THE LIVED EXPERIENCES OF SECONDARY SCHOOL PARENTS IN RAISING RESPONSIBLE DIGITAL CITIZENS IN A ONE-TO-ONE LEARNING ENVIRONMENT

by

Gabriel Conrad Guven

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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ABSTRACT

As technology use increases among adolescents both in and out of school, parents face the new challenge of teaching their children to successfully navigate learning in a digital world. A review of the existing literature provided a history of both the benefits and risks of one-to-one learning. Research revealed a lack of parent voice. The purpose of this transcendental, phenomenological study was to look at the experiences of 10 parents whose students had access to one-to-one technology required or provided for educational purposes at a private, faith-based secondary school in California. Baumrind's (1967, 1968) parenting style theory and Potter's (2004) media literacy theory provided a theoretical framework. This study collected data using Moustakas' (1994) methods for transcendental, phenomenological research. The central research question asked, "How do parents describe their experience of training their children to be responsible digital citizens in the context of a hyper-connected society?" The study utilized convenience sampling for selecting participants (Petty, Thomson, & Stew, 2012). Data included interviews, journals, and a focus group. Data analysis methods following Moustakas' (1994) approach to phenomenological research included: creating coded categories, identifying key themes, writing individual structural and textural descriptions, writing composite structural and textural descriptions, and creating the essence statement (Moustakas, 1994). The analysis produced the following 10 themes: (a) challenges in maintaining a healthy lifestyle; (b) the educational benefits of learning with technological devices; (c) questions related to digital versus print learning; (d) mixed feelings about technology; (e) the weight of parenting; (f) the importance of ongoing communication; (g) preparing children for adulthood; (h) holding children accountable; (i) the importance of trust; and (j) providing instruction at an early age.

Keywords: digital citizenship, media literacy, one-to-one learning, parenting style.

Dedication

I dedicate this dissertation to all parents who desire to help their children successfully navigate the changing, all-consuming, digital world.

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List of Abbreviations

Institutional Review Board (IRB)

Maine Learning Technology Initiative (MLTI)

National Educational Technology Standards (NETS)

No Child Left Behind (NCLB)

Science, Technology, Engineering, and Math (STEM)

CHAPTER ONE: INTRODUCTION

Overview

Training today's adolescents presents a set of circumstances never before faced by parents. According to a recent research study by Pew Research Center, nearly 95% of teenagers connect to the Internet regularly, and teenagers prefer to access the Internet using mobile devices (Kiger & Herro, D, 2015; Madden, Lenhart, Duggan, Cortesi, & Gasser, 2013). Pre-teens and teenagers are hyper-connected, meaning that they constantly connect to technology. The availability of the Internet brings positive benefits such as ready access to resources. However, Internet access also brings negative consequences like risks to the overall health and wellbeing of young people, including obesity and arrested social development (Bowman, 2015; Kiger & Herro, D, 2015; Madden et al., 2013; Turner, 2015; Yang, Lu, Wang, & Zhao, 2014). With the rise of educational institutions adopting and relying on technology for academic growth, along with the pervasive use of it at home, parents face the scenario of raising adolescents to be responsible users of the digital worlds (Hollandsworth, Donovan, & Welch, 2017).

This generation of pre-teens and teenagers, representing Generations Y and Z, respectively, exist with an increasing digital identity (Bolton et al., 2013; Eastman, Iyer, Liao-Troth, Williams, & Griffin, 2014; Gurung & Rutledge, 2014; Thompson, 2013; Turner, 2015). For the purpose of this study, a pre-teen falls between the ages of eight and 12, and a teenager falls between the ages of 13 and 18 (Lauricella et al., 2016). In their world, much of life and learning occur in a digital environment (Bassiouni and Hackley, 2014; Bolton et al., 2013; Eastman et al., 2014). Several challenges exist for a generation of parents and educators that did not necessarily grow up immersed in this online environment (Livingstone, Mascheroni, Dreier, Chaudron, & Lagae, 2015). Adults continue to learn the most effective methods for utilizing

technology as a learning tool for students both at school and at home. Junior high and high school students learn best when surrounded by adults that model appropriate technology use and implicitly teach them the guidelines of operating effectively in a digital world (Felt & Robb, 2016; Harjt & Freed, 2013; Lauricella et al., 2016; Radich, 2013; Ribble, 2009; Sorkhabi, 2005). A gap exists in understanding the experiences of parents who enroll their children in schools that require regular Internet access for learning. Adolescents socialize and learn online, which presents parents with an opportunity to teach their children to do so responsibly. Several dangers exist for pre-teens and teenagers who do not approach online activities with common sense (Felt & Robb, 2016). These dangers include lack of proper digital literacy skills, distractibility while online, diminishing social skills, and health-related issues (Drew, 2013; Felt & Robb, 2016; Heitner, 2016; Turner, 2015). Limited literature exists that examines exactly how parents address the responsible use of technology for learning purposes with their children (Fleischer, 2012; Fletcher & Blair, 2014; Ihmeideh & Shawareb, 2014).

In recent years, educational institutions have increasingly adopted technology in an effort to improve student learning and comply with the requirements of Common Core state standards (Bebell & Burraston, 2014; Bebell, Clarkson, & Burraston, 2014; Ditzler, Hong, & Strudler, 2016; Gurung & Rutledge, 2014). The integration of one-to-one, student-to-computer learning environments is moving ahead at a rapid rate (Alexiou-Ray, Wilson, Wright, & Peirano, 2003; Gurung & Rutledge, 2014; Pegrum, Oakley, & Faulkner, 2013; Willocks & Redmond, 2014). Prior to the turn of the century, school districts could not implement one-to-one learning environments due to lack of infrastructure, high cost, insufficient digital resources for effective learning, and limited buy-in from faculty members (Swallow, 2015; Swanson, 2013; Topper & Lancaster, 2013; Zheng, Arada, Niiya, & Warschauer, 2014; Zheng, Warschauer, Lin, & Chang,

2016). As these factors rapidly changed over the last two decades, digitally connected classrooms became commonplace (Alexiou-Ray, Wilson, Wright, & Peirano, 2003; Gurung & Rutledge, 2014; Pegrum, Oakley, & Faulkner, 2013; Willocks & Redmond, 2014). However, for today's secondary students, technology permeates both school and home life (Gurung & Rutledge, 2014). Current trends create a blur between the use of computers as a tool for learning at school and as a device for either learning or play at home (Gurung & Rutledge, 2014).

In general, qualitative empirical evidence related to one-to-one learning environments from the parent perspective is lacking because most studies only utilize students, teachers, and administrators (Broussard et al., 2013; Ditzler et al.; 2016; Downes & Bishop, 2015; Liu et al., 2016; Storz & Hoffman, 2013; Topper & Lancaster, 2013; Willocks & Redmond, 2014). Few studies tackle the issue from a qualitative, phenomenological nature (Fleischer, 2012; Gurung & Rutledge, 2014; Lynch & Redpath, 2014). This lack of qualitative research from the parent perspective presents a gap, as the role of parents in shaping their adolescents' digital habits is underestimated (Fletcher & Blair, 2014; Ihmeideh & Shawareb, 2014; Lauricella, Wartella, & Rideout, 2015; Livingstone et al., 2016). In Downes' and Bishop's (2015) study of a one-to-one learning environment utilizing laptops in middle school, the need for further exploration of the intersection of technology and family life was specified.

Additionally, a need for better understanding the family experience regarding technology use at school and home also exists (Lauricella et al., 2016; Wartella, Rideout, Lauricella, & Connell, 2013; Willocks & Redmond, 2014). Parents expressed a desire for more control over what students are doing on their devices (Willocks & Redmond, 2014). The use of computers, both at school and at home, has created a blurring of roles. Students often struggle to differentiate between using technology for personal and academic purposes (Gurung & Rutledge,

2014). Students often rely on technology use habits they learned outside of school, usually at home, when called upon to use these skills in an academic setting, and often, the skills they learned at home were for personal entertainment purposes and not scholastic purposes (Gurung & Rutledge, 2014).

Overall, this chapter provides a brief background of the problem accompanying parenting adolescents in being responsible digital users within the context of a hyper-connected, one-to-one learning environment. The purpose of this study, which was to look at the experiences of the parents of secondary students who have access to one-to-one learning environments required or provided by a school system for educational purposes, is also discussed. The following sections provide details about the situation to self, the significance of the study, the research questions, an overview of the research plan, and definitions.

Background

This study was built upon the historical, social, and theoretical contexts surrounding parenting adolescents in one-to-one learning environments. Historically, literature highlighted the challenges, as well as benefits, around young people and learning with computers (Karsenti & Fievez, 2013; Richardson et al., 2013; Zheng et al., 2014). The existing literature also provided ample details centered on the changing social dynamics associated with an immersive digital learning environment (Rideout, Foehr, Roberts, 2010; Sanders, Parent, Forehand, & Breslend, 2016). Additionally, multiple theoretical concepts (parenting theory and media literacy theory) provided key background that formed the basis for this study (Baumrind, 1967, 1968; Potter, 2003, 2014).

Historical Context

With the advent of the Internet in the mid-1990s, access to an ever-growing platform of information, communication, and entertainment opened up to schools (Bebell & Burraston, 2014; Bebell, Clarkson, & Burraston, 2014; Ditzler et al. 2016). As computers became more mobile and more cost effective, adolescents found themselves accessing the Internet rather freely (Turner, 2015). Concurrent with the adoption of computers/mobile devices for personal use by adolescents, computers have slowly migrated to the learning environment (An & Alon, 2013; Hatakka, Anderson, & Grönlund, 2013; Richardson, Bathon, Flora, & Lewis, 2012).

In his systematic narrative research of over 600 articles on one-to-one learning environments, Fleischer (2012) showed that in the mid-2,000s, schools began adopting an instructional model that provided access to a computing device for every student throughout the school day (Fleischer, 2012). This led to the one-to-one learning environment movement, which is also referred to as one-to-one, 1 to 1, or ubiquitous learning (Gurung & Rutledge, 2014; Richardson et al., 2013; Storz & Hoffman, 2013). Fleischer's (2012) review revealed that early scholarly articles showcased the academic benefits of one-to-one learning environments with little focus on the problems brought on by these new initiatives (Willocks & Redmond, 2014). Additionally, the preliminary research around one-to-one learning environments were quantitative in nature and focused primarily on academic benefits (Fleischer, 2012). Table 1 provides a timeline, which places the role of educational technology in historical perspective.

Table 1

Timeline of Key Events in the History of Educational Technology

Year	Event
1958	The passing of the National Defense Education Act (Wolfe, 2012)
1970s and 1980s	Microcomputers were introduced into schools (Barron, Kemker, Harmes, & Kalaydjian, 2003)
1980s	Apple's personal computers appear in schools (Topper & Lancaster, 2013)
1990s	The United States and Australia introduced one-to-one learning (Zheng et al., 2014)
1990s	Education focused on computer-based tools (Graber & Mendoza, 2013)
Mid-1990s	Most American classrooms had access to a computer (Wolfe, 2012)
1995	The Internet began to enter into the educational setting (Wolfe, 2012)
1998	ISTE publishes the NETS (Barron et al., 2003)
2000s	Web 2.0 tools emerged (Simsek & Simsek, 2013)
2002	President Bush launched the No Child Left Behind initiative and the Enhancing Education Through Technology Act (Barron et al., 2003)
2002	Maine launched the first statewide, one-to-one learning environment program (Barron et al., 2003; Zheng et al., 2014)
Mid-2000s	Literature on digital citizenship emerged (Ribble & Bailey, 2005a)
2009	Development of the Common Core Curriculum (Larson & Miller, 2011)
Early 2010s	Advent of the iPad™ (Karsenti, and Fievez, 2013)
Early 2010s	One-to-one learning became a major educational movement (Wolfe, 2012)
2010s	Media literacy became an educational focus (Potter, 2013; Ribble 2012)
2013	Teenagers average eight hours of screen time daily (Harjt & Freed, 2013)
2016	Rapid adoption of one-to-one programs by schools (Zheng et al., 2016)

Scholars cited academic benefits as a primary reason to adopt one-to-one learning environments (Richardson et al., 2013; Zheng et al., 2014). Some of the academic benefits include engagement, motivation, creativity, and better access to information (Patrikakou, 2015;

Zheng et al., 2014; Zheng et al., 2016). Teachers are better able to differentiate and delegate more responsibility to students in a one-to-one, digital learning environment (Zheng et al., 2014). The data used to measure academics in schools showed improved overall test scores and better writing with the advent of authentic audiences accessible via computing devices (Bebell & Burraston, 2014; Karsenti & Fievez, 2013; Swallow, 2015; Zheng et al., 2014; Zheng et al., 2016).

Several existing studies examined the benefits of one-to-one learning environments from a quantitative perspective (Bebell & Buraston, 2014a; Bebell & Burraston, 2014b; Karsenti & Fievez, 2013; Zheng et al., 2014). The primary focus of multiple qualitative studies was on measurable student learning outcomes. Researchers often used student scores on standardized tests or internal benchmarks to illustrate the academic benefits of one-to-one learning environments (Bebell & Burraston, 2014b; Karsenti & Fievez, 2013).

Like the quantitative studies previously mentioned, qualitative studies highlighted the benefits of one-to-one learning environments (An & Alon, 2013; Broussard et al., 2013; Ditzler et al., 2016; Downes & Bishop, 2015; Liu et al., 2016; Storz & Hoffman, 2013; Swallow, 2015; Topper & Lancaster, 2013). The myriad of benefits from these studies include increased student engagement, time for collaboration, higher test scores, authentic assessment of students, and the development of 21st century skills (Ditzler et al., 2016; Downes & Bishop, 2015; Liu et al., 2016; Swallow, 2014). Worth noting is the fact that a greater number of existing articles examined one-to-one learning environments while citing both the benefits and risks (Broussard et al., 2013; Ditzler et al., 2016; Downes & Bishop, 2015; Liu et al., 2016; Storz & Hoffman, 2013; Topper & Lancaster, 2013).

Social Context

Emerging literature about adolescent technology use highlighted some of the challenges associated with its increase. Karsenti & Fievez (2013) surveyed more than 6,000 students and teachers about the benefits and risks of mobile technology in education. In the process, they identified a need for more research in understanding the obstacles for student technology use. Literature suggests teenagers spend anywhere from seven and a half to nine hours a day on digital devices (Hart and Frejd 2013; Rideout, Foehr, Roberts, 2010; Sanders, Parent, Forehand, & Breslend, 2016). This is an increase from the six hours reported in 2004 (Rideout et al., 2010). Other challenges with pervasive technology use by adolescents include proper social and physical development, academic integrity, and confusion over computers as tools for work and play. The increase in technology use amongst students created a need to understand what parents are doing to help their children use these tools most effectively and responsibly.

Instructing youth in responsible digital citizenship habits requires training. David and Katz (2010) analyzed conversations between parents, teachers, and students about ethical issues and found that young people do not think about the implications for ethical behavior in the same manner that adults do. It was surmised that parents play a critical role in engaging their children to become responsible digital citizens. Kiger and Hero (2015) used survey responses to analyze parental involvement in schools that allow students to bring their own devices to school. They concluded that institutions that incorporate high levels of technology could benefit from including parents in the planning processes in order to address concerns about ethical and safe computer use. Mike Ribble (2004, 2009, 2012, 2013), who has emerged as one of the most cited educators in the area of digital citizenship, reported high misuse of technology amongst teenagers both in and out of school (Ribble & Bailey, 2005b). Struggles with digital safety and

etiquette were also highlighted; more specifically, one of the most common student misbehaviors is distractibility (gaming, social media, browsing the Internet) while using technology in the classroom setting (Heitner, 2016; Zheng et al., 2014). Fletcher and Blair (2014) interviewed 40 adolescents about their perceptions of parental control of their social technology use. The study concluded that adolescents responded better to guidance when they perceived their parents as being technology experts, and the study highlighted the need for future research to include parent perspective on issues relating to rules for using technology. Additionally, parent behaviors in the home helped shape the digital citizenship habits of their children (Fletcher & Blair, 2014).

Theoretical Context

Several studies have addressed the need for more research focusing on the interplay of adolescent technology use and parenting (Fleischer, 2012; Fletcher & Blair, 2014; Ihmeideh & Shawareb, 2014). From a broad perspective, there are limited studies that focused on how parents approach technology education with their children (Fleischer, 2012; Fletcher & Blair, 2014; Ihmeideh & Shawareb, 2014; Livingstone, Mascheroni, Dreier, Chaudron, & Lagae, 2015). One existing study reveals that 95% of parents expressed favorable views towards technology use for education; conversely, these same parents expressed uncertainty about their role as parents in a media-rich environment (Lauricella et al., 2016). Diana Baumrind (1967, 1968) developed her theory as a way to understand the effects of parenting style on the way children behave. Baumrind's theory provides a framework to understand parenting approaches within the context of adolescent technology use.

Another term for effective and responsible technology use is "media literacy," which refers to the basic ability of a technology user to navigate digital media successfully (Potter 2003, 2014). Several studies highlighted the need for future research to examine parental

mediation and protective steps tied to Internet use (Fleischer, 2012; Fletcher & Blair, 2014; Ihmeideh & Shawareb, 2014; Willocks & Redmond, 2014). Ihmeideh and Shawareb (2014) surveyed over 2,600 kindergarten-through second-grade parents about their children's Internet habits. Multiple regression analysis of the data revealed that parents who define themselves as "authoritative" allowed more Internet use at home. Parents stated that they felt comfortable with technology use in the home because they had defined and discussed rules for it (Ihmeideh & Shawareb, 2014). This study provides a basis to continue researching parenting training practices and the connection to adolescent technology use. As more and more schools utilize one-to-one learning environments—more specifically new media tools—in their academic programs, teachers and parents can strive to educate youth in the proper use of these tools (Karsenti, & Fievez, 2013; Willocks & Redmond, 2014). These scholars also recommended more research to examine the interplay of technology use at school and at home. Similarly, Bassiouni and Hackley (2014) recognized the need to understand the generational differences in technology experiences because parents and their children use technology in different ways. Fletcher and Blair (2014) pointed out the limited amount of research on parents' attempts to teach their children responsible digital habits. Parents play a role in the development of their teenage children's digital habits, so researching the issue of one-to-one learning environments from their perspective will bring understanding (Lauricella et al., 2014; Willocks & Redmond, 2014). For example, one study detailed the power of modeling, as higher technology use amongst parents was positively associated with higher levels of technology use amongst young children (Lauricella et al., 2014).

Situation to Self

My personal motivation for the present study stemmed from multiple factors. First, as

the father of middle school students immersed in a one-to-one learning environment, I feel a responsibility to prepare them for this environment, support them in it, and guide them towards becoming mature and responsible digital users. This research has significant practical and personal applications. Also, I serve in a K-12 academic institution that values and promotes a one-to-one learning environment. All of its middle school and high school students bring their own iPads™ from home each day. As a school leader, I have heard many parents express their praise of, and frustration with, technological devices used for educational purposes both within and outside of the school setting. From a personal perspective, I see myself standing between two worlds: the millennial and postmillennial generations and my own. Generations tend to approach technology in different ways (Dotterer, Hedges, & Parker, 2016). Elmore (2010) pointed out how technology negatively affected members of Generation Y (those born between the years of 1984 and 2002). He cited health concerns, addiction to playing video games, and struggles with pornography as problems (Elmore, 2010). Elmore (2010) also wrote about the need to understand and parent this generation as a way to help them through the challenges they face (Barlow, 2011). Growing up in the 1980s as an elementary school student in the heart of Silicon Valley, I was directly and indirectly exposed to the latest technological developments. I distinctly remember when the Apple IIe cart rolled into my second-grade classroom. At times, I feel like a millennial, and yet there are distinct generational differences between myself and members of these younger generations. This unusual life circumstance has helped prepare me to become a well-informed and empathetic researcher. I see the value of technological advancement and readily embrace it, yet I also see the value of a life not completely lived in the digital world.

As a Christian serving as an administrator in a faith-based private school, I bring with me a Christian philosophy of education. In the area of technology use with students, in my opinion, there are key biblical principles that apply to the use of technology amongst secondary school students. Luke 2:52 sets a foundation for healthy, adolescent development as the passage states, "And Jesus kept increasing in wisdom and stature, and in favor with God and men" (New American Standard Version). This verse highlights the importance of healthy mental, physical, spiritual, social, and emotional development. Additionally, Proverbs 4 serves as a backdrop for understanding the role that parents play in instructing their children in right living. Though set in a biblical time, the principles of discretion, humility, and willingness to learn outlined in Proverbs 4, if applied today in the parent-child relationship, can help train responsible digital citizens. The entire book of Proverbs was written as didactic, or instructional, literature and provides a solid foundation for understanding the role of parenting in the moral development of children. As the existing literature revealed uncertainty amongst students, parents, and educators with regard to the appropriate student use of technology (Zheng et al., 2014), this study aims to understand and give voice to that experience from the parent perspective.

According to Moustakas (1994), effective, transcendental, phenomenological research questions aim to uncover rich, deep meaning. Moustakas (1994) also explained that a researcher's excitement and curiosity ought to guide the inspiration of the research questions. From this perspective, I have questions that relate to this research topic from the perspective of both an elementary school principal and a parent of middle-school students. The school that I serve at rolled out a one-to-one learning environment at the secondary level in recent years. Although I value the additional technology tools, I have concerns about many of my elementary

school students as they move on to middle school with regard to their maturity and whether they will receive continued instruction regarding responsible iPad™ use.

Additionally, I believe that the issue requires further examination from multiple perspectives. In many conversations with former elementary school parents, I have sensed a frustration with the one-to-one learning environment that I would like to learn more about. Recently, this inspired me to deliver my school's annual keynote address on the topic of theology and technology. Afterward, I was struck by the responses from fellow educators who seemed hungry to know more about effectively training students to become responsible digital citizens. My personal interest was a driving force in the development of this study and the associated research questions.

Additionally, this study incorporated an ontological, philosophical assumption, as I utilized a variety of participants to share their own, individual experiences of parenting teenagers absorbed in technology for academic purposes. In a phenomenological study of this nature, I played a critical role in gathering and sharing many perspectives of the phenomenon (Creswell, 2013). A social constructivism interpretive framework shaped this study. Creswell (2013) pointed out the importance of researchers basing their work on the lived experiences of participants, extensively interacting with participants, and placing themselves in the middle of the process. Creswell (2013) also wrote about how the social constructivism interpretive framework allows researchers to interpret the research based on "their own experiences and background" (Loc. 761). By the nature of the study, I naturally relied on my own experience and background.

Problem Statement

The existing literature illustrated that adolescents sometimes lack the needed skills to thrive in hyper-connected, digital world that they inhabit both in school and at home (An & Alon, 2013; Anderson & Rainie, 2012; Hatakka et al., 2013; Richardson et al., 2012). Current researchers examined the benefits of one-to-one learning environments while not pondering, in depth, such other issues as failures, limitations, and the lived experiences of parents (Fleischer, 2012). The problem of one-to-one learning environments is that allowing young people continuous access to technology with all of the benefits as well as the potential pitfalls—such as screen time and health issues—results in an increased need for effective digital citizenship training (Ribble & Bailey, 2005a; Strasburger, Hogan, Mulligan, Ameenuddin, Christakis, Cross, & Moreno, 2013; Wartella et al., 2013).

Parents face the new challenge of teaching their children effective skills to navigate a one-on-one environment in a healthy and safe manner, thereby enabling them to act responsibly as digital citizens (Anderson & Rainie, 2012; Richardson et al., 2012). Further, parents share the responsibility of teaching healthy technology habits with educators (Fletcher & Blair, 2014; Ihmeideh & Shawareb, 2014; Willocks & Redmond, 2014). A lack of peer-reviewed literature exists to provide parents a voice on this matter, as existing studies predominantly focused on the opinions of students, teachers, and administrators (Downes & Bishop, 2015; Fleischer, 2012; Olson et al., 2015). My study gave parents that voice, and my study uncovered the essence of what they go through raising millennials and post-millennials in a technology rich era (Fleischer, 2012).

Purpose Statement

The purpose of this transcendental, phenomenological study was to look at the experiences of the parents of secondary students who had access to one-to-one learning environments required or provided by a school system for educational purposes. These students were responsible for the computing device throughout each school day, as well as at home while completing homework assignments. Students were required to use the devices for educational purposes at school, but had autonomy over the device while at home where they tended to use them for other purposes. I investigated the role of one-to-one devices in a parenting relationship and how this role was defined, perceived, and experienced. At this stage in the research, the one-to-one learning environment is best defined thusly: "each teacher and student have full and independent access to a computing device" (Bebell, Clarkson, & Burraston, 2014, p. 131). As more and more schools move to a one-to-one learning environment, students are using technology at a higher rate both in and out of school (An & Alon, 2013; Hatakka et al., 2013; Hollandsworth, Donovan et al., 2017; Richardson et al., 2012). Common Sense Media recently reported that teenagers spend nearly six hours a day on their devices pursuing non-school related activities (Felt & Robb, 2016). They also reported that 78% of teenagers from higher socioeconomic backgrounds own smartphones, and 51% of low socioeconomic teenagers do as well (Felt & Robb, 2016). This increased connectivity creates a need to teach young people to be responsible users of technology, or digital citizens. Ribble (2009) defined digital citizenship as "norms of appropriate, responsible behavior with regard to technology use" (p. 15).

For the purpose of this study, being a responsible digital citizen encompasses strong media literacy skills, the ability to avoid the dangers of online use, and the ability to create and post content, usually by way of social media platforms, in a digital environment (Jones &

Mitchell, 2015). This study was guided by Baumrind's (1967, 1968) parenting style theory, which illustrates the role various styles have on influencing children to behave in an appropriate manner, as well as Potter's (2004) theory of media literacy, which lays out a model for understanding how a person becomes literate in digital media tools. An awareness of various parenting styles and media literacy development helps to understand the overall experience of parenting. More precisely, applying these theories to experience of teaching digital citizenship to adolescents provided a broad theoretical framework. This study gave voice to the experience of parenting pre-teens and teenagers toward responsible digital citizenship in an increasing digital era.

Significance of the Study

This study aimed to extend the existing literature by examining the influence of parenting styles on one-on-one technology use. Multiple studies have examined one-to-one learning environments from the student and educator perspective (Downes & Bishop, 2015; Fleischer, 2012; Fletcher & Blair, 2014; Gurung & Rutledge, 2014; Hatakka et al., 2013; Lynch & Redpath, 2014; Storz & Hoffman, 2013). Existing literature did tie both media literacy and digital citizenship to the role of parents, but essentially, none of these studies did this from a transcendental, phenomenological perspective (Kiger & Herro, 2016; Sharrer & Ramasubramanian, 2015; Tuukkanen & Wilska, 2015; Yang et al., 2014). Felt & Robb (2016) highlighted the lack of qualitative research that looks at the implications of technology usage specifically on children. Flores and James (2013) qualitatively explored the role of ethics in online life, but they looked at the issue only from the perspective of young people and did not include the parent perspective. Flores and James' (2013) study provided valuable insight into the

way that younger generations view online activity with less focus on ethical behavior than their adult counterparts.

My current study added to this discussion by tying the topic specifically to digital citizenship formation. Gurung and Rutledge (2014) conducted a phenomenological study that closely resembles mine in terms of topic and method and was set in a public, alternative high school. Data collection methods included interviews, field notes, and observations. The main purpose of the study was to understand the interplay of student computer use at both at school and at home. Although the study focused on student experience, several aspects resemble my study design (Gurung & Rutledge, 2014). My research will extend the findings of this study to include a different group of participants: parents.

Looking at these issues from the parent perspective provided an understanding of the role parents perceive that they play in shaping the moral and ethical use of technology by their children. The shared experiences of parent participants in this study provide encouragement to other parents experiencing the same phenomenon. This study was significant because of the emphasis on one-to-one learning environments for academic purposes within the context of the family unit, which is a gap identified in the existing literature (Downes and Bishop, 2015).

In terms of practical significance, as a result of this study, school leaders have access to a detailed account of what parents experienced in terms of technology education at home. This represents a gap in the current research (Fleischer, 2012; Richardson et al., 2012). Additionally, schools may be able to identify initiatives to support parents and students and can assess digital citizenship curriculum in light of parent perspective. Further, administrators will have access to a sample of parent opinions about technology usage to compare with existing data. Finally,

students in one-to-one learning environments may benefit by having a better understanding of their parents' approach to trying to keep them safe in a digital world.

The study may be significant for teachers because findings may strengthen the bridge between school and home as teachers may more clearly understand what parents are experiencing on their end. Teachers already face the task of teaching curricular content to students, and adding digital citizenship formation makes their job even more challenging. Shared parent experiences will help teachers formulate their approach to digital citizenship with their students. Digital citizenship formation within the context of a one-to-one learning environment remains a topic that is seldom examined from the parent perspective, and the results from this study may help bring that perspective to other parents, students, teachers and administrators (An & Alon, 2013; Fleischer, 2012; Hatakka et al., 2013).

Research Questions

This study focuses on the following overarching central question: *How do parents describe their experience of training their children to be responsible digital citizens in the context of a hyper-connected society?*

The following sub-questions aided in gathering more specific details flowing out of the central question:

1) How do parents describe their experience of training their children to be responsible digital citizens in the context of a one-to-one environment?
2) How do parents perceive their particular parenting style in relation to addressing digital citizenship with their children?
3) How do parents describe their efforts at mediating adolescent technology use?

Moustakas (1994) said that effective, transcendental, phenomenological research should define, discuss, and clarify key words related to the research questions. The central question focused on parenting in a hyper-connected world (Kiger & Herro, D, 2015; Madden et al., 2013; Turner, 2015; Yang, Lu, Wang, & Zhao, 2014). The average adolescent, not necessarily in those in one-to-one schools, spends an average of eight to nine hours a day in front of a screen (Felt & Robb, 2016; Hart & Frejd, 2013; Strasburger et al., 2013; Turner, 2015). With ready access to technology, many questions arise around the topic of parenting pre-teens and teenagers towards responsible usage (Fletcher & Blair, 2014; Patrikakou, 2015; Tuukkanen & Wilska, 2015).

The first sub-question focused specifically on the current, pervasive, integration of one-to-one learning environments (Anderson & Rainie, 2012; Hatakka et al., 2013; Zheng et al., 2014). Unlimited access to technology, especially the Internet, has created a historically unprecedented parenting scenario (Hiniker, Schoenebeck, & Kientz, 2016; Ozgür, 2016; Yang et al., 2014). In order to equip parents to address the issue, initial research questions unearthed what parents are experiencing with their children. Fleischer's (2012) meta-analysis of one-to-one literature revealed a lack of parent voice in one-to-one studies.

The second sub-question focused on parenting style and digital citizenship. Darling (1999) defined parenting style as the ability to "influence, teach, and control their children" (p. 1). This research question helped provide an understanding of how parents perceive their particular style and its impact of digital citizenship formation. Multiple scholars highlighted the link between parenting and digital citizenship formation (Kiger & Herro, 2015; Preston, Savage, Payton & Barnett, 2016). Ribble (2009) provided the best definition of digital citizenship as the "norms of appropriate, responsible behavior with regard to technology use" (p. 3). Richardson et al. (2012) also stressed the need to examine proper digital citizenship formation in adolescents.

This research question effectively drew out parent perceptions in this area. Several authors pointed to roles that parents play in digital citizenship formation (Kiger & Herro, 2015; Ribble, 2009). Sorkhabi (2005) confirmed that parents play a critical role in the morals their children develop.

The third, and final, sub-question centered on understanding parental mediation of adolescent technology use. Existing studies identified the importance of further examining parental mediation—specifically focusing on the role that parental mediation may play in fostering healthy technology habits (Fleischer, 2012; Fletcher & Blair, 2014; Hiniker et al., 2016; Ihmeideh & Shawareb, 2014; Willocks & Redmond, 2014; Yang et al., 2014). Lauricella et al. (2016) indicated that the majority of parents support forms of monitoring technology use, and this specific sub-question added a detailed voice to more deeply understand this standpoint. As a whole, the research questions uncovered deep insight into parents' experiences in teaching their children to be responsible technology users.

Definitions

1. *Digital citizenship* – Ribble (2009) defined digital citizenship as "norms of appropriate, responsible behavior with regard to technology use" (p. 15). For the purpose of this study, the term will broadly include all three aspects laid out by Jones and Mitchell (2015): basic media literacy education, instruction in avoiding dangers online, and a proactive empowering of students to be agents for positive change in an increasingly online world.
2. *Hyper-connected* – Being hyper-connected refers to the idea that technology users have access to the Internet via laptops, desktops, or mobile devices for most of their waking

hours (Kiger & Herro, D, 2015; Madden et al., 2013; Turner, 2015; Yang, Lu, Wang, & Zhao, 2014).

3. *Media Literacy* – Green et al. (2015) defined media literacy as "the ability to access, analyze, evaluate, and create messages in a wide variety of media modes and formats while recognizing the role and influence of media in society" (p. 36). Lin, Li, Deng, and Lee (2013) defined media literacy broadly as the access to and utilization of media.
4. *One-to-One Learning Environment* – *A* one-to-one learning environment is best characterized as one in which "each teacher and student has full and independent access to a computing device" (Bebell, Clarkson, & Burraston, 2014, p. 131).
5. *Parental Mediation* – Clark, as cited by Nikken & Jansz (2104), defined this as a parental "attempt to mediate and mitigate the negative effects of the media in their children's lives" (p. 252). The three types of mediation are: restrictive (controlled), active (instructive), and co-use (shared media) (Nikken & Jansz, 2014).
6. *Parenting Style* – Parenting style is the way in which "parents influence the development of children's social and instrumental competence" (Darling, 199, p. 1). Similarly, Ihmeideh and Shawareb (2014) defined parenting style as the way in which "parents interact with their children and respond to their behavior" (p. 413).
7. *21st Century Skills* – Kaufman (2013) defined 21st century skills such as "critical thinking and problem-solving skills, communicative skills, information and media literacy skills, contextual learning skills, and an ever important collaboration skill set" (p. 79).

Summary

Through the existing literature, this chapter established an overview of the study, as well as the need for further research from the parent perspective on raising responsible digital citizens

in the context of a one-to-one learning environment. Chapter One also provided a succinct statement of the problem as well as the purpose of this study: the need to capture parent voice surrounding the issue of training children with increased technology use at school and home. The chapter concluded with a brief overview of the study, a list of the research questions, and a discussion of the benefits. As a whole, this study aimed to capture parent perspective on digital citizenship formation, in both a hyper-connected world and a one-to-one learning environment, in the hope that greater understanding of the parent experience can shed light into the challenge of raising a generation of healthy digital citizens.

CHAPTER TWO: LITERATURE REVIEW

Overview

Chapter Two provides a complete backdrop of one-to-one learning environments beginning with a historical view of computers in education in order to provide context for understanding the current role of one-to-one programs, as well as the associated opportunities for further research in this area. The use of computers in education began as early as the mid-20th century and evolved to the current state, in which schools continue to incorporate the latest technological tools. As the demands for technical jobs in the United States grows, schools face the pressure of implementing a variety of learning experiences centered on technology. The review of literature on computers in education, as well as the specific features of current one-to-one learning environments, framed the current study. The literature review is organized around a thematic approach (Moustakas, 1994). The existing studies on one-to-one learning environments predominantly examined student, teacher, and administrator voices while omitting parent perspective (Fleischer, 2012; Hatakka et al., 2013; Oliver, Mollette, & Corn, 2012; Swanson, 2013; Zheng et al., 2014). Student, teacher, and administrative perspectives help to understand the overall nature of one-to-one learning; however, the lack of parent perspective makes understanding the role of one-to-one devices in a parenting relationship difficult. This chapter also examines the limited research that taps into the lived experiences of parents as they lead their children through digital learning in the 21st century. In addition, a review of scholarly writings on digital citizenship provides both a working definition of digital citizenship and an understanding of the opportunities and risks that children face as members of online communities. Baumrind's (1967, 1968) theory of parenting styles serves as one of the primary frameworks for this study as it also informs the role of parent participants as they raise children

in a digital age. Theory of media literacy acts as the second, overarching, theoretical framework as it provides a basis for understanding how children learn to use new media, as well as the moral and ethical responsibilities that accompany such use. Current research illustrates how parents and educators play a role in training responsible digital citizens within the context of a one-to-one learning environment.

Theoretical Framework

This study applied Baumrind's (1966, 1967, 2013) theory of parenting styles and media literacy theory. Baumrind studied the interplay of care and control in the parent-child relationship, and media literacy provides a method to understand how youth develop proficiency media habits. In conjunction, both frameworks provide valuable insight into this study as they help interpret parents' lived experiences in raising children in an increasingly digital world.

Parenting Style Theory

Baumrind (1967, 2013) believed that parents have a profound influence on their children's development. Overall, her writings defined parenting as the ability to "influence, teach, and control their children" (Darling, 1999, p. 2). Parental control is the idea that parents aim to transfer personal standards for conduct to their children (Baumrind, 1967, 2013). Understanding how parents raise proficient digital citizens begins with understanding the basic nature of parenting and the influence style has on intended results. Baumrind's parenting styles theory stemmed from her (1967, 2013) original research, in which she tied the behaviors of parents, in the context of parenting, to the behaviors of their children. Baumrind (1968) grouped her findings into three distinct parenting styles: authoritarian, authoritative, and permissive. The authoritative style represents a balanced approach that views children as autonomous and gives freedom with limits. Conversely, the authoritarian style is an overbearing, controlling approach.

The third parenting style, permissive, represents an unhealthy combination of responsiveness to needs and permissiveness of negative behaviors. Maccoby and Martin (Pellerin, 2005), later added a fourth dimension to Baumrind's (1966, 1967, 2013) typology: negligent.

Baumrind's (1966, 1967, 2013) parenting styles theory showed a connection between the combination of high care and high demandingness (Ihmeideh & Shawareb, 2014; Pellerin, 2005). In essence, the more a parent cared for the needs of their children while holding them to high standards, the more likely the children would be successfully influenced by that parent (Baumrind, Larzelere, & Owens, 2010; Ihmeideh & Shawareb, 2014). This typology serves as a lens that brings awareness to the variety of parenting approaches practiced by the participants.

Authoritative parenting style. The authoritative style represents the most effective of the four approaches (Baumrind, 1991; Baumrind et al., 2010; Baumrind, 2013; Ihmeideh & Shawareb, 2014; Shucksmith, Hendry, & Glendinning, 1995). For example, one study revealed that an authoritative parenting style resulted in higher parent involvement and encouragement in an academic setting when compared to other styles of parenting (Steinberg, Lamborn, Dornbusch, & Darling, 2012). Successful parents model standards for conduct that their children internalize (Baumrind, 1967, 2013). Scholars support the notion that the authoritative parenting style is more successful than other styles at helping children reaching goals (Baumrind, 2013; Ihmeideh & Shawareb, 2014; Özgür, 2016). Baumrind (1966, 1968, 2013) defined successful authoritative parents as being those who displayed firm control, reasoned with their children, fostered social development, and aimed for independence.

The authoritative parenting style is categorized by reciprocity, understanding, and flexibility (Baumrind, 2013). Multiple sources pointed to the role that power plays in authoritative parenting (Baumrind, 1967, 1968, 2013). Successful parents balance power

between themselves and their child. Baumrind (1968) found that children of overbearing parents often rebelled against extreme behavior management. Children desire some level of autonomy in making behavioral choices (Baumrind, 1968). In the authoritative approach, power is asymmetrical in preschool years, moving towards shared, and with the eventual goal of independence (Baumrind, 1968; Shucksmith et al., 1995). Authoritative parents balance controlling their children directly with their authority and allow for independence that can help shape conscientiousness in children (Baumrind, 1966, 1968, 2013).

Baumrind (2013) further explained that control by the parent(s) is firm but not overbearing with the aim of compliance (Steinberg et al., 2012). Pellerin's (2005) study, which applied Baumrind's (1966, 1967) parenting styles to the school setting, revealed that school agents that act in an authoritative fashion produce the most desirable results in students, thus illustrating the effectiveness of this approach. One other consideration is that this parenting style transcends demographics in terms of its influence on developing successful children (Baumrind, 2013; Shucksmith et al., 1995). This finding further validates the authoritative style that combines the desire to meet children's needs with the practice of holding children to high standards (Baumrind, 2013; Damon, 1989; Ihmeideh & Shawareb, 2014). Yang et al. (2014) highlighted the role that the combination of parental support, mediation, and intervention play in developing healthy technology habits in children (Ihmeideh & Shawareb, 2014; Özgür, 2016; Patrikakou, 2015). The authoritative style provides a framework for understanding effective parenting approaches within a digital learning environment.

Amidst the existing literature related to parenting styles and technology usage, parents self-report that this is the most widely used approach (Ihmeideh & Shawareb, 2014). Scholars identified effective strategies from authoritative parents. Those who practice this approach knew

the most about their children's online habits (Patrikakou, 2015). These parents communicated effectively about technology usage and set practical rules in place (Ihmeideh & Shawareb, 2014; Özgür, 2016). Authoritative homes employed appropriate mediation and restriction efforts without asserting too much control and taking autonomy away from children (Ihmeideh & Shawareb, 2014; Yang et al., 2014). Patrikakou (2015) reported that young people in this type of environment were the most responsible Internet users compared to other parenting styles. Fletcher & Blair (2013) observed that as parents become more sophisticated technology users, children tend to buy into parental guidance. As with parenting in general, the authoritative approach yields better results in teaching responsible technology habits than any other style.

Authoritarian parenting style. In contrast, the authoritarian parenting style represents a less nurturing approach (Baumrind, 1967). Guardians tend to be more demanding in their expectations of children, and blame them for their less than desirable behavior (Sorkhabi, 2005). In terms of control, Sorkhabi (2005) stated that these types of parents act in a more restrictive manner. Authoritarian parents act inflexible, as power moves in a top-down fashion. Communication tends to be one-directional from the parent to the child (Damon, 1989). The main aim of authoritarian parents is to develop obedient children (Damon, 1989). As a result, this approach may lead parents to shut off the opportunity to learn from their children, thus eliminating an opportunity to grow strategies that will help children navigate challenges. Correa (2014) refers to this as "brokering."

As applied to monitoring technology usage, authoritarian parents expect children to obey all rules without question (Ihmeideh & Shawareb, 2014; Ozgür, 2016). Parents seldom give explanations regarding online behavior expectations (Wong, Ho, & Chen, 2015). Özgür (2016)

cited that extreme control is not always effective in keeping young people away from risk while using the Internet.

Permissive parenting style. According to Baumrind (1968), permissive parents tend place few demands on their children. In this void of control, children learn to self-regulate their behavior (Baumrind, 1966). There is very limited parental control in these scenarios (Baumrind, 1968). In Sorkhabi's view (2005), because of this lax control parents tend to ignore the needs of their children. The result is a scenario where control lies in the hands of the children, and they dictate terms to parents. The permissive style is high in care, but low in expectations and accountability (Damon, 1989). In other words, caring for children takes precedence over making demands (Damon, 1989; Darling, 1999).

Unlike authoritative and authoritarian parents, permissive parents do not make many demands on technology practices and they tend to give in to their children's demands for technology time (Ihmeideh & Shawareb, 2014; Özgür, 2016). Typically, permissive parents avoid confrontation with regard to adolescents' technology habits (Wong et al., 2015). Children perceived their parents as being less and less authoritative and more permissive in relation to Internet usage as they grew older (Özgür, 2016; Patrikakou, 2015).

Negligent parenting style. The fourth and final parenting style, uninvolved or negligent, came about after the development of the original three (Baumrind, 2005). In these scenarios, parents are neither responsive, nor do they set high expectations for their children (Darling, 1999). Baumrind (2005) described these parents as being disengaged. This presents a challenging scenario to children, as those holding direct authority over them may not meet their basic needs. They may be neither productive students, nor digital citizens, as authority figures expect little from them.

In view of technology usage, the current research revealed that negligent parents have limited care, concern, or involvement over their children's online activities (Ihmeideh & Shawareb, 2014; Özgür, 2016; Wong et al., 2015). These parents pay little or no attention to what their children are doing online and offer no assistance. Sanders et al. (2016) reported that many parents neither monitor media time nor put rules in place for their children. One study highlighted the fact that nearly half of the participating households offered no rules or expectation for technology usage whatsoever (Hiniker et al., 2016). Adolescents, themselves, living in these environments reported that parents enforce no technology rules (Strasburger et al., 2013). This act of negligence can hamper a student's ability to be a successful online learner and can lead to Internet addiction (Lou, Shih, Liu, Guo, & Tseng, 2010).

Other parenting factors. Understanding some other related aspects of parenting that do not fall under a description of one of the four parenting types is important. The existing literature did connect punishment to parenting styles (Baumrind, 1968). The benefits of punishment include quick restoration of the relationship between parent and child after the fact and a less likely recurrence of an offense by a child in the future (Baumrind, 1968). Of the four parenting styles, mainly authoritative and authoritarian parents would exercise punishment as a way of correcting behavior. In terms of rebelliousness, children tend to rebel against authoritarian and permissive parenting styles (Baumrind, 1968). This may result in resentment stemming from conflict and further lead to withdrawal. This is primarily associated with the authoritarian style (Baumrind, 2012). Finally, addressing the role of power within this parenting typology is critical.

Baumrind (2005) summarized that the aim of all parenting is to control children by regulating behavior to comply with community norms. Power can be either coercive or

controlling, versus its counterpart: confrontational (Baumrind, 2012). Authoritarian parents tend to use power to coerce their children into expected behavior, while authoritative parents aim to use power to confront, which leads to competent and mentally healthy children (Baumrind, 2012). Authoritative parents aim to slowly release power to their children (Baumrind, 2012). In the permissive and uninvolved scenarios, the children retain the majority of the power.

Weaknesses of Baumrind's theory. Critics of Baumrind (1966) point to the fact that her studies utilized small, homogeneous samples (Shucksmith et al., 1995). Baumrind's (1966, 1967, 1968) studies also failed to look specifically at socioeconomic status and ethnicity as factors in parenting (Shucksmith et al., 1995). As such, social background may be an influence on the behavior of children and generally applying Baumrind's (1966, 1967) theory can be problematic (Darling & Steinberg, 1993). Darling and Steinberg (1993) also pointed out that Baumrind (1966, 1967, 1968) did not examine two-way communication as a separate variable. They believe that this parenting strategy may override the influence of parenting style. Furthermore, Darling and Steinberg (1993) pointed out the uncertainty about *why* the authoritative style is most effective, and they highlighted a need for continued empirical research in the area. Even with some of the criticism, Baumrind's (1966, 1967) theory has remained foundational in understanding the role of parenting style in developing socially adjusted, independent children.

Parenting style and socialization. One salient study pointed to socialization as the main responsibility of parenting (Baumrind et al., 2010). In terms of socializing children, the goal is to balance a child's needs for independence with protection. The family structure provides the context for this needed socialization to happen (Baumrind, 2012). Baumrind (1991) pointed to transmission of values between parent and child and said that even into adolescence, parents—

and not just peers—continue influencing their children. Providing connectedness to children in the family environment facilitated the transition to independence and helped form a healthy self-concept (Baumrind, 1991).

Authoritative parents tend to be the most effective in training independent, social, and responsible children. Baumrind et al. (2010) highlighted the fact that children tend to emulate authoritative parents. The family structure provides the primary socializing environment for children, and parenting style significantly influences their development (Imeideh & Aseel, 2014). This study aimed to understand how parents are socializing their children in a digital world. One of the main aims of parents is to train children who will function in a healthy and independent manner (Baumrind, 2012). The four parenting styles provided the lens for making sense of the lived experiences of parenting in a digital age.

Media Literacy Theory

Literacy instruction aimed at developing fluent readers has been a major focus of education for centuries (Simsek & Simsek, 2013). In today's educational settings, once students know the basic skills of reading and writing, they are introduced to a variety of digital tools that also require a certain level of digital literacy in order to use them effectively and appropriately (Lin et al., 2013; Simsek & Simsek, 2013). Digital exposure is not limited to adolescents. Experts sense that infants and toddlers are overexposed to screen time. Radich (2013) recommended no screen time for children under the age of two and no more than 30 minutes per day for children ages two to five. Attempts at computer literacy in the 1990s focused mainly on teaching how to use new, computer-based tools (Graber & Mendoza, 2013). Around that time, the International Society for Technology in Education developed technology standards for education known as the NETS (Graber & Mendoza, 2013).

By the 2000s, education technology moved away from simply teaching how to use tools and added an ethical aspect to media use. The emergence of Web 2.0 tools completely altered educators' approaches to media literacy (Simsek & Simsek, 2013). Web 2.0 tools allow for ease of creation and collaboration online. Currently, some scholars view this era as a historical high point for media influence on society (Lin et al., 2013). As students gain more access to information in various and novel forms, instructors face the task of teaching media literacy skills (Simsek & Simsek, 2013). This has motivated educators to begin aggressively addressing these skills (Potter, 2013). Schools feel a responsibility to teach the ethical use of technology (Graber & Mendoza, 2013). Moving forward in the era of new media tools, there is much uncertainty and debate over how best to define and address this evolving concept (Maksl, Ashley, & Craft, 2015; Potter, 2013).

Media literacy theory explained. In the early 2000s, Potter (2004) stood out as one of the main scholars in the realm of media literacy theory. He pulled together existing ideas on media literacy education and proposed a model for media literacy. Additionally, Sharrer and Ramasubramanian (2015) discussed Potter's belief that an emphasis on media literacy led to the building of technical competencies. The four factors of the model include: knowledge structures, personal locus, competencies and skills, and information processing tasks (Maksl et al., 2015; Potter, 2004). In addition to Potter's (2004) four factors of media literacy theory, Simsek and Simsek (2013) added the following dimensions: assembling knowledge, evaluating information, and navigating in new ways. Lin et al. (2013) broadly defined media literacy as the access to and utilization of media. They developed the notion that Web 2.0 tools have increased the ability for more people to be producers of and participators in media. Other authors expanded media literacy theory to include strategies for digital citizenship (Simsek & Simsek, 2013). Potter

(2013) described the complexity of digital media use. Media literacy theory provides a framework to answer questions about the nature and purpose of digital media (Potter, 2013).

The four factors. Knowledge, the first of Potter's (2004, 2013) four factors in his framework, moves from simple to complex concepts and provides a context for understanding media (Maksl et al., 2015; Potter, 2013). The second of Potter's (2004) factors, personal locus, deals with an individual's goals for media usage and the way these goals filter through information that is deemed essential or not (Potter, 2004, 2013). This particular skill plays an important role by giving perspective and meaning to digital media usage (Martens, 2010; Potter 2004, 2013). Competencies and skills, the third factor, are acquired and developed early in life and can continue to grow as one matures (Potter, 2004, 2013). These essential skills include analysis, evaluation, grouping, inducting, deduction, synthesis, and abstracting (Potter, 2004). Information processing, the fourth factor, includes filtering, meaning matching, and meaning construction (Potter, 2004). As all of these skills outlined in Potter's (2004, 2013) framework improve, so too does one's media literacy. In essence, skill development leads to literacy.

Theory of media literacy and adolescents. From a developmental perspective, adolescents are ready to learn the moral side of media usage beginning in middle school (Graber & Mendoza, 2013). Certain ideas can facilitate effective media literacy acquisition. A multi-modal approach that appeals to multiple intelligences is the most effective instructional strategy. Students also thrive when given opportunities for hands-on learning (Graber & Mendoza, 2013). Graber and Mendoza (2013) described the current generation of adolescents as a participatory culture that likes to produce original work. Traditional, lecture-based approaches are not effective. Adolescents benefit from relevant, student-centered approaches to media literacy

instruction. Media literacy theory provides a framework for understanding how to teach discernment with new technologies (Simsek & Simsek, 2013).

Protectionism and mediation. Potter (2013) believes in an intervention model for developing media literacy. The three parental intervention models he explained include: restricting access, co-viewing, and instruction. Mediation is another term used to describe these interventions. Three types of mediation are: restrictive (controlled), active (instructive), and co-use (shared media) (Nikken & Jansz, 2014). Rather than completely sheltering young people from access to digital media, active mediation emerged in the research as being the most effective approach. Active mediation initiates a conversation with young people and allows parents to explain their views and rationale with the ultimate goal of developing independence (Hiniker et al., 2016; Nikken & Jansz, 2016).

Application to the current study. The elements of media literacy theory that connect to education are critical to this study because young people cannot be responsible digital citizens until they are literate in new media tools. Research points to the role that media literacy plays in developing modern citizens with a strong sense of digital citizenship (Martens & Hobbs, 2015; Preston et al., 2016). Young people do not become media literate after a single lesson. Rather, media literacy is built through ongoing conversation aimed at growing key knowledge and requisite skills while applying them in the process (Greene et al., 2015).

Related Literature

Parenting style theory and media literacy theory provided a background for exploring the key issues related to this study. Many sources explored the broad nature of parenting children growing up in a digital era and 21st century learning. The existing literature also provided an

overview of one-to-one learning environments including details about both benefits and areas of concern. Several scholars wrote about the meaning of and need for digital citizenship.

The Nature of Parenting Children Growing Up in a Digital Era

Students currently enrolled in secondary schools fall between Generation Y (those born between the early 1980s and the early 2000s) and Generation Z (those born between the early 2000s and the present) (Bolton et al., 2013; Eastman et al., 2014; Thompson, 2013; Turner, 2015). Terms originally used to describe members of Generation Y included: digital native, digital immigrant, or Net Generation; however, they are now known as millennials (Dotterer et al., 2016; Gurung & Rutledge, 2014; Patrikakou, 2015). Experts refer to members of Generation Z as post-millennials (Bassiouni & Hackley, 2014).

Generational Divides and Technology Usage

There are different experiences with technology from one generation to the next, but the dividing lines are not always clear (Hiniker et al., 2016; Patrikakou, 2015). Both millennials and post-millennials embrace diversity, thrive on collaboration, and pursue social activism (Bolton et al., 2013; Turner, 2015). Those coming from mostly urban settings are easily bored and embrace the notion of fun (Bolton et al., 2013; Thompson, 2013). Young people think and process information differently than older generations, a quality that is attributed to them being hyper-connected (Thompson, 2013; Turner, 2015; Yang et al., 2014). Further, they are connected because technology is more readily available than ever before (Patrikakou, 2015; Turner, 2015). Early childhood for millennials and post-millennials involved digital exposure and access to mobile devices unlike any other previous generation (Bassiouni & Hackley, 2014; Lauricella et al., 2015; Sanders et al., 2016). The post-millennials represent the first generation to experience pervasive, or ubiquitous, mobile technology (Turner, 2015). On average, these children spend

eight to nine hours per day on screens (Turner, 2015). With the number of available online tools increasing, the need for media literacy in youth is elevated (Radich, 2013).

Today's adolescents are more comfortable and more adept in a digital environment than their parents (Bassiouni & Hackley, 2014; Felt & Robb, 2016). The Pew Research Center (2013) reported that 95% of American teenagers are accessing the Internet on a regular basis, most via mobile devices (Lauricella et al., 2015; Madden et al., 2013). To demonstrate this connectivity, a recent study revealed that parents reported that 63% of their pre-teens and teenagers have their own cellular phones (Lauricella et al., 2016). This intense connectivity to devices illustrates how today's young people express a desire to be connected socially, and they find this connection online (Felt & Robb, 2016). Children may use technology as an escape to a fantasy experience as a way to cope with life's challenges (Turner, 2015).

Bassiouni & Hackley (2014) stated that no definitive empirical findings exist with regard to the impact of an increased digital environment on the overall health of adolescents. Other researchers have concluded that both the positive and negative aspects of technology have profoundly influenced these generations (Özgür, 2016; Patrikakou, 2014; Turner, 2015). Turner (2015) reported that some parents are not holding their children accountable with regard to their technology usage (Turner, 2015), and others struggle to find the best way to help them balance their time (Hiniker et al., 2016; Sanders et al., 2016). Parents also seem to more readily recognize the moral and ethical implications of online activities than their children (Flores & James, 2013). Children need to be encouraged to unplug and pursue other activities such as reading and playing (Bassiouni & Hackley, 2014; Radich, 2013).

Texting and Social Media as Identity Amongst Adolescents

Today's younger generations spend a significant amount of time on social media sites. The United States government has established that the minimum age for students to lawfully gain access to social media is 13 (What age should, 2016). Young people predominantly use social media for communication and entertainment (Bolton et al., 2013). A major risk is that excessive time spent on social media can lead to a host of negative emotions, including envy and hatred (Bolton et al., 2013). Bolton et al. (2013) pointed to the possibility of teenagers struggling to develop and maintain intimate relationships in the context of social media usage. Mitchell (2016) expressed the need to teach young people to utilize social media for positive social gain and not just as a tool for communication and entertainment. Similarly, students' constant use of texting, both in and out of the school environment, represents a distraction from focusing on other tasks (Anderson & Rainie, 2012).

STEM Education

This pervasive use of adolescent technology parallels the emergence of programs focusing on Science, Technology, Engineering, and Math (STEM) education. In recent years, many schools implemented STEM in an effort to develop students that are prepared to succeed at both the graduate level, as well as in a professional setting (Eisenhart, Weis, Allen, Cipollone, Stich, & Dominguez, 2015). The United States educational system faces a significant challenge in developing students prepared to work in the growing STEM industry (Erdogan & Stuessy, 2015). As cited in the Horizon Report, the Bureau of Labor and Statistics projects 30% job growth in science, technology, engineering, and math by the year 2021 (Adams, Freeman, Giesinger, Cummins, & Yuhnke, 2016). The creation of jobs requiring advanced science and

math training is outpacing the development of potential employees in educational institutions (Means et al., 2016).

Federal mandates to increase STEM education are arising based on the demand to train students to fill spots in the ever increasing technology industry, an increase first evidenced in the in the second half of the 20th century (Eisenhart et al., 2015; Erdogan & Stuessy, 2015; Scott, 2012). The reauthorization of the Elementary and Secondary Education Act included an added emphasis on science education (Erdogan & Stuessy, 2015). Roots of STEM education clearly go back to the 1990s, and early indicators of the focus on STEM education go as far back as the Sputnik era in United States history (Eisenhart et al., 2015).

The multiple benefits emerging from existing studies generate an appeal for a continued focus on STEM education. Recent studies indicated that STEM schools produced students that perform higher on standardized tests, exceed minimum academic expectations, have strong attendance rates, and are more successful in the university setting as compared to schools lacking STEM programs (Erdogan & Stuessy, 2015; Means et al., 2016; Scott, 2012). Means et al. (2016) also indicated that schools with an intentional STEM focus generated multiple benefits compared to schools with similar demographics that did not incorporate a STEM focus. Means et al. (2016) also found that STEM students progress through a more aggressive offering of math classes, are more involved in related, after-school activities, and have a greater chance of pursuing a STEM-related career.

Currently, schools in the United States utilize various models of STEM education ranging from selective schools via an application process to a traditional school model that incorporates STEM electives (Eisenhart et al., 2015). Many effective STEM schools focus on a student-centered and project-based approach to learning (Eisenhart et al., 2015). The primary goals of

STEM education include the following: creative thinking, problem solving, leadership, and innovation (Erdogan & Stuessy, 2015). These schools also place an emphasis on college and career readiness, especially in areas related to STEM (Erdogan & Stuessy, 2015). Schools continue to invest heavily in technology. Future Source Consulting (2016) recently reported that schools worldwide increased annual spending on educational technology by 7% in 2015 to a total of 15 billion dollars. Existing trends and research indicate that technology integration, as well as proper teacher training in the classroom, is a necessity for 21st century schools.

Twenty-first Century Learning

STEM education coincided with the emergence of an educational technological movement commonly referred to as 21st century learning. When President Bush signed the No Child Left Behind Act (NCLB) of 2002, he set the tone for 21st century education (Kaufman, 2013). NCLB, coupled with Common Core State Standards, provided the framework for learning in the modern era. Skills required in the 21st century extend beyond a stand-alone class, as they permeate every aspect of the educational system (Kaufman, 2013). Additionally, NCLB created an added emphasis on technology in education for the sake of improving academic success, and not merely for the sake of having technological tools present (NCLB, 2002).

A major aspect of NCLB is that it made computers an integral part of the future of education (Lowther, Inan, Strahl, & Ross, 2012). In terms of digitally literacy, NCLB set an expectation that students would be digitally proficient upon entrance into high school (Lowther et al., 2012). One of the realities of 21st century learning is that the nature of literacy is changing due to access to both print and digital content (Drew, 2012; Leu et al., 2013). This also necessitates a focus on new media for adolescents in an educational setting (Flores & James, 2013). These new tools have led to the creation of digital literacy standards in the school setting

(Drew, 2012; Leu et al., 2013). In fact, the new Common Core State Standards detail these new online literacy skills (Drew, 2012; Leu et al., 2013).

Multiple scholars have attempted to describe the ideal 21st century learning environment. According to recent research, today's effective classrooms allow for authentic learning experiences (Kaufman, 2013; Zheng et al., 2014). Other descriptors outlined by Kaufman (2013) include creativity, communication and collaboration, and skill development for career preparation. However, educators cannot assume that students intuitively know how to use the tools presented to them, and they must explicitly learn how to use them (Gurung & Rutledge, 2014). Teachers emphasize such basic skills as proper etiquette while communicating online (Anderson & Rainie, 2012). Ribble (2012) also highlighted the importance of teaching digital citizenship in 21st century schools. Many researchers tied the computer to the new standards for modern education (Wolfe, 2012; Leu at al., 2013). Current technology develops 21st century skills in a significant way.

Overview of One-to-One Learning Environments

As the computer ushered in 21st century learning, many K-12 schools began integrating technology at a rapid rate (Hatakka et al., 2013; Zheng et al., 2014). Currently, the number of one-to-one programs continues to increase (Zheng et al., 2016). Scholars cited the value of improved student learning as a key motivation for moving to a one-to-one student to computer environment (Swallow, 2015; Zheng et al., 2014). One-to-one schooling environments are defined by the availability of one computing device per student at any given time at both school and home. One-to-one learning is also commonly referred to as ubiquitous learning (Broussard, Hebert, Welch, & VanMetre, 2014; Gurung & Rutledge, 2014). The existing literature provided insight into the historical precedence for one-to-one learning environments, strategies for

integration, the pros of integration, and the associated challenges of extensive student use of computers in school (Oliver et al., 2012; Swallow, 2015; Topper & Lancaster, 2013).

Historical Precedence for Computers in Education

Computers emerged as a novelty in schools as early as the 1970s and 1980s (Thornburg, 2014). The 1990s brought experimentation and uncertainty about the role of computers into the future of education (Bebell & Burraston, 2014). A monumental shift occurred in the mid 1990s when the Internet began emerging in schools, necessitating a need for clear educational outcomes tied to computer usage (Wolfe, 2012). As a result, the National Educational Technology Standards (NETS) emerged as the first framework of its kind (Davies & West, 2014). Consequently, the NETS and legislation of the early 2000s, including NCLB (2002), brought forth the first one-to-one program (Davies & West, 2014; Zheng et al., 2016). Wolfe (2012) believes that one-to-one programs will be the perpetual future of technology in education.

Richardson et al. (2013) noted that some educators view technology in schools as a panacea for systemic problems. The move to a one-to-one student to computer learning environment brings benefits like improved academics, as well as risks such as distractibility. More specifically, many wonder about the effects of screen time on proper neurological and social development (Carr, 2010; Thompson, 2013). While the majority of stakeholders (including educators, students, parents, policy makers, and the public at large) in schools today agree that technology is a necessary component of every classroom, there is much debate about how to most effectively integrate technology (Oliver et al., 2012; Swallow, 2015; Topper & Lancaster, 2013).

Although the academic benefits of such use of technology are established, questions about the potential challenges persist. What are the long-term mental, social, and physical risks

of placing students in front of computers for so much of the school day? What can educators and parents do to maximize the learning value of technology in the classroom in a balanced fashion? A historical look at one-to-one learning environments provides insight into the rise of computers in the classroom and the rational for adopting devices. It also helps provide understanding about why educators are prone to adopt devices despite mixed research about the overall benefits. Finally, a historical perspective on computers in education helps to identify the risks that parents may face as children bring devices into the home setting.

Schools continually look for ways to harness technological tools to increase student learning. Multitudes of historical studies exist in the field of one-to-one student to computer programs. Researchers widely recognized the Maine Learning Technology Initiative (MLTI) as the first official, one-to-one program in the United States (Richardson et al., 2013; Zheng et al., 2014, Zheng et al. 2016). The movement toward one-to-one programs is gaining momentum (Hatakka et al., 2013; Zheng et al., 2014). Some researchers cited the lack of empirical studies in the field of one-to-one technology programs especially relating to potential problems (Hatakka et al., 2013; Willocks & Redmond, 2014). Others revealed the critical need for current education to develop 21st century learners that could think critically on their own, create new content using technology, and communicate effectively with the most current tools (Bebbell & Burraston, 2014; Brousssard et al., 2014; Ditzler et al., 2016). Similarly, researchers found that one-to-one learning environments fostered higher student engagement (Liu et al., 2013; Richardson et al., 2013). A historical precedent has been set for the value of studying schools with one-to-one student to computer programs, and many issues still need to be explored in future research.

The Value of Learning with Computers

No clear consensus has emerged regarding the benefits of one-to-one learning environments (Zheng et al., 2016). In their meta-analysis of literature about one-to-one learning environments, Zheng et al. (2016) cited mixed prevailing views. The literature in general presents views that range from touting the transformative power of computers in the classroom to views that demonstrate concern over the neurological impacts of increased technology integration in schools (Oliver et al., 2012; Swallow, 2015; Topper & Lancaster, 2013).

Though few object to the presence of technology in the classroom, educators and parents alike are looking for the right model and accompanying philosophy undergirding effective technology integration. Early research on computers in education by Molnar (1997) provided an overview of the history of technology integration. Molnar (1997) summarized that benefits included varied instructional approaches and improved individualized learning. The ability to differentiate effectively stands out as one of the most viable reasons for integrating technology (Lynch & Redpath, 2014; Richardson et al., 2013).

Goals of 21st Century Education—Harnessing the Benefits of Technology

The movement to improve student learning in the 21st century begins with clearly established and articulated goals. The aim of K-12 educational is to prepare graduates for university level learning and the workforce (Ditzler et al., 2016; Lowther et al., 2012). University and employment trends will dictate what these skill sets will look like. Another major goal of education is allowing students to be creators and contributors in the realm of academia (Hatakka et al., 2013; Lynch & Redpath, 2014). This represents a shift in thinking, because for decades, teachers viewed students as vessels to fill with the knowledge passed down from previous generations (Zheng et al., 2016).

By the time students reach high school, educators expect them to achieve the highest levels on Bloom's Digital Taxonomy (Introduction to the SAMR Model, 2015; Hilton, 2016). Similarly, as more and more educators embrace the Technological Pedagogical Content Knowledge framework, student learners experience effective technology use with effective teaching approach and relevant content (Hilton, 2016). In terms of goals that relate to student technology use, technology integration for the sake of technology is not the be-all and end-all. As technological advancements automate more features of classroom life, these advancements assist in the learning process.

Student Needs within One-to-One Learning Environments

Understanding the wide range of student needs allows teachers to reach the previously discussed 21st century educational goals. At its core, the current educational system struggles to motivate learners; however, creating an engaging learning environment via one-to-one learning improves student motivation (Hatakka et al., 2013; Karsenti, & Fievez, 2013; Mango, 2015; Topper & Lancaster, 2013; Zheng et al., 2014). Wiggins (2014) recently spent two days following students as an observer in a typical high school setting. He found that students sit most of the school day, a practice that can be exhausting (Wiggins, 2014). Wiggins also observed that students are simply listening to teachers for the vast majority of their school day. Existing research highlighted the idea that one-to-one learning meets student needs by providing higher levels of engagement (Liu et al., 2013; Richardson et al., 2013).

Another major need of students relates to parental support (Lauricella et al., 2015; Ozgür, 2016). Parents are the primary educators of their children, and they shoulder the responsibility to create a home environment that values education. Students benefit from a home environment that meets their basic needs, and in the absence of this, schools must rise to the challenge. This

study shed even more light on the critical role that parents play in meeting the needs of their children in a one-to-one learning environment (Lauricella et al., 2015; Ozgür, 2016).

Mobile Devices in One-to-One Learning Environments

Certain studies examined the effects of laptops, specifically, on one-to-one learning environments (Hatakka et al., 2013; Richardson et al., 2013; Topper & Lancaster, 2013; Zheng et al., 2016). Other studies looked specifically at mobile technology in schools (Ditzler et al., 2016; Liu, Navarrete, Scordino, Kang, Ko, & Lim, 2016). The iPad™ is a popular mobile device for many schools providing expanding educational content via app development, and the device is an affordable option (Ditzler et al., 2016; Jones & Strudler 2012; Mango, 2015). IPads™ differ from laptops in their ease of use and portability. In the early part of the 2010s, the iPad™ represented nearly 75% of the computing devices used in schools everywhere (Karsenti & Fievez, 2013).

In recent years, Google Chromebooks™ have become a formidable option for one-to-one learning environments as sales indicate that Chromebooks™ may be challenging the iPad™ as the top computing device in schools (Molnar, 2015; Wan, 2015). Lynch and Redpath (2014) examined an Australian school that introduced iPads™ for the first time and found that their use as mobile technology in a one-to-one learning environment brought the benefits of increased student motivation, ease of use, limited support issues, and the availability of apps for content creation. Mobile technology provides an effective method for moving forward the aims of 21st century education, and many schools choose mobile devices over traditional laptops.

Integration Factors of One-to-One Learning Environments

Many modern schools have already integrated, or plan to integrate, a one-to-one ratio of students to computers to facilitate digital learning. Recent studies cited the extensive benefits of

integrating one-to-one learning environments (Bebell & Burraston, 2014; Broussard et al., 2014; Ditzler et al., 2016; Liu et al., 2016). As schools feel compelled to adopt the one-to-one model, they have a base of literature that provides an analysis of the multitude of integration factors. The existing literature addresses the financial impact of major technology expenditures on schools (Topper & Lancaster, 2013). Researchers also point to the importance of implementing technology programs with much thought given to the quality of the integration plan itself (Topper & Lancaster, 2013). Other integration factors include the importance of strong leadership, robust professional development, and responsible, long-term, fiscal planning as indicators of success in one-to-one learning environments (Oliver et al., 2012; Topper & Lancaster, 2013).

Multiple researchers recognized the critical role that teachers play in successful integration of one-to-one learning environments (Oliver et al., 2012; Patrikakou, 2015). Teacher openness to change stood out as one of the most important keys to success. Although some teachers resisted the integration of one-to-one programs, this resistance diminished over time (Swallow, 2015; Zheng et al., 2016). In their meta-analysis, Zheng et al. (2016) also noted the importance of teacher training and ongoing support in effective one-to-one learning environments. The existing literature established a case for the critical role educators play in ensuring that technology integration works.

Benefits of One-to-One Learning Environments

The key factors that bring about positive academic change in one-to-one learning environments include effective school leadership, teacher support, parent buy-in, technical support, and professional development (Oliver et al., 2012; Topper & Lancaster, 2013). Richardson et al. (2013) reported mostly positive findings with one-to-one initiatives in their

review of existing programs worldwide. Similarly, Zheng et al. (2016) reported many benefits in their meta-analysis on laptop use in schools including: improved school-to-home relationships, a student-centered, individualized approach to learning, autonomy, increased project-based learning, varied learning activities, authentic learning, as well as higher student engagement and motivation. More specifically, one study showed that one-to-one learning environments improved academic achievement (Zheng et al., 2014). Teachers found that their workload tended to decrease once immersed in a one-to-one program (Hatakka et al., 2013).

From the student experience, several benefits emerged. Multiple studies cited improved motivation to learn, higher levels of engagement, and an appreciation for the choices in how students work brought about by increased technology (Hatakka et al., 2013; Karsenti, & Fievez, 2013; Topper & Lancaster, 2013; Zheng et al., 2014). Along with the increase in student engagement, research pointed out higher levels of creativity and fun in the learning process (Karsenti, & Fievez, 2013; Zheng et al., 2014).

In terms of day-to-day tasks, Zheng et al. (2014) revealed that students had significantly better access to information via their computing devices (Topper & Lancaster, 2013). One-to-one learning environments also brought better delivery process for content and resources (Hatakka et al., 2013). Increased access allowed for more sharing of information and interaction in and out of the traditional classroom environment (Hatakka et al., 2013; Karsenti, & Fievez, 2013). Zheng et al. (2014) also highlighted improvement in differentiated classrooms and increased autonomy amongst students. Perhaps the most notable and important benefits came in the form of positive academic gains in the core areas of language arts and mathematics (Hatakka et al. 2013; Karsenti, & Fievez, 2013). Students also benefitted from improved assessment tools

themselves (Karsenti, & Fievez, 2013). New assessment tools allowed for immediate response and feedback via automated assignments available online.

All of the aforementioned benefits resulted in noticeable academic strides in schools that integrated one-to-one learning environments. Other indicators of academic success included improved test scores and better writing for authentic audiences accessible via computing devices (Zheng et al., 2014). This led to students that were well prepared for university and professional life after high school (Topper & Lancaster, 2013). The existing literature provided evidence for the academic benefits of one-to-one learning environments.

Areas of Concern

The existing research, however, also highlighted some areas of concern. This study addressed the phenomenon of the parent perspective on the digital lifestyle of pre-teens and teenagers. This included a discussion of both the benefits and risks brought about by a one-to-one learning environment. Student distractibility while on their computing device stood out as being a major concern (Broussard et al., 2014; Heitner, 2016). Other major risks included the overall physical, social, and emotional wellbeing of adolescents, academic integrity, and the blurring of technology use for personal and academic reasons (Hatakka et al., 2013; Radich, 2013; Wartella et al., 2013; Yang et al., 2014). Still other issues include student discipline, the need for digital literacy, and addiction to devices. This section discusses the risks discussed in the existing literature. (Zheng et al., 2014).

Screen time and neurological development. With the emergence and adoption of more one-to-one programs, some see potential harm in the increased student screen time, or more specifically, time spent online (Tuukkanen & Wilska, 2015). The Kaiser Family Foundation examined trends in adolescent screen time (Rideout et al., 2010). The study reported that

average screen time for children has increased one hour per year between 2005 and 2010, culminating in eight to nine hours a day. More recent studies confirmed that average screen time falls at eight hours per day (Hart & Frejd, 2013; Strasburger et al., 2013; Turner, 2015). Graber and Mendoza (2013) reported that today's youth spend more time on screens than they do being engaged with their parents.

Sanders et al. (2016) studied the struggles that parents experience with regard to youth screen time by surveying 615 parents with children ranging from age three to 17. Using a correlational method, their results indicated that positive parenting and behavior control directly related to a decrease in screen in youth screen time (Sanders et al., 2016). The findings from the study identified parent struggles with regard to limiting youth screen time (Sanders et al., 2016). Another study, by Wartella et al. (2013), revealed that the vast majority of parents perceived that children spend about half their time on a device engaged in activities with no academic benefits.

In terms of proper neurological development, several issues emerged in the existing literature. Turner (2015) cited lack of time to concentrate, lack of time spent writing, and lack of time spent reflecting, and determined that this unfocused attention is due to increased multitasking. Multitasking creates a challenge for teenagers to stay focused and to avoid distraction (Felt & Robb, 2016). Felt and Robb (2016) also pointed to texting during academic time as being problematic for students. Similarly, existing research revealed a concern about their children becoming less intellectual (Thompson, 2013). A recent study by The Pew Research Center highlighted the need amongst adolescents of the millennial generation for instant gratification as well as quick, shallow-decision making as concerns (Anderson & Rainie, 2012). Some fear that the brain is not able to develop deep thinking as effectively with overuse of digital technology (Thompson, 2013).

Physical health. In the literature connecting technology and adolescents, health concerns emerged. Some scholars expressed overall concerns about the health of children (Strasburger et al., 2013; Thompson, 2013). Specific concerns cited by researchers included: obesity, lack of outside play, irregular sleep patterns, inability to focus and pay attention, and the psychological and physical effects of Internet addiction (Radich, 2013; Sanders et al., 2016; Strasburger et al., 2013; Thompson, 2013; Wartella et al., 2013; Yang et al., 2014). Felt and Robb (2016) reviewed scholarly research about Internet addiction, and although it is difficult to determine the nature of addiction, they were able to identify "problematic media use" as a concern amongst adolescents (p. 5). Similarly, existing research reflected that parents fear the negative effects of video games, a phenomenon labeled as Internet Gaming Disorder. Parents also expressed concern over time spent being sedentary, as well as the negative effects on socialization (Felt & Robb, 2016; Wartella et al., 2013).

Socialization. Some scholars wonder about the negative social effects of prolonged time spent online on the social development of young people (Radich, 2013; Turner, 2015). They showed that in some cases, increased technology use led to a decrease in face-to-face interactions and less-social people (Hatakka et al., 2013; Patrikakou, 2015; Turner, 2015; Tuukkanen & Wilska, 2015). Over-dependence on technology may alter how young people perceive real life (Yamamoto & Ananou, 2015). This has led to cases of loneliness and depression amongst some teenagers (Özgür, 2016). Adolescents need opportunities for conflict resolution in a real setting (Turner, 2015). The issue of balancing time online is a difficult one as young people feel an immense social pressure to be connected online with their peers, and disconnecting may make teenagers feel like social outcasts (Bolton et al., 2013). Parents expressed concern over the

possibility of video game exposure negatively influencing their children as they may emulate the violence witnessed while playing (Wartella et al., 2013).

Cyberbullying. Multiple scholars have cited cyberbullying as being a concern with regard to youth and their technology usage (Bolton et al., 2013; Özgür, 2016; Patrikakou, 2015; Yamamoto & Ananou, 2015). This is a prime example of how teenagers may use technology the wrong way outside of the school setting (Ribble, 2012). Students may demonstrate cyber-aggression and lack of empathy, resulting in bullying (Felt & Robb, 2016; Yamamoto & Ananou, 2015). The research summarized that online offenders do not necessarily see or experience the effects of cyberbullying in person, and the offenders may not even be aware of their aggression (Turner, 2015). This phenomenon may exacerbate the issue. Forms of cyberbullying may include loss of privacy and criminal activity (Bolton et al., 2013). Texting containing sexual innuendo or content (aka "sexting") sometimes accompanies cyberbullying (Jones & Mitchell, 2015). The increased access to technology presents more opportunities for cyberbullying, among other issues, to occur within teenage communities.

Blurring of Home and School Technology Use

Current research reveals that students demonstrate an inability to differentiate between technology as a tool for learning and as a tool for play (Zheng et al., 2014). Using the same technological tools at school and home caused confusion for students. Home and school technology use may be markedly different, and younger online learners struggle to discern the difference (Gurung & Rutledge, 2014). Adolescents tend to view learning at school and home in completely different contexts (Gurung & Rutledge, 2014). The blurring of lines between school and home has grown more pronounced in the midst of one-to-one learning environments. Pre-teens and teenagers today experience a pervasive use of technology; this exposure creates a

challenge for children to differentiate between technology as a tool for learning and technology as a toy (Gurung & Rutledge, 2014).

Judicious Technology Integration

The literature regarding one-to-one learning environments spoke to judicious technology integration as being a necessity for successful one-to-one learning environments. Radich's (2013) work focused on clearly defining interactive media and discussed appropriate integration of technology into the classroom. Technology does not replace real-life learning opportunities. Radich's (2013) article summed up the importance of judicious integration thusly: "The appeal of technology and the steady stream of new devices may lead some educators to use technology for technology's sake, rather than as a means to an end" (p. 4). Educators in a one-to-one learning environment bear the responsibility of making judicious technology decisions by ensuring that technology integration is purposeful.

Digital Citizenship

Many scholars have attempted to give a clear definition to digital citizenship. Mike Ribble (2004, 2009, 2012) emerged as one of the recurring authors on the topic of digital citizenship instruction. Ribble (2009) defined digital citizenship as the "norms of appropriate, responsible behavior with regard to technology use" (p. 3). Several other researchers attempted to give digital citizenship a clear definition. From a broad perspective, digital citizenship represents a method of teaching young people the appropriate use of technology (Radich, 2013). Teaching adolescents responsible technology use involves setting clear expectations for appropriate behavior while online (Ribble, 2012). Radich (2013) defined a critical aspect of digital citizenship as "an understanding of the use, abuse, and misuse of technology as well as

the norms of appropriate, responsible, and ethical behaviors related to online rights, roles, identity, safety, security, and communication" (p. 10).

Ribble's (2009) detailed explanation of digital citizenship included four factors: awareness, guided practice, modeling and demonstration, as well as feedback and analysis. Ribble (2009, 2012) also spelled out nine essential elements of digital citizenship. Simsek and Simsek (2013) stated that digital citizenship, at its core, deals with expected behavior (or the norm) while online. Related topics range from digital access to literacy and to overall health and wellness (Ribble, 2009). Digital citizenship formation also includes helping young people understand the concept of creating a digital footprint and creating and maintaining a healthy online reputation (Ribble, 2012; Simsek & Simsek, 2013).

Jones and Mitchell (2015) pointed out the difference between media literacy and digital citizenship. Broadly defined, digital citizenship does not necessarily incorporate teaching students how to master the basics of using and navigating digital media; rather, digital citizenship ought to focus on equipping adolescents to treat others respectfully while online and to engage the world civically (Jones & Mitchell, 2015). Jones and Mitchell (2015) provided specific rationale for their definition of digital citizenship. They suggested that media literacy and associated skills are critical for youth; however, they only lay a foundation for responsible use. Jones and Mitchell (2015) also reflected on the fact that many attempts at digital citizenship instruction only aim to prevent cyberbullying and other dangerous behaviors.

The ideal digital citizenship education includes teaching tolerance and respect, a focus on the common good, and an emphasis on social justice. Simply avoiding harm is not sufficient (Jones & Mitchell, 2015; Mitchell, 2016). This generation of digital learners lacks a fully developed ability to engage and shape their online, civic world (Mitchell, 2016). Effective

digital citizenship instruction provides youth with the ability to think critically and to innovate (Mitchell, 2016). For the purpose of this study, the term digital citizenship will broadly include all three aspects laid out by Jones and Mitchell (2015): (a) basic media literacy education; (b) instruction in avoiding dangers online; and (c) a proactive empowering of students to be agents for positive change in an increasingly online world. Effective digital citizenship instruction gives students boundaries and empowers them to influence the technical world they live in (Mitchell, 2016).

Ribble (2012) stated that the increase in one-to-one programs in the educational setting provides an impetus to teach responsible technology use. He added that a clear process for teaching responsible technology use must be in place, as students may not learn these essential skills otherwise. Similarly, Richardson et al. (2012) pointed to the lack of focus on digital citizenship within one-to-one learning environments. The overall goal of teaching digital citizenship is to understand both the opportunities and responsibilities that come with the online world (Hiniker at al., 2016; Kiger & Herro, 2015; Preston et al., 2016). Multiple researchers indicated that young people demonstrated a need to learn to balance their technology usage (Hiniker et al., 2016; Kiger & Herro, 2015).

Digital citizenship clearly stood out as a challenge for students in existing studies (Ribble & Bailey, 2005a). Students demonstrated a glaring lack of technology knowledge and its appropriate use (Ribble, 2012). Ribble and Bailey (2005a) stated that this topic must be a top priority for schools. One of the five National Educational Technology Standards (NETS) for educational leaders highlighted digital citizenship formation (Richardson et al., 2012). Ribble (2009) substantiated the fact that the NETS make digital citizenship a top priority. Ribble and

Bailey (2005a) also shared that effective digital citizenship practices teach children how to use tools prior to distributing them to teenagers (Ribble & Bailey, 2005a).

Building overall strong digital literacy in young people can help prevent shortcomings, and focusing on the moral and ethical nature of online behavior is an integral aspect of digital citizenship instruction (Preston et al., 2016). Flores & James (2013) determined that carefully developed and selected curriculum could facilitate the development of making sound choices based on clear principles. They also pointed to the importance of developing moral ways of thinking through both instruction and practice.

As students enter into a one-to-one learning environment, adults can equip them with the skills needed to navigate the digital world in a healthy, balanced, and responsible fashion. With technology use by adolescents consuming increasing amounts of time, adults can help guard against destructive tendencies, addictions, loneliness, deteriorating physical health, and more by modeling healthy digital citizenship (Hart & Frejd, 2013; Lauricella et al., 2015; Strasburger et al., 2013). There is a very real risk that the tools that can benefit education can also derail learning if proper boundaries are not in place. Patoine, Whitman, and Goldberg (2008) addressed adolescents and technology in their research and identified that sometimes, children do not know how to manage screen time and adhere to healthy usage habits. These researchers also found that students struggle to differentiate what is and is not appropriate, as well as when they have simply spent too much time online.

Role of Parenting in Raising Responsible Digital Citizens

The existing literature pointed to the major role that parents play in training responsible digital citizens (Kiger & Herro, 2015). The literature specifically revealed that the most effective training by parents begins at the age when students start using computers (Dotterer et al., 2016;

Hollandsworth et al., 2017; Ribble, 2012). As related to the theoretical framework for this study, media literacy education relates to digital citizenship formation (Preston et al., 2016). Existing research pointed to the significant role that parents could play in influencing their children's overall technology use (Kiger & Herro, 2015; Yang et al., 2014). Children most likely will not learn to be digitally responsible unless those in authority implicitly teach them to do so (Graber & Mendoza, 2013). Thorough training of children does not simply include the use of technological tools alone, but rather, it must include a focus on the ethical use of such devices (Graber & Mendoza, 2013).

Many parents lack key knowledge and expertise in navigating a digital world—skills that their children possess (Hiniker et al., 2016). Conversely, parents that raised responsible digital citizens were technically savvy themselves. Fletcher and Blair (2014) highlighted the connection between parents' own education level in this area and the implications on their children. These technically savvy parents were viewed in a more favorable light by their children (Fletcher & Blair, 2014).

As children move into a secondary school environment, parents can begin focusing on developing moral thinking with regard to technology use (Kiger & Herro, 2015). Graber and Mendoza (2013) identified the ages of 10 to 15 as being ideal for the introduction of this type of teaching. Problems do arise in this area because of a lack of conversation and training between generations (Hiniker et al., 2016). Often, guardians allow children unlimited access to the Internet while paying little attention to the type of activities they are participating in online (Tuukkanen & Wilska, 2015). Conversely, effective parents remain aware of what is happening and provide accountability (Kiger & Herro, 2015). Young people benefit from rules relating to the type of access they can pursue, and parents can enforce such rules by checking usage history

of the devices their children use (Fletcher & Blair, 2014). The literature suggested that parental support, mediation, and intervention could facilitate the development of healthy technology habits (Hiniker et al., 2016; Yang et al., 2014).

Existing Phenomenological Research in Educational Technology

Several researchers examined educational technology from a qualitative approach (Fletcher & Blair, 2014; Flores & James, 2013; Gurung & Rutledge, 2014; Hatakka et al., 2013; Storz & Hoffman, 2013; Swallow, 2015; Wolfe, 2012). The vast majority of these qualitative studies related to educational technology utilized case study designs (Swallow, 2015; Wolfe, 2012). Many of these earliest qualitative case studies came in response to the first schools and districts that attempted one-to-one learning in the 2000s (Bebell & Burraston, 2014). The MLTI represented the first one-to-one district in the world (Zheng et al., 2014). Subsequent researchers followed this case study approach in an effort to further evaluate effective technology use in the middle school setting (Wolfe, 2012).

As student technology usage became the norm at both school and at home at the beginning of the 2010s, qualitative research around this topic took on a more nuanced approach beyond just evaluating the preliminary effectiveness of one-to-one learning environments. Gurung and Rutledge (2014) examined communication using technology between school and home. Flores and James (2013) gauged how young people perceive the moral and ethical nature of technology usage (Flores & James, 2013). Hatakka et al. (2013) studied the benefits and negative consequences of a one-to-one implementation from the student perspective using group interviews and observing the effects. Storz and Hoffman (2013) focused specifically on capturing student voices within a one-to-one learning environment via student and teacher interviews, focus groups, and observations. In a similar case study, Swallow (2015) researched

the negative aspects of one-to-one experiences from the teacher and student perspective after the initial excitement of a first-year adoption. Other research looked at gauging whether parents or children were the technology experts in the home setting (Fletcher & Blair, 2014). As a whole, the existing qualitative literature around technology usage for educational purposes relies heavily on evaluating teacher and student perspective using the case study approach.

Summary

As evidenced, the use of computers is an integral part of the future of education (Baron et al., 2003; Wolfe, 2012). The historical context of one-to-one learning environments provides a full understanding of the complex challenges that parents face in raising responsible digital citizens today. A review of the benefits of digital learning, as well as the challenges expressed by students, teachers, and parents alike gave full voice to the various, related issues. One-to-one learning environment benefits are clearly stated, as a sampling of these benefits include improved communication, student-centric learning, autonomy and choice for each student, and improved engagement and academic scores (Zheng et al., 2016). Conversely, existing literature documented concerns like too much screen time and overall physical and social wellbeing (Radich, 2013; Tuukkanen & Wilska, 2015; Wartella et al., 2013; Yang et al., 2014).

The literature as a whole revealed the uncertainty and complexity of one-to-one learning environments. In general, the pool of existing research did not sufficiently examine the impact of technology use on children and teenagers (Felt & Robb, 2016). A generational gap in technology usage reveals that millennials and post-millennials interact differently with technology than their parents (Bassiouni & Hackley, 2014; Hiniker et al., 2016; Turner, 2015). A lack of empirical research on the effectiveness of one-to-one learning environments from the parent perspective exists, and the literature revealed a clear need to capture parent voice on this

topic. The literature also revealed a gap in truly examining parent perspective on increasing use of technology in schools (Downes & Bishop, 2015; Olson, et al, 2015).

Several studies looked at teacher and student voice only (Fleischer, 2012; Hatakka et al., 2013; Oliver et al., 2012; Storz & Hoffman, 2013; Swanson, 2013; Zheng et al., 2014). Overall, the literature provided compelling reasons to explore the experiences of parenting a digital generation. A complete definition of digital citizenship provided a way to create a standard by which to understand parent experiences. Few sources addressed the role of parenting in forming digital citizenship in adolescents. The research did not provide agreement on how to handle the need for effective digital citizenship instruction (Fletcher & Blair, 2014; Ribble, Bailey, & Ross, 2004). The literature review substantiated the need to research the way parents define, perceive, and experience teaching their children digital citizenship within the context of a one-to-one learning environment.

CHAPTER THREE: METHODS

Overview

In order to best research and understand parents' lived experiences in raising responsible digital citizens in a one-to-one learning environment in new ways, this study utilized a transcendental phenomenological approach that relied heavily on the work of Moustakas (1994). The following sections address the overall qualitative design and provide detailed descriptions of the setting and participants. The three main types of data that I collected include: semi-structured individual interviews, a focus group, and online journal entries. I also included a description of the process for establishing trustworthiness, as well as a discussion of the ethical considerations taken into account. The existing literature provides ample examples of qualitative research on the topic of one-to-one learning environments; however, the collective research does not approach the topic from a purely transcendental phenomenological perspective when involving parents of pre-teens and teenagers.

Design

The transcendental phenomenological design fit my study best. Cilesiz (2011) identified the phenomenological approach as vital for studying educational technology because this method allows for understanding these types of experiences. Additionally, existing scholarly studies underutilize this approach. Technology has become embedded into the "lifeworld" (a word used by van Manen, 1990, to describe the experiences of everyday life) of parents and their pre-teen and teenaged children. This study utilized a phenomenological approach to help uncover the "essence and meaning" of these lived experiences (Cilesiz, 2011, p. 493). Furthermore, a need for more phenomenological studies in educational technology exists because of its effectiveness in researching the issue from the right approach and also because of the dearth of existing studies

about technology using the phenomenological approach. Van Manen (1990), though more oriented towards a hermeneutic phenomenological design, pointed to the role of phenomenological research in providing deep understanding and meaning for the experiences of life. He described phenomenological research as a way of making some aspect of lived experience more readily understood. This intent of this study was to parents' experiences in raising their children to be responsible technology users more readily understood from the transcendental phenomenological approach.

My study was aimed toward investigating the role of one-to-one devices in a parenting relationship. This study captured parents' lived experiences with their children's academic technology habits, and the goal was to understand this phenomenon at a deep level. Padilla (2003) described the aim of phenomenological research as the ability to naturally uncover and explain the world. This study identified and described the experiences of parents as they raise their children in a digital age (Schwandt, 2015). As such, the choices for data collection reflect intentionality, as all three methods targeted the lived experiences of the participants. These data collection methods included interviews, a focus group, and journals (Cilesiz, 2011; Jacelon & Impero, 2005; Moustakas, 1994). The parent participants for the study came from an established school that issues an iPad™ to each student for academic use both at school and at home. These were ideal participants because they have lived with the challenges of parenting children that attend a school environment that deeply embraced technology use in education. Parenting pre-teens and teenagers immersed in technology for educational purposes brings about the day-to-day reality of trying to raise responsible digital citizens. Understanding this phenomenon was at the center of this study. More specifically, identifying the way parents defined, perceived, and experienced the underlying consciousness of this parenting phenomenon was the main aim of

this research. My research described the ways in which parents addressed their children's technology use (Cilesiz, 2011). This study described what parents experience while training their children to become responsible digital citizens within both the school and home settings.

Research Methods Considered

Upon beginning this research process, I wanted to measure whether students are using technology appropriately in the context of a one-to-one learning environment from a quantitative perspective. In that early phase of research, I realized that there was a lack of empirical literature evaluating students' digital citizenship practices. As a result, I shifted my focus to a qualitative approach. The findings of this study identified potential quantitative variables for future research (Moustakas, 1994). Once I decided upon this general approach, I began evaluating various qualitative designs.

The ethnographic approach did not fit my proposed study because I want to understand the general use of technology among teenagers in a one-to-one learning environment from the parent perspective, versus trying to understand a specific cultural group. One-to-one learning is becoming pervasive in American educational settings (Zheng et al., 2016). I also quickly ruled out a grounded theory design because I had no intention of explaining a process or practice (Creswell, 2013; Moustakas, 1994; Swezey, 2015). A historical perspective design did not fit the needs of this proposed study either, as the importance of understanding digital citizenship formation within one-to-one learning environments is a relatively new phenomenon with limited historical perspective (Swezey, 2015). I did, however, ponder a case study design for some time. Several of the descriptors of the case study approach align with my research questions. Two factors persuaded me to move away from a case-study approach. The first was that I did not intend to research a single case or issue (Creswell, 2013; Moustakas, 1994; Swezey, 2015). The

second factor was that the body of existing literature looking at my topic using case study designs failed to capture the lived experience of parents in a way that comes to understand the phenomenon of raising children in a one-to-one learning environment (Swallow, 2015; Wolfe, 2012).

After considering these qualitative approaches as a whole, I realized that I desired more to understand a specific experience from the phenomenological approach. I struggled to determine whether I should use the hermeneutic or transcendental phenomenological approach. I was certain that phenomenological best suited my research questions, but I had to understand the subtle difference between the differing approaches to select what would best suit my study. Once I determined that my research questions aim to objectively identify and describe participants' perspectives versus trying to interpret these experiences, I knew that the transcendental approach was the right choice for this study (Moustakas, 1994; Schwandt, 2015; Swezey, 2015).

Moustakas (2014) spent time writing about the transcendental approach as a process that aims at participants "really feeling understood" (p 12.). Parenting in a technology rich world is an intense struggle (Bennett & Maton, 2010; Fletcher & Blair, 2016; Hiniker et al., 2016; Lauricella et al., 2015; Sanders et al., 2016). Bringing understanding and awareness to these lived experience through empirical research can help society. Multiple authors point to a gap in research that focuses on the phenomenon of parenting in a hyper-connected world (Anderson & Rainie, 2012; Cilesiz, 2011; Ihmeideh & Shawareb, 2014; Patrikakou, 2015). Moustakas (1994) described the transcendental process as a way of knowing an experience, or as a way to become one with a phenomenon. I am passionate about understanding this topic of parenting in the digital age, and this approach allowed me to deeply explore the issues through the lived

experiences of the participants. This approach was also valuable for the purpose of this study versus a quantitative method that removes some of the humanity and sociological nature of the research design (Moustakas, 1994). Table 2 illustrates the various methodical approaches considered, as well as the reason that a transcendental phenomenological approach was selected as the best fit for this study.

Table 2

Qualitative Research Methods Reviewed

Qualitative Approach	Sources of Information	Factors Considered	Factors in Non-selection	Supported in Literature
Case Study	Creswell (2013) Swezey (2015)	Researches an issue related to one, specific case. Provides an in-depth picture of that specific case versus a broad, general application.	Case study designs are prevalent in relation to my topic. My proposal is not bound to a specific case.	Yes
Ethnographic	Moustakas (1994) Swezey (2015)	Aims to examine the features of a specific social group.	One-to-one crosses over several cultural groups, not one community.	No
Grounded Theory	Creswell (2013) Moustakas (1994) Swezey (2015)	This approach aims to discover/develop new theories from data collected during research.	Baumrind's study (1967) already addressed the topics under study from a theoretical perspective.	No
Historical	Creswell (2013) Swezey (2015)	The historical approach aims to examine past events and their impact on current ways of life.	One-to-one learning is a relatively new phenomenon with a limited history.	No
Hermeneutic	Creswell (2013) van Manen (1990)	Describing and interpreting the lifeworld.	Does not place enough emphasis on the subjective, individual experience.	No
Transcendental Phenomenological	Creswell (2013) Moustakas (1994)	Describing everyday life from each individual's experience.	I selected this approach for my study.	Yes

Research Questions

Moustakas (1994) laid out a rational for developing research questions as well as ample examples. The central question for this transcendental study followed his approach and focused on the following:

> How do parents describe their experience of training their children to be responsible digital citizens in the context of a hyper-connected society?

The following sub-questions aided in gathering more specific details flowing out of the central question:

1. How do parents describe their experience of training their children to be responsible digital citizens in the context of a one-to-one environment?
2. How do parents perceive their particular parenting style in relation to addressing digital citizenship with their children?
3. How do parents describe their efforts at mediating adolescent technology use?

Setting

The primary setting for this study was a large, sixth- through 12th-grade, private, faith-based school in the San Francisco Bay Area that utilized a one-to-one learning environment. Moustakas (1994) shared that qualitative researchers study phenomenon in their natural setting. He also stated that researchers ought to analyze the phenomenon in these natural settings for meaning through the lens of the people within them. In the transcendental approach, researchers study phenomenon within a natural context, and the interaction with the participants involves an in-person component (Moustakas, 1994). I gathered data from parent participants at the school site, a natural setting for this study (Reupert & Deppeler, 2015).

This specific school provided an ideal setting for the study for several reasons. First, the school resides in close proximity to Silicon Valley, the epicenter of technology development, and many of the students' parents work in the tech industry. This private school represents a rigorous, college preparatory program in the Christian tradition. In its own literature, the school described one of its main goals as committing to the moral and spiritual development of its students. Similarly, the schools mission statement indicates that it aims to empower students to reach their potential through Christ-centered excellence in all areas. The campus resides on a coastal, 100-acre plot. The students, travelling from five local counties, represent the ethnic diversity of the San Francisco Bay Area, as nearly 45% of the student body is from a minority background. The high school consists of 790 students, and the middle school is comprised of 264 students. The school boasts a strong academic program, as 65% of the faculty holds advanced degrees, and their reported academics scores reflect high-level success.

The second reason that this school was an ideal setting is that it has a reputation in the surrounding community for expertise in the area of educational technology. The school hosts an annual educational technology conference on site that several local schools attend. A recent Facebook post confirmed that over 200 schools attended the 2015 conference either in person or online. Additionally, the school has an established pattern of iPad™ usage and considers itself to be a pioneer in this regard, as it was the first school in the world to incorporate a one-to-one learning environment utilizing iPads™. This longevity of use has established a school culture that celebrates student technology use. Such a setting provided an ideal backdrop for understanding the challenges of parenting in a technology rich environment.

Participants

This study utilized convenience sampling (Moustakas, 1994). This approach to sampling worked for this study as the two main criterion for participants were that they enrolled their child at a one-to-one school and that they had a story to share about their lived experiences of raising children in a technologically rich environment both at school and at home (Creswell, 2013). Another reason this study utilized convenience sampling was that I had access to the school due to a pre-existing relationship with the headmaster, as we are both members of a local educational leadership group (Marshall, 1996). Convenience sampling also worked for this study, as I easily collected data from participants because of my close proximity to the school (Marshall, 1996). All participation from the parents was voluntary, and I sent an invitation to participate in the study using parental email contact information provided by the school. I worked with the headmaster and his administrative staff to obtain all of the required agreement forms.

Technically, all parents of students enrolled at the school were part of the pool of participants as they have all experienced the phenomenon (Moustakas, 1994). Parents were selected by the order in which they replied to the email invitation. I logged each response with a timestamp in an Excel™ file. If a participant dropped out of the study for whatever reason, I went back to the Excel™ file based on the original email responses and selected the next potential participant based upon the order in which they replied to the invitation. Due to the fact that the initial email invitation did not yield enough participants, the school sent a second email invitation on my behalf.

As a school utilizing a one-to-one learning environment, students were using iPads™ throughout the day for reading textbooks, executing research, practicing academic skills on applications, and completing written assignments for classes. Students used these same devices

at home to complete homework. Therefore, parents faced the experience of addressing a one-to-one learning environment and its effects at home simply by enrolling in the school. A total of 10 participants were involved, as saturation was reached at that point (Moustakas, 1994). I contacted respondents to the invitation via email to gauge their interest in the study and willingness to participate (Moustakas, 1994). At that point, I sent an introductory letter (Appendix C) and a letter of informed consent to confirmed participants (Appendices E).

The demographics of the parents involved were gathered and documented once the Institutional Review Board (IRB) approved the research proposal (Appendix B), and I finalized the participant list. Questions about demographic information were included in the interview process. After I successfully defended the proposal, I sought and obtained permission from the IRB (Appendix B). At that point, I began to interact with confirmed participants. School documents revealed that the students represent a diverse ethnic community, with 45% of the school population reported as being minorities. Table 3 provides further demographic details of the parent participants.

Table 3

Demographics Information

Name of Participant	Gender	Age	Ethnicity
Sophia	Female	57	Hispanic/Latino and Caucasian
Sarah	Female	49	Asian-Pacific Islander
Joshua	Male	46	Caucasian
Ruth	Female	57	Caucasian
Esther	Female	42	Caucasian
Mary	Female	59	Caucasian
Martha	Female	48	Caucasian
Hannah	Female	49	Caucasian
Deborah	Female	50	Caucasian
Miriam	Female	40	Hispanic/Latino

Procedures

The first step was to gain written permission from the headmaster to use the school's parent community as participants for the study (Appendix A). This letter was included with the application for institutional research involving human participants by way of the IRB. Once IRB permission was obtained (Appendix B), I met with the headmaster again to discuss the next phase of the research project: soliciting and securing parent participants. As mentioned previously, all parents who enrolled their children in this one-to-one school experienced the phenomenon. Separate emails for both the individual interviews (Appendices C and D) and the focus group (Appendices E and F) were sent to the entire school, and included a cover letter and included the consent form. I responded to parents in the order in which they replied to the invitation. Once 10 participants committed, per Moustakas' (1994) recommendations for this type of research, I scheduled the interviews that were audio recorded. The interviews lasted between approximately 30 and 60 minutes. One week prior to each interview, I began sending out each of the four journal prompts every few days, culminating with the collection of the last journal one week subsequent to the face-to-face interview date. Participants responded to all four prompts within approximately a two-week period.

After completing the individual interviews, I scheduled and conducted the focus group. The focus group invitation went to the entire parent community of the school. A total of six parents responded to and committed to the scheduled focus group. Ironically, all of the participants also participated in the individual interviews. On the day of the focus group, two of the participants cancelled due to illness. As the four other members were already committed to the date, I proceeded with a focus group of four members. I am glad that I did, as the results were rich with meaningful content.

Once all three data points were fully collected, I sent the recorded interviews to an outside service for transcription. I transcribed the video-recorded focus group discussion myself. The company took the audio files and turned them into word-for-word text files. From there, I used NVivo™ software to perform an initial analysis of the data (Petty et al., 2012). Using Moustakas' (1994) approach, I went through the horizonalization process by listing all relevant expressions, followed by reducing and eliminating unnecessary expressions. I used the resulting clusters to identify all themes, and eliminated the non-essential ones (Petty et al., 2012). From there, I wrote the individual textural and structural descriptions in the form of the major themes, as well as the overall textural and structural descriptions. I culminated my analysis by writing the final essence statement (Moustakas, 1994).

Participants read corresponding portions of the written statements (including the individual participant descriptions and the themes) to improve credibility (Creswell, 2013; Moustakas, 1994). I emailed each participant the appropriate descriptions and give them one week to review and provide feedback. All data collected in the process were stored on a password-protected laptop. The original audio files and transcriptions will also be stored on the same password-protected computer for three years. I kept notes in a Microsoft Word™ document throughout the entire process to capture my thoughts, action items, and other needed information.

The Researcher's Role

I was excited to serve as the actual research tool for this study. Qualitative research allows for the exploration of an issue through a social science perspective (Creswell, 2013; Moustakas, 1994). As a parent of junior high school students myself (at a school different from the one for this study), I have deep-seated questions regarding the use of technology both in and

out of school with adolescents (Moustakas, 1994). From previous conversations with parents of junior high students at my current school of employment, as well as interest driven by personal research and reading, I have grown curious about the nature of parenting in a digital age.

One of my challenges in achieving epoché—the ability to set aside prejudgments—was to guard against some of my own pre-existing views of technology use amongst students (Moustakas, 1994). Families of students currently enrolled at my school where I work have shared stories about the detrimental aspects of one-to-one learning environments including distractibility, and I was intentional about not allowing these anecdotes to taint the experiences that this study's participants shared. I achieved epoché by intentionally blocking personal attitudes toward adolescent technology as participants shared their own experiences (Moustakas, 1994). I listened intently to participants' personal accounts and did not interject my opinions and judgments throughout the interview process. Further, I intentionally selected a school separate from the one I currently work at to avoid any possible conflict of interest. Additionally, I allowed participants to share their parenting experiences and captured that phenomenon without bias in order to achieve epoché (Moustakas, 1994). Prejudgments were set aside relating to parenting and technology as the participants shared their stories (Moustakas, 1994).

One of the steps to achieve epoché was maintaining an open attitude as if looking at this experience for the first time (Moustakas, 1994). As the main research tool, I had the privilege of gathering and analyzing data from these parents in order to tell their story. Overall, my role as the researcher was to study and describe the phenomenon, or to derive the essence of parenting in a technology-saturated environment (Moustakas, 1994; Patton 1999).

Data Collection

A well-developed, phenomenological study must take into account the need to collect data that sufficiently captures the participants' lived experiences (Creswell, 2013; Moustakas, 1994). I gave careful thought to the development of the data collection methods to ensure that the selected data matched the purpose of the study (Moustakas, 1994). For this study, the opinions of the parent participants were the focal point of all data collection. The three sources of data for this study include: individual interviews, a focus group, and journals. As outlined by Moustakas (1994), the long, open-ended, semi-structured interviews were the primary data collection method. These interviews best captured the individual experience of parenting children in a one-to-one learning environment. Participants were either the child's mother or father, with a total of nine mothers and one father. Moustakas (1994) described this as an informal and interactive process that utilizes open-ended questions.

Following the interviews, I held a focus group of just four participants as two confirmed participants cancelled the day of the event (Gill, Stewart, Treasure, & Chadwick, 2008). Krueger and Casey (2014) noted the value of smaller (or mini) focus groups because they "are easier to recruit and host and are more comfortable for participants" (p. 67). The essential nature of the questions from the interviews remained unchanged. These questions allowed for a group discussion, during the focus group, about the same phenomenon. The third and final data collection method consisted of written journal responses (Jacelon & Imperio, 2005; Moustakas, 1994). This allowed a creative outlet to capture the phenomenon of parenting teenagers in a technology rich environment.

These three data points allowed for triangulation (Creswell, 2013; Moustakas, 1994). All of the data collection methods aimed to allow the researcher to obtain a more personal response

from the participants. These specific collections strategies allowed for this intense personal reflection and expression. At the conclusion of each phase of the data collection, all participants received a personal letter and a gift card to a local coffee shop for $25 in appreciation for their efforts (Gill et al., 2008).

Interviews

The purpose of this study was to understand, from the parent perspective, the experience of teaching adolescents how to be responsible digital citizens in a one-to-one, private, secondary school environment. Creswell (2013) emphasized the importance of focusing on a project's purpose when designing interviews. Moustakas (1994) laid out several factors for well-developed interviews, including: creating an informal and interactive tone, establishing trust with the participants, and aiming to solicit honest responses.

The semi-structured interview was ideal for this study as the approach allowed flexibility and conversation within a general outline of topics (Gill et al., 2008). At the beginning of the interview process, I shared a working definition of parenting styles, one-to-one learning environments, and digital citizenship as a way to build common understanding of the central topics heading into each interview (Appendix G). The interview style incorporated aspects of Creswell's (2013) responsive interviewing model, allowing for more of a natural dialogue. The questions below represent a broad, general interview outline that guided each session (Moustakas, 1994). Both the demographic and specific interview questions follow Moustakas' (1994) sample interview questions, as well as my own, original questions that are couched in the existing literature.

Gathering demographic information during the interview process aided in understanding the participants more fully. An older research project, which examined parent perspectives on

adolescent technology use in the home, provided a precedent for recording gender information from each participant (Hollingworth et al., 2011). In another study that measured digital citizenship from the perspective of students, Jones and Mitchell (2015) used an established breakdown for classifying race/ethnicity. Similarly, Rode's (2009) research on digital parenting served as a basis for collecting age information from both participants and their children. Table 4 and Appendix H support all questions related to demographic information.

Table 4

Demographic Information from Interview Questions

Question	Basis for Question	Existing Research	Research Sub-question (SQ)	Theoretical Framework
What is your gender? Female Male	Convenience Sampling Role of Parenting	Hollingworth et al. (2011) Moustakas (1994) Rode (2009)	SQ2	Baumrind (1966, 1967)
What is your age?	Convenience Sampling Role of Parenting	Moustakas (1994) Rode (2009)	SQ2	Baumrind (1966, 1967)
What is your ethnicity? American Indian/ Eskimo Asian/Pacific Islander Black/African-American Hispanic/Latino Caucasian Other	Convenience Sampling	Jones & Mitchell (2015) Moustakas (1994) Rode (2009)	SQ1 SQ2	Baumrind (1966, 1967) Potter (2004)
How did you find the school?	Convenience Sampling		SQ1 SQ2	Baumrind (1966, 1967) Potter (2004)
How old are your children, and how long have they attended the school?	Convenience Sampling	Rode (2009) Lauricella et al. (2016)	SQ1 SQ2	Baumrind (1966, 1967) Potter (2004)

The remainder of the interview questions solicited detailed information that related to the central question and the sub-questions (Appendix H):

1. How would you describe your experience of training your pre-teen or teenager to be a responsible digital citizen in a one-to-one learning environment?
2. How do you perceive your child's one-to-one learning environment experience?

3. How do you perceive your particular parenting style in relation to addressing digital citizenship with your child?
4. What stands out to you about teaching responsible technology use?
5. How does the experience of parenting a student in a one-to-one environment affect you?
6. What feelings come to mind when you think about parenting your pre-teen or teenager to be a responsible digital citizen?
7. As a parent, how do you mediate technology use?
8. What other significant thoughts that relate to parenting in this area do you have?

The existing literature established a basis for each of the interview questions. The first interview question finds its basis in Willocks and Redmonds (2014) work that sought to gauge parent perspective on children using the iPad™ for learning in a positive fashion. Question two builds on existing studies that intended to evaluate the effectiveness of one-to-one learning programs (Topper & Lancaster, 2013; Willocks & Redmond, 2014). These studies only examined the perceptions of school administrators and teachers, thus providing a basis to ask parents about their perceptions.

The next interview question asked participants to share their personal reflections on parenting style in relation to digital citizenship. This question is based heavily on Baumrind's (1966, 1967) parenting typology, as well as on studies that revealed the impact of parenting behaviors on child technology and the need for further related research (Correa, 2013; Fletcher & Blair, 2014). Interview question four was derived from Willocks and Redmond's work that revealed a gap in deeply understanding potential challenges to student learning in the context of a one-to-one learning environment. The fifth interview question was based on the work of

Hatakka et al. (2015), who established a basis for furthering examining the personal impact of adolescent technology use in the home as a positive or negative phenomenon from the parent perspective.

The next question solicited responses about parent feelings towards responsible technology use by their children. Willocks and Redmond (2014) highlighted the limited research around the potentially negative aspects of pervasive technology use in the home. This particular question invited parents to share their emotions with regard to these potential risks. Question seven asked parents how they mediate their children's' technology use. Existing studies surveyed parents on the topic of mediation; however, these studies did not include open-ended, face-to-face interview questions that allow participants to expand on their responses (Hiniker et al., 2016; Yang et al., 2014). The final interview question provided parents an open-ended option to share any other relevant thoughts around the research topic (Creswell, 2013). In addition, Tuukkanen and Wilska (2015) established the importance of asking parents about their experiences with regard to everyday technology use by their children. Table 5 presents a summary of the rationale for each of the interview questions.

Table 5

Interview Questions Supported by Existing Literature (adapted with permission from Dr. Megan Cordes)

Relation to Research Sub-questions (SQ)	Interview Question	Existing Literature	Theoretical Framework
SQ1 SQ2	How would you describe the experience of training your teenager to be a responsible digital citizen in a one-to-one learning environment?	Willocks & Redmond (2015)	Baumrind (1966, 1967) Potter (2004)
SQ1	How do you perceive your child's one-to-one learning environment experience?	Hatakka et al. (2013) Topper & Lancaster (2013)	Potter (2004)
SQ2	How do you perceive your particular parenting style in relation to addressing digital citizenship with your child?	Correa (2013) Fletcher & Blair (2014)	Baumrind (1966, 1967) Potter (2004)
SQ1 SQ2 SQ3	What stands out to you about teaching responsible technology use?	Willocks & Redmond (2015)	Baumrind (1966, 1967) Potter (2004)
SQ1 SQ2	How does the experience of parenting a student in a one-to-one environment affect you?	Hatakka et al. (2013)	Baumrind (1966, 1967) Potter (2004)
SQ1 SQ2	What feelings come to mind when you think about parenting your pre-teen or teenager to be a responsible digital citizen?	Fleischer (2012) Willocks & Redmond (2015)	Baumrind (1966, 1967) Potter (2004)
SQ3	As a parent, how do you mediate technology use?	Nikken & Jansz (2013) (Hiniker et al., 2016)	Baumrind (1966, 1967) Potter (2004)
SQ1 SQ2 SQ3	What other significant thoughts that relate to parenting in this area do you have?	Tuukkanen & Wilska (2015)	Baumrind (1966, 1967) Potter (2004)

Each interview was audio recorded using an iPad™ and a laptop as a backup device (Gill et al., 2008). An interview guide was printed for each session, and each guide provided space for note taking during the interview (Creswell, 2013; Moustakas, 1994). I paid an outside service, Scribie, to transcribe the recorded interviews (Gill et al., 2008). Per Creswell's (2013) recommendation, I pilot tested the interview questions on a parent who had her child enrolled in a one-to-one learning environment different from the site for this study (Gill et al., 2008). One of the appealing aspects of interviews was the fact that they closely resembled social conversations (Moustakas, 1994). As the research tool, my professional experience helped shape this ability to dialogue with individuals in both formal and informal settings. Interviews occurred at the school site, which allowed participants to be in a familiar, comfortable environment (Gill et al., 2008). Reupert and Deppeler's (2015) phenomenological study on another education-related issue conducted interviews at the actual school location as well. Of the entire research process from inception of a topic to completion of the manuscript, I was most excited about this portion of the study because I was eager to hear what these parents had to say.

Focus Group

The second data collection method was an audio and video-recorded focus group of four participants drawn from all parents in the school (Gill et al., 2008; Krueger and Casey, 2014). I originally planned to invite currently active members of the school's Parent Teacher Association to participate in the study. Such associations generally represent individuals who are willing to support the school with additional time and resources and tend to be more knowledgeable about the day-to-day workings of the school. Gill et al. (2008) pointed to the value of using a pre-existing community group for a focus group, as participants may feel more comfortable. However, when I met with the headmaster regarding the study, he informed me that the school

did not have any pre-existing parent groups. At this point, the school sent an invitation to participate in the focus group to the entire parent community. I reminded participants that they could withdraw from the process at any time (Gill et al., 2008). As the researcher, I served as the moderator.

The focus group provided an opportunity for me to interact with multiple participants at the same time. This dynamic was especially useful for exploring complex, multi-layered concepts from the perspective of the participants (Moustakas, 1994). This type of data collection allowed for rich, deep understanding of the phenomenon (Gill et al., 2008). The discussion began with an introduction focusing on the purpose of the study, as well as the key topics of parenting style, one-to-one learning environment, and digital citizenship. I then covered guidelines for the session, including length, notes about maintaining respectful communication, the importance of keeping the discussions private after the fact, and expectations for involvement (how and when to add to the conversation).

The questions for the focus group were similar to the individual interview questions. This process required careful moderation to allow everyone to participate in an open, free-flowing environment. I was pleased with the level each participant involved herself. My professional experience in facilitating teacher meetings proved to be an asset here. Gill, Stewart, Treasure, and Chadwick (2008) recommend using no more than 12 questions. I asked the following questions during the focus group (Appendix I):

1. How would you describe your experience of training your teenagers to be responsible digital citizens in a one-to-one learning environment?
2. How do you perceive your children's one-to-one learning environment experience?

3. How do you perceive your particular parenting style in relation to addressing digital citizenship with your children?
4. What stands out to you about teaching responsible technology use?
5. How does the experience of parenting a student in a one-to-one environment affect you?
6. What feelings come to mind when you think about parenting your pre-teen or teenager to be a responsible digital citizen?
7. As a parent, how do you mediate technology use?
8. What other significant thoughts that relate to parenting in this area do you have?

The original interview questions also serve as the basis for the online journal prompts, in addition to the focus group questions. The first three interview questions, as well as the seventh, rephrase the sub-questions of the study in terms the participants can understand. Questions four, five, six, and eight are used directly from Moustakas' (1994) model for questioning in a transcendental phenomenological study as they ask how and what questions around the central phenomenon in an effort to understand the lived experience of each participant.

Each of the main topics emerged from the existing literature, and the literature revealed a gap in addressing each of these areas qualitatively. For example, the literature about one-to-one learning environments reveals that extensive benefits exist to this type of learning. A host of studies cited the benefits of one-to-one learning environments in the form of improved test scores, higher student engagement and motivation, autonomous student learning, better teachers, differentiated classrooms, and increased creativity (Fleischer, 2012; Richardson et al., 2013; Willocks & Redmond, 2014; Zheng et al., 2014; Zheng et al., 2016). Multiple researchers specifically cited the need for more empirical evidence on the topic of adolescent technology

use, especially relating to associated concerns (Cilesiz, 2011; Felt & Robb, 2016). Specifically, misuse of computers by students, as well as distractibility, stood out as prominent issues in the existing literature (Ribble & Bailey, 2005b; Heitner, 2016; Zheng et al., 2014). Ribble and Bailey (2005a) also spoke to the need for parents to address responsible computer usage prior to their first introduction to it. Research questions one, two, and six directly related to the issues raised by these authors.

Baumrind's (1967) research focused on the profound influence parenting style has on the behavior of children. Parents identified with one of the four styles outlined in the theoretical framework: authoritative, authoritarian, permissive, or negligent (Darling, 1999). I was intrigued by how parents perceived their parenting style and the influence that they, as parents, had on their children. Interview question three was supported by the literature related to parenting style (Baumrind, Larzelere, & Owens, 2010; Ihmeideh & Shawareb, 2014).

Journals

Journals provided an excellent source of rich, qualitative data (Jacelon & Imperio, 2005). Moustakas (1994) wrote of the value of journaling as a way for participants to depict their experiences. Though issues of privacy and ownership among others exist with online data collection, Moustakas (1994) encouraged this method as the approach adds creativity to the data-collection process. Creswell (2013) described these types of journals as like an "open-ended diary" (Loc. 3129). I emailed identical journal prompts to each participant (the same participants from the interviews) every three or four days for a period of two weeks. Nine of the 10 participants responded to all of the journal prompts. The prompts began before the first interview so that the interview time reflected back to the first two prompts (Jacelon & Imperio, 2005). The prompts closely resembled the interview, and focus group questions and aimed to

capture real life, day-to-day parenting experiences where direct observation is not practical (Jacelon & Imperio, 2005). The online journal instructions and prompts are listed below (Appendix J):

> Every three to four days, a new prompt will be emailed to you. Please respond as often as you like throughout the week with at least two to three sentences. As a reminder, I am the only person who will be reading these online journals. Your name will be removed from the eventual write-up based upon the journal to maintain anonymity.
>
> Week 1a - How would you describe the experience of training your pre-teen or teenager to be a responsible digital citizen in a one-to-one learning environment?
>
> Week 1b - How do you perceive your children's one-to-one learning environment experience relating to being a responsible digital citizen?
>
> Week 2a - How do you perceive your particular parenting style in relation to addressing digital citizenship with your child?
>
> Week 2b - What feelings come to mind when you think about parenting your pre-teen or teenager to be responsible digital citizens?

Data Analysis

The first major step in the analysis phase was to organize the data (Moustakas, 1994). I began by reading and rereading multiple times all of the transcribed interviews, the transcribed focus group, and the journal responses. Moustakas (1994) created a data analysis method specifically for a transcendental phenomenological study. He spent significant time developing a method for horizonalization. This approach emerged from Van Kaam's (1966) original work. The first step in the analysis involved listing all experiences, or meaning units, relevant to the phenomenon being studied (Moustakas, 1994). This included data from the interviews, the

journals, and the focus group. This step in the analysis allowed me to consider every perception in the pursuit of truly understanding what these parents experience in trying to raise well-adjusted digital citizens (Moustakas, 1994). I used NVivo™ software to create the above-described list of categories (Moustakas, 1994; Petty et al., 2012). Tables 6, 7, and 8 illustrate the initial codes used to organize and analyze the data by research question.

Table 6

Codes Used in Data Analysis Related to RQ1

Theoretical Framework	Repeated Idea	Shorthand Code
Baumrind (1966, 1967)	Educational Value	EV
Baumrind (1966, 1967)	Weight of Parenting	WoP
Potter (2004)	Print versus Digital Learning	PvDL
Baumrind (1966, 1967) Potter (2004)	Loss of Play	LoP
Baumrind (1966, 1967) Potter (2004)	Competing with Technology	CwT
Potter 2004	Mixed Feelings	MF
Baumrind (1966, 1967)	Faith in Parenting	FiP
Potter 2004	Educational Disappointment	ED
Potter 2004	Face-to-face Struggles	FS
Baumrind (1966, 1967)	Gender Differences	GDI
Potter 2004	Technical Frustrations	TF

Table 7

Codes Used in Data Analysis Related to RQ2

Theoretical Framework	Repeated Idea	Shorthand Code
Baumrind (1966, 1967)	Ongoing Communication	OC
Baumrind (1966, 1967)	Feelings of Fear	FoF
Baumrind (1966, 1967) Potter (2004)	Trust Issue	TI
Baumrind (1966, 1967)	Empowering Children	EC
Baumrind (1966, 1967)	Early Instruction	EI
Baumrind (1966, 1967)	Preparing for Adulthood	PfA
Baumrind (1966, 1967) Potter (2004)	Generational Differences	*GD*
Baumrind (1966, 1967) Potter (2004)	Importance of Parental Awareness	PA
Baumrind (1966, 1967)	Caring Relationships	CR

Table 8

Codes Used in Data Analysis Related to RQ3

Theoretical Framework	Repeated Idea	Shorthand Code
Baumrind (1966, 1967) Potter (2004)	Accountability	AC
Potter (2004)	Questionable Content	QC
Baumrind (1966, 1967) Potter (2004)	Screen Time	ST
Potter (2004)	Need for Balance	NfB
Potter (2004)	Permanence of Posting	PoP
Potter (2004)	Kid Workarounds	KW
Potter (2004)	Blurring	BL
Potter (2004)	Distractibility	DIS
Potter (2004)	Health Concerns	HC
Baumrind (1966, 1967) Potter (2004)	Lack of Transparency	LoT

The next step was to reduce and eliminate items from the initial list that were non-essential; i.e., items that were redundant and did not relate to the essence of the phenomenon (Moustakas, 1994). At this point, I transformed the list into a cluster of meaning units, followed by a list of possible themes (Moustakas, 1994). Then I identified and validated the final themes (Moustakas, 1994). Subsequently, I wrote the individual textural descriptions followed by individual structural descriptions for the 10 themes that emerged. The individual textural descriptions consisted of a narrative centered on an identified meaning unit mostly using participants' own words (Cilesiz, 2011). As the researcher, I wrote the individual structural descriptions in my own words to capture the participants' experiences in language that could be readily understood (Cilesiz, 2011).

The analysis concluded with the written composite textural and structural descriptions. I merged the participants' own words into a general narrative to create the composite textural description (Cilesiz, 2011). Using my own words, I pulled from the individual structural descriptions to create a summary of the combined experiences in plain language (Cilesiz, 2011). This culmination of the analysis came in the form of one salient, composite, textural, structural description also known as "the essence" statement, or the meaning of the experience shared by the participating parents (Moustakas, 1994, p. 13). This process allowed the movement of units of meaning into one whole description or a movement from individual meanings to communal meanings (Moustakas, 1994). Moustakas (1994) described this final step as, "a unified statement of the essences of the experience of the phenomenon as a whole" (p. 100).

Trustworthiness

Creswell (2013) provided effective methods for establishing trustworthiness. He also advocated for a pursuit of accuracy in the research process to add validity. Schwandt (2015)

stated that trustworthiness determines the overall quality of a qualitative study. A trustworthy researcher reflects confidence in the data as well as the collection and analysis process. The four main components of trustworthiness in this phenomenological study included credibility, dependability, confirmability, and transferability (Schwandt, 2015). Creswell (2013) also added that a well-developed, trustworthy study adds quality through clear understanding of a specific methodology. In the case of this study, the methodology consistently revolved around Moustakas' (1994) principles of transcendental phenomenological research.

Credibility

A well-developed phenomenological study provides detailed, accurate descriptions derived from the data (Moustakas, 1994). The process of ensuring that this rich information existed in the final manuscript accurately increased its credibility. Perhaps the most important step in establishing credibility was the triangulation of the three types of data collected (Moustakas, 1994). This included the interviews, a focus group, and journals. Patton (1999) summarized that multiple methods of data collection provide a more comprehensive analysis of meaning. Relying on multiple data sources to draw conclusions allows for triangulation (Schwandt, 2015). Patton (1999) further stated that multiple data collection methods add varying points of view about the same issue. This may cause some preliminary inconsistencies, which can lead to even richer meaning in the end of the analysis. The 10 major themes of this study all appeared in every type of data collected.

Providing authentic and accurate interpretations of participants' meanings increased credibility (Creswell, 2013; Moustakas, 1994). I was careful to ensure that my interpretation and summary of the participants' experiences aligned with reality (Schwandt, 2015). I utilized member checks to help increase the credibility of the study. Each participant had the opportunity

to read and respond to his or her individual textural and structural descriptions. Additionally, I sent a draft of the study out for a peer review aimed at identifying edits needed (Morse, 2015).

Dependability and Confirmability

Dependable studies provide consistency. Schwandt (2015) spelled out the need for phenomenological research to be logical, traceable, and documented. Throughout the methods section of this study, I provided ample details about the context and setting of the study. Eventually, the rich, thick descriptions derived from the participants' experiences led to a dependable study (Moustakas, 1994). I provided sufficient details about each discovered theme (Moustakas, 1994). Additionally, validity came in the form of recognizing "core facets" (Creswell, 2013). I asked a peer to review the draft of manuscript with the aim of providing needed edits to improve the dependability of the study.

As previously stated, I utilized member checks for confirmability (Creswell, 2013; Schwandt, 2015). These member checks allowed the participants to see and comment on the individual textural and structural descriptions and themes, as well as the culminating textural-structural description also known as the essence statement (Moustakas, 1994). These steps ensured that the interpretations of participants' experiences were not fictionalized; rather, they were personally confirmed by the participants (Schwandt, 2015).

Additionally, I made it known explicitly my role/bias (reflexivity) at the onset of the study (Moustakas, 1994). With such a personal interest in the topic, as well as my unique background growing up in Silicon Valley, reflexivity was an appropriate method to ensure confirmability. I was careful not to allow my personal experience to override participant experiences as expressed. Previously, I clarified my biases in an attempt to continually be mindful of and appraise my position in the study. The aforementioned triangulation, member

checks, and peer review helped ensure reflexivity (Berger, 2015). My position as an insider on the topic allowed me to understand the language used within one-to-one learning environments and also allowed for deep probing during the data collections process; however, I guarded against assumptions and allowed participants to tell their story (Berger, 2015). This careful approach to maintaining reflexivity allowed me, as the research tool, to "capture the essence" of the phenomenon, while also building the confirmability level of the study (Berger, 2015, p. 12).

Transferability

Schwandt (2015) defines transferability as the ability to transfer the findings of one case to another without variation. Future researchers can transfer the methods outlined here and discover similar findings. Rich, thick descriptions and details in this study included descriptions of materials used, explanations, statements, and notes about the study (Schwandt, 2015). These added details may allow future researchers access to information needed to transfer the methods (Morse, 2015; Petty et al., 2012).

Ethical Considerations

The research process requires an examination of ethical issues. I clarified the overarching purpose of my research to participants from the onset of the study. This helped participants to understand the benefits of the research and to point out my effort to conduct it both in an ethical manner and for a worthwhile cause. In addition, each individual participant completed a voluntary consent form (Appendix D), which detailed the purpose of the study and provided a brief summary. Before beginning, participants had an in-depth understanding of their role in the research. In my application for IRB approval, I spelled out all ethical factors related to the proposed study. When sending the recruitment email, I discovered that I previously knew two of the participants as we attended the same churches a few years back. Both participants were

excited to participate and did not express concerns over our previous acquaintance. They were informed of the voluntary nature of the study and their right to withdraw.

I took steps to ensure confidentiality of all parent participants in the study (Moustakas, 1994). All data collected, including the interviews, focus group, journals, and any other recorded data and notes, will be stored electronically and password protected for three years. Unique to this study were the possible concerning stories shared by participants about their individual parenting practices. Since the study looks at parenting styles, the participants may have revealed personal stories of negligence or abuse of their children. For example, a parent may reveal that they allow their children to use technology in the home for illegal activities. I informed parents in the consent forms that as a mandated reporter, I may need to report any such instances of neglect or abuse to California's Child Protective Services. Thankfully, no such instances arose in the data collection process.

Summary

This phenomenological study aimed to understand the personal experiences of parents in training their children to be responsible digital citizens in the context of one-to-one learning environment. This research captured authentic parent voices by employing interviews, focus groups, and personal online journals. The questions associated with each of the data collection methods were very similar in nature as they allowed participants multiple avenues to express their experiences in parenting pre-teens/teenagers that tend to be hyper-connected to technology for the majority of their waking hours. Moustakas' (1994) approach to data analysis in the transcendental phenomenological method helped me to ascertain and write about the essence of these parenting experiences. This essence statement helped to explain in clear, everyday language exactly what parents are experiencing in raising responsible technology users. I gave

careful consideration to ensure thorough trustworthiness and sensitivity to ethical considerations. Chapters four and five will include the results and discussion of this analysis.

CHAPTER FOUR: FINDINGS

Overview

Chapter four presents the findings, based on in-depth analysis, of this transcendental phenomenological study focused on capturing parent perspective of secondary students' one-to-one learning experiences. The purpose of this study is to examine the experiences of parents of secondary students who have access to one-to-one learning environments required or provided by a school system for educational purposes. The first section of the chapter provides details of each research participant in the form of narrative portraits. Chapter four also provides a list and initial description of all themes, and it subsequently ties each theme to the corresponding research question(s). Several themes emerged in the analysis that relate to each research question. The next section answers the central research question and the three sub-questions. Per Moustakas' (1994) methodological recommendations, this chapter concludes with the written textural description, the structural description, the overall textural-structural description, and a summary.

Participants

In total, the study included 10 participants from the same school location. The fact that all participants enrolled their children at the same school provided a unifying attribute to their shared experiences. The school administration sent the initial invitation to participate to all enrolled families on my behalf, and 18 individual participants replied. Due to various scheduling conflicts, of the 20 interested parents, 10 chose to participate. In total, I conducted 10 individual interviews, collected nine journal responses, and arranged one focus group consisting of four participants. I identified participants throughout the results and discussion sections using

pseudonyms. Table 9 provides a summary of information related to each participant's family size and involvement at the school site.

Table 9

Demographics of Parent Participants

Participant Name	Total Number of Children	Ages of Children	Corresponding Gender of Children	Total Number Of Students at the School
Sophia	7	17, 19, 21, 28, 30, 32, 35	Not reported	1
Sarah	2	15, 19	F, F	1
Joshua	2	12, 15	F, F	2
Ruth	3	21, 18, 12	F, F, M	1
Esther	3	15, 15, 17	M, M, F	3
Mary	1	15	M	1
Martha	2	13, 14	F, M	2
Hannah	2	16, 18	F, M	1
Deborah	1	17	F	1
Miriam	2	14, 16	M, M	2

A total of 10 parents participated in the study. The following summaries provide a description of each participant.

Sophia

Sophia was a 57-year old, Hispanic/Caucasian female. She was the mother of seven mostly grown children, and was one of the oldest parent participant in the study. The youngest of her seven children, a son, was the only adolescent remaining in the family. Sophia's oldest child is 35-years old, which places Sophia in the unique position of raising children both prior to and during pervasive technology use in schools. She expressed feelings of relief with regard to the raising of her children, as nearly all of them are adults. She also repeatedly referred to the high level of trust required in parenting adolescents towards responsible technology use.

Sarah

Sarah was a 49-year old, Asian female. Sarah was the mother of two daughters: one a graduate of the site school and the other a ninth grader. While recognizing the value of learning with computing devices, she also expressed feelings of concern over the ways in which her daughters used technology, and shared specifically about the distractibility of computing devices. Sarah also shared some of the ways that she has tightly monitored and controlled access to the Internet in her home.

Joshua

Joshua was a 46-year old, Caucasian male with two daughters enrolled in the school. He was also the only father who participated in this study. His wife was an educator at a local junior college, and over time, he gleaned several educational concepts from her. As a non-educator, he displayed an in-depth understanding of the field of educational technology. Joshua also expressed that he felt mostly excited about the many opportunities that iPads™ provide for

learning. He exhibited, perhaps, the highest level of enthusiasm and support of the one-to-one learning program of all of the participants.

Ruth

Ruth was a 57-year old, Caucasian female. Similar to Sophia, Ruth was a seasoned parent of three grown children, two of which attended universities. Her youngest child, a son, was the only one who attended the site school and participated in a true, one-to-one learning program. Ruth and her husband encouraged their son to use computers for educational purposes at a young age. She expressed feelings of support of and excitement for the school's approach to learning via iPads™.

Esther

Esther was a 42-year-old, Caucasian female. Her three sons (a 17-year old and twin 15-year olds) all attended the site school at the time of the study. Her husband also served as a teacher at the school—a phenomenon that gave her an added perspective on the research topic. Esther was an eager, enthusiastic participant. She was not shy about sharing her lived experiences as a parent of teenagers in a technology-rich environment. She also spent a lot of time expressing the importance of faith in parenting her three sons.

Mary

Mary was a 59-year old, Caucasian female. She was the only single parent in the study. Her son, a 15-year old, was her only child. Her son began attending the site school in sixth grade, so she was involved as a parent in the school for over four years. More than any other participant, Mary took time to think through questions. She often paused for long periods before responding. She expressed a mixture of feelings as she recognized the value of learning in a one-to-one environment as well as the challenge of engaging her son away from a screen.

Martha

Martha was a 48-year old, Caucasian female mother of two (a 13-year-old daughter and a 14-year-old son). She expressed strong support of the site school's one-to-one program. Her husband worked in the technology industry, which gave her a favorable of opinion of technological tools. More than any other participant, she shared specific ways in which she engaged and monitored her children's technology usage—both inside and outside of school—by actively participating in social media and apps herself.

Hannah

Hannah was a 49-year old female who described her ethnicity as "other." She had two children. Her eldest, a girl, graduated two years previously from the site school, and her son was in the an 11th grade at the time of the study. Hannah held the unique position of being both a parent and a teacher at the school. Her position as a teacher provided details into the employee side of working in a one-to-one learning environment. Hannah expressed a balanced view of allowing pre-teens and teenagers use of technology for educational purposes.

Deborah

Deborah was a Caucasian female who turned 50 the day after her interview. Her only child, a daughter, was a 12th grader who enrolled in the site school during her freshman year. Deborah's living situation was a distinctive one: Her primary home was over two hours away from the site school, and they maintained a second residence near the campus. Deborah's family did this because when they began looking for a Christian high school for their daughter, the site school was the only one that met their criterion. This demonstrated the family's commitment to the school. Deborah displayed an intentional approach to parenting in the area of technology.

She took time to explain rules for technology use with her daughter, and she checked in on technology use on a regular basis.

Miriam

Miriam was a 40-year-old, Hispanic/Latino female. Her two sons (ages 14 and 16) attended the site school since the sixth and seventh grade, respectively. Similar to Hannah, Miriam held the uncommon position of serving as both a parent and teacher in the school. She first began her experience at the site school as a parent and later began working for the school. Miriam shared equal feelings of frustration and excitement over the school's one-to-one learning program. She shared effectively several practical examples of the benefits and struggles of parenting in a technology rich era.

Results

Based on the purpose of this study, I sought to investigate the role of one-to-one devices in a parenting relationship and how this role is defined, perceived, and experienced. The central research question asked:

> How do parents describe their experience of training their children to be responsible digital citizens in the context of a hyper-connected society?

This chapter also answers the following three research questions:

1. How do parents describe their experience of training their children to be responsible digital citizens in the context of a one-to-one environment?
2. How do parents perceive their particular parenting style in relation to addressing digital citizenship with their children?
3. How do parents describe their efforts at mediating adolescent technology use?

The themes that follow provide detailed information that helps answer each of these questions.

Theme Development

The themes of this study emerged after I had immersed myself in reading, re-reading, taking notes, coding, grouping, and reducing the data. The journals, semi-structured interviews, and the focus group provided a wealth of data to analyze for themes. After transcribing, reading, horizonalizing, coding, and organizing the data, the following themes emerged: (a) challenges in maintaining a healthy lifestyle; (b) the educational benefits of learning with technological devices; (c) questions related to digital versus print learning; (d) mixed feelings about technology; (e) the weight of parenting; (f) the importance of ongoing communication (g) preparing children for adulthood; (h) holding children accountable; (i) the importance of trust; (j) and providing instruction at an early age.

Theme 1: Challenges in maintaining a healthy lifestyle. All three data sources (interviews, journals, and the focus group) reflected this theme. This theme consisted of more coded notations than any other theme in this study. Of the 10 total interview participants, eight of them spoke about health concerns mostly related to screen time. The majority of journal responses, five out of nine, also reflected this theme. Additionally, the focus group referenced this theme (in some capacity) a total of 14 times. Participants spoke extensively about the challenges their children faced in managing time spent on computing devices and the potential short-term and long-term health concerns. Sophia, with a bit of humor, summed up the way young people feel about the amount of screen time that they desire:

> And the more you say, "No," or say, "You know, you really shouldn't." The more they dig in their heels sometimes. Especially this child. He's like, "Yeah, the more you bug me, mom, the more time I have to not do it."

Sophia's son viewed this brief conversation with his mother as being time wasted away from his computing device.

Screen time. This sub-theme showed up consistently in participant responses. Most participants expressed concern over how much time their children spent on devices. They feared that excessive time on a computer took away from real-life experiences like walking, having a conversation, or enjoying a family meal together. Overall, they wondered if too much time on a screen led to an unhealthy lifestyle. Parents also struggled to know how to enforce screen time limits, as children expressed the need to complete homework on their devices.

Deborah alluded to the sheer amount of time young people want to spend connected online through their devices in the following passage:

> Up until her freshman year, our daughter had not been allowed any extensive time in front of the computer at home, we hadn't had cable TV for several years, very little video game time was allowed, and she had only recently acquired a phone (with no Internet access), so when she was allowed to have the iPad™ for school, it was a bit of "overload" for her too!

Sophia further described the ways parents viewed their children's constant connection to devices:

> Oh that, just the constant, it walks. You see girls with iPhones™ in their hands, and they're walking with it. In the house, he's gaming but that is right here while he's chatting with whomever, or he's doing something else in his...So there's that constant need to be interactive.

As participants reflected on screen time concerns, they often expressed the challenge of imposing time limits. Parents desired to set healthy limits, but they did not always know the best way to approach or enforce it. In her interview, Hannah spoke about the need to "watch the

amount of time that they're on the device, having them be accountable for their learning." Similarly, Esther alluded to the pushback that she received when imposing time limits. She shared, "We also get a lot of flak sometimes because we do limit their media to one and a half hours on school days and two hours on the weekend per day."

Mary shared that her son would spend "literally 20 hours a day on the computer" if she let him manage screen time on his own. Finally, Sarah provided a powerful visual of how connected children are to their devices. Parents expressed a desire to help children manage screen time and to live apart from screens. This proved to be a challenge as young people find so much of their identity in their devices. Sarah shared that her daughter is "holding it upstairs, downstairs… and then FaceTime[s] everybody… And this is the thing she's putting under her arm all the time. And if you turn it off, she has no life." Parents perceived that their children find too much of their identity in their devices and wanted to help them live life off of screens. These efforts often led to constant battles over screen time with children.

Blurring. This notion emerged as another sub-theme in the data analysis process. One of the factors that may account for young people feeling the constant need to be connected is that children view their devices as not only an educational tool but also as their primary entertainment and communication device. Multiple parents shared in detail about the struggles they experience in discerning whether children are on-task at home with regard to their screen time. Parents suspected that their students were not only working on homework, but they were also using social media, texting, or watching videos at the same time. Miriam commented, "So it blurred everything together." Similarly, Sophia observed, "He's just Snapchatting while he's gaming at the same time… or flipping back and forth between homework." Hannah described the blurring phenomenon as "crossing that line between using the one-to-one device as a learning

tool, into using it as an entertainment platform." For Ruth, the blurring created mixed feelings. She shared, "…the digital world encompasses lots of his study time and free time too. I try to require breaks and doing other things than computer or screen related activities." The multiple references to the blurring of school and play while on devices concerned parents.

Need for Balance. One of the ways that parents connected to the over-use of screens and blurring was by expressing the need for balance with regard to technology usage. Parents perceived that their children spent too much time on devices resulting in imbalanced lifestyles. By default, children selected screen time over various other activities such as exercise, reading, or having face-to-face conversations. Young people also lived out of balance by constantly utilizing devices for entertainment rather than homework or other productive activities. Parents feared that children would live out of balance without instruction. Mary stated, "…but I felt that if I just let him run around with it, [he] was not [going to] lead [a] very well balanced lifestyle." Hannah also addressed the importance of balance when she shared, "They're learning how to balance access, how to balance responsibility, and how to balance education versus entertainment." Martha elaborated, saying that she believed that children should be able to use their device for both academic and non-academic activities, but the use must be balanced. Martha explained:

> Just because I don't know where it's going. I think there's everything in moderation. So there's a balance there to be had, and I don't want my kids to be in a closet with a computer later in their lives. I want them to be out in the world and be able to eat a meal and talk to someone without their phone on.

Mary also provided a concrete example from her own parenting experience on the need for balance as she shared, "So for me again it's about the balance, you have to be outside for a while,

you can play on your computer, you can do your schoolwork, but you just have to try to keep it balanced." Parents viewed off-screen activity as a necessary element of a balanced lifestyle. Finally, Deborah also spoke about her desire for her daughter to balance time connected to a device:

> We can use technology to benefit us, so trying to instill in our children how destructive the bad can be with the need for balancing the good that tech offers, while also balancing the rest of life, hopefully opens the corridor to a successful outcome as an adult.

Parents felt a responsibility to teach their children how to manage the amount of time they spend on screens, so they would live balanced lives as adults.

Many participants also referred to health concerns related to the lack of exercise, overstimulation, and brain function as a result of imbalanced amounts of time spent on devices. Esther provided a detailed example of the need she perceived for her children to exercise:

> They have actually thanked us numerous times because unlike many of their friends, they have learned to have a life and interests outside of their devices. For example, our twins who are almost 15, have built a fort, designed and constructed bows and arrows, played airsoft, rollerbladed, [and] jumped on our trampoline.

She felt a sense of pride in helping her children develop an appreciation for physical exercise. Esther also shared, "…we've had to force him to exercise a certain amount of time every day." Mary expanded on the concern of mental overstimulation from screens as a sign of an unhealthy, imbalanced lifestyle. She stated, "I think it has more to do with the brain function. What is… this overstimulation… doing[?] What are the long term effects on our evolution even?" Mary continued, "But I can't imagine it's good for your brain to be over-stimulated so late at night." Throughout the data, participants clearly shared multiple concerns around health-related issues.

Theme 2: The educational benefits of learning with technological devices. A second theme that emerged from the analysis related to the significant educational benefits students gain by working with a computing device(s) in a school setting. Nine of the 10 participants shared on the perceived value of learning with computers, and excerpts from all data types (journals, interviews, and the focus group) revealed this theme. Eight of the interviews addressed the topic in some capacity. Of the nine participants who completed the journals, four of them expounded on the educational benefits of learning with devices. Additionally, the focus group referenced this theme 14 times. Overall, participants focused on the educational benefits of engagement, organization, communication and collaboration, access to information, specific apps, and preparation for life outside of high school.

Multiple participants shared generally positive views of learning with technology. Mary summed up, "I think there definitely are some positives." Martha echoed that sentiment as she said, "I actually have feelings of, I think, it's hope and excitement for the future." Similarly, Sarah described the learning environment thusly: "I felt it is a gift for my children being offered this one-to-one learning environment at this young age. She got a lot out of it, and became more and more skilled and responsible with this tool." Hannah was even more enthusiastic as she shared, "I'm a huge advocate of one-to-one programs." Hannah expanded on her enthusiasm, "…his learning experience has been huge. It's been just so wide open. He knows a little bit about so much that I'm always amazed how he knows that." Hannah noted that from her perspective, one of the most valuable academic advantages of one-to-one programs was that children "become problem solvers." From Joshua's perspective, one of the greatest values was that students focused on "different learning modalities." The positive sentiment of one-to-one learning was evident throughout the data as all but one participant shared detailed instances of

the benefits of educational technology.

Increased engagement. This sub-theme emerged as a specific educational benefit. Many parents particularly emphasized the increased engagement they witnessed in their children. From the parents' perspective, students in a one-to-one learning environment enjoyed using computers for learning. Mary described engagement this way, "…for the students, though, I want to say it's made learning more fun." Esther shared the same sentiment as she spoke, "I really think that learning has been a lot more fun for them, and I think they have been constantly in these project-based learning situations." Hannah also tied digital learning to increased engagement. She shared, "The digital platforms have made it such that they're engaging, so I find that he's more interested, more engaged, and more likely to be doing more of the work, more of the learning, more of the research on his own."

Mary's vantage point provided a similar view of engagement in learning. She shared, "I can see the product; you don't always see it, but they're having fun. It seems as if they're having fun and I think that's all good. And he tends to study [while] Skyping." Ruth also discussed this engagement phenomenon in the following excerpt:

> I see that he is totally engaged in learning things. And again, the computer is also... it's like entertainment in a way, and then it's also learning. Like looking up and doing research and setting up presentations so he has to go up and he has to make slides, PowerPoint slides, and then he has to present on those in a day or two. And tell about what he learned in the... like recently, he was doing one on the "ologies" for science. He had microbiology. He had to go on there and research what microbiology was, find some pictures, and find out: if you were a microbiologist, what you'd be doing. He did all of that and then he had to present on it to other people in his science class. So getting the

> information really quickly, and it doesn't always have to be written down on a paper and turned into a teacher.

Finally, Sophia discussed engagement when she shared, "I think it's just that it's way more interactive. Yes, and there's way more resources you can use." Multiple participants identified engagement while learning as a benefit of one-to-one learning.

Increased access to digital learning processes. This sub-theme also consistently appeared in the data, as participants highlighted the organizational improvements of learning with computers as an educational benefit. Prior to Internet access at school, students relied on print materials almost exclusively. With the addition of Web-based learning materials, students moved into a new digital, learning paradigm. Mary summed it up when she shared, "With sort of the one-stop shop, everything is there. You have no excuses." Sophia more specifically noted the value of eliminating the need to carry textbooks and the value of ready access to learning materials in the following quote:

> You have your book… The good is practical. You're not hauling around the stack of books that weigh 70 lbs. An instant access to Internet, to resources that the teachers set up, that are very useful in learning. So [it] might bring more desire to learn, because they're not just reading a textbook.

Mary expressed a similar sentiment, as she shared, "As far as the supplies, I like it that there isn't a paper trail to organize at home." Parents viewed e-textbooks and resources as a benefit in helping students to organize their learning. Joshua continued this line of thinking. He stated, "But I think, from a teacher's standpoint, it's great, because you have the ability to put everything in one place, and/or have it available to you, and have less paper floating around." Several parents perceived digital resources as an aid in student organizational skills.

An increased organization of learning provided by a digital environment allowed students to take ownership of their learning in new ways. Joshua shared that, "It has been very positive and helpful in instilling responsibility for their education. Our kids are responsible for receiving information, submitting assignments and asking questions themselves, from and to the [school] faculty." Ruth also summarized these benefits. She stated that her son used his laptop for "turning in assignments, completing and researching using the Internet, textbooks or online programs to complete his assignments." Student organization of learning in a digital environment also led to improved communication with teachers.

Communication. Parents shared examples of their children more readily and more easily communicating with their teachers about learning assignments. Ruth noticed the improved communication when she said, "The communication that he has with his instructors is great. He can ask questions or get help needed." Miriam also shared that, "I think it gives them access to their teachers quickly, which is helpful. And all that information." Joshua observed the same phenomenon as he summarized that his children, "learn by doing, to interact, and get feedback from teachers and colleagues, and to constantly [revise] and hone." Miriam also noticed the improved communication. She shared, "The quick communication through Moodle™, or Google Classroom™, or email… I think it helps them to own their own learning." The benefits of improved communication extended beyond just student-to-teacher relationships.

Collaboration. Parents noted this improved communication via collaboration amongst their children and their peers. Students embraced this increase in collaboration as it gave them the ability to share their schoolwork with peers and teachers in new ways. Esther provided a detailed description:

They communicate with their friends a lot… they do these Quizlets™ or whatever. And

> they build these cool entire study guides for each other. I know they're just really into that. [My son] builds these study guides and then he shares [them] with all his friends and people add to it… Instant collaboration, and then they all study together.

Mary wished that she had the communication tools her children accessed when she was a student. She said:

> So this whole idea of Skyping and doing your homework together. I mean we didn't, we couldn't do that as… Sunday afternoon or Saturday morning. To get them there, drop them off, and go back and pick them up. So they could get their project done. So it is definitely a positive that you can Skype™.

Joshua shared that technology was "a useful tool." He continued, "I think, in some ways, it enhances it, because they're able to continue the dialogue outside of the classroom more, and they're able to work on projects remotely." Mary noted the same thing as she shared, "They are having a good time playing, and when it comes to homework, I see them working together and discussing the content." Mary expanded on the value of student communication and collaboration as she said, "I guess when they do their video assignments, I think that's probably fun where they share. They'll work in teams, and they'll decide who's responsible for which aspect of the presentation. I can hear that is interactive. I can hear him talking to his friends." Several parents noted the benefits of collaboration.

Information available online. This emerged as another sub-theme under the umbrella of educational benefits. As students gained access to computing devices at school, they also gained access to information available online. Multiple participants expanded on the educational value of this increased access to information. Miriam said, "…it's like they don't have to know all the information anymore. They just have to know how to find it." She continued in her own words,

"I think that the benefit of it too, in terms of math, is that they can find out quickly if they're doing it right." Hannah enthusiastically highlighted this benefit when she said, "I'm amazed at how much he knows about technology and how much he knows about navigating digital systems. I think it has freed me, to some extent, from being the one to have to help him all the time and answer questions because he literally has a whole world of answers." Ruth also shared about the value of accessing online support for learning:

> Because it's very interactive and some of the textbooks, [be]cause we went to back to school night and they were telling us about some of the textbooks. It's like they have the video nerd in there. And they can show you how to do problems if you're having trouble in math. So it's like you're not just stuck to you and a piece of paper.

Participants shared multiple examples of the value of anytime access to educational information.

Several participants went deep in their explanation of the educational benefit provided by specific apps. Esther shared about a few she discovered, saying, "They've learned about Garage Band™ and iMovie™ and different ways to present information. And my one son does a lot of... He got really into for a while animation and… stop motion." She continued, "In terms of their creativity and their outlets, it's opened up a whole level. Also, they've discovered ways to learn." Esther continued, "So coming here, it was like whoo! My kids were suddenly super engaged, really into these iMovies and these little puppet things. Their little brain says, 'Wow, wow.'" Miriam referenced a specific app for students to practice quizzing themselves. She saw value in this as she stated, "Because they studied, they get that quick feedback if they're doing it right." Sophia also discussed specific apps for learning. She said, "And talk about things. And you can individually do what you need to do at home. But of course after school now. [Cellular phones] are your [camera]. You can do videos." Mary provided a succinct summary to the

value of learning with specific apps when she said, "I mean, he has embraced it, and he does everything with the different apps. And I think it's been positive." These educational apps revolutionized learning. Students can easily ask and answer questions, watch tutorial videos, create movies, quiz themselves, and take pictures.

Preparation for life after high school. One final educational benefit of learning with computers was that this rich, digital, learning environment helped prepare students for life outside of high school. Parents shared a desire for students to be prepared for future careers related to STEM. They saw a one-to-one learning environment at the middle school and high school levels as being excellent preparation for these future jobs. Joshua specifically shared, "And using technology now, I think benefits them later, in life, in further higher education, in the job market, in the understanding of how people communicate, and collaborate, and work, and stuff like that."

Miriam commented on the values of learning something as simple as typing:

> So they all learned how to type—I think that's really valuable. And I think that should be part of the one-to-one experiences: that they still really encourage the keyboarding, the typing, 'cause I think it lets them express themselves… lets the thoughts come more than the thumb typing. And, it's a skill they're [going to] need if they work in computers.

Esther also expressed the life lesson in being technically proficient that extended beyond high school, saying:

> I feel like kids are a lot more technologically savvy, though. If they went into a field, they would know how to be able to figure out whatever device it was [that] they throw in front of them because they have this experience.

Parents perceived that learning with computers in a one-to-one learning environment

developed technically savvy young people who were well equipped for life after high school.

Theme 3: Questions related to digital versus print learning. Parent questions regarding the nature of digital learning on a computing device versus print learning (using textbooks, working on paper, etc.) emerged as a second theme from the data tied to the first research question. The majority of participants discussed this area. All three data sources (journals, interviews, and the focus group) revealed this theme. I recorded 19 notes in the coding process. Five of the interviewees referenced this theme, and it appeared in one of the written journal responses. The theme also appeared in three instances in the focus group transcription. Mostly, the thoughts centered on questions as to whether one form of learning is better than the other, or questions about whether purely digital learning lacks some quality of learning that is inherent to print learning. Participants also expressed concern over the lack of disconnect between education and entertainment that digital learning tended to create.

Disconnect between education and entertainment. Participants expressed concern over children learning primarily on digital devices because it left them feeling disconnected from what was being studied. When students previously completed the majority of schoolwork with print materials, parents felt they had more visibility with regard to what their children were doing. The disconnect, or lack of transparency, also caused parents concern because they were unable to determine if students were working on homework or spending time on activities not related to school—a phenomenon that did not occur when learning was done predominantly with paper. Parents were unable to discern quickly exactly what their children were doing. Deborah summed up this feeling when she said,

> I mentioned before, without having an actual school book in front of her, there was no way for us to know what she was working on, and if it was school work at all, surfing

Pinterest™, or talking to friends, etc.

Miriam described this phenomenon as a "disconnect." She said, "I think it makes me feel a little disconnected from what they're learning, because I don't see as much tangible evidence of what they're learning. So, they don't bring anything home. I don't see papers. I don't see drawings."

This lack of visible work also tied into questions around digital learning versus purely print learning. The high volume of work being done on a digital device created this disconnect. Miriam described how learning on a device created this concern when she said,

> I don't really even know what they're doing. What I would do with math is: I would usually buy a hard-copy textbook so I could help them, where I would have the book and they're doing it on their iPad™. It's because I just want to be involved.

Lack of print materials. Digital learning, when compared to print learning, did provide some advantages. Most notable was the fact that students did not have to carry textbooks back and forth to school. As mentioned previously, parents viewed this as an educational benefit. However, many participants reflected on challenges that solely reading and working on screens created. Miriam stated,

> I'm old-fashioned so I [want to] touch a book. To me, they're flipping through and writing with their finger. And I just can't do that, not as fast as they can. And I'm not comfortable. I would always offer them a keyboard

Esther also shared insight in this area when she expressed feelings of disgust at the removal of the traditional library. She perceived value in providing students access to print books for reading. She shared:

> Especially me, I feel it's really important that they read, that they read real books. I take them to the library and get real books, which I thought was kind of disgusting when I came here, and they got rid of their library. They have no library. No books, no real books.

Sophia similarly viewed this negatively when she said, "I still feel like it's nice if they could read a book. If they're only read off a pad—always reading soft copy—the screen's hard on their eyes. So I see that's a somewhat negative affect."

Mary also contributed thoughts related to concerns about simply reading on screens. She shared,

> In elementary school, it was required reading every night. Like 30 minutes. You had to log in, and we did it, bedtime reading. Sometimes he'd go on for an hour 'cause he really liked the story, and now it's like pulling teeth to get him to read a book. And that concerns me.

Mary also stated that she found it difficult to encourage her son to read for sustained periods.

Sophia provided a good summary of the challenge of learning solely digital versus with print materials as she shared, "…there's something to be said for tactile, using a piece of paper and pencil. And it's not completely gone, but I don't know. I think there's something to be said with picking up a book and not the electronic." Multiple participants highlighted concerns over reading solely from screens as compared to print materials.

Learning process. Multiple participants expressed questions and concerns about how learning exclusively with computers impacted the learning process. Mary wondered what changes digital learning may have brought about as she said, "I don't know if that replaces another kind of skill that you would do manually, or a different kind of thought process." Sophia

saw a place still for a learning process that occurred while working with print materials:

> And the fact that you… I guess they can highlight and underline, but it's something tactilely different in the learning process. So when you're reading a novel, or something, to actually feel that. Highlighting or putting a sticky note that you could physically see not just shake. I mean, there's all those tools that are in an iPad™ or on your computer, but there's something still to be said about learning the old-fashioned way. I guess you could say that, yet you don't have to do all either way. There's a place for all of it.

Mary agreed, but also added: "I've heard people say that when you write things yourself with a pencil, that you actually remember it better." Although parents were not citing research to back up their opinions, they did feel that learning on screens reduced a student's ability to retain information.

Ruth noted that the learning process on the iPad™ created some challenges in the learning process for her son. She said, "I did notice initially that he'd try to do his reading, and then do his answering questions and sometimes that was kind of hard, because it was an older iPad™, and he took a while for him to get used to that because there wasn't just paper around." Sophia spelled out important insight as to why she felt the need for some learning processes to still occur off a computer:

I think the bad that comes to that is for kids who need, and my kid does, did need, does need, something to hold in his hand. But the textbook's there, and so yeah, you're holding the iPad™, but there's a difference. And he's a good kid to be annotating, highlighting, and feeling. And partly, he has learning disabilities, so the bad part is: it takes away some of the tactile that you get with the actual textbook. So he reads... We usually buy him all of his literature books, the novels and such 'cause he wants things in his hand as opposed to reading it off his iPad™.

> Finally, Miriam shared feelings of appreciation that some work is still done by hand: I worry about that and then handwriting. They're not writing anything by hand. This school actually has moved to where the whole math department—all math is done on paper. I like that. It's not completely digital. As a parent and a teacher, I like that. They just do pencil and paper for math. That's good.

Though parents appreciated the educational value of moving books and work onto a digital device, they shared strong opinions on the importance of still learning in traditional ways with print materials.

Theme 4: Mixed feelings about technology. The third theme related to research question one that emerged in this study was the fact that parents shared mixed feelings about the use of technology as a learning tool within a one-to-one program. While parents recognized the extensive educational benefits, they also wondered at what cost these benefits came. Though no parent advocated for the removal of one-to-one devices, parents expressed a desire to use technology for learning in a balanced fashion. As Hannah stated, "There are a lot of mixed feelings." Seven of the participants clearly articulated these mixed emotions, and all three data sources reflected this theme. No major sub-categories emerged under this theme, so the responses are organized around each participant's own experience.

Esther shared more than any participant in this area did. She expressed these conflicted feelings, while also recognizing the dangers of technology coupled with the advantages, by stating:

> On one hand, I feel like we need to be vigilant about the dangers of technology, and on the other hand, foster in our children a desire to use technology for good for this world and pursuing their own passions and interests.

She described this phenomenon as a feeling of "dissonance. She also recognized both the negative and positive aspects of technology for children. Esther summed up her feelings when she said, "I'm not to say whether it's good or bad if everything seems to kind of be okay. It's just different. And that's what's hard to get used to."

Like Esther, Martha observed the benefits, along with the challenges, brought about by learning with technology in a one-to-one environment. Martha stated,

> I think that as much as the technology can be scary, it also has opened up a world to our kids. And it's given them access to things they would have never been able to understand or see before. So I'm happy about not having six textbooks in the house.

Mary also reflected this dissonance when she said:

> So it's almost like too much information. You can be overwhelmed with how much is out there and trying to absorb all that and process it. So I think most of my feelings are more on the concern side not on, "Oh wow, this is wonderful and New Age." It's more like: How is this [going to] influence my child? Is it [going to] be positive? Yeah, It's a different kind of energy you have to put into that. And I guess also for my own style, if I was more permissive, I wouldn't be as concerned…

Part of the mixed feelings for Mary stemmed from her desire to access the benefits of learning with technology, coupled with intense concerns of the "overwhelming" nature of technology use.

Like the other parents, Ruth also expressed conflicted emotions. She stated, "My feelings are mixed because the digital world encompasses lots of his study time and free time too. I try to require breaks and doing other things than computer or screen related activities. So monitoring is important." Ruth acknowledged the positive side of learning, even with the distractions that technology brought for both children and adults. She continued,

> Well, I know technology is crazy for all of us right now, so I think even parents have trouble with the whole Facebook, everything that's going on. But I do feel good for him because I think it really adds to his whole experience of school.

Sarah viewed this challenge of balancing the positive and negative attributes of technology through the analogy of a power tool. She explained, "They don't need that powerful tool yet, and so sometimes they abuse this tool." Sophia also used the tool analogy to express her conflicted perspective when she said, "So, as a technology tool, it's grand. I think sometimes it gets in the way sometimes as well. It's too easy to be distracted." Overall, participants described their view of their children's technology use with language reflecting mixed feelings.

Theme 5: The weight of parenting. One of the prevailing themes that emerged from the participants' experiences is that parenting pre-teens and teenagers towards responsible digital citizenship is hard. Participants used words like "helpless," "inadequate," "heavy," "anxiety," and "weight" to describe this phenomenon. The data was overwhelming in this area, as all participants shared ideas related to this theme. Every type of data (journals, interviews, and the focus group) cited multiple examples of this theme. All but one of the 10 interviewees spoke to this theme. Seven of those nine people submitted journal responses that addressed the theme in some capacity. In addition, the focus group referred to the weight of parenting 13 times. The excerpts below provide a narrative of this experience.

Perhaps the best way to summarize this theme is to describe it as an emotional weight parents feel. Miriam called it the "weight of living in this" technologically rich world. Like Miriam, Joshua expressed this idea when he said, "I think it makes me feel, in a way, kind of the gravity of the whole thing." Mary added that the topic is "not always easy to talk about" as a parent.

Emotional weight. This sub-theme appeared pervasively in the data. The uncertainty of parenting in a new, digital era was almost too much for parents to bear. They described it as a constant weight that stayed with them. Deborah expressed this weight as "fear." She shared, "Oh, yeah, first thing that comes to mind is fear, of course." Similarly, Sarah simply described her feelings saying, "I'm a little bit scared." She also coupled that fear with feelings of frustration. Esther described this weight as a felt "dissonance." She said, "I think that my feelings are largely based on a sense of dissonance." Esther also described it as a challenge when she shared, "It's been challenging, and I think my husband and I are still being challenged." Miriam also felt the weight of the challenge as reflected in the following passage:

> I think it's been challenging as parents because the device has so many different purposes, so I think it made me be more controlling than I wanted to be. I feel for them. I feel like I'm wanting to parent them in a way where I can come alongside them, or their dad, and just say, "This is the world we live in. And you just have to choose how are you going to live." But it's not easy. It makes me fearful for them. You know, just what's out there.

A range of other feelings expressed by participants captured the overall weight parents feel as they help their children navigate a school and home culture permeated with technology. Mary described the feeling as overwhelming when she stated, "Sometimes it's overwhelming for me since I'm from the old school." Sophia described her own experience when she said, "Just, it's challenging. I think every generation has their challenge." Esther expressed the full emotional weight of parenting in terms of anger. She shared, "And I'm telling you, I feel angry. I feel really angry at times because I feel like they are constantly accosting my sons." Esther expressed these strong feelings in light of the easy access her boys had to pornography on the

Internet. Similarly, Miriam described her feeling of frustration with terms like "constant" and battle. She explained, "It's just been a constant and ongoing thing of… I think it's maybe more of a battle dynamic in our house than I would have wanted for our family."

Powerlessness and inadequacy. These overwhelming feelings often led to a sense of powerlessness and inadequacy in parenting. Although parents had the best intentions to support their children, they often felt outmatched or undone by the pull of technology. Esther spelled it out clearly during the focus group when she said, "I also feel powerless at times." Mary simply described the feeling as "defeated." She continued:

> So in some ways, I feel helpless because I'm not in full... I'm not in control. Or you just don't know at any moment what could influence them even the choice of music and everyone's got their ear plugs in and you'd always know what they're listening to. So it's sort of an invasion. I feel somewhat of an invasion into your parenting privileges or environment.

Miriam shared similar feelings when she spoke, "At times, I feel inadequate to guide them since we grew up in a different environment. And I feel like I am making reactionary decisions instead of knowing how to proactively lead them." Sarah revealed that she experienced a similar sentiment when she shared, "But at times, I still feel inadequate being a parent raising a digital citizen." In a word, Sophia described the situations as a feeling of "helplessness." Sophia expounded on her original thought as she stated, "…at times, [it] makes you feel so inadequate."

Sense of parental responsibility. Participants often shared thoughts related to the weight of learning in the context of feeling a sense of responsibility to raise digitally responsible children. Frequently, these experiences left parents feeling defeated. Sophia summarized this well when she said, "We all try to do the best we can do." Hannah articulated the overall goal of

raising children to be responsible when she said, “I think I’m still exasperated by not... and again, I’m just talking about not the one-to-one as a learning device; I’m talking about digital citizenship.” Esther spelled out the desire to help her children as a “deep sense of responsibility knowing that they do not just become responsible citizens; they need a lot of guidance and teaching as well.”

Mary described the weight of raising a responsible child thusly: “I just want, you know, everyone to comply with doing the right thing. But that’s been the challenge for me…” Joshua expressed a sense of anxiousness tied to these challenges as he spoke, “…anxiety, about not only knowing if I’ll make the right decisions and thinking they will get into some kind of trouble without my ability to help, but anxiety that I’ll even understand the environment that they are in.” Mary also had concerns about how difficult it is to help children successfully navigate the digital landscape. She shared, “The immediate feeling was one of concern, because the schools alerted and educated the parents on the potential risks and vulnerabilities that a child could be exposed to using the Internet.” She continued, saying,

> I’m probably not as good at it as, you know, other parents, but it’s not that I... I’m very concerned. I [want to] do more. I just don’t feel I have the skillset; I have the right way, because it will come across as if I’m lecturing. It’s hard for me to keep it light and funny, and can I catch him off guard maybe?

Sarah felt the weight of parenting in light of the short amount of time she perceived as being left to influence her daughter. She said, “I felt really heavy in a way that I am sending this kid out to the world in just three more years. Of course, I will remind and examine her use of Internet with advice and action.” Multiple parents shared a desire to raise the children the right way, and they shared a common struggle around how challenging that act is.

Increasing technology use. Participants articulated a sense that increasing technology led to a set of challenging parenting scenarios. Mary described the feeling when she said, "I feel I'm not always able to keep up with it. She continued, "I feel it's going too fast for me, personally, to keep up with it. So I just... I'm amazed that the kids can keep up with it, and embrace all the new technology." Esther described her feelings this way:

> I certainly know we haven't done things perfectly, and have probably erred on being too restrictive and controlling, but I think we have just done our best in a world that our parents and ourselves never really lived in. I do hope my children will improve on and be better equipped to help their own children navigate this technological world.

Hannah expressed a similar thought when she said:

> I think it's really important too, for us as a family, to really rely on God's guidance and wisdom, how to handle these complex situations or challenging circumstances. There are times where I don't know what to do because, again, as you said, this is all new; The whole influx of technology and having a device in your constant 24-hour possession.

Martha shared a feeling of success in this challenging parenting area along with concern over the increasing nature of technology use in the following text:

> I'm happy about everything being done on the iPad™. And I think, again, because we took the time to really understand the technology and we know how to use it, I'm not afraid of it. I think it's great, and I think it's [going to] keep going, so we better be on it.

Negative content. Participants expressed specific concerns with regard to the challenge of parenting towards responsible use in light of negative content available on the Internet. Miriam shared, "And there's a lot to it, also teaching them about how permanent it is. But that's

kind of like social media, so I'm not sure if that's exactly what you're talking about. It just all overlaps so much." She continued, saying:

> How things are now for them, I think it puts such pressure on them. Because anything they do could be captured and talked about or posted. It's like there's no privacy. Everything could be permanent. If they made a mistake, if they did something foolish… It's just, it's so public. Everything is so public.

Miriam shared even more insight in the following excerpt:

> So you have to give them some freedom to see how they use it… It's a lot of freedom for them at a young age, so that can be stressful. I guess that would be a feeling I also have. I don't know, emotions, just a little bit of fear. I guess. That would be, going back to the emotion and the feelings question, the fear of what they'll experience or what's out there.

Sarah also shared about how difficult it is to parent her daughters in an environment where children can access negative content online. She said, "Because it's such an open world out there, [we] can't monitor them every moment. [We're] just kind of afraid maybe some picture they post is not good… But we can't protect them from everything, so [we] need to let them make mistakes and then suffer the consequences."

Family time. Some parents articulated the weight of maintaining family time in light of pervasive technology use. Parents described a feeling of being in competition with technology for family time. Additionally, parents felt that time spent together as a family was vital, but they sometimes struggled to find the right way to convince their children of that fact. Miriam expressed a challenge in maintaining family time. The following text was shared previously; however, it is worth stating again because of its poignancy:

> We've gone through different approaches. And sometimes we'd have like a screen-free day. But it's like they're mad for half the day before you can even get to the good part of enjoying the benefits of being screen-free. So it's just a battle. It's kind of like… you're fighting with it all the time. I don't want to compete with it for my family time, or health… go outside. It's just been difficult.

Parenting with regard to responsible technology use and creating a maintaining a healthy family life was a challenge for parents.

Theme 6: The importance of ongoing communication. As related to the second research question, one clear, consistent theme that emerged from the participants' lived experiences was the importance of ongoing communication in helping pre-teens and teenagers to become responsible digital citizens. Like some of the major themes, every single participant in the study contributed thoughts related to the importance of ongoing communication. This theme consisted of more coded notations of all but one other theme. All data types (journals, interviews, and the focus group) reflected the theme. Nine of the 10 interviewees referred to this theme in some capacity. An overwhelming nine out nine journal responses addressed the topic. The focus group covered the topic in seven separate references. Multiple participants used the exact word "ongoing" in more than one instance. Some ideas that support this theme included proactive communication, talking with children in light of poor choices, barriers to effective communication, and strategies that successfully facilitated dialogue.

As noted, several instances reflected the ongoing nature of communication. Miriam specifically described the phenomenon as "an ongoing conversation." She continued, saying:

> And I think it's an ongoing conversation too. For sure. As far as teaching the responsible uses. There were things we had to address that I didn't even know would

> come up. So sometimes you're responding to like, "Oh, wait, you're not supposed to be doing that right now. You're supposed to be doing your homework. And I thought you were. And you're doing something else."

Deborah echoed that statement as she said, "Well, I think part of it is [that] we've always tried to keep open communication." Similarly, Ruth stated, "This has been an ongoing communication for most of his life." Esther shared parallel thoughts, "…open communication. Just not allowing them to shut you out. Because I think that's just a natural thing. At least try to keep the conversations going."

Hannah expressed similar feelings as to the ongoing nature of communication with her children. She said, "I don't believe it is enough to have a talk about the importance of digital citizenship once, for instance, when a child first receives a digital device; rather, the training and conversations should be ongoing." Joshua simply described this as having a "constant conversation with kids." Likewise, Martha described the ongoing conversation when she said, "We talk about this stuff all the time, and we've talked about it since they were on the computer in our house playing games." Finally, Sophia alluded to the importance of "lots of dialogue" and "lots of talking."

Proactive communication. This sub-theme pulled out a more specific type of ongoing communication. On more than one occasion, parents specifically noted the value of proactive communication. Martha shared a parenting strategy that she employed at home. She said, "Here's what we're [going to] do: We're [going to] talk to them about it all the time. Every time something hits the news, we're [going to] make 'em watch it." Martha shared this in the context of proactively addressing issues that may arise while her children access content via the Internet. Deborah attacked the issue head on with her daughter prior to enrolling in a one-to-one learning

environment. She explained her proactive approach in the following passage:

> And then knowing that we were coming in to [the school] with iPad™ technology, we just [kind of] started talking a lot and using examples of where technology without maturity, without forethought, had gone very wrong, and how that not only affected them but, potentially, for a good chunk of their life.

Esther made time to intentionally check in with her children on a regular basis. She did this by asking her children frequently how they were doing "in regards to struggling with the temptations that present[ed] themselves or [could] be pursued online." Like Martha, Deborah, and Esther, Ruth reflected a proactive approach to communication. She shared,

> My style is more a constant communication and permissive in some aspects, my child has earned trust in the area of his use of the Internet. We also talk to him about possible dangers, or trolling that happens and ads that may pop up.

Communication in light of poor choices. At times, proactive communication proved to be an effective parenting strategy; however, other instances called for dialogue in light of poor choices made by pre-teens and teenagers. Though parents wished their children would avoid making poor choices, they viewed these moments as prime opportunities to instruct. Deborah detailed one such instance of talking about poor choices with her daughter. She said, "We have talked about why her choices were wrong, why she felt the need to make those choices, the potential for present/future "damage," expressed our disappointment in her decisions, and applied some form of consequence." Sophia had a similar experience. She explained, "I talked to him about it as far as "why" and is that really a good use of your time? We haven't dealt with it yet. That's probably something we should do. Are you being accountable to somebody?"

Joshua recalled a similar scenario. He summed it up, saying,

> But in terms of what they're viewing, I mean we talk to...e specially my wife, I think, talks to them a lot about the type of content that was acceptable to look at and the type of stuff that wasn't.

Sarah provided one final example of reactionary conversation. She said, "I do restrict their usage of Internet and have an opening discussion about my worries if I see something wrong." Sarah continued,

> …those are the years I was worried and talked to them. And sometimes, they made huge mistakes by writing something, either text or online, and other parents actually told me what she wrote, and she cries and she's scared. And so, those special moments have lots of [opportunity for] discussion.

Interestingly, Sarah described one such reactionary moment as "special," thus further reinforcing the theme of the importance of ongoing communication.

Barriers to communication. One participant provided insight into some of the challenges, or barriers, to communication. Though frustrated by these barriers, parents expressed strategies they employed to work past them. Mary noted that her son sometimes resisted talking about touchy issues related to technology usage. She explained:

> Well they need to listen. It's an easier conversation, I think, at school because at home, I think they don't want it. In my experience, when I try to approach certain subjects it's like, "Mom. I'm not an idiot." You know? I get it more like, "What do you think? I'm an idiot?" And I can't. I really have a hard time to approach it. So then I said, "All right. We're talking about trust here."

Mary continued her thought when she said, "I am a single mother, and it's not always easy to talk about external threats. So once again, I am thankful that he seems to have embraced the concerns laid out at school."

Effective communication strategies. Finally, multiple participants shared examples of communication strategies that worked effectively with their pre-teen and teenage children. One strategy that worked for Deborah was to "just try not to react to anything that's too shocking." A couple of participants highlighted the benefits of family meals as a conduit for ongoing communication. Esther called these "dinner time discussions." Sophia shared the following story:

> Two nights a week, dinner. You need to sit with me and Dad 'cause he comes home late and tired… And it's two nights my husband has to be at work really late. So he doesn't have to cut off his activity here, but it does force him to come and sit with us.

Martha shared a similar experience:

> "…Hey, call us if you have a problem" kind of thing. That's the vibe I've been getting, but not like something that's formalized. It's just, "If you have an issue, you can talk, and here's the dates that we're [going to] do it in the evening. And you can bring all your list of questions, and we'll get 'em answered."

Hannah provided some examples of communication strategies that worked for her. She often initiated dialogue with her children about "what is/isn't appropriate." Hannah was intentional about having those conversations that "really tap into his character and his ethics and values." Hannah also pointed out that communication should center on "open, frank conversations." Miriam also sensed the importance of talking about the moral side of technology

usage. She said, "It has required us to learn new technology and have ongoing conversations about integrity, character, and responsibility."

Sophia provided one more example of a communication strategy that worked for her. She shared, "So, I have learned to have conversations with my son, to model digital citizenship, and to pray for guidance." Overall, all participants provided insight into the importance of ongoing communication.

Theme 7: Preparing children for adulthood. Another major theme that emerged from the data is that parents felt a duty to prepare their pre-teens and teenagers for adulthood. The majority of participants contributed thoughts to this theme, and all data sources (including journal, interviews, and the focus group) provided support for the theme. All 10 of the interviewees referred to this theme in some capacity, while all of the journal responses addressed the topic. Further, the focus group transcription contained six references to this major theme. I organized the participant's responses in this category around three ideas: children transitioning out of their parents' home, the release of control from parent to child over time, and children becoming men and women. Hannah's words provided a clear summary of this sentiment. She said, "However, he's entering in his junior year, and I feel like the stakes are [going to] get higher for him, as far as temptations, dialogue, conversations. Everything's sort of heightened the older you get." In light of this natural progression, parents aimed to adequately prepare their sons and daughters for adulthood.

Children transitioning out of their parents' homes. Deborah, Sophia, and Esther provided insight into their goal of transitioning their children out of their homes as responsible adults. This goal motivated parents to engage their children and to proactively prepare them for this transition into adulthood. Deborah described it in her own words as she shared, "Hey, once

they leave my house, hopefully because we've already been through this together, they'll make the same good choices when I'm not there." Sophia similarly said,

> Because in the next year, or in two years, whatever, they're [going to] be completely on their own… He's proved himself, and we would rather have him crash and burn when we can be there, than going to college and not having any time management skills. So hopefully, he's building his time management.

Parents aspired to raise students who were responsible adults in the area of technology usage.

The release of control from parent to child over time. Many participants conversed in detail about their attempts to prepare their children for adulthood by gradually releasing control over time. Sophia described this gradual release as an intentional act based on her parenting style. She explained, "But as they got older, we would change to authoritative to permissive to... I wouldn't say negligent as in little care or control. I think we keep our ears open and we have conversations." Sophia continued,

> We went from really controlling to we're hands off now… So we're pretty much hands completely off at this point, as he's a senior. Trying to make sure, you know grades…we can come down, but he's about to turn 18…

Esther described a similar circumstance and tied the release of control to trust. She said, "And so there's a trust issue there, and our son, our oldest son, has just this summer gotten permission to be on the Internet without being monitored now as a senior." Esther provided more insight in the following excerpt:

> We have a senior, and it's really hard. As soon as he became a senior, we told him: You know, we're [going to] allow you to have a lot more because we want you to live a life

> like you would in college, but still have us there. So we wanted to give him freedom so we could still watch him.

Like Sophia and Esther, Miriam intentionally aspired to prepare her children for adulthood by slowly letting go. She described it this way: "Well part of the job, I think, is teaching them, like you were saying, with the goal in mind. They're [going to] have the freedom, eventually, to do whatever they want with their devices." She later shared how these efforts to develop responsible children paid off. She stated, "That factor, in cooperation with our parenting, has resulted in high schoolers who know how to use their devices responsibly for their intended purpose. She viewed this phenomenon as a "growing freedom as they got older."

Joshua provided a detailed example of how he moved from strict control to more autonomy in the following excerpt:

> I felt like we had to do it based on trust or else, like some of the other people, if you do it based on strictly monitoring and policing your kids, as soon as you're not policing them, they're [going to] do something, that... Not what you want 'em to do. They're not [going to] be self-motivated or self-governing. That's kind of how we felt about it.

Mary described this transition as her son being "on his own more often." She provided further details on this gradual release when she said, "I'm willing to let him go and make his own... I want him to make his own decisions and be accountable." Like so many other participants, Ruth had her own story of building responsibility over time as reflected in the following passage:

> Well, what I like about it is how the level of responsibility he has for that iPad™, for the books on it, for getting his work done, for sending the stuff to his teacher. That he has to be responsible for plugging it in, for getting it into his backpack in the morning.

Children becoming men and women. For many parents, the hope in gradually releasing control to their children was to build strong men and women. Esther described it this way:

> And then as they get older, you have to let go of some control, but the stakes are higher because they're becoming men. They're becoming adults. This, these decisions are going to shape a lot of their habits and maturity. And I feel like I want them to make these decisions for themselves. And maybe you have to wait till they're 35.

Hannah added insight in the following story of her own:

> Now that she's an adult, she has absolute freedom and full ownership. Because right now, if there's things that we don't agree with, how accountable do we need to hold her before we say, "The device now is no longer ours in any sense of the word?"

Hannah aimed to fully develop her adult daughter to be completely independent. In another example, Hannah intentionally dialogued with her son about what it means to be a godly man in light of the temptations technology may bring. She stated,

> For example, with the use of pornography, rather than never talking about that and hoping he doesn't engage; from a mother's perspective, to share with him what that whole industry means for women, and what God says about valuing women.

Through the several specific incidents shared by participants, the theme of preparing children for adulthood clearly emerged.

Theme 8: Holding children accountable. The first theme related to research question three is that parents detailed several ways that they aim to keep their children accountable in the area of technology usage. This theme prevailed in the data as nearly all participants shared insights and anecdotes in this area. Also, all three data sets (journals, interviews, and the focus group) addressed this theme. All 10 interviewees referred to this theme, and six of the nine

journal responses contained related information. In addition, the focus group transcription referenced the topic eight times. Parents continually felt a sense that they ought to be holding their children to high standards while operating in a digital world, and they did this by holding them accountable. Miriam summed up the need for accountability well in the following quote:

> And that's the word we use with them. You're "accountable" to us right now, but as you grow up, you will need to be accountable to someone else, always. Nothing should be completely private. So, just learning how to have accountability in their life—just right now, it's us, but somebody else someday.

Consequences for poor choices. One of the primary ways that parents provided accountability for their adolescent children was by providing consequences for poor choices. Deborah stated, "…you break the rules, there are consequences. Without rules, chaos reigns." She set specific expectations for her daughter and enforced consequences as a form of accountability. Deborah emphasized to her daughter in advance, going into her freshman year, the school's written rule that if inappropriate material were downloaded or viewed, the school had the right to take the iPad™ away permanently. Further, iPads™ were described as "a privilege, not a right." She shared, "Okay, you do realize that if you don't abide by this, that you'll have the iPad™ taken away, potentially." Miriam followed a similar parenting philosophy as she explained, "…especially for boys, too, I feel like there's just too much out there available for them. Really, they have to grow up pretty fast, learning to be self-controlled or accountable or bear the consequences of the choices they've made." Sarah reflected a similar approach in the following excerpt:

> …occasionally, when I do see she spent too much time chatting with her friend under the name of doing homework together, I would firmly remind her that her Internet time is

limited. It will shut down, even if her work is not completed, and I mean it.

Monitoring. In an effort to provide accountability, parents regularly monitored their children's technology usage. The participants in this study felt that these efforts helped develop responsible digital citizens. Deborah called her regular monitoring "pop searches." Martha similarly stated, "We have some hard [and] fast rules. [My husband] has an app on his phone that pulls anything that our kids download as far as new technology onto their phones onto his." Hannah shared that "there was accountability." She continued, "My kids know that at any point, we will take the devices, check their history, be actively looking to see what's going on in their social media." Mary also described the regular monitoring, "I often check in with him when he is on the computer or other media." Miriam described a similar approach when she said, "I could read their texts and look at all of their Internet usage, whatever they do on social media."

In the following quote, Esther provided a detailed example from her experience of how she and her husband monitored technology use:

> He's the ghost person on their Instagram™, or whatever it is. So he's a ghost. So he watches. So he reads all his Instagram™, whatever. And [my son] knows that he's a ghost, but he can't see that my husband's watching him.

Likewise, Hannah detailed an account where her son's text message revealed inappropriate content. She said to her son, "You know, I came across a series of text messages, and the person text messaging was using inappropriate language." She explained possible consequences to her son when she said, "But if this keeps happening, your phone is being taken away. So you need to advocate for yourself to say..."

Sarah also described her monitoring in the following passage:

> Actually, this all started even before she came to [the school]. So we have monitoring, that's called... What is that software by PC? That you put it in and then you connect to it, they send you a report, and you can set the... block certain websites?

In her experience, Sophia utilized a software that allowed her to "see every device, phone, your computer, your laptop, iPad™, Kindle™, everything that it was accessing." The vast majority of parent participants chronicled some experience of regularly monitoring their children's online access.

Limiting access. In addition to monitoring, several parents simply limited online access. Steps included "turning off access to the Internet" or "requiring a Wi-Fi password." Sophia limited her son's access "so that he couldn't get places and we could assign hours." At one point, Esther shared a specific memory when her family faced significant challenges with her sons using their time online in an appropriate, balanced fashion. She shared the following story:

> And what we finally came to was that we were going to take... They would not have access to the Wi-Fi in our house, so they do not know the Wi-Fi passwords. When they walk into our house, they don't have access to Wi-Fi, unless I log them in or my husband logs them in.

When her sons did not respond, she stepped up the limitation. She explained, "So what we did was: I was the only one with access to the Wi-Fi. And so they're not allowed to use their iPads™ or their devices." Some of the participants felt that limiting online access provided a form of accountability.

Co-viewing. Several parents also cited co-viewing as an effective way to hold their children to high standard of technology usage. When Deborah's daughter accessed the Internet when she was younger, one of her parents had to be "right there, pretty much." Ruth also placed

her son in a central, visible place in the home when he went online. She described this co-viewing:

> He's right in the middle, near the kitchen, so we can see what's going on. And at any time I can say, "What were you on? What are you looking at?" And he has to show me whether he's proud of it or not. And I go, "What was it?" And he's like, "Oh, you know." And so I go, "You have to show me exactly, 'cause I'll go to history and see it."

Sarah also utilized a similar strategy. She shared, "Well, I think is: If you're studying, you're allowed in your room with the door open. But if you're not studying, if you're using your Internet, it should be downstairs in the public area."

Importance of dialogue. Parents cited dialogue with children as a way to address issues and to facilitate accountability. They sensed that talking about technology habits provided them a pathway into their children's lives. Through dialogue, parents were able to assist their children with maintaining healthy technology habits. Sophia recalled a time when her son had gone around her back to gain Internet access. As previously referenced, she shared, "I talked to him about it as far as 'why' and is that really a good use of your time? We haven't dealt with it yet. That's probably something we should do. Are you being accountable to somebody?"

Likewise, Joshua saw value in conversation as he shared about "having constant conversation with kids about what apps and resources they're [going to] go and look at, and what is not acceptable and why."

Accountability based on care. Parents made it clear that they did not want to enforce harsh rules just to be mean; rather, they genuinely felt that accountability based on care helped their children develop into healthy digital citizens. Hannah explained her reasoning for holding her children accountable when she stated, "So they're accountable to us only in the sense that we

monitor, that we monitor from a posture of trust, and checking in periodically, but not micromanaging and not managing the device from a thinking the worst." Mary also described how she viewed accountability as a way of caring, "I'm still pretty stern about certain things, but it's all based on his understanding and the trust we have." Deborah put this sentiment into her own words, "She understands there is always unconditional love, which is the reason we care enough to intervene."

Accountability in light of goal(s). In a similar vein, parents articulated the goal of providing accountability. Joshua viewed the goal as raising responsible children. He shared a desire to "teach them accountability and that they are responsible for the outcomes of the decisions that they make." Mary viewed the goal of accountability as fostering a "well balanced lifestyle." Likewise, Sophia explained that all of the monitoring could "ease off" as her son grew more responsible. Finally, Hannah spoke to the desire to build character in her son as she said, "We monitor, but not excessively, and we trust him to be maintaining integrity and Christ-like character at all times." Overall, parents felt strongly that their attempts at providing accountability helped their children mature into responsible young men and women.

Theme 9: The importance of trust. The importance of trust in the parent-child relationship emerged as a second major theme related to research question three. Like the other themes, all data types (journals, interviews, and the focus group) reflected the theme. Six of the interviewees discussed this theme in some capacity, and four of the journal responses addressed the topic. Also, the focus group transcription contained three references to the theme. Joshua described the parenting experience as one that "included a lot of communication and a lot of trust." Mary simply surmised, "So thinking, you know, translating that. Yeah. Like, okay, this is all about trust." Miriam explained the need to figure out "that dynamic of trust." In a

powerful illustration, Sarah described the importance of trust in the parent-child relationship, "I think a few parents just spontaneously get upset [and] angry. Then the relationship gets really down to the drain, and they close up and don't trust you anymore. Just like opening other people's letters, mail." The presence, or absence of trust, strengthened or weakened the parent-child relationship.

Trust tied to maturity. In multiple contexts, participants reflected an increase in trust tied to maturity. Mary detailed one of the points, at which she recognized her son maturing in trust, "It's all about trust, because now that he is 15, he is on his own more often." Esther talked about the milestone of "senior year" and the increased responsibility and trust that transition provided. She shared, "And so there's a trust issue there, and our son, our oldest son, has just this summer gotten permission to be on the Internet without being monitored now as a senior." Similarly, Hannah talked about turning 18 as a milestone as she explained, "She's 18, so I feel like we just now have to trust. We have to trust that she'll... When she has a daughter, she'll know exactly what I'm talking about." Miriam provided her own example of increasing trust over time as she spoke,

So I had to kind of back off the restrictions and trust that they were using it the way they were supposed to. As they get older, that's the same thing. You start trusting them more, giving them more responsibility and less control.

Practicing trust. The participants in this study shared precise examples of instances where they did not simply say that trust was important, but they actually practiced trust in action. Joshua recalled a time when he used less monitoring in favor of trust when he shared, "Now we trust them to join different apps or sites, as long as they use common sense they have built up in doing so." He continued, "There's this element of trust, you have to trust that they want to... We

didn't put any limiting apps or apps where we're going to be looking at the history, the kids' history, although, occasionally, we did." Ruth had a similar experience. She shared, "My style is more a constant communication and permissive in some aspects, my child has earned trust in the area of his use of the Internet."

Hannah took time to articulate the process of building trust. She explained that she did monitor her children's devices from time-to-time. However, in Hannah's mind, to "check" devices was not an overstepping or breaking of trust, but rather, "they're accountable to us only in the sense that we monitor, that we monitor from a posture of trust, and checking in periodically, but not micromanaging and not managing the device from a thinking the worst." Parents practiced trust, and they identified trust as a major factor in healthy relationships with their children.

Theme 10: Providing instruction at an early age. The final theme pertaining to research question three revolved around the age at and manner in which children were introduced to technology. Parents expressed a need to equip children at an "early" age. Like all other themes, the majority of participants revealed this concept in all three data types. Six of the interviewees referred to this theme, while the journal entries and the focus group each addressed the theme once. In the following excerpt, Sophia provided insight as to why education in the area of technology usage at an early age was so important:

> So they started that process even when he was there in third grade, of how to be good, where you should be going on the Internet, where you shouldn't be going. So again, the third party started the process, because we weren't even up to speed that quickly even though my husband is in the software industry. At home, it was like, "Wait a minute, you're in third grade and you're on the Internet?"

Participants felt that even elementary school was not too early to address the issue.

Of all the participants, Joshua spent the most time discussing the importance of intervention "early on." He explained, "I think, maybe more discussion even earlier. We didn't have as much discussion the earliest on as maybe we should have." He continued by discussing the importance of "having constant conversation with kids about what apps and resources they're [going to] go and look at, and what is not acceptable and why, you know, early on." Clearly, he felt the importance of training at a young age as he shared, "Well, I think it makes me feel in a way kind of the gravity of the whole thing. I think you need to get them started off right." He used the term "early and often" in regards to parental involvement.

Mary also saw the need for education early on as she shared, "So I feel that he did learn at an early age about a lot of these things." Mary summarized her thoughts as she said, "Therefore, at a young age (elementary school) the dialogue already began, and I feel my child grew up with this awareness and seems to use the Internet responsibly."

Training before first use. Also worth noting is that multiple participants cited the need to prepare children to use their digital devices responsibly prior to their first use. Sarah explained, "Actually, this all started even before she came to [the school]." Miriam stated, "And giving them tools of what to do if that happens, so training them on how to use it in an appropriate way." In addition, Martha shared, "So we have a contract with our kids that they had to sign that said we own this equipment and we have the rights to take it away from you at any time." The contract allowed Martha to train and set expectations prior to use. Finally, Ruth shared the following:

> My particular style is probably more with him because he's been trained in it since he was two with [my husband]. He did everything, and they worked out stuff together. And

> still [my husband] is responsible. If [my son] messes up his system [my husband] is over there.

Multiple parents described the need to educate children "early on" in the process of technology usage.

Research Question Responses

The 10 themes that emerged from the data analysis provided the basis for answering the research questions. Each theme corresponded to specific research questions, as detailed below. The three sub-questions for this study, grouped together, answered the central question, which asked, "How do parents describe their experience of training their children to be responsible digital citizens in the context of a hyper-connected society?"

Research Question One Response: ***How do parents describe their experience of training their children to be responsible digital citizens in the context of a one-to-one environment?*** The question asked during the data collection process was designed to generate open, free flowing responses from participants. Participant responses relating to this question summarized the overall experience of parenting pre-teens and teenagers in a technology rich environment. Four of the 10 themes related to the overall experience of parenting children towards responsible digital citizenship.

The first theme is the *challenges in maintaining a healthy lifestyle*. The participant parents expressed just how difficult it can be to force their children off of digital devices and into everyday activities. Further, they felt that in order to raise responsible digital citizens, they needed help developing healthy lifestyle habits. The most compelling confirmation of this came from Miriam, who shared this previously referenced sentiment:

> We've gone through different approaches. And sometimes we'd have a screen-free day. But it's like they're mad for half the day before you can even get to the good part of enjoying the benefits of being screen-free. So it's just a battle. It's kind of like… you're fighting with it all the time. I don't want to compete with it for my family time, or health… go outside. It's just been difficult.

Multiple parents articulated the various challenges they face in helping their children engage in non-computer-related activities geared towards developing a healthy and balanced lifestyle.

Another theme that helps answer the first research question relates to *the educational benefits of learning with technological devices*. Over and over again, parents readily expounded on the various ways that technology has improved the overall educational experience of their children. As pre-teens and teenagers learn to focus on the educational benefits of learning with their devices, they are acting as responsible digital citizens. Joshua provided an excellent example of a key academic benefit in the following quote:

> The types of feelings that I have are that these are skills, they're not only just technical skills, but they are skills that help them learn in the way they need to learn. So it feels to me like a super important thing that they need to get a hold of and conquer. And, it opens up a new world for them.

All 10 participants articulated multiple educational benefits that come about when students used devices correctly and for their intended purposes.

A third theme that supports the initial research questions deals with the questions *related to digital versus print learning*. Parents expressed concerns over their ability to guide homework time when their children worked exclusively on a computer. They described this as a

"disconnect between education and entertainment." This phenomenon allowed students to stray from their intended purpose for being on a device. Miriam summed up her experience well:

> I don't like how much access they have, where it's not limited. It's not like if they were using a book. I would know that they were doing their homework, and I would look over and see they're doing their homework with paper and book. But when they're on an iPad™, I don't know what they're doing. So they could be playing games or they could be doing their homework, they could be going back and forth... It makes me parent in a way that I don't necessarily like. Like, "What are you doing? What are you doing? Are you still doing the same thing?" Instead of just letting them do their own thing.

Parents felt a constant frustration in helping children be responsible digital citizens in light of the novelty and distractibility of learning with digital devices as compared to completing school work in a traditional method with pen and paper.

This phenomenon led to the final theme that helps answer the first research question. Parents expressed *mixed feelings about technology*. Esther encapsulated these feelings:

> I guess sometimes I feel dissonance. Like there's a dissonance between... In me because I think technology is so beneficial—we can learn so much and we can keep in touch with people and it has so many great qualities—but I also see how it's affected family relationships and social relationships. And I feel a dissonance in that, and I see that happening with my children. And I think that they've had so many great opportunities through technology to really expand themselves way more than when we were in our old school. And I've seen so much creativity and avenues of exploration that we didn't have access to in at their previous school. And I feel happy about that, but then I felt the dissonance because I've also seen them change.

Dissonance is an appropriate word to describe parents' overall feelings in this area. Although they value the new world of learning possibilities for their children, they fear the unintended consequences that arise in raising responsible digital citizens.

Research Question Two Response: ***How do parents perceive their particular parenting style in relation to addressing digital citizenship with their children?*** The second research question tied the theoretical framework to the actual experiences of the participants involved in this study. The question aimed to solicit thoughtful reflections from participants about their approach to parenting and the subsequent results as perceived in their children. All parents readily identified themselves as being "authoritative" in terms of their approach to raising responsible digital citizens. Three of the overall themes relate to parenting style.

As parents reflected on their approach to parenting in the area of technology, they expressed *the weight of parenting*. Multiple participants specifically felt it difficult to maintain family time. Deborah explained this *weight* in the following passage:

> There is much more to life, and I am afraid the age of technology is robbing us of simple pleasures like taking the time to take a walk, look at the clouds, look at the flowers, spend time at dinner talking to family, take up a hobby, travel, read an actual book, go see musical theatre…

Although the participant parents viewed technology use as being a threat to family time, they also described ways they were able to maintain this important time together. The participants also articulated *the importance of ongoing communication* in order to be effective, authoritative parents. Of the 10 themes, this one jumped out the most. Hannah summed up this importance of talking with children in the following quote:

> It really should be an ongoing conversation, ongoing dialogue. So I feel like the training has been ongoing, especially in light of the new digital platforms that come out. It seems like there's always that opportunity to have to revisit what it means to be a responsible digital citizen because more and more capabilities on the device are opening up.

Finally, the third theme that helped answer the second research question was *preparing children for adulthood*. Baumrind (1967) described authoritative parents as those that gradually release control to their children over time. Esther shared the following:

> There is a caveat to this, however, in that once our kids become seniors in high school, we let them decide for themselves and provide limited structure for them. Our parenting becoming more permissive so that they are able to make most or all of their decisions themselves before leaving for college.

As self-identified, authoritative parents, the participants in this study readily identified several successful parenting strategies.

Research Question Three Response: *How do parents describe their efforts at mediating adolescent technology use?* The third and final research question allowed parents to discuss specific strategies they have employed in their homes to help manage technology use by their children. The varied responses from participants revealed that this is in fact an area parents spend much time and energy addressing. Though the specific implementation of strategies varied from participant to participant, several consistent themes related to mediation emerged. The first was the experience of *holding children accountable*. This emerged as one of the most re-occurring themes during the analysis. Miriam shared the following insight:

> But as they've grown older, I've really tried to make it more of a conversation about accountability. I said, 'Okay, in your life you should always be accountable to someone;

> nothing is [going to] be a secret. And I'm not always [going to] be checking.' Because they have a growing freedom as they got older.

Another closely related theme emphasized *the importance of trust*. Mary highlighted the roles trust played in her parenting in the following passage:

> It is very important for our family culture that there is trust between parent and child. I trust my son to make good choices, and while I often check in with him when he is on the computer or other media, I do not demand that he share his passwords and logins with me on a regular basis.

Another theme that addressed the final research questions dealt with *providing instruction at an early age*. Several parents cited the importance of this training, as it prevented much harm due to lack of information. Children entered into the realm of technology use with clear guidelines and warnings about potential pitfalls. Many parents were intentional about this practice. Mary shared the following:

> From as early as elementary school to the present, I give so much credit to the schools that my son has attended. He started in a good, public, elementary school and then attended here for middle school and now high school. The school doctrines were keen on educating pupils, as well as parents on Internet safety.

These early interventions helped obviate potential disasters. Holding children accountable while trusting them, coupled with early education, allowed parents to mediate technology use in their homes.

Composite Textural Description

The themes listed and addressed above results provided the basis for a collective description of the phenomenon. The participant parents described their experience of training

their children to be responsible digital citizens in the context of a one-to-one environment, participants as being a "challenge." Parents expressed concerns over their children spending excessive time on screens, whether for educational or non-educational purposes. Parents also expressed concern over the need for their pre-teens and teenagers to live a healthy, balanced lifestyle, which included regular exercise, getting enough sleep, and having creativities outlets.

Another noteworthy concern involved the sheer volume of learning occurring in a digital platform versus print. This increase in learning on a computing device created a disconnect between education and entertainment, leaving parents feeling uninvolved in what their children were doing. Amidst the overarching concerns, parents did cite the educational value inherent in one-to-one programs. In terms of the benefits, they viewed their children as being more engaged, more organized, and more responsible. Participants in the study also noted that their children exhibited better communication and collaboration skills as related to their learning. Overall, parents described their experience in raising their children to be responsible digital citizens with a mixture of feelings.

With regard to how parents perceived their particular parenting style in relation to addressing digital citizenship with their children, essentially all participants described themselves as being authoritative parents. Even when the parents used terms like "authoritarian" moving towards "permissive," they were describing an "authoritative" approach. These efforts to raise responsible children left participants feeling "helpless," "inadequate," "heavy," and "anxious." This weight of parenting connected to an overwhelming sense of responsibility to help their children.

A major contributing factor to this parenting challenge was the rapidly increasing nature of technology use, which often resulted in greater access to negative content. As parents

explained their parenting styles, they noted the importance of ongoing communication in the parent-child relationship. This communication took on many forms including: proactive communication, conversations in light of poor choices, barriers to dialogue, and effective strategies in talking with children. Overall, parents viewed their particular approach (style) as a means to prepare their sons and daughters to be responsible, independent adults.

In relation to parents' efforts at mediating adolescent technology use, parents shared a multitude of approaches. The single greatest theme that emerged in this area was the need to hold children accountable with regard to their technology usage. Parents did this by issuing consequences for poor choices, regularly monitoring usage, practicing co-viewing, and limiting access to the Internet. All of these attempts at accountability were built on a sense of care through healthy dialogue and with the goal of training children to be independently responsible. Trust was inherent in the process of raising responsible digital citizens via accountability.

Composite Structural Description

Parents often felt that their attempts to raise responsible digital citizens were out of their control. They related these struggles to teach appropriate technology use to the various generational challenges that were similar to the challenges their own parents faced with them. They also sensed that the context of pervasive technology use amongst pre-teen and teenagers was not going away, but rather, would increase. Although this pervasive online connectedness was not necessarily their choice, some parents actually chose the school for its reputation as a hub for educational technology expertise. Parents could have chosen another school, but there was a feeling that the technological tide was pervasive.

The one-to-one learning context created a sense of blurring. Parents described how computing devices have become part of the pre-teen and teenage psyche. Young people's

identities are wrapped up in screens to the point that parents described devices as being part of their children. Parents had to teach balance and healthy lifestyle choices in light of this phenomenon. Parents did not always know what children were doing on screens, and it concerned them. Likewise, they expressed a desire for a more balanced environment and to be connected to their children. They wanted to trust their children blindly, but they also felt they simply could not give unlimited access due to overwhelming negative content (e.g., cyberbullying, pornography and distracting games) and the temptation to use devices inappropriately. In this sense, parents wished they could do more to help their children successfully navigate the digital world in which they found themselves, both at school and home.

Textural-Structural Synthesis

At the core of parents' experiences in training their children to be responsible digital citizens in the context of a one-to-one learning environment is an overwhelming weight of responsibility. Every parent in this study readily recognized the educational benefits of learning with computers; however, they always recognized the benefits in light of the significant challenges. No parent advocated for taking computers for learning away, but they did express wanting to keep technology in its proper place and a desire to make the most of the situation. In other words, parents wanted to capitalize on the positive side of technology while mitigating the harmful effects.

Participants shared a deep loss of innocence as a sentiment that parenting was easier when children were younger and technological devices were not pervasive. They also shared a sense of disconnect with their children brought about by spending excessive amounts of time on screens for both educational and non-educational purposes. In reflecting on the totality of raising

children to become independent, responsible adults, many felt a sense of failure and inadequacy. The participants even saw the same overwhelming struggles with technology in themselves.

Additionally, a deep desire to hand over control and trust was expressed, as well as a need to help their children frequently. Further, parents found hope in the family structure, which included deep, meaningful conversations and the fact that every generation of parents had unique challenges they helped their children navigate. At their core, study members embraced the challenges presented and expressed a deep love, which motivated them to persevere in raising responsible digital citizens.

Summary

Chapter four presented the results of this phenomenological study describing parents' lived experiences in raising their children to be responsible digital citizens in the context of a one-to-one learning environment. The 10 participants in the study provided their insight via journals, individual interviews, and a focus group. The data analysis process revealed 10 total themes tied to the three overarching research questions for this study. Chapter four provided an in depth description of each participant, a detailed representation of each theme, and responses to each of the research questions. The chapter concluded with the written composite textural description, the composite structural description, and the composite textural-structural description or the essence statement.

CHAPTER FIVE: CONCLUSION

Overview

One-to-one learning environments are here to stay (Bebell & Burraston, 2014; Bebell, Clarkson, & Burraston, 2014; Ditzler, Hong, & Strudler, 2016; Gurung & Rutledge, 2014). The existing literature did not adequately reflect parent perspective on this challenging parenting phenomenon (Fleischer, 2012; Fletcher & Blair, 2014; Ihmeideh & Shawareb, 2014). This study gave those parents a voice. Although parents relied on their best efforts, and as they described, the most effective parenting style, the weight of training children to be "above reproach" in the area of technology usage persists (Baumrind 1966, 1967; I Timothy 3:2, New International Version; Potter 2004).

The purpose of this study was to understand how parents experience training their children to be responsible digital citizens in the context of a technology rich society and a one-to-one learning environment. The central research question asked, "How do parents describe their experience of training their children to be responsible digital citizens in the context of a hyper-connected society?" More specifically, answers to the following research questions gave a rich perspective on parenting in this context:

1. How do parents describe their experience of training their children to be responsible digital citizens in the context of a one-to-one environment?
2. How do parents perceive their particular parenting style in relation to addressing digital citizenship with their children?
3. How do parents describe their efforts at mediating adolescent technology use?

Participants in this study addressed these questions by responding to journal prompts, participating in individual, semi-structured interviews, and sharing their experiences in a focus

group. This concluding chapter provides a brief summary of the findings in light of the purpose statement and research questions, a discussion of the implications connected to both the theoretical frameworks and the literature review, a statement of practical limitations, a review of the delimitations and limitations, and recommendations for future research.

Summary of Findings

The previous chapter provided the results of the analysis of the three data sources: journals, interviews, and the focus group. The analysis produced the 10 following themes: (a) challenges in maintaining a healthy lifestyle; (b) the educational benefits of learning with technological devices; (c) questions related to digital versus print learning; (d) mixed feelings about technology; (e) the weight of parenting; (f) the importance of ongoing communication; (g) preparing children for adulthood; (h) holding children accountable; (i) the importance of trust; and (j) providing instruction at an early age.

Four themes emerged from the first research question: (a) challenges in maintaining a healthy lifestyle; (b) the educational benefits of learning with technological devices; (c) questions related to digital versus print learning; and (d) mixed feelings about technology. Parents saw the value in learning with technology, and they felt the challenge of helping their children learn and live a balanced life in this environment. The second research question relating to parenting style revealed the themes that parenting is a (a) weight to carry; (b) ongoing communication is critical to success; and (c) preparing children for adulthood is the ultimate goal. All parents viewed themselves as being authoritative in terms of parenting style. This approach to parenting helped carry the emotional weight of raising responsible children.

Finally, in relation to the third research question and technology mediation, participants produced the following three themes: (a) holding children accountable; (b) the importance of

trust; (c) and providing instruction at an early age. Efforts at mediation, as reported by parents, made a major difference in raising responsible digital citizens. Parents explained that their mediation efforts were always built on upon trust and care. The following discussion adds insight into these overall research findings.

Discussion

This study added novel contributions to the field of existing literature in the realm of educational technology. Multiple scholars highlighted the need to further research parent perspective on student technology usage in the school setting, specifically in one-to-one learning environments (Downes & Bishop, 2015; Olson, et al, 2015). Felt & Robb (2016) noted the importance of examining the impact of technology on children in general. This study successfully captured that much-needed perspective, and it provided an added level of understanding into excessive adolescent technology use (Cilesiz, 2011; Felt & Robb, 2016).

Related to Baumrind's Parenting Theory

Baumrind's (1967, 1968) theory of parenting styles served as the major theoretical framework for this study. The results confirmed multiple existing research findings. First, Baumrind's (1966, 1968, 2013) definition of successful authoritative parents accurately describes the parents in this study. Participants' narratives revealed parents who exhibited firm control, dialogued regularly and reasonably with their children, and aimed to move their children to independence. Baumrind (1967, 2013) also stated that parents profoundly influenced their children's development. Participants consistently recounted instances of their attempts to shape the practical and moral uses of their children's technology usage. Like existing studies addressing technology from the parent perspective, participants identified themselves as being predominantly authoritative (Ihmeideh & Shawareb, 2014). Parents shared examples of a caring

approach to accountability, which led to significant influence on the development of their children (Baumrind, Larzelere, & Owens, 2010; Ihmeideh & Shawareb, 2014).

This study extended previous research by offering new insight into the parenting styles theory as applied to on one-to-one learning from parents who make-up a key group of stakeholders (Fleischer, 2012; Fletcher & Blair, 2014; Ihmeideh & Shawareb, 2014). These previous studies failed to tie parenting theory to technology in this context. The current study added depth and connected the phenomenon specifically to the emerging, one-to-one movement. The cumulative narrative provided by participants in the study revealed a grim picture filled with the overwhelming emotional weight of parenting. Caring, responsible, and engaged parents feel defeated, and they sense that they are losing their children to screens.

The context of this study also shined new light on the application and analysis of parenting theory. Effective parenting skills are transferrable in multiple contexts. Participants even hinted at the fact that values easily transfer from face-to-face life to the digital realm, and the same was true with effective parental training (Baumrind, 1991). In other words, the way that children acted off a screen often transferred to the way they acted online. In summary, the authoritative style represents the most effective of the four approaches (Baumrind, 1991; Baumrind et al., 2010; Baumrind, 2013; Ihmeideh & Shawareb, 2014; Shucksmith, Hendry, & Glendinning, 1995). This study substantiated the finding of previous studies in the context of a one-to-one learning environment, as all participants described various successful approaches to authoritative parenting. Positive efforts to raise responsible digital citizens stemmed from the authoritative approach. The combination of care in the form of healthy parent-child relationships, coupled with firm boundaries and accountability, encapsulated the authoritative model of parenting.

Related to Media Literacy Theory

Media literacy theory served as a secondary theoretical framework for this study. Simsek and Simsek (2013) highlighted the importance of teaching media literacy skills to young people who have increasing access to technological tools and content. Throughout the data collection process, each participant recounted personal stories of how they attempted to develop media literacy and responsible technology use in their children. Similar to multiple existing studies, the findings here confirm that parental mediation does effectively provide a level of needed accountability (Martens & Hobbs, 2015; Preston et al., 2016). Parent participants cited that they practice all mediation modes including restricting access, co-viewing, and instruction (Nikken & Jansz, 2014). Parents from this study also illustrated how these mediation efforts built strong competencies and a sense of responsibility (Sharrer & Ramasubramanian, 2015). Potter's (2004, 2013) theory outlined methods for technological instruction beginning with young children. Participants reported the teaching of competencies and skills *early in life*, which led to proficient acquisition of skills and continual development as children matured.

The present study diverged a bit from the established narrative about media literacy theory, as the importance of trust in the context of providing accountability—or mediating—became clearer. The existing literature regarding media literacy did not spell out how strongly parents sensed the central role trust plays in the process. The fact that participants felt an intense emotional weight of failed attempts to direct their children towards proficient and ethical media literacy contributed a novel finding to the field. Parents also detailed how one-to-one learning environments increased the challenge of developing strong media literacy skills because of the constant access to the Internet and the temptations presented to pre-teens and teenagers in that setting.

Related to the Literature

The results from this study provide a platform to discuss the multiple relationships between the findings and the existing literature. The theoretical frameworks, as well as the literature review, identified many of the same issues expressed by the participants. The 10 themes from chapter four are discussed here in the same order they originally appeared.

Challenges in maintaining a healthy lifestyle. Multiple researchers cited general concerns that this generation faces in terms of their overall health because of increased technology usage (Özgür, 2016; Patrikakou, 2014; Turner, 2015). In the interviews, focus group, and journals, parents expressed repeatedly a deep concern over the need to help their children live a healthy lifestyle. The literature revealed a host of health issues related to adolescent technology use including: obesity, lack of outside play, irregular sleep patterns, inability to focus and pay attention, and the psychological and physical effects of Internet addiction (Radich, 2013; Sanders et al., 2016; Strasburger et al., 2013; Thompson, 2013; Wartella et al., 2013; Yang et al., 2014). Parents longed for the days when their children went outside of their own accord, and truly perceived their effort to raise healthy children as a being a battle.

Parents detailed the reality of the blurring of the use of computers as a tool for learning at school and as a device for either learning or play at home (Gurung & Rutledge, 2014). Multiple parents described their children's devices as *part of them*. More than one participant detailed the sense of competition they felt in trying to pry their adolescents off the screen and into the real world. The findings from this study confirm these health issues as real concerns.

Detailed accounts of parental efforts at helping children maintain balance offer another novel contribution. Several researchers hinted at the need for children to balance their time, although they lacked concrete examples (Hiniker et al., 2016; Sanders et al., 2016; Turner,

2015). This study offers multiple lived experiences of helping children balance time on and off a screen.

Fresh insight was provided by parent struggles with their pre-teen and teenagers' screen time and access to inappropriate content. Existing literature suggested that teenagers spend anywhere from seven and a half to nine hours per day on a digital device (Hart & Frejd 2013; Rideout, Foehr, Roberts, 2010; Sanders, Parent, Forehand, & Breslend, 2016; Strasburger et al., 2013; Turner, 2015). Additionally, Elmore (2010) cited such concerns as videogame addiction and pornography use. Several participants shared openly and candidly about these types of struggles in their homes. These detailed, lived accounts give a much-needed voice to these concerns. Schools must be aware of the overwhelming challenges in maintaining a healthy lifestyle that may arise from handing out devices for academic purposes.

The educational benefits of learning with technological devices. This study predominantly confirmed the educational benefits of learning with technological devices spelled out in the literature. It appeared as if parents were parroting the scholarly findings in this area. The analysis of data revealed major sub-themes related to academic benefits such as: engagement, organizational improvement, responsibility, communication, collaboration, and easy access to information online. As Lauricella et al. (2016) reported, 95% of parents expressed favorable views towards technology use for education, and all parents in this study cited at least one academic benefit of one-to-one learning programs. Zheng et al. (2016) similarly reported on the many benefits of one-to-one learning including: improved school to home relationships, a student-centered, individualized approach to learning, autonomy, increased project-based learning, varied learning activities, authentic learning, as well as higher student engagement and motivation. The data from this study revealed every one of these benefits. Additionally,

Karsenti and Fievez, (2013) noted an increase in student engagement and higher levels of creativity and fun in the learning process. Participants in this study expressed the same academic benefits.

Moreover, scholars revealed additional benefits such as critical thinking, the ability to create new content using technology, and communicating effectively with the most current tools (Bebbell & Burraston, 2014; Brousssard et al., 2014; Ditzler et al., 2016; Hatakka et al., 2013; Lynch & Redpath, 2014). Parents in this study specifically cited all of these benefits. Other benefits found in both the literature and the findings from this study include better access to information via computing devices and skill development for career preparation (Topper & Lancaster; 2013 Zheng et al., 2014). The current study offered new light in this area in particular, as parents described the ways a one-to-one environment helped prepare their children for life after high school (Topper & Lancaster; 2013 Zheng et al., 2014).

Parents specifically articulated the value placed on children being prepared for college, and they viewed effective technology integration in the secondary school setting as being an excellent method to accomplish this task. Parents shared that the career opportunities that will be available to their grown children will incorporate some level of technological expertise. A one-to-one learning environment provided ample chances to develop critical technological skills. The existing studies lacked the rich, first-person narratives revealed in this study. Parents readily recognized the need for their children to develop innovative technological skills as a way to springboard them into future success at the university and career level. Overall, the findings from this study confirmed the multitude of academic benefits found in the existing literature.

Questions related to digital versus print learning. I was surprised when this theme emerged from the analysis. The existing literature specific to one-to-one learning did not address

the differences between digital and print learning in depth. Multiple scholars referred to the realities of 21st century learning and the changing nature of literacy due to access to both print and digital content (Drew, 2012; Leu et al., 2013). The current study confirmed this phenomenon and extended previous research, as parents discussed a disconnect between education and entertainment and frustration with the digital learning process due to a lack of learning with print materials. Parents appreciated the educational value of working on digital devices, but they also shared strong opinions on the importance of still learning in traditional ways with print materials.

Mixed feelings about technology. Parent participants clearly expressed mixed feelings towards technology. They described the conflicting feelings as a "dissonance." Lauricella et al. (2016) found that parents expressed favorable views towards technology use for education. The present findings corroborated the fact that existing literature highlighted the challenges, as well as benefits, of young people learning with computers (Karsenti & Fievez, 2013; Richardson et al., 2013; Zheng et al., 2014). Narratives from the data confirmed real issues such as student distractibility in the form of gaming, social media, and browsing the Internet (Heitner, 2016; Zheng et al., 2014). Although few objected to the presence of technology in the classroom, educators and parents alike seek the right model and accompanying philosophy undergirding effective technology integration. This study extended previous research as no clear consensus has emerged regarding the benefits versus the risks of one-to-one learning environments (Zheng et al., 2016). Parents cited both academic benefits and threatening concerns, and they made clear their frustrations with one-to-one programs. This study highlighted the need for continued research in this area.

The weight of parenting. Parenting in a technology rich world is an intense struggle (Bennett & Maton, 2010; Fletcher & Blair, 2016; Hiniker et al., 2016; Lauricella et al., 2015; Sanders et al., 2016). The literature review provided examples of the role that parents play in training responsible digital citizens (Katz, 2010; Kiger & Herro, 2015). The findings corroborated previous results, as parents expressed an intense emotional weight they carry in raising digitally responsible children. Scholars described this as a new challenge (Anderson & Rainie, 2012; Richardson et al., 2012). The narratives from everyday life parenting unearthed in this study extend the current research. One novel contribution is the way in which participants described, with narrative details, this weight of parenting. The magnitude of this phenomenon came into focus as participants discussed their experiences with words like, "helpless," "inadequate," "heavy," "anxiety," and "weight." The fact that parents felt a powerlessness and inadequacy, coupled with an overwhelming sense of parental responsibility, provides new insight on the topic. The participants' perspectives revealed struggles with parenting in light of increasing technology use. Additionally, the very real threat to family structure and the competition for children's attention brought about by increased technology were revealing.

The importance of ongoing communication. This emerged as one of the major themes of the study. The findings supporting the usefulness of ongoing communication predominantly corroborated previous research. Multiple scholars cited the importance of communication in training children (Hiniker et al., 2016; Ihmeideh & Shawareb, 2014; Özgür, 2016). Parenting in the area of technology requires a conversation with young people and allows parents to explain their views and rationale with the ultimate goal of developing independence (Hiniker et al., 2016; Nikken & Jansz, 2016). Similarly, Baumrind (1991) discussed the importance of providing connectedness to children in the family environment, which led to children feeling a stronger

sense of independence. Greene et al. (2015) highlighted the nature of ongoing conversations aimed at growing key knowledge. Current findings extended previous research as participants provided details on the nature of communication in their homes. Sub-themes included areas such as proactive communication, communication in light of poor choices, barriers to communication, and effective communication strategies. The richness of these lived experiences captured in the textural descriptions provided a depth of insight that was didn't exist previously .

Preparing children for adulthood. Parent participants repeatedly referred to ways in which they aspired to prepare their children for adulthood. They were not naïve in their understanding that the hands-on nature of parenting ends as children reach maturity. The findings from this study corroborated previous research that revealed ways in which parents shape the moral development of their children (Sorkhabi, 2005).

One of the major sub-themes in this area discussed the release of control from parent to child over time. Baumrind (1967, 2013) defined control as the transfer of personal standards for conduct from parents to their children. Baumrind (1966, 1968, 2013) further articulated how authoritative parents balance control with independence. The parents in this study expressed a sentiment consistent with Baumrind's findings. The literature review also revealed parenting strategies focused on teaching digital citizenship aimed at developing and understanding of both the opportunities and responsibilities that come with the online world (Hiniker at al., 2016; Kiger & Herro, 2015; Preston et al., 2016). As parents achieved this goal, they described a strong sense of relief and accomplishment. Overall, the existing literature and the lived experiences of the participants revealed the ways in which parents prepared their children for adulthood.

Holding children accountable. Like the other themes, this major theme substantially corroborated the existing literature. Past findings revealed that parental support, mediation, and

intervention facilitated the development of healthy technology habits (Hiniker et al., 2016; Kiger & Herro, 2015; Yang et al., 2014). Children benefited from parental efforts at providing accountability. In light of the goal of raising responsible digital citizens, Radich (2013) defined a critical aspect as "an understanding of the use, abuse, and misuse of technology as well as the norms of appropriate, responsible, and ethical behaviors related to online rights, roles, identity, safety, security, and communication" (p. 10). The literature and the lived experiences of this study's participants revealed that authoritative parents utilized the right approach to mediation as they balanced control with autonomy (Ihmeideh & Shawareb, 2014; Yang et al., 2014).

The current study extended previous conclusions as it provided concrete narratives detailing how parents practiced specific types of mediation (Lauricella et al., 2016). These included monitoring, limiting access, and co-viewing. The current findings examined parental mediation and protective steps tied to adolescent technology use (Fleischer, 2012; Fletcher & Blair, 2014; Ihmeideh & Shawareb, 2014; Willocks & Redmond, 2014). Additionally, the sub-themes provided novel contributions, as parents discussed the importance of dialogue, accountability based on care, and accountability tied to specific goals. These themes did not appear in the literature review. Finally, the current findings shed new light on the topic as parents chronicled real life stories of accountability in the form of the consequences delivered to their children for poor choices.

The importance of trust. Previous research related to one-to-one learning neglected to discuss, in depth, the importance of trust in the parent-child relationship. One study highlighted the way that authoritative parents build trust with their children (Ihmeideh & Shawareb, 2014). The study showed how authoritative parents felt comfortable with technology use in the home because they had clear rules in places and a high level of trust in their children (Ihmeideh &

Shawareb, 2014). Parents offered new light on the subject as the majority of participants in this study detailed ways in which they practiced trust in relation to the maturity of their children. Raising children to be responsible technology users requires healthy parent-child relationships, and the importance of building and practicing trust in these relationships cannot be overlooked.

Providing instruction at an early age. Multiple parent participants cited the importance of preparing children to use digital devices responsibly before they were ever in their hands. The existing literature was ripe with similar findings, and in this way, the current study corroborated these findings. Graber and Mendoza (2013) pointed out that adults must implicitly teach adolescents the responsible use of devices, and several parents in this study discussed ways they did this. Graber and Mendoza (2013) also pointed to the importance of focusing on the ethical use of devices when introducing them to children. Multiple parents chronicled the ways they discuss the morally responsible use of devices with their pre-teens and teenagers. Similarly, Potter (2004, 2013) noted the importance of training early in life. Providing instruction at an early age emerged as one of the major findings in this study. This simple act of taking time to train children *early on* should not be underestimated.

Implications

Various implications emerged in this study in relationship to the theoretical frameworks and the existing literature. The main theoretical implication is that authoritative parenting provides children the greatest level of care and accountability in order to become a well-adjusted adults. The study, as a whole, presented a multitude of practical implications. These practical implications provide suggestions to help parents and educators better direct the young people in their care. As this study uncovered, adolescents need the appropriate amount of accountability in order to successfully navigate the digital realm.

Theoretical Implications

The finding from this current study fully support both Baumrind's (1967, 1968) parenting styles theory and Potter's Media Literacy Theory (2004, 2013). Authoritative parents yield the most effective results in raising responsible digital citizens. The study participants identified themselves as being authoritative. Reading this research may provide better understanding and application of these strategies. One strategy that worked effectively was initiating conversations on a regular basis regarding technology use. Parents also explained that building in time away from school had the benefit of allowing children to socialize, exercise, read, and to create.

Multiple participants referred to the importance of spending time together as a family around the dinner table. Similarly, mothers and fathers may also benefit by employing aspects of Potter's (2004, 2013) Media Literacy Theory. Teaching digital competencies and skills early in life—with a focus on continual development over time — could prove helpful. Study members discussed the importance of training children in the proper use of devices before granting access. Participants also reflected on the importance of holding young people accountable to pre-established guideline by random checks, filtering, and dialogue. The following sections address these implications.

Related to the Literature

The extant literature fully substantiated the 10 themes that emerged from this study. Limited literature exists that examined exactly how parents addressed the responsible use of technology for learning purposes with their children, especially from a qualitative perspective. (Fleischer, 2012; Fletcher & Blair, 2014; Ihmeideh & Shawareb, 2014). The purpose of this transcendental, phenomenological study was to look at the experiences of 10 parents whose students had access to one-to-one technology required or provided for educational purposes. The

study sought answer to the questions, "How do parents describe their experience of training their children to be responsible digital citizens in the context of a hyper-connected society?" The literature review combined with the expressed lived experiences of parents answered that question. Parent descriptions of raising responsible digital citizens led to the following themes: (a) a healthy lifestyle; (b) the educational benefits of learning with technological devices; (c) questions related to digital versus print learning; (d) mixed feelings about technology; (e) the weight of parenting; (f) the importance of ongoing communication; (g) preparing children for adulthood; (h) holding children accountable; (i) the importance of trust; and (j) providing instruction at an early age.

Practical Implications

Multiple practical implications emerged from this study involving several school stakeholders including parents, teachers, administrators, and students. Each group can play a part in producing responsible pre-teen and teenage digital citizens. The implications are spelled out specific to each group.

Parents. Parents that feel overwhelmed at the prospect of helping children navigate the technological world unscathed do not have to lose heart. Rather, they can find hope in the testimonials shared in this study. Participants expressed a range of feelings from regret to raging anger. While these feelings impacted participants, they expressed hope by focusing on their relationships with their children. By regularly communicating with their children, operating in trust, and issuing consequences as needed, parents found hope.

One participant in particular discussed the power of unconditionally loving her children as a way to provide them with the confidence to make mistakes and to grow from them. Parents who participated in this study also found hope in the fact that they never gave up on themselves,

and they kept their eyes on the ultimate goal of raising their children into responsible adults. There was a sense of relief that resulted, and it stemmed from never giving up on the responsibility for nurturing and guiding children through every challenge of adolescence into adulthood. The effort exerted in children when they were young, led to the development of well-adjusted young adults. Parents can apply the various approaches imbedded in the results of this study.

Multiple parents discussed the importance of unconditionally loving their children. When the focus was on building healthy relationships, positive outcomes followed. Several parents noted how family time, especially meal times, helped foster healthy dialogue and relationships. Parents must be intentional in this area. Several participants also noted the importance of faith and prayer in the parenting journey.

Various quotes from participants illustrated the shortcomings of children in the realm of technology use. It is critical that parents frequently communicate with their children. Children need the help of their parents. The weight that parents feel in this realm is real, and the challenges are difficult. It is important for parents to acknowledge this weight. In addition, it is imperative that parents train their children in the appropriate use of technology at an early age, preferably before the first use. Finally, parents ought to practice accountability. The benefits of caring accountability were sufficiently stated in this study.

Teachers. The existing literature recognized the important role that teachers play in successful integration of one-to-one learning environments (Oliver et al., 2012; Patrikakou, 2015). Teachers hold the most influence over how technology is used in the classroom. This is an enormous responsibility, and teachers should view it this way. Further, teachers should leverage the educational benefits available through one-to-one initiatives; however, they should

be mindful of the challenges such as distractibility and the effects of excessive screen time on proper neurological and social development (Carr, 2010; Thompson, 2013). Sometimes, teachers need to insist that students put their digital devices down. As illustrated by the stories in this study, children may not possess the insight or ability to live a balanced life if left to their own accords.

In terms of pedagogical approaches, teachers should not simply require students to "search up answers online." It is perfectly fine to lecture. Mary captured this sentiment in the following excerpt:

> Well, you know, sometimes he has mentioned that he wishes the teachers would just give a traditional lecture. He feels there are a lot of assignments, and then go use the tools to find the answers. And I don't know if that's part of his behavior style, where he's... I don't [want to] say 'lazy,' but if he can just listen and observe the information.

Teachers should be intentional about leading pupils through proven learning processes. Ruth noted that the learning process on the iPad™ created some challenges for her son. She said,

> I did notice, initially, that he'd try to do his reading and then do his answering questions. And sometimes that was kind of hard because it was an older iPad™ and it took a while for him to get used to that because there wasn't just paper around.

Learning on a computer may not always be as easy as it appears, and there may be better methods to utilize.

It is worth stating that teachers should train students intentionally on the appropriate use of iPads™ in the class setting from the beginning. Teachers should also actively monitor what students are doing (i.e., distractibility, gaming, and viewing inappropriate content). Teachers should not hesitate to talk to their students about technology usage habits both inside and outside

of class. These conversations may provide some of the most meaningful learning moments of all. It is important that teachers are real and authentic with the pre-teens and teenagers they serve. Teachers can even relate their own struggles and success with technology as a means to inspire students toward responsible use. In addition, communicating success and concerns related to technology usage to parents may provide much needed support in raising responsible children. Finally, Joshua offered keen insight on the importance of maintaining a focus on continuous improvement. He shared, "So from a teaching perspective… to always think about how you constantly improve and deliver learning through technology in… all the ways that are possible."

Administrators. One of the key factors that brought about positive academic change in one-to-one learning environments was effective school leadership (Oliver et al., 2012; Topper & Lancaster, 2013). School leaders play a major role in establishing an environment that emphasizes the best use of technology for educational purposes. School leaders must develop clear, research-based policies for all school stakeholders on the purposes and benefits of technology usage. Administrators must also force teachers away from being solely dependent on using technology for learning. Computers cannot become babysitters in the classroom. Through the observation and evaluation process, administrators must set high standards for their teachers to foster student movement, creation, and face-to-face dialogue (skills that parents feels are fading). School leaders must also be honest about the struggles brought about by one-to-one learning environments, and they should not *sugarcoat* concerning issues by passing off digitally rich learning environments as being *perfect*. The challenges and shortcomings of learning with computers are real for everyone. Parents do not want technology removed from schools, but they do want to mitigate the harmful effects associated with it. Esther shared, "I feel like [the

school], honestly, I talked to my husband. They need to pay more attention to it. I think all schools need to."

Parents in this study expressed the sentiment that schools should not completely eliminate work done on paper. Administrators should also carefully consider maintaining traditional libraries housing print books. Esther noted, "I take them to the library and get real books—they have no library—which I thought was kind of disgusting when I came here. No books, no real books." Finally, administrators should note that parents also expressed frustration over the e-book process. Though the e-book industry for schools is relatively new, school leaders should make their best effort to provide a seamless process to the families that they serve.

Students. Pre-teen and teenage students ought to listen to their parents and communicate with them regularly. The parents in this study expressed a deep love of and care for their children. The 21st century student should also be aware that they are facing significant challenges that no previous generation faced. These are uncharted waters. Students may benefit from finding an accountability partner. Also, young people should not be afraid to seek help from an adult when they observe or experience something disturbing online. It is crucial that students use their devices for the intended purposes at the intended times. Young people may benefit greatly by working towards living a healthy, balanced lifestyle. Regular exercise, talking face-to-face with friends, and practicing creativity on and off a screen may yield positive outcomes. Secondary students are currently experiencing a powerful technological opportunity uniquely provided to this generation. Students must learn to mitigate the harmful effects of technology while leveraging the positive. Pre-teens and teenagers must understand that parents do not want to lose their children to a screen.

Delimitations and Limitations

As the researcher, I intentionally set delimitations to give the study a focus. One of the main delimitations of the study was that participating parents enrolled one or more of their children in a secondary (6-12 grades) private school utilizing a one-to-one learning environment. Future research results utilizing these methods may differ in school settings that integrate technology in a limited (not pervasive) fashion. I also chose a school site with an established history of iPad™ usage. This ensured that the school culture was one that readily embraced 21st century learning with pervasive technology integration. The fact that the school setting holds to a faith-based orientation was not necessarily a delimitation. The school's proximity to Silicon Valley, which is a technologically rich area, and its merit in one-to-one learning, played a large role in the selection process. Existing studies emphasized student and teacher voice, while omitting parent perspective (Fleischer, 2012). This study focused solely on parent voice.

My study also presented some limitations, which were beyond my control as the researcher. Private school families may have access to more resources, which limits the transferability of the results to a low socioeconomic school setting. The fact that the school is located near Silicon Valley, which employs many parents in the technology sector, also limits the study to a geographic area that exhibits above-average technology usage. The study assumed that: 1) parents have a basic awareness of how the school's one-to-one learning environment functions and some of the accompanying issues that occur both at school and at home because of the technology use; and 2) participants authentically shared their experiences in light of that fact that some may reflect negatively in terms of parenting style and what the existing literature reveals about effective parenting. If parents did not freely share their experiences, then the study did not completely capture the essence of the phenomenon. This study kept parent identities

confidential and allowed participants to voluntarily withdraw from the research process at any time as a safeguard.

The demographics of the participants limited the study based on gender homogeneity, as only one father participated, versus nine mothers. Another limitation was that several parents were unable to visit the campus for individual interviews or the focus group due to the large geographic region from which the school attracts families. The school utilizes an extensive bussing system that travels to multiple counties. More parents would have participated if the school were closer to their homes. Though I set a delimitation of parents in a private, faith-based school, these were not primary factors in selection. I was focused on looking for a school with longevity of one-to-one practices; however, the site selected did limit the parent participant population to a private, faith-based school setting.

Recommendations for Future Research

Future researchers can build upon the findings from this study. As this study focused solely on parent perspective, future researchers might add multiple stakeholder perspectives to a study while still using a transcendental, phenomenological approach (students, teachers, and administrators). Future studies may provide deeper insight into the parent-child relationship by incorporating combined parent-child interviews. Other studies may extend the findings by evaluating an entire school district versus an individual school site to see if results are generalizable beyond one setting. As this study focused on a private school, future studies may select schools with differing socio-economic backgrounds. Additional research might also utilize a similar study, but with students in an elementary school setting. Still another study might explore the differences in perceived parent style and technology usage based on the

genders of both children and parents. Due to the significant societal implications of increasing technology usage, future researchers can address the following questions related to this study:

- Do mothers and fathers parent in the area of technology differently?
- Does gender play a role in the technology habits of pre-teens and teenagers?
- How do public school parents perceive parenting towards responsible digital citizenship?
- Do parents with children in schools that integrate technology on a limited basis feel the same way?
- Do elementary (K-5) parents perceive the same educational benefits and challenges?
- Are there significant differences in print versus digital learning processes and the accompanying academic results?
- Is there a way to quantitatively assess digital citizenship formation in students?

Summary

The original purpose of this study was to look at the experiences of the parents of secondary students who had access to one-to-one learning environments required or provided by a school system for educational purposes. This study addressed a critical gap in the realm of educational technology as very few, if any, studies deeply examined the parent perspective of pervasive technology use in schools (Fleischer, 2012; Fletcher & Blair, 2014; Ihmeideh & Shawareb, 2014). Using Moustakas' (1994) method for transcendental, phenomenological research, this study answered broad questions about what parents are experiencing in this space. The 10 major themes identified provided a rich portrait of parents' lived experiences in raising their children towards responsible technology use, which is no easy task.

From my perspective, two significant findings emerged from the study. The first was the importance of ongoing communication. Parents need to talk to their children about responsible

technology use early on in life and often. I've often found myself exhausted at the end of a work day attempting to raise children, prep meals, clean the house, and take care of myself. Sometimes, I've felt the urge to ignore the amount of time my children spend on their computing devices because it is easier than holding the children accountable and helping them live a well-balanced life. However, the findings of this research study encouraged me as a father to continue the conversation, and I will do so because I care deeply.

The other finding that stood out to me, as the researcher, was the deep loss of innocence and accompanying feelings of sadness expressed by participants. The fact that parents are in "competition" for their children's attention is alarming. Parents must not allow technology to capture the hearts and imagination of their children; rather, that is the parents' job. As reflected by the participants' stories, hope comes in insisting on meaningful, ongoing communication and real life experiences in the context of the family dynamic. Time together unplugged from a screen matters deeply. Family meals at the dinner table on a regular basis are vital for our future societal livelihood. I do not want my children nor myself to get lost in a digital world. I care too much. That was a main impetus for my original motivation for this study, and it is was reinforced. Parents have a voice. This study brought it out, and now it is the responsibility of parents to help their children hear that voice. Their future ability to navigate this ever-increasing digital world depends on it.

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APPENDIX A

School Permission Request Letter

April 7, 2016

Mr. [Headmaster]
[Address omitted]

Dear Mr. [Headmaster],

As a graduate student in the School of Education at Liberty University, I am conducting research as part of the requirements for an Ed.D in educational leadership. The title of my research project is "The Lived Experiences of Secondary School Parents in Raising Responsible Digital Citizens in a One-to-One Learning Environment," and the purpose of my research is to describe the lived experiences of secondary school parents whose children participate in a one-to-one learning environment.

I am writing to request your permission to conduct my research in the homes of parents with students enrolled at [your school]. I would like to utilize your parent contact list to recruit participants for my research.

Participants will be asked to email me at gcguven@liberty.edu to schedule an interview, a focus group, and to receive instructions for how to write journal entries about their experience as parents of digital learners. The data will be used to understand and articulate the voice of parents with regard to raising children in a digital environment. Participants will be presented with informed consent information prior to participating. Taking part in this study is completely voluntary, and participants are welcome to discontinue participation at any time.

Thank you for considering my request. If you choose to grant permission, please provide a signed statement on approved letterhead.

Sincerely,

Gabriel Guven
Doctoral Candidate, Liberty University
[Address omitted]

APPENDIX B

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

May 18, 2017

Gabriel Guven

IRB Approval 2873.051817: The Lived Experiences of Secondary School Parents in Raising Responsible Digital Citizens in a One-to-One Learning Environment

Dear Gabriel Guven,

We are pleased to inform you that your study has been approved by the Liberty University IRB. This approval is extended to you for one year from the date provided above with your protocol number. If data collection proceeds past one year, or if you make changes in the methodology as it pertains to human subjects, you must submit an appropriate update form to the IRB. The forms for these cases were attached to your approval email.

Thank you for your cooperation with the IRB, and we wish you well with your research project.

Sincerely,

G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
The Graduate School

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APPENDIX C

Informed Consent Letter Interview/Journal Participants

Dear Participant,

As a graduate student in the School of Education at Liberty University, I am conducting research as part of the requirements for a doctorate in educational leadership. I currently serve as the elementary school principal at nearby Valley Christian Schools. I have a passion for better understanding the role of technology in education. The title of my research project is "The Lived Experiences of Secondary School Parents in Raising Responsible Digital Citizens in a One-to-One Learning Environment," and the purpose of my research is to describe the lived experiences of secondary school parents whose children participate in a one-to-one learning environment. I am writing to invite you to participate in my study.

Participants must be a parent or guardian of a student(s) currently enrolled at the school. Participants should have some awareness of the current, one-to-one, student-to-computer initiative in place at the school. It is assumed that as a current parents, you are at least 18 years of age. If you are willing to participate, you will be asked to take part in a face-to-face interview and to respond to a few online journal prompts. It should take approximately 60 minutes to complete the interview, and each of the journal prompts will take about 15 minutes to complete. Your participation will be completely anonymous, and no personal, identifying information will be required.

To participate, please email me at gcguven@liberty.edu. I will contact you to schedule an interview and provide instruction about the online journaling.

At the time of the interview, a consent document containing additional information about my research will be provided for your signature.

If you choose to participate, you will receive a $25 gift card to a local coffee shop.

Sincerely,

Gabriel Guven
Doctoral Candidate, Liberty University

APPENDIX D

CONSENT FORM

The Lived Experiences of Secondary School Parents in Raising Responsible Digital Citizens in a One-to-One Learning Environment

Gabriel Guven
Liberty University
School of Education

You are invited to participate in a research study of the experience of parenting adolescents in a technology rich era. You were selected as a possible participant because you are the parent of a student enrolled in a one-to-one, student-to-computer learning environment. I request that you read this form and ask any questions that you might have prior agreeing to participate.

Gabriel Guven, a doctoral candidate in the School of Education at Liberty University, is conducting this study.

Background Information: The purpose of this study is to understand how parents experience training their children to be responsible digital citizens in the context of a technology rich society and a one-to-one learning environment.

Procedures: If you agree to be in this study, you will be asked to do the following:

1. Take part in an hour-long, audio-recorded, confidential interview about the research topic.
2. Complete four journal responses based on prompts, which will be emailed to you over the course of two weeks. The journal responses will be kept confidential.

Risks and Benefits of being in the Study: The risks involved in this study are minimal, no more than you would encounter in everyday life. The research questions may solicit responses that reveal instances of child abuse and/or child neglect. Mandatory reporting requirements may come in to play in such scenarios.

There may be benefits to participating in this study. Participants may acquire a better understanding of the four main parenting styles laid out in Diana Baumrind's 1967 and 1968 research, as well as a better understanding of parenting and technology. Benefits to society may include a better understanding of what parents experience day-to-day in parenting pre-teens and teens in a technology rich environment. Understanding this topic can lead to improvements in parenting and educating young people.

Compensation: Upon completion of the interview and journal process, each participant will receive a gift card to a local coffee shop. If a participant does not complete the study, he or she will not receive the gift card.

Confidentiality: The records of this study will be kept private. In any sort of report that I might publish, I will not include any information that will make it possible to identify a subject. Research records will be stored securely, and only the researcher will have access to the records. We may share the data collected from you for use in future research studies or with other researchers. If we share the data that we collect about you, we will first remove any personally identifying information.

- Participant privacy and confidentiality will be maintained by using pseudonyms in the final

dissertation manuscript.

- All files containing names will be stored on a password-protected computer in my home for three years. At that point, all files, as well as back-up copies, will be deleted.
- I will store recordings of the interviews on my personal iPad™. Only the company used to transcribe the interview and myself will have access. Recordings will be erased after three years.
-

Voluntary Nature of the Study: Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relationship with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

How to Withdraw from the Study: If you choose to withdraw from the study, please contact me, the researcher, at the email address/phone number included in the next paragraph. Should you choose to withdraw, data collected from you will be destroyed immediately and excluded from the study.

Contacts and Questions: The researcher conducting this study is Gabriel Guven. You may ask any questions you have now. If you have subsequent questions, **you are encouraged** to contact him at gcguven@liberty.edu. You may also contact the researcher's faculty advisor, Dr. Jennifer Courduff, at jlcourduff@liberty.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd, Green Hall Suite 1887, Lynchburg, VA 24515 or email at irb@liberty.edu.

Please notify the researcher if you would like a copy of this information for your records.

Statement of Consent: I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

(NOTE: DO NOT AGREE TO PARTICIPATE UNLESS IRB APPROVAL INFORMATION WITH CURRENT DATES HAS BEEN ADDED TO THIS DOCUMENT.)

☐ The researcher has my permission to audio-record my responses as part of my participation in this study.

Signature Date

Signature of Investigator Date

APPENDIX E

Informed Consent Letter Focus Group

Recruitment Letter Focus Group

Dear Participant,

As a graduate student in the School of Education at Liberty University, I am conducting research as part of the requirements for a doctorate in educational leadership. I currently serve as the elementary school principal at nearby Valley Christian Schools. I have a passion for developing a better understanding of the role of technology in education. The title of my research project is "The Lived Experiences of Secondary School Parents in Raising Responsible Digital Citizens in a One-to-One Learning Environment," and the purpose of my research is to describe the lived experiences of secondary school parents whose children participate in a one-to-one learning environment. I am writing to invite you to participate in my study.

Each participants must be a parent or guardian of a student(s) currently enrolled at Monte Vista High School. Participants should have some awareness of the current, one-to-one, student-to-computer initiative in place at the school. It is assumed that as a current parent, you are at least 18 years of age. If you are willing to participate, you will be asked to be part of a focus group with fellow parents. It should take approximately 60 minutes to complete the focus group. Your participation will be completely confidential. This means that, as the researcher, I will know who said what, but I will not disclose your identities in the final document. Personal, identifying information will be protected.

To participate, please email me at gcguven@liberty.edu. I will contact you to schedule your focus group attendance.

Please review, print, and sign the attached consent document containing additional information about my research. You can return the signed consent form on the day of the focus group.

If you choose to participate, you will receive a $25 gift card to a local coffee shop.

The focus group will occur on *date TBD* at the *location TBD* at *time TBD*.

Sincerely,

Gabriel Guven
Doctoral Candidate, Liberty University

APPENDIX F

CONSENT FORM

The Lived Experiences of Secondary School Parents in Raising Responsible Digital Citizens in a One-to-One Learning Environment

Gabriel Guven
Liberty University
School of Education

You are invited to participate in a research study of the experience of parenting adolescents in a technology rich era. You were selected as a possible participant because you are the parent of a student enrolled in a one-to-one, student-to-computer learning environment and you are a member of the PTA. I request that you read this form and ask any questions that you might have prior agreeing to participate. Gabriel Guven, a doctoral candidate in the School of Education at Liberty University, is conducting this study.

Background Information: The purpose of this study is to understand how parents experience training their children to be responsible digital citizens in the context of a technology rich society and a one-to-one learning environment.

Procedures: If you agree to be in this study, you will be asked to take part in an hour-long, video-recorded, focus group about the research topic.

Risks and Benefits of being in the Study: The risks involved in this study are minimal, no more than you would encounter in everyday life. The research questions may solicit responses that reveal instances of child abuse and/or child neglect. Mandatory reporting requirements may come in to play in such scenarios.

There may be benefits to participating in this study. Participants might acquire a better understanding of the four main parenting styles laid out in Diana Baumrind's 1967 and 1968 research, as well as a better understanding of parenting and technology. Benefits to society may include a better understanding of what parents experience day-to-day in parenting pre-teens and teens in a technology rich environment. Understanding this topic can lead to improvements in parenting and educating young people.

Compensation: Upon completion of the focus group, each participant will receive a gift card to a local coffee shop. If a participant does not complete the study, he or she will not receive the gift card.

Confidentiality: The records of this study will be kept private. In any sort of report that I might publish, I will not include any information that will make it possible to identify a subject. Research records will be stored securely, and only the researcher will have access to the records. We may share the data collected from you for use in future research studies or with other researchers. If we share the data that we collect about you, we will first remove any personally identifying information.

- Participant privacy and confidentiality will be maintained by using pseudonyms in the final dissertation manuscript.
- All files containing names will be stored on a password-protected computer in my home for three

years. At that point, all files, as well as back-up copies, will be deleted.

- I will store recordings of the focus group on my personal iPad™. Only the company used to transcribe the focus group and myself will have access. Recordings will be erased after three years.
- One limit of confidentiality exists in that I cannot assure participants that other members of the group will maintain their confidentiality and privacy. However, I will clearly state this as a requirement at the beginning of the focus group.

Voluntary Nature of the Study: Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relationship with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

How to Withdraw from the Study: If you choose to withdraw from the study, please contact me, the researcher, at the email address/phone number included in the next paragraph. Should you choose to withdraw, data collected from you, apart from the video-recorded focus group data, will be destroyed immediately and excluded from the study. Focus group data will be maintained, but your contributions to the focus group will be excluded in the study if you choose to withdraw.

Contacts and Questions: The researcher conducting this study is Gabriel Guven. You may ask any questions you have now. If you have subsequent questions, **you are encouraged** to contact him at gcguven@liberty.edu. You may also contact the researcher's faculty advisor, Dr. Jennifer Courduff, at jlcourduff@liberty.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, you are encouraged to contact the Institutional Review Board, 1971 University Blvd, Green Hall Suite 1887, Lynchburg, VA 24515 or email at irb@liberty.edu.

Please notify the researcher if you would like a copy of this information for your records.

Statement of Consent: I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

(NOTE: DO NOT AGREE TO PARTICIPATE UNLESS IRB APPROVAL INFORMATION WITH CURRENT DATES HAS BEEN ADDED TO THIS DOCUMENT.)

☐ The researcher has my permission to audio and video-record my responses as part of my participation in this study.

_____

Signature Date

_____

Signature of Investigator Date

APPENDIX G

Hello Study Participant,

The following terms provide information that may be helpful in answering questions during individual interviews, the focus group, or journal responses. Please read and reflect on each term prior to the participation. Thank you.

Sincerely,

Gabriel Guven
Doctoral Student
Liberty University

Key Terms:

One-to-One Learning Environment – One-to-one learning environment is best defined as "each teacher and student has full and independent access to a computing device" (Bebell, Clarkson, & Burraston, 2014).

Parenting Style – Parenting style is defined as the way "parents influence the development of children's social and instrumental competence" (Darling, 199, p. 1). Similarly, I define it as a way "parents interact with their children and respond to their behavior" (Ihmeideh & Shawareb, 2014). The four parenting styles are: authoritative (balance of care and accountability), authoritarian (heavy parent control), permissive (high in care but low in control), and negligent (little care or control).

Digital citizenship – Mike Ribble (2009) defines digital citizenship as "norms of appropriate, responsible behavior with regard to technology use". For the purpose of this study, the term digital citizenship will broadly include three aspects: basic media literacy education, instruction in avoiding dangers online, and a proactive empowering of students to be agents for positive change in an increasingly online world Jones and Mitchell (2015).

APPENDIX H

Demographic Questions:

What is your gender?

What is your age?

What is your ethnicity (American Indian/Eskimo, Asian/Pacific Islander, Black/African-American, Hispanic/Latino, Caucasian, Other)?

How did you find the school?

How old are your children, and how long have they attended the school?

Interview Questions:

1. How would you describe the experience of training your pre-teen or teenager to be a responsible digital citizen in a one-to-one learning environment?
2. How do you perceive your child's one-to-one learning environment experience?
3. How do you perceive your particular parenting style in relation to addressing digital citizenship with your child?
4. What stands out to you about teaching responsible technology use?
5. How does the experience of parenting a student in a one-to-one environment affect you?
6. What feelings come to mind when you think about parenting your pre-teen or teenager to be a responsible digital citizen?
7. As a parent, how do you mediate technology use?
8. What other significant thoughts that relate to parenting in this area do you have?

APPENDIX I

Focus Group Questions:

1. How would you describe your experience of training your pre-teen(s) and teenager(s) to be responsible digital citizens in a one-to-one learning environment?
2. How do you perceive your children's one-to-one learning environment experience?
3. How do you perceive your particular parenting style in relation to addressing digital citizenship with your child?
4. What about teaching responsible technology use stands out to you?
5. How does the experience of parenting one-to-one students affect you?
6. What feelings come to mind when you think about parenting your teenagers to be responsible digital citizens?
7. As a parent, how do you mediate technology use?
8. What other significant thoughts that relate to parenting in this area do you have?

APPENDIX J

Journal Prompts Emails to Participants

Dear Study Participant,

Every three to four days, a new prompt will be emailed to you. Please write your response to the prompt as often as you like throughout the week with at least two to three sentences. As a reminder, I am the only person who will be reading these online journals. Your name will be removed from the eventual write-up based upon the journal to maintain anonymity. Please send completed journals to me as an email response to this original email.

Week 1a - How would you describe your experience of training your pre-teen/teenager to be a responsible digital citizen in a one-to-one learning environment?

Dear Study Participant,

This is the second journal prompt for the week. Please write your response to the prompt as often as you like throughout the week with at least two to three sentences. As a reminder, I am the only person who will be reading these online journals. Your name will be removed from the eventual write-up based upon the journal to maintain anonymity. Please send completed journals to me as an email response to this original email.

Week 1b - How do you perceive your children's one-to-one learning environment experience relating to being a responsible digital citizen?

Dear Study Participant,

This is the first journal prompt for the week 2. Please write your response to the prompt as often as you like throughout the week with at least two to three sentences. As a reminder, I am the only person who will be reading these online journals. Your name will be removed from the eventual write-up based upon the journal to maintain anonymity. Please send completed journals to me as an email response to this original email.

Week 2a - How do you perceive your particular parenting style in relation to addressing digital citizenship with your child?

Dear Study Participant,

This is the final journal prompt for the study. Please write your response to the prompt as often as you like throughout the week with at least two to three sentences. As a reminder, I am the only person who will be reading these online journals. Your name will be removed from the eventual write-up based upon the journal to maintain anonymity. Please send completed journals to me as an email response to this original email.

Week 2b - What feelings come to mind when you think about parenting your pre-teen or teenager to be a responsible digital citizens?