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An Investigation on Cyber Safety Awareness Among Teachers and Parents

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An Investigation on Cyber Safety Awareness Among Teachers and Parents

By
Teresa M. Lester

A Dissertation Submitted to the
Gardner-Webb University School of Education
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

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Approval Page

This dissertation was submitted by Teresa M. Lester under the direction of the persons listed below. It was submitted to the Gardner-Webb University School of Education and approved in partial fulfillment of the requirements for the degree of Doctor of Education at Gardner-Webb University.

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Acknowledgements

It would be remiss of me if I didn't first thank my God. The verse that got me through the last two chapters was, "For I the Lord your God, will hold your right hand, saying to you, 'Fear not, I will help you'" (Isaiah 41:13, The King James Version).

I want to thank my husband Phillip Lester for always standing by my side when I tell him that God has given me new challenges to complete. This was truly the biggest challenge yet. Second, I would like to thank Dr. Jennifer Putnam, Dr. Sydney Brown, Dr. Kelly Clark, Dr. Kelsey Greer, and Chad O. Thomas, principal at Bailey Middle School, for all the support and advice they have provided along this amazing and arduous journey. I would not have made it through the journey without my cohort family, in alphabetical order they are: Natalie Bishop, Dawn Delk, Angela Hines, Samuel Lemoine, Stephanie McCabe, Nicole Prell, and Alecia Roberts. These new family members forged a bond, encouraged, and lifted each other every step of the way.

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Abstract

An Investigation on Cyber Safety Awareness Among Teachers and Parents. Lester, Teresa, 2018: Dissertation, Gardner-Webb University, Cognitive Development/ Overlapping Spheres of Influence/Theory/Flow/Cyber Awareness/ Cyberbullying/Cyber Safety/Educational Programs/Intervention Models/Online Safety/Online Parental Controls/Parents Education/Sexting

The purpose of this mixed-methods investigation was to determine how teachers and parents understood and educated themselves on cyber safety. This research explored how teachers and parents found and used resources available to stay informed of the constant threats and changes for students while online.

> The amount of time young people spend with media has grown to where it's even more than a full-time work week . . . When children are spending this much time doing anything, we need to understand how it's affecting them for good and bad. (Henry J. Kaiser Foundation, 2010, p. 2).

It is now more important than ever for researchers, policymakers, teachers, and parents to stay on top of the impact technology has on students'/children's lives.

Using an online mixed-methods survey and interviews, the researcher sought to determine, compare, and examine the levels of understanding and perspectives of teachers and parents on cyber safety issues and training. This study was used to determine if there was a need for more readily available training on the issues concerning cyber safety for teachers/parents to ensure the safety of students/children in K-12 schools and communities.

This research found that many teachers and parents are working to learn about cyber safety and monitor students/children but feel frustrated that technology changes so fast that their efforts sometimes feel inadequate. Adding to the knowledge base of free resources for teachers and parents might help in this endeavor. News channels and some principals are already making efforts to educate their communities about technology changes where possible to keep teachers and parents informed and to help the community make better decisions for students and children.

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Chapter 1: Introduction

Introduction

Internet safety and awareness is a growing priority across the nation. Keeping up to date on the many issues surrounding online security and safety presents its own problems. Many organizations have developed training on Internet safety, but technology changes daily. It is imperative to stay on top of what is new in order to know how to safely use the Internet (Lantzy, 2009). "Unlike any other time in history, the 21st century allows us access to information at the click of a button" (Wiley, 2014, p. 151). According to G. Gurley, presenter at a 2016 technology conference for teachers at the North Carolina Center for the Advancement of Teachers (NCCAT), "Our students live in a digital world, with the ability to contact anyone, anywhere, anytime." Helping students use technology safely requires refined skills (Wiley, 2014).

According to S. Wind (personal communication, January 19, 2016), Cyber Crime Specialist and seminar speaker in North Carolina,

> The criminal justice systems have not been updated for 24 years. Middle school students who participate in crimes like sexting are prosecuted as pedophiles and have permanent criminal records. There have been some cases where the parents have also been charged, as they are the owners of the devices used for these crimes.

Students are generally unaware that sharing pictures on sites such as Snapchat is not as safe as it seems. Photos may only appear for a few seconds but then become the property of Snapchat and can be used anywhere without the originators' permission (S. Wind, personal communication, January 19, 2016).

Many of these children might not fully understand the impact these actions could

have on their future lives. While technology can be used as a tool in many classrooms to prepare students for future 21st century jobs, understanding how to be safe online should be a part of the process.

The intent of this research was to study the levels of need on cyber safety awareness for teachers and parents. The cyber safety issues covered included bullying. ghost apps, texting, inappropriate pictures, sexting, and identity tracing.

Chapter 1 is arranged in the following sections: Background, Problem Statement, Purpose of Study, Research Questions, Theoretical Framework, Nature of the Study, Definitions, Assumptions, Scope and Delimitations, Limitations, Significance, and Summary. Together, these sections provide a brief overview of relevant literature, evidence of the problem, and current studies available for this research and explain a meaningful gap in current research.

Background

According to research by the Henry J. Kaiser Foundation (2010) on cyber safety issues, "The amount of time young people spend with media has grown to where it's even more than a full-time work week" (p. 2). It is now more important than ever for researchers, policymakers, teachers, and parents to stay on top of the impact technology has on students'/children's lives. "When children are spending this much time doing anything, we need to understand how it's affecting them for good and bad" (Henry J. Kaiser Foundation, 2010, p. 2).

Sexting has become an issue in many K-12 communities. Sexting is defined as "The sharing of sexual or nude images or videos online or through mobile phones" (Bentley, O'Hagan, Raff, & Bhatti, 2016, p. 40). In 2015, news stories on schools in North Carolina reported on 75 students whose nude pictures were shared through a

Dropbox site. One middle school student was charged and was required to register as a sex offender. All the students involved faced possible charges for posting nude pictures (Little, 2015a). John Snyder, a legal expert handling the case stated, "It's a clear violation of the law: it's not a gray area: it's a felony" (Little, 2015b, p. 1).

S. Wind (personal communication January 19, 2016) and the information found on her website, www.parentsknowmore.com, suggest many adolescents believe sexting is no big deal because they are exposed to it all the time. In a comment about adolescents sharing nude pictures on their electronic devices, Francisco (2015) stated, "It's going to affect a lot of people's lives and change their lives forever. This is serious business" (p. 1).

In 2016, a North Carolina school reported fake Instagram sites that led the public to believe principals were making defamatory comments about parents and staff (Anonymous, personal communication, 2017). In both cases, students were arrested, and sites were shut down. At the same time as these reports, several other districts in the state were facing similar issues (Fogarty, 2014).

Another website, www.cyberbullying.us, offers resources for teachers, students, parents, and adults, including lessons and laws surrounding cyberbullying. This topic is also a great concern in teaching students/children how to use the Internet safely and responsibly. In some instances, cyberbullying has led to tragedy. Francisco (2015) noted that suicides had occurred after bullied students' nude pictures were leaked online. For this reason, recent efforts have been created to bring more awareness to the issue of cyberbullying. This research study was designed so that needs concerning Internet safety could be determined as well as ways to educate teachers and parents about the resources available to them on cyber safety. Additionally, it was hoped these communities would

have better informed students who work and explore safely online.

Lack of knowledge. In researching the topic, several articles were used from educational journals and dissertations; but due to the relatively new awareness of this problem, few books on current cyber safety issues were found. Websites like parentsknowmore.com are available, and webinars designed to help teachers/parents do exist; however, few attend these webinars when given the opportunity (S. Wind, personal communication, January 19, 2016).

Although there are limited studies on this topic, the research that has been conducted has raised alarms. In a study conducted in the United Kingdom in 2015 and published in 2016, approximately 1,000 parents were surveyed about Internet laws. Half of the parents surveyed were unaware it was illegal for children or adults to take and post nude pictures of themselves online. Twenty-eight percent of those surveyed did not understand it was illegal for children to post nude pictures of their peers online (Bentley et al., 2016). It also found 83% of the parents surveyed had never received information about sexting, and 84% never looked for information about sexting (Bentley et al., 2016). The study did reveal 50% of the parents surveyed wanted to learn more about cyber safety and the laws concerning sexting.

Differences in perceptions. In a 2016 survey conducted by the U.S. based National Cyber Security Alliance (NCSA, 2016), over 800 "online teens between the ages of 13-17 and a separate sample of 810 online parents found several signs of apparent digital disconnect between parents and children" (p. 1). This Microsoft sponsored research conducted between June 7-10, 2016, found,

> American teens may lead more complex digital lives than most parents realize and have experienced several undesirable-and even hurtful experiences online such as

> receiving negative messages and having concerns about exposure to extremist content. The survey also reveals a high reliance by teens on peer-to-peer support when facing online problems and a significant reluctance to seeking parental assistance. (NCSA, 2016, p. 1)

The study revealed a concerning difference between parent and children perceptions of online activity. The NCSA (2016) study showed 60% of teens had created social accounts unbeknownst to their parents, yet 67% of parents surveyed around the same time stated their children reported all worrisome online incidents to them. This same trend was apparent on issues such as use of device time and rules governing how and when devices were used in a home. Parent and children answers varied on all accounts surveyed. "Thirteen percent of teens report their parent is completely aware of the full extent of their activities . . . Three percent of parents reported being completely aware of the full extent of their children's activities online" (NCSA, 2016, p. 3).

Negative online experiences. The NCSA (2016) study also looked at negative experiences such as negative or unkind treatment online. Of the 39% of teens who reported unfavorable experiences, 52% indicated it was because of something they said or did; 45% indicated it was for their appearance; 27% indicated it was for sexual orientation; 24% indicated it was for their race or ethnicity; and 6% indicated it was for a disability (NCSA, 2016). More alarming than these statistics was the fact that 40% of these teens reported they would turn to a friend before their parents. Eighty-five percent of the parents thought their children would come to them first (NCSA, 2016).

ChildLine is a counseling service provided for children under the age of 19 that originated in the United Kingdom. It offers a free 24/7 hotline service and provides 1:1 counselor chats. The program allows teens to talk through any issues. The program can

also direct children to future help through their clinics. Other online sites in places like Philadelphia are now available ("ChildLine," n.d.).

The United Kingdom ChildLine organization conducted studies using snapshot data gathered from ChildLine calls between the years 2002 and 2014. The ChildLine study found, "86% of parents stated they would seek help if they found out their child had sent a sexual image to another young person and it had been shared on the Internet" (Bentley et al., 2016, p. 2). This statistic speaks volumes on the need to educate communities on how children develop cognitively and whether it is safe to trust that a child will report inappropriate communication happening online. The same study showed a sharp rise from 2010-2011 to 2012-2013 in children who mentioned cyberbullying and sexting in ChildLine counseling sessions and in the number of children who found worrying or offensive content online (Bentley et al., 2016). This idea is illustrated in Figures 1 and 2 from the Bentley et al. (2016) study. Both the NCSA (2016) and ChildLine (n.d.) reports illustrate the problems possible when students/children are online. It also underscores the fact that these issues are not limited to the U.S.; instead, the issues are worldwide.

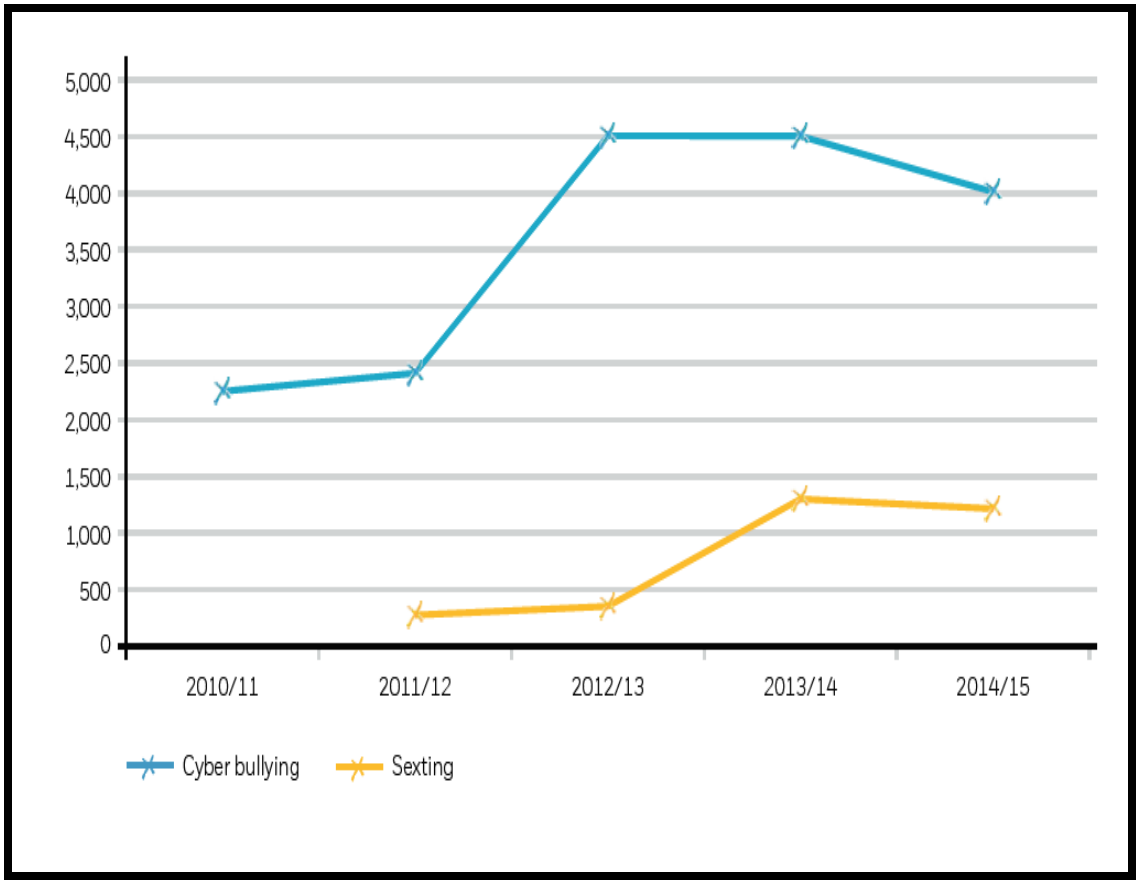

Figure 1. Number of ChildLine Counseling Sessions Where Cyberbullying and Sexting were Mentioned. Source: (Bentley et al., 2016, p. 41).

Figure 1 makes it clear that since 2011, instances of both cyberbullying and sexting have become an issue for the children who chose to speak to ChildLine counselors.

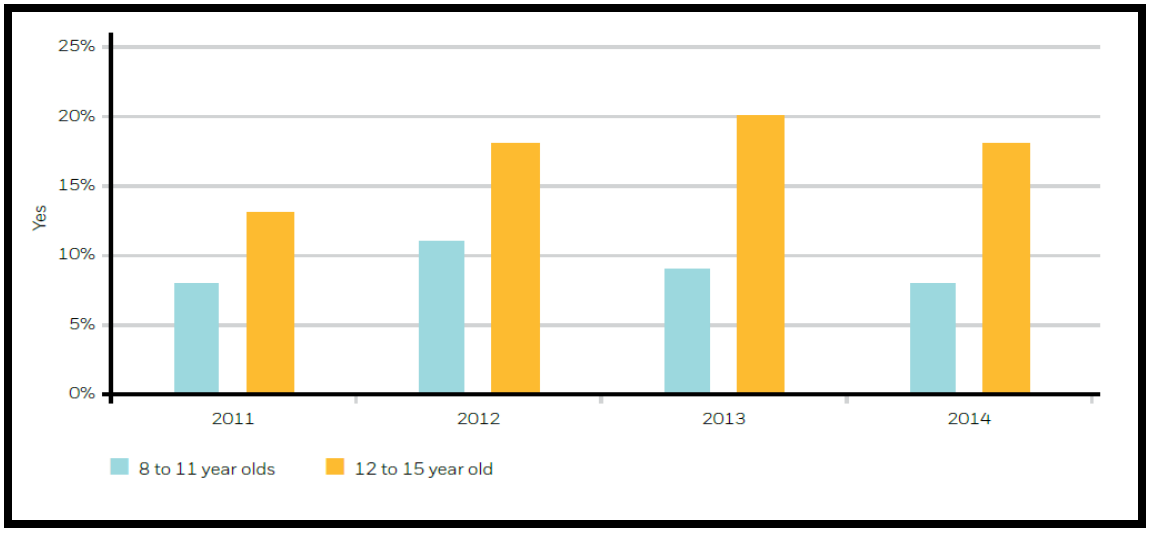

Figure 2. Results of Children Ages 12-15 Being Asked if They Had Found Worrying, or Offensive Materials Online. Source: (Bentley et al., 2016, p. 41).

Police reports from 2002-2014 showed a sharp increase in the number of recorded offenses of nude or provocative images in the United Kingdom. This trend is shown in Figure 3.

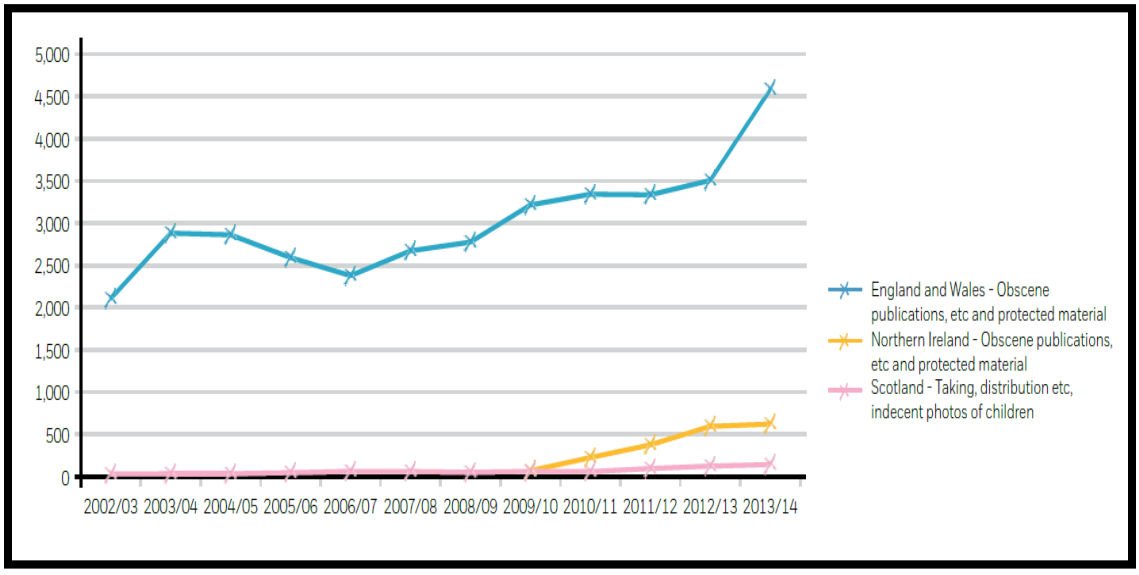

Figure 3. The Number of Police Recorded Offenses of Indecent Images. Source: (Bentley et al., 2016, p. 42).

Technology in educational settings. In a survey conducted by Instructure, a company that created the educational software Canvas, a module-based online platform for student and teacher assignment interaction, teacher responses were mostly positive about the use of technology in the classroom. In December 2015, 650 K-12 and higher education teachers were surveyed as well as more than 2,000 educators from industrialized countries worldwide (Bolkan, 2016). This survey showed 94% of respondents believed technology in the classroom was, overall, a positive tool for improving learning. It showed technology made education more accessible and saved about 40% of hours worked a week. In addition, the survey indicated many U.S. schools allow multiple devices into the classroom (Bolkan, 2016). "The most pressing concern among educators was distraction, which outranked privacy and security issues. . . Teachers are focused on the how, not whether, technology should be used" (Bolkan, 2016, p. 2). In addition, Goldsborough (2015) noted, "One key aspect of technology is the importance of using it appropriately, with the term for this being 'appropriate technology.' Whether digital or not, technology should improve, not degrade the quality of lives" (p. 1).

Ghost applications. S. Wind (personal communication January 19, 2016) mentioned in her seminar conducted in January 2016, that many children use ghost applications. Applications are hidden behind images like the calculator or camera icon on phones, so their parents/guardians will not know they are using applications they would not approve of them using (S. Wind, personal communication, January 19, 2016).

Little literature exists that addresses the issue of how well equipped teachers and parents are in understanding, using, and monitoring the use of technology by their students and children. This study addressed that issue.

Parenting education. Most of the information on parenting education centers on typical problem behaviors with children. Technology is a newer piece of the problem behaviors parents are now dealing with in the family environment. Although parenting education models are numerous, approaching these issues is a sensitive task. Many parents view this help as an intrusion or as a deficiency in parenting skills (Ailincaif & Weil-Barais, 2013). The intentions of these programs cover topics like informing the parents, preventing future problems, preventing risky behaviors, and coping with difficulties. The key to the success of these programs is parent voluntary participation (Ailincai & Weil-Barais, 2013).

An example of this type of concern occurred in a North Carolina middle school. A principal dealing with sexting in a middle school spoke to the students as a group during their lunch time and then followed up with a ConnectEd phone call to parents. In the message, he mentioned that in his home, he takes devices away from his children at bedtime, charges the devices in his room, and returns the devices to his children in the morning. This comment was meant to be a suggestion and not an instruction; however, many parents were outraged that the principal, "was trying to tell them how to raise their children and was out of line" (Anonymous, personal communication, 2017).

Problem Statement

The Internet is a massive, constantly changing environment. Children are exposed to an adult world every time they log into a device with Internet access. A mixed-methods investigation was conducted to examine how well teachers and parents are informed about online cyber safety and what they did to learn more to stay up to date with changes and to protect the students/children in their care.

Purpose of Study

This study investigated how aware parents and teachers in K-12 environments are concerning online cyber safety issues. The study was used to determine if there is a need to create more awareness of opportunities for teachers and parents to take advantage of free programs available to them on this issue. This study also provided a window into whether or not more opportunities for community groups on this topic need to be made available and if these populations would take advantage of the opportunities if they were aware they existed.

Research Questions

In order to delve more deeply into this topic, four research questions guided this study. They included

1. In what ways do teachers/parents in K-12 environments monitor their students'/children's online use?
2. To what extent are teachers and parents in K-12 environments aware of cyber safety issues?
3. What methods do teachers/parents in K-12 environments use to learn and stay current about topics concerning cyber safety for themselves and their students/children?

Theoretical and/or Conceptual Framework

A theoretical lens "becomes a transformative perspective that shapes the types of questions asked, informs how data are collected and analyzed, and provides a call for action or change" (Creswell, 2014, p. 64). The lens for this study was the theory of overlapping spheres of influence. The theory of overlapping spheres of influences shows that school, family, and community work together as a partnership to create a more

wholesome environment for the student/child. This model, created by Epstein (2011), was created to improve scores and relationships between the partners in each student's/child's school life but is written so that it transcends to other ways of helping as well. In this study, the sphere of influence theory was used to show how teachers, parents, and the community can partner together to protect the students/children in a K-12 online environment safety.

The overall picture was that schools, families, and communities influence and have mutual interest for the student/child in that community (Epstein, 2011). The same principle was used to determine the need for teachers and parents to learn more about online cyber safety as the community helps through offering free training programs and incentives. When all three components work together, the student/child benefits.

Nature of Study

A social constructivist design "demonstrates belief that individuals seek understanding of the world in which they live and work" (Creswell, 2014, p. 8). The researcher in this type of study relies on participant views and constructs meaning from discussions, body language, and interactions with others. Questions are typically open ended, and the researcher listens to and observes the participants carefully (Creswell, 2014).

The setting was an open, online environment where parents and teachers of K-12 students were asked to complete a survey in their own space and time. Survey links were provided through Facebook (Appendix A), LinkedIn, and Twitter. Participants were given an opportunity to participate in a focus group discussion approximately three weeks after their initial online survey. One participant was interviewed virtually using Google Hangouts; four participants took part in individual face-to-face interviews; and two

participants participated in telephone interviews. It was the intent of this study to conduct group interviews, but the participants either did not have or did not want to download tools needed for online interviews as a group. Individual interviews were therefore used to obtain the needed opinions of the individuals who chose to participate.

Definition of Terms

Cyberbullying. "Occurs when digital messages are used to threaten, torment, or embarrass someone" (Mulka, 2014, p. 7).

Cyber citizenship. "Taking responsibility for your role in cyberspace and engaging in positive and ethical decision-making to stay safe online" (Mulka, 2014, p. 7).

Cyber safety. "The safe and responsible use of information and communication technology. It is about keeping information safe and secure, but also about being responsible with that information, being respectful of other people online, and using good netiquette" (Internet etiquette, Storypark.com/cybersafety, 2017, "What is Cybersafety," para. 1).

Digital footprint. Steps taken when using the Internet that leaves personal information seen by the online world (Mulka, 2014).

Digital immigrant. Someone who was raised without the use of technology and is not learning how to use technology (G. Gurley, personal communication, June 13, 2016).

Digital literacy. "The proficiency to effectively employ web 2.0 applications, Internet-based tools, and repository sites to further meaningful research and development" (Jacobs, 2014, p. 7). It requires access, selection, curation, and creation capabilities (Jacobs, 2014). How well the concepts, safety, and use of technology are understood and used.

Digital native. Someone who was born after the technology was developed and has been exposed to technology all their lives. "People who were born after the invention of digital technology and have grown up using it" (Mulka, 2014, p. 7).

Experiential learning. A process of learning by doing or learning through mistakes (Bryant, 2013).

One-to-one initiatives. Schools provided a computer for each student to use during school instruction. Some schools send these computers/Chromebooks home with the students, and others opt to leave these in the classroom (Bjerede & Krueger, 2015).

Self-regulated learners. Research and draw their own conclusions. They do not believe everything the hear (Lapan, Kardash, & Turner, 2002).

Social media. "Online forms of communication used to create, collaborate, and/or share among Internet users" (Henderson, 2016, p. 29).

Assumptions

According to Foss and Waters (2007), assumptions in a dissertation is "a discussion of the methodological assumptions that inform the researcher and guide the study" (p. 151). The goal of the research was to test the assumptions and determine if a need surrounding the issue of cyber safety truly existed and then to follow up with a plan of action to correct any issues found.

It was the assumption of the researcher that if teachers and parents were well informed about cyber safety issues, they would become better advocates in protecting the students and children in their care who were using technology. It was also the assumption that cyber safety is a current and relevant topic needing exploring.

It was assumed that the results of the surveys and interviews would be a good representation of how this topic resonates with K-12 parents and teachers.

Scope and Delimitations

As a middle school teacher, the researcher has seen and heard both positive and negative issues concerning online cyber safety. While it was important to learn more about this topic and to grow in the process, it was a moderate task to remain unbiased. To help with possible bias, the researcher surveyed participants anonymously online where possible and conducted interviews through information given by participants who chose to be involved in the second phase of the study. This information will be stored securely in a lockbox at the researcher's home for 5 years.

Limitations

The research was conducted online through a Google Docs Form and one interview through Google Hangouts. Six other potential focus group participants chose to be interviewed individually by phone or in person as they did not have nor want to install the tools needed for online focus group discussions. Focus groups then became interviews in order to complete the process.

"This is a relatively new and emerging area of research" (Bentley et al., 2016, p. 40). Few book resources were available on this topic as it is a new and ever-changing topic. Many of the resources used came from educational journals and magazines written for teacher use and reference. This fact limited the information gathered for the parent perspective in this research.

Significance

It is vitally important that teachers and parents are well informed in order to understand how to guide students/children with the safe use of online tools. It is equally imperative that they are knowledgeable as to how to find help when students/children find themselves in a potentially harmful experience online. Educating teachers and

parents to be positive advocates for online usage can be a vital part of keeping students/children safe while they learn new skills and prepare for future jobs and life. "The Internet can be extremely beneficial for children: they can use it to learn, communicate, develop, create and explore the world around them" (Bentley et al., 2016, p. 40); however, the use of the Internet can also leave children vulnerable and expose them to risks online. These risks may not be fully understood by children or their caregivers at home or school. In fact, as Bentley et al. (2016) noted, many children do not understand the difference between online and offline lives. This fact underscores the significance of this study.

Summary

In Chapter 1, the need to stay up to date on current changes in cyber safety was introduced. The study explored levels of concern and awareness of cyber safety issues among teachers and parents in K-12 environments through an online investigation.

The study used a social constructivist method and began with survey participants who responded to the links provided through Facebook, LinkedIn, and Twitter. The second phase of the study used volunteer participants in interviews with open-ended questions. Both phases used mixed-methods items to gather participant views and beliefs. The answers were then studied, looking for differences in perspectives and levels of understanding and needs among these groups of teachers and parents.

Chapter 2, the literature review, goes into more details on the research conducted for this study.

Chapter 2: Literature Review

Introduction

This study sought to determine the need for training among K-12 teachers and parents regarding cyber safety for students/children. The intent was to first determine the need for more knowledge, learn the perspectives of these groups being tested, improve awareness of free resources for teachers and parents, and make recommendations for possible growth in online cyber safety. The purpose was to increase knowledge, thereby increasing the safety of students/children while online.

Chapter 2 covers the literature used to determine the need for this study. It covers Literature Search Strategies, Theoretical Foundation, Literature Review Related to Key Variables and Concepts, and the Summary and Conclusions.

Literature Search Strategy

To complete a thorough search for information, the Gardner Webb-University dissertation site was searched for similar topics. Programs like Flow.Proquest.com were used to store and cite works found through the university's site. Other sites like Education Resource and Information Center (ERIC), were used to find even more dissertations and journal writings. There were library and bookstore searches for current literature and books. There were searches online through business education journals and course textbooks as well as attending seminars on the topic. The first seminar, "ParentsKnowMore," was by a cyber specialist expert and was presented to teachers and parents. The informative session was well advertised and offered to five schools in the area. Approximately 40 parents and one teacher were in attendance. This training led the researcher to other websites pertaining to cyber safety issues. The second seminar was through North Carolina's Center for the Advancement of Teachers (NCCAT) and

covered many of the new technologies available to teachers and how to use them. This was a 5-day session.

Keywords used in the searches were cognitive development, cyber awareness, cyberbullying, cyber safety, experiential learning, Jean Piaget, Jerome Bruner, online safety, parental controls, overlapping spheres of influence, studies on children and cyber safety, cybercrimes, risky teen behaviors, sexting, and current trends in cyber safety.

Because cyber safety is an ever-changing topic, it was important to use recent data and reports. A search for any information within the last 5 years showed that terms and understandings vary greatly. Very little current data were available in books, so educational journals featuring current topics and research were used. Earlier data used were to obtain background information on how technology developed as a tool in school systems. Most of the data used was from research and journals created in the last 5 years.

Theoretical Foundation

The theoretical foundation or lens for this study was the theory of overlapping spheres of influence. The overlapping sphere of influence, created by Joyce Epstein, was written to inspire generations of teachers, parents, and communities to work together for the betterment of the student/child. It was "adopted by the National Parent Teacher Association as a tool for understanding family engagement and improving partnership practices" (Price-Mitchell, 2011, p. 172).

Epstein defined partnership as "a shared responsibility of home, school, and community where members work together to share information, guide students, solve problems, and celebrate successes" (Price-Mitchell, 2011, p. 173). There are two factors in the overlapping of spheres of influence theory: time and experiences. The time and age of a child determines which section of the sphere has the most influence. Because

parents are typically more involved with school with the younger students, a first grader would depend more heavily on the parent and school than a high schooler (Epstein, 2011). The second component reveals the interpersonal relationships that are more important to the child's education. Time, age, and influence will determine each child's level of mutual interest between parents, teachers, and the community. At the center of the model of influence, shown in Figure 4, is the student/child (Epstein, 2011).

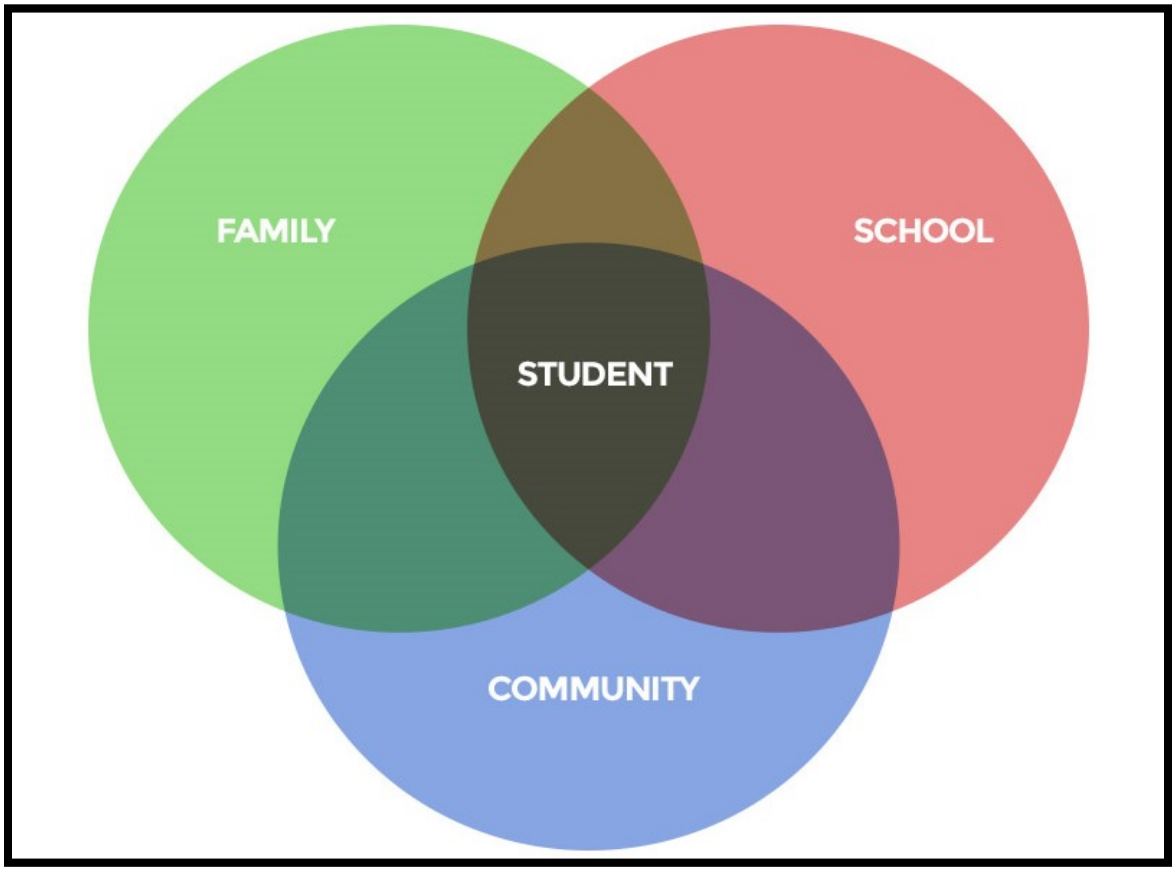

Figure 4. Joyce Epstein's Sphere of Influence. Source: http://tiny.cc/oi7bmy

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Figure 4 illustrates the ideal sphere of influence. This study looked at the realistic spheres of influence in each school studied after the research was completed. All stakeholders in a child's education have mutual interest and influences in a partnership model. In the past, these spheres were considered separate. The overlap is thought to

increase when there is more than one stakeholder (Epstein, 2011).

There are six types of involvement in this process: parenting, communicating, volunteering, learning at home, decision-making, and collaborating with the community. The communication should always be two-way, such as letters and emails from parents to teachers and vice versa or calls and working together through difficult times (Epstein, 2011).

The community is also a key player. Depending on the connection, they can supply resources, funds, or places to meet and work together. In the case of cyber safety, learning about cognitive development or just everyday issues that arise in the different school environments, community leaders could be the suppliers of trainers and materials to help in educating parents and teachers.

Literature Review Related to Key Variables and Concepts

In America's early stages, free elementary education was made available, and high schools followed in the mid-20th century. "By the 1950's the United States had achieved preeminence in education at all levels and its triumphant lead would remain undisturbed for several decades" (Goldin & Katz, 2008, p. 324). Between the 1970s and 1990s, these trends slipped away, and the United States was no longer considered to be the first in education among other nations (Goldin & Katz, 2008). As technology entered the educational realm, the dynamics of educations changed as well.

Interventions for all students to use technology. Young children's exposure to technology increases as the amount of computer ownership increases. Research on how to incorporate technology for preschoolers began in 1997. Despite the growth in technology, there are still gaps in the social economic classes as to who does and does not have access to computers at home. The lack of technology for all families leads parents

and advocates to look at schools to provide for this inequality (McCarrick & Li, 2007).

Laptop interventions in schools are viewed as ways to increase economic competitiveness, reduce the inequity in access to computers and information between poor and wealthy families, raise student achievement, and transform the quality of instruction (Whiteside, 2013). "Being able to communicate in a digital environment is a skill set that must be mastered by both teachers and students today" (Henderson, 2016, p. 29). Understanding how safe students/children are when learning how to navigate these new technologies also involves the parents. "While school culture has a critical impact on whether educational technology is accessible and how it is used, so does the home culture" (Bjerede & Krueger, 2015, p. 6).

Intervention for future survival. According to Wagner (2012), there are seven survival skills needed for "careers, continuous learning, and citizenship" (p. 12). "They are: critical thinking and problem solving, collaboration across networks and leading by influence, ability and adaptability, imitative and entrepreneurship, accessing and analyzing information, effective oral and written communication, and curiosity and imagination" (Wagner, 2012, p. 12). Wagner believed that U.S. students need more innovation with teaching and that students need to know how to use curiosity and imagination for innovation to take place (Wagner, 2012). It does not have to be a device, it can be the way customers are treated (Wagner, 2012). Other necessary skills for success mentioned by Wagner were "perseverance, a willingness to experiment, take calculated risks, tolerate failure, and the capacity for design thinking" (p. 12). According to Wagner, "One cannot have empathy without having practiced the skills of listening and observing. Integrative thinking begins with the ability to ask good questions and to make associations. There is also a kinship between collaboration and networking" (p.

15).

These descriptors from Wagner (2012) work together to form what is known as soft skills in the business world. Technology continues to change the dynamics of jobs and the different skills needed in the work force. These skill-based changes in workplaces create needed changes in how schools now educate students using technology. The younger generation seems to pick up on how to use new devices easier than the older generations and employees are now looking to the younger generations for leading in these areas. "Existing employees who are slow to grasp new tools will not be promoted and might see their earnings reduced. Those who are quicker will be rewarded" (Goldin & Katz, 2008, p. 90).

Soft skills still needed. In business education classes across K-12 schools, teachers are being encouraged to revisit teaching soft skills. Soft skills are general skills like accepting feedback, working collaboratively, managing time, and communicating well with others (Stone, n.d., p. 1). Soft skills in the business world refer to interpersonal skills such as getting along with others while in groups and while getting the job done (Arneson & Kufner, 2016). This idea includes the use of "appropriate verbal tone and body language while interacting with customers" (Arneson & Kufner, 2016, p. 15).

"It is widely conceded that the use of computers and their software has obviated the need for certain abilities and traits" (Goldin & Katz, 2008, p. 93). Cursive writing was taken out of many schools because it was felt that students would type their future communication needs. Cashiers now scan a bar code and fast food workers only need to know what a product looks like (Goldin & Katz, 2008).

"There is a growing concern among parents and employers that today's business graduates are not sufficiently capable of moving beyond electronic connections to

humanize their dealings with others" (Urban, 2016, p. 10). This concern is yet another area where teachers and parents can partner together to instill soft skills while teaching/learning to work with new technologies. "Increasingly in the 21st century, what you know is far less important than what you can do with what you know" (Wagner, 2012, p. 142).

Positives and negatives. In 2003, it was believed the computer would help children become more creative and would assist them in performing well in future jobs. Supporters and naysayers argued computers might be helpful but should not be used as the only measure of teaching and learning. Naysayers on computer usage among children felt learning should involve more hands-on and personal experiences for total growth (McCarrick, & Li, 2007).

In 2014, Arizona State University Teacher's College received a grant to infuse technology into the schools' iTeachAZ program. The iTeach AZ program pairs teachers in training for 1 full year with a mentor teacher. The grant allowed them to infuse more technology and report on how the program worked (Schaffhauser, 2016). "It was like night and day . . . Students who had been disengaged were now participating and were the ones creating the most abstract and creative presentations," stated one teacher in the study (Schaffhauser, 2016, p. 1). "It reached every kind of learner," stated another teacher (Schaffhauser, 2016, p. 1). The study found students learned more quickly, assessments were faster, and engagement was greater (Schaffhauser & Nagel, 2016); however, even in this setting, the drawbacks to using technology were apparent. One educator noted, "We knew there would be times when the kids wouldn't use it appropriately" (Schaffhauser & Nagel, 2016, p. 7). The study shows technology can be a good tool in the classroom, but even when things are going well, there are going to be

times when students do not make the right choices.

A study conducted through an online survey by Schaffhauser and Nagel (2016) examined the "love (and sometimes hate) relationship between educators with technology in teaching" (p. 1). The survey addressed teacher thoughts and opinions on the usage of technology in the classroom. "A total of 1,307 qualified respondents from K-12 schools across the country answered multiple choice questions and open-ended opinions about what works and does not work in their classrooms, schools and districts" (Schaffhauser & Nagel, 2016, p. 6). Two thirds of the respondents were teachers. Eighty-five percent reported technology made their jobs easier but that it came with challenges. In the open-ended responses, participants voiced their concerns about "losing other skills found in the traditional methods of teaching" (Schaffhauser & Nagel, 2016, p. 7). An example was given of students using screen capture instead of writing notes. Others reported increased cheating with the usage of technology; however, nine of 10 teachers felt the 1:1 initiatives were a positive thing for today's classrooms (Schaffhauser & Nagel, 2016).

Initiatives are for all students. Families with low incomes can only offer limited support to the schools their children attend (Bjerede & Krueger, 2015). In one district in California, Wi-Fi was placed on buses set up in neighborhoods so families who otherwise would not have access to technology could now have free access to a local Wi-Fi. The initiative was called "ConnectEd to the future" (Gordan, 2015). ConnectEd to the Future helped close the gap between students who had technology available and students who lived in areas where technology or Internet connectivity were not available. "It's off-the-charts unbelievable how students are engaged now, not because they're looking at a screen all day but because they're able to communicate, collaborate, create, research, critically think and find answers. The world has been opened to them"

(Gordan, 2015, p. 2).

Social media in schools. In 2005, the University of Phoenix College of Education conducted an online survey of 1,000 K-12 teachers in the U.S. through a Harris Poll. According to Piehler (2015), Kathy Cook, Dean of Technology for the University of Phoenix stated, "Today's teachers are increasingly tech-savvy in both their personal and professional lives and are enthusiastic about using technology to keep students engaged and excited about learning" (p. 1). The study revealed teachers are using real-world experiences such as Skype or other technologies to communicate with topic experts and schools in other locations as well as blogs, wikis, and social media to prepare their students for real-world applications through education (Piehler, 2015).

In another study conducted by the University of Phoenix College of Education between April 14-25, 2016, more than 1,000 full-time American teachers were surveyed through a Harris Poll. The study revealed that the use of social media in the classroom has decreased since late 2013. Eighty-one percent of the teachers surveyed "remain worried about conflicts that can occur from using social media with their students and/or parents" (Chang, 2016, p. 1). Thirty-one percent reported they experienced issues with students and/or parents connecting with them on social media and monitoring their work and/or personal lives (Chang, 2016). Chang (2016) quoted Kathy Cook, Dean of Educational Technology for the University of Phoenix, as saying, "The first steps to using social media as an educational tool is acknowledging its impact on the lives of today's students and teaching them about the importance of digital citizenship" (p. 1).

Spying on students. In a study conducted through Electronic Frontier Foundation (EFF), several alarming facts surfaced for consideration on child safety while using the Internet in schools (Alim, Cardozo, Gebhart, Gullo, & Kalia, 2017). The

following excerpt comes from the executive summary.

> Throughout EFF's investigation over the past two years, we have found that educational technology services often collect far more information on kids than is necessary and store this information indefinitely. This privacy-implicating information goes beyond personally identifying information (PII) like name and date of birth, and can include browsing history, search terms, location data, contact lists, and behavioral information. (Alim et al., 2017, p. 1)

The EFF worked to take a closer look at school districts; inadequate privacy policies; and, in some cases, no privacy policy at all (Alim et al., 2017). Over 1,000 students, parents, teachers, administrators, and other stakeholders were surveyed. The investigation looked at privacy issues and challenges each of these groups faced in their own communities (Alim et al., 2017). Concerns about limiting student creativity emerged as did concerns over the sale of personal information. The EFF noted that governments, schools, and industries trying to shape technical education are caught in the middle, and students are steadily losing their privacy while the issues are being worked out.

The results of the investigation led to the institution "filing a complaint with the Federal Trade commission regarding the stat collection practices of Google's G Suite for Education" (Alim et al., 2017, p. 3). Glaring loopholes were discovered according to the Family Educational Rights and Privacy Act (FERPA) and the Children's Online Privacy Protection Act (COPPA; Alim et al., 2017).

Eight trends. There were eight trends that emerged from these surveys. First, parents felt a lack of transparency and no disclosure of what technology students were using in each classroom. Second, parents felt the investigative burden fell to them.

Third, there is a growing concern about privacy and data collection of students. Fourth, EFF "investigated 152 educational technology services reported as in use in classrooms and found troubling trends in their privacy policies regarding lack of encryption, opaque data retention practices, and inadequate data aggregation and de-identification" (Alim et al., 2017, p. 5). Fifth, parents who wanted to withdraw students from classroom programs had limited choices. Sixth, there was a general lack of trust between policies and stakeholders. Seventh, teachers need better training on digital privacy; and eight, students need enhanced digital literacy training (Alim et al., 2017).

One glaring complaint among parents was that "teachers had accounts created for the students without notice or consent" (Alim et al., 2017, p. 7). Under FERPA, "the data that students often use to log into Google services-like name, student's number, and birthday-can't be shared with third parties-including Google-without written parental consent" (Alim et al., 2017, p. 8). In one case in California where parents did not want their student using a Chromebook in the classroom, the district consented on behalf of the student with no option for the parents to opt out (Alim et al., 2017).

> Of the 152 educational technology services reported, only 118 had published privacy policies online . . . Of the 118 privacy policies, 78 mentioned data retention policies . . . Only 51 mentioned de-identification or aggregation of user data. (Alim et al., 2017, p. 9)

Through the EFF investigation, parents found teachers overwhelmingly unaware and considered them non-experts in the use of technology. Teachers also felt unequipped to handle technology in the classroom. According to Alim et al. (2017), one teacher commented on the survey, "the country does not seem to be deliberately ignoring privacy concerns, but just lacks general knowledge about ongoing discussions about students'

privacy" (p. 17).

"Things" are not secure. "The Internet of Things is still a wide-open space with little conformity from one thing to another and no clear standards for communication or security" (Bolkan, 2017, p. 20). As concerns grow for student privacy online, so does the concern for the use of multiple devices in the classroom. Tools like the Amazon Echo are "always on and always listening and recording" (Bolkan 2017, p. 20). Wearable devices record and take pictures and even allow for Internet access wherever the child/wearer is located (Bolkan, 2017). Technology has bloomed to multiple devices and has caused changes in the way things are done in an everyday classroom. According to the North Carolina end-of-year testing instruction manuals (2016-2017), testing administrators are now required to ensure that phones, smartwatches, and any other device that can connect a student to the Internet must be turned off and collected before testing can begin.

Adaptations for the future of technology. As the dynamics of technology continues to change, teachers are forced to learn and adapt. These changes tend to come approximately every six months, and teachers need to stay on top of what is new in technology (Henderson, 2016). Henderson (2016) suggested that teachers learn a new digital concept each week, that they seek out technology savvy colleagues, and that they develop a "lifelong learning mindset" (p. 31).

Changes in teacher training. Effective teachers can make learning fun and innovative. Most students today want learning to be active and not passive (Whiteside, 2013). A teacher interviewed in the "Love/hate" study stated, "In today's world, a student who doesn't understand technology will not make it far. We are equipping students to do tomorrow's jobs-the ones that don't exist today!" (Schaffhauser & Nagel,

2016, p. 8). It is important for all teachers to get on board to learn and teach using technology. They can also teach problem-solving skills as well as innovative ways to learn with technology (Whiteside, 2013). "Eighty-four percent of the teachers surveyed in the same study stated they now prefer a mixture of face-to-face and online professional development" (Schaffhauser & Nagel, 2016, p. 8).

Parent and children perspectives differ. In a study conducted by Hart Research Associates (2011) for the Family Online Institute, 702 parents of children aged 8-17 who access the Internet were interviewed by telephone. The study was conducted from July 8-16, 2016. One of the key findings was the "parents generally feel their children are safe online, but parents with younger children are more confident than those who have older children" (Hart Research Associates, 2011, p. 2). Parents surveyed reported they relied on teachers, news sources, and other parents to keep them informed about cyber safety (Hart Research Associates, 2011). "Twenty-four percent of parents surveyed say their children use three or more devices to access the Internet" (Hart Research Associates, 2011, p. 2).

In the Hart Research Associates (2011) study, parents stated they felt more confident with Internet safety on the computer than they did with smartphones and handheld devices. "Ninety-seven percent stated they have talked to their children about Internet safety but only half of those parents use parental controls. Forty-six percent felt the parental controls were not necessary" (Hart Research Associates, 2011, p. 3). Setting rules and limitations were the most popular way of monitoring children online; but when asked, only six parents of the 702 surveyed used specific parental controls on the devices. Sixty-one percent looked through browser history and blocked specific sites they were aware of as problem sites. More than half of the parents surveyed found it difficult to

monitor cell phone usage (Hart Research Associates, 2011).

Cognitive development. Jean Piaget, creator of the Cognitive Development theory, was the first psychologist to study Cognitive development and has been called "the leading psychologist today" (McLeod, 2015, p. 1). Piaget was more interested in the qualitative characteristics of children in his research. He observed children of different age groups in their natural environment, such as at school or on the playground, and journaled the actions he observed (Singer & Revenson, 1996). Piaget felt that "cognitive development is about how a child constructs a mental model of the world" (McLeod, 2015, p. 1). Piaget was more concerned with the individual child than all learners. He determined that there are discrete stages of development and worked under the assumption that children store mental representations of experiences and apply them when needed (McLeod, 2015).

Piaget was fascinated with writings on epistemology, the study of knowledge, by his predecessors Bergan, Kant, and Durkeim (Singer & Revenson, 1996). His focus was on "How do we know" and "How do we think" (Singer & Revenson, 1996, p. 5)? According to Singer and Revenson's (1996) translation of Piaget's work, "Children can understand only what they have experienced themselves and expect adults to see things exactly as they do" (p. 14). Piaget thought children learned through processes of assimilation and accommodation. This dual process led to his schema on cognitive development. "A schema is a simple mental image or pattern of action, a form of organizing information that a person uses to interpret the things she sees, hears, smells, and touches" (Singer & Revenson, 1996, p. 17). Piaget established four elements that guide development: emotions, maturation, experience, and social interaction. These four work together synergistically (Singer & Revenson, 1996). "Experience is a major

catalyst because it is only through exposure to a variety of experiences that children can make discoveries for themselves. Social interactions with other people-especially parents, teachers, and other children-provide those experiences as well as feedback" (Singer & Revenson, 1996, p. 18).

On learning right from wrong, Piaget understood there are three stages of moral development. From birth to age 4, the child feels no obligation to follow rules. Between the ages of 4-7, adults are considered all-powerful and must be obeyed. From the ages 7-12, a child will review and consider the purpose and consequences of rules and will decide if the rules and consequences warrant the correct behavior (Singer & Revenson, 1996). "Piaget showed that young children think strikingly different ways compared to adults" (McLeod, 2009, p. 1).

Jerome Bruner, another psychologist on child development, believed that "important outcomes of learning include not just concepts, categories, and problem-solving procedures invented previously by the culture, but also that the ability to 'invent' these things for oneself" (McLeod, 2008, p. 1). In contrast to Piaget's age-related stages, Bruner recognized that modes of representation translated to each other through life's experiences. If a child was brought up under different circumstances, their growth and beliefs would develop differently and sometimes faster (McLeod, 2008).

Bruner felt that children ages 1-6 stored information visually and need images to help them learn. He believed that children ages 7 and onwards categorized and organized and manipulated outcomes. At this stage in development, Bruner understood that knowledge was stored as words and numbers (McLeod, 2008). Bruner thought, "what determines the level of intellectual development is the extent to which the child has been given appropriate instruction together with practice or experience" (McLeod, 2008, p. 4).

"Children develop self-confidence by taking independent actions and promote independent actions and judgement by experiencing their own mistakes" (Lundberg, Romich & Tsang, 2007, p. 1). A child's level of decision-making increases after the age of 9 and generally develops without parental input between the ages of 12-17. Formal reasoning skills develop more rapidly between the ages of 15-16 (Lundberg et al., 2007). According to (Lundberg et al., 2007), "The transition from parent control to child control is referred to as autonomy granting or independence giving" (p. 3), as the process of growth moves from childhood to adult (Lundberg et al., 2007).

This information combined with the results of the research findings were used to determine when a child is ready to deal with technology and its challenges. The theories also helped in determining why teachers and parents might need to become better informed to help children through these developmental stages while they are exploring the world of ever-changing technology safely.

Risky behaviors in teens. There is a growing body of brain research projects trying to evaluate why teens make risky choices. Some say teens are not good at evaluating risk, and others counteract and say they are just as good about making decisions as adults. One idea that has risen from this form of research is that adolescents have an increased interest in peer relationships and are more likely to make risky choices to increase these relationships (Mounts, 2015). Adolescents appear to be more stressed than adults about being rejected by their peers. It is important to remember that during the adolescent years, the parts of the brain that help with this type of processing are still developing (Mounts, 2015).

The lateral prefrontal cortex (PFC) of the brain helps with mature thinking and self-regulation. This section of the brain develops gradually during the adolescent years

(Mounts, 2015). In a driving test conducted comparing teens and adults, teens performed as well as adults. "When paired with two same-aged friends, clear differences emerged. Late adolescents were somewhat riskier in their driving when they were with friends" (Mounts, 2015, p. 2). This behavior was also observed using magnetic resonance imaging (MRI) technology, and the actions and differences in actions were observed in the PFC portion of the brain. "Adolescents used areas of the brain that are more closely associated with rewards when completing driving task around their peers" (Mounts, 2015, p. 3).

A group of doctors and scientists from Florida State University (2014) College of Medicine conducted a series of 19 studies called "Teenage Brains: Think Different?" These studies sought to discover the reasons behind risky behaviors parents and the criminal justice system deal with daily. They discovered a striking difference between children, adults, and teenage boys. "Using brain activity measurements, a team of researchers found that teenage boys were mostly immune to the threat of punishment but hypersensitive to the possibility of large gains in gambling" (Florida State University, 2014, p. 1). This led researchers to question the effectiveness of punishment for risky behaviors in teens.

Digital natives and immigrants. Students are considered natives to cyberspace; however, older adults as well as many teachers are considered digital immigrants. According to G. Gurley, presenter at a 2016 technology conference for teachers at NCCAT:

> Characteristics of a digital immigrant are people who print out emails, make a phone call to ask, "Did you get my email," print out documents to edit, bring people into office to see a cool website, and prefer to concentrate on one item at a

time in a quiet space.

Likewise, he listed the characteristics for a digital native.

> They function best when networked, prefer their graphics before text, thrive on instant gratification and frequent rewards, surround themselves with technology, gather multimedia information quickly, learn best when it is relevant, instant and useful. (G. Gurley, personal communication, June 13, 2016)

"Digital natives are very familiar with technology and tend to understand it more thoroughly than people born before its invention" (Mulka, 2014, p. 7). Students today find the Internet far more compelling than face-to-face teachers in most classrooms (Wagner, 2012). Digital natives are differently motivated. They are more flexible and more comfortable with collaboration. They act on their curiosities by Googling for fun and "love following hyperlinks to see where they lead" (Wagner, 2012, p. 18). Digital natives learn to create and explore on the Internet (Wagner, 2012).

Seeing the differences between digital immigrants and digital natives and understanding student perspectives on technology may be different than teacher or parent perspectives might open the way to learning what needs to change to make their technological world safer.

Cyber citizenship. It is ethically imperative students that become good citizens of cyberspace, especially as the use of technology in classrooms and at home is on the rise. Students can be taught about plagiarism, safety, copyright laws, fair use, security, and privacy as part of learning how to use the different technologies in schools. Teaching students to be responsible, respectful, and use acceptable behaviors can also be included in training (Woolley, 2010). Good cyber citizenship is taking responsibility for positive, ethical decision-making to stay safe online (Mulka, 2014).

Experiential learning. Experiential learning is a process of learning by doing or learning through mistakes. Children need help from adults inside and outside of schools to make good choices for their futures. According to Bryant (2013), schools and parents/guardians need to empower students/children to make informed decisions about their safety online. Simply having a list of dos and don'ts does not work (Bryant, 2013).

The experiential learning theory was developed by Carl Rodgers, a humanistic psychologist. He believed that for a person to grow, they needed an environment of openness and self-disclosure, acceptance, and empathy (McLeod, 2007). Rogers believed, "No one else can know how we perceive, we are the best experts on ourselves" (McLeod, 2007, p. 8). Rogers felt that people are inherently good but can become destructive if a poor self-concept overrides the valuing process (McLeod, 2007). He believed that for a person to realize their self-image, they had to have childhood experiences that allowed them to explore and learn who they truly are, intellectually and creatively (McLeod, 2007). Rogers believed that a fully functioning person should display the characteristics of being open to positive and negative experiences. He believed they should be in touch with the different experiences that happen throughout life, trusting instincts and gut feelings. They should use creative thinking and risk-taking in order to explore life and be happy and satisfied with life while always looking for new challenges (McLeod, 2007). Rogers was quoted by Weibell (2011) as saying, "There is a difference between failure and making a mistake. Mistakes are a part of the learning process" (p. 2).

Children view using technology for education as satisfying. They enjoy the levels of difficulty, the social interaction, and the frustrations surrounding the assigned task. They embark on their own developmental task to question their ideas and others' ideas

(Campbell & Jane, 2012). "This questioning provides autonomy over their learning and helps them apply deeper learning through the experience" (Campbell & Jane, 2012, p. 2).

Self-regulated learners do not just believe everything they hear. They research and draw conclusions on their own. They can, in many cases, monitor and influence their own actions. They use goals to measure the adequacy of their learning. They make changes where necessary. Self-regulated learners use these characteristics to self-reflect to improve their learning experiences and performances (Lapan et al., 2002).

Trusted learning environment (TLE). Within educational walls, parents expect full transparency regarding student data and online safety while at school. Parents want an understanding of how data are used and what rules are in place to protect their children (Krueger, 2016). A new system of protection called TLE was recently developed because of these concerns with ever-changing technology to better protect students across the nation (Krueger, 2016). TLE was formed by educational leaders both nationally and locally through 28 school districts' technology leaders (Krueger, 2016).

It is thought the development of this voluntary TLE seal "will be a mark of distinction for school systems, signaling to parents and communities that they have taken measurable steps to help protect the digital privacy of student data" (Krueger, 2016, p. 31). School systems earning this TLE seal will demonstrate to others that they adhere to effective privacy policies concerning student data (Krueger 2016).

Teachers and parents can be taught how to handle emerging technologies proficiently and can be trained so they are better prepared to protect students/children. Integrating ethics, legal matters, and social issues while teaching curriculum can be challenging. Teachers can infuse cyber safety and ethics into the lesson being taught. Active citizenship can to be demonstrated on all levels of a student's learning process

(Woolley, 2010).

Summary and Conclusions

Most of the studies used for this research are current and relevant. Technology is a constantly changing field, and there needs to be current and relevant information used to draw accurate conclusions. Research indicates there is a need to recheck the levels of understanding and difference in perspectives about cyber safety and how that knowledge is applied and used as technology changes constantly. The theory used for this study was the theory of overlapping spheres of influence. Through this study investigation process, the need for training was determined. Learning how to close the divide to protect students and children is a challenge. It is time to educate teachers and parents on how they can teach themselves and stay on top of changing technology trends and to share the knowledge they have learned in the process.

Chapter 3: Methodology

Introduction

Technology is changing the way future generations will develop social and cognitive skills such as critical thinking and communication. According to Bryant (2013), children are exposed to an adult world every time they log into a technology device; and they need to be taught critical thinking skills, so their experiential learning outside of a supervised environment does not lead them into poor decisions that can cost them their privacy, put them in harm's way, or destroy their futures.

Teachers and parents in K-12 school systems were the focus of this research. It was the intention of the researcher to draw a clearer picture of the extent K-12 teachers and parents are aware of the constant changes and threats in their students'/children's cyber world. The goal was to assess the need for training and then to develop opportunities for training or tap these audiences into resources already available in order to create better-informed teachers and parents and better-protected students/children.

Overview of the Study

The researcher's role was to first find information already available on the proposed topic, both for and against the initial thoughts of the researcher in order to avoid bias. The researcher next developed a plan to answer the research questions. After identifying the purpose of the survey research and after determining the type of data needed for the study, it was decided that an online survey and the use of virtual group interviews would be the best approach for this study.

Once the proper approvals were in place from the research institution, the researcher endeavored to recruit participants, administer the survey, and collect the data. Keeping in mind the privacy and security of the participants, the researcher then

evaluated the initial batch of information from the survey responses by placing items in batches of similar information, looking for themes, and determining where the greatest areas of responses were. When this was completed, adjustments were made to the interview questions to gain more information in the high theme areas.

Gathering data, separating the information into sections of similar information, and analyzing the data needed to be done before the study's findings could be generated. Participants wishing to see the final copy will be directed to the Gardner-Webb dissertation records.

Chapter 3 covers the Research Questions, Phases of the Study, Research Design and Rationale, Validity and Reliability Measures, Threats to Validity, and the Summary.

Research Questions Restated

This study sought to investigate the following research questions.

1. In what ways do teachers/parents in K-12 environments monitor their students'/children's online use?
2. To what extent are teachers and parents in K-12 environments aware of cyber safety issues?
3. What methods do teachers/parents in K-12 environments use to learn and stay current about topics concerning cyber safety for themselves and their students/children?

Phases of this Study

Phase one of this study involved the use of surveys to gather data. Surveys are typically quantitative in nature: however, the survey instrument used in this research had mixed methods. Phase one involved separate survey items for teachers (Appendix B) and parents (Appendix C) in K-12 school environments and was non-district specific. The

only difference in the two surveys was the wording of children versus students. This instrument was administered through an online Google Form survey through Facebook, LinkedIn, and Twitter and was also sent through email (Appendix D) to participants who requested this format. In addition, flyers that listed the separate links for the study were handed out to participants not connected to the researcher's social media accounts (Appendix E).

Phase two involved individual and small group interviews conducted online using Google Hangouts, face-to-face, and on the phone. These mixed-method interviews involved "unstructured and generally open-ended questions intended to elicit views and opinions from the participants" (Creswell, 2014, p. 246). Participants from the phase one survey were given an opportunity to participate in the second phase interviews. The script and questions used for these interviews can be found in Appendix F.

Two of the interview participants were recorded using a LiveScribe 2GB Echo Smartpen (Appendix G), while the researcher took notes. The recording of the interview was disclosed before the interviews began. The other five interviews were in locations and at times where the LiveScribe pen was not available. The data were then added to the previous data for comparison of opinions and perceived needs in the development of training materials for teachers and parents on cyber safety.

LiveScribe Echo Smartpens have been used successfully in classrooms to help students, especially those with special needs, to capture and use notes through recordings taken in class. The Smartpen helps in gathering voice data and takes pictures of the notes page every 72 seconds so the researcher can focus more on the audience and behaviors in the groups being studied and then listen to the recording later to put all the pieces of the research together. Users can also pin point a time and print the notes page that

corresponds with the voice recordings (Marggraff, 2010).

In a study conducted at Vanderbilt University, speed of access and convenience were compared between the Apple iPod Nano and the LiveScribe pulse Smartpen. There were 40 participants. Of the 40 participants, 39 chose the Smartpen as being easier and faster in accessing data over the Apple iPod Nano. On a short quiz given during the research, following a brief video, 79% of the participants scored higher using video, notes, and audio access compared to participants who used video and notes, video and no notes, and no video and no notes (Schaack, 2009).

Research Design and Rationale

The purpose of this social constructivist sequential design was first to use mixed methods to explore the topic with a small convenience sample survey and then more fully explore specific themes within personal and small group interviews. Research questions in this type of study should be open ended so multiple avenues of information can develop (Butin, 2010). The research questions should answer the what, why, and how of what is being explored. Exploratory research "is sometimes also known as an emergent design, whereby the researcher modifies the research focus and specific methodologies considering new and unfolding information and findings" (Butin, 2010, p. 80).

The first phase of the research was a mixed-methods exploration of a convenience sampling of parent and teacher views on cyber safety. In this phase, surveys were made available online through Facebook, LinkedIn, and Twitter to K-12 parents and teachers to gather preliminary perceptions on the extent of their understanding of current technologies and the ways they monitored their student/child while using technology. Their thoughts and perspectives were explored more deeply in the mixed methods personal and small group interview phase.

From the initial exploration, the findings from the surveys were used to monitor the more in-depth questions for phase two interviews. Questions for the interview portion were predeveloped and adjusted after the results from phase one had been examined. These questions are posted later in this chapter. Teachers and parents who chose to participate in phase two included their email and contact information in a separate section after the survey was completed. The personally identifiable information was not used in the research results and will be destroyed. Participants were given the opportunity to withdraw at any time and given the ability to have their responses deleted from the study notes.

Description of phase one. Parents and teachers in K-12 environments were provided information through Facebook, LinkedIn, Twitter, and emails. Participants had an opportunity to complete an online survey through Google forms. Parents and teachers were given separate survey links. Logic links were used to direct participants away from the survey to gather contact information for participation in the personal and small group interviews. Participant consent was described at the beginning of the online survey. A brief description of the purpose of the survey and an option to withdraw from the research without penalty at any time was explained. Consent was given when the participant continued, completed, and submitted the survey.

Table 1 illustrates how the questions in both the phase one survey and the phase two interviews link back to the research questions (Butin, 2010).

Table 1

Alignment between Research, Survey, and Interview Questions

Research Questions	Related Survey Items	Related Interview Questions
In what ways do teachers/parents in a K-12 environment monitor their students'/children's online use?	4, 5	2 Teachers 2, 3 Parents
To what extent are teachers and parents in a K-12 environment aware of cyber safety issues?	6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18	1,2 Teachers 1, 2, 3 Parents
What methods do teachers/parents in a K-12 environment use to learn and stay current about topics concerning cyber safety for themselves and their students/children?	9, 10, 11, 12,13, 14, 16	2, 3 Teachers 2 Parents

As shown in Table 1, the survey items and interview questions matched up well with the research questions.

Description of phase two. The second phase, the qualitative interviews, investigated participant knowledge of what was available for parents in the community on cyber safety and what was needed for teachers and parents to develop safe K-12 online environments and behaviors for students/children. Questions were designed to "elicit meaningful and deep responses that would take the shape of narratives" (Butin, 2010, p. 97). Two of the interviews were recorded and five were in person. Where the LiveScribe pen was not available, notes were taken. These interviews were "later transcribed and analyzed, along with notes from the individual interviews, looking for patterns, themes, and distinctive perspectives" (Butin, 2010, p. 97).

The interviews began with the introduction, purpose, and guidelines. Following this information, there was an icebreaker, a question, a transition, and then the next

question. The interview questions were as follows.

1. What issues related to cyber safety are you now concerned about?
2. What concerns do you have about how your students/children are monitored while using devices online in your classroom/home?
3. (For teachers), According to responses from the survey items, some teachers felt they were informed, but there wasn't really training offered at school on cyber safety. Is there training offered at your school and if so, to what extent? (For parents), According to responses from the survey items, some parents felt they were informed about cyber safety but did not feel the need to monitor their children because they "trust them to do what's right." What are your thoughts on that comment?

Validity and Reliability Measures

In order to ensure validity and reliability for this study, procedures to check for accurate findings and understanding of the materials (Creswell, 2014) were used. The survey items were piloted for validation by a group of teachers and parents not involved in the study groups. These volunteers took the survey and provided feedback as to whether the questions were understandable, in proper sequence, and well worded for the information being sought (Wagner, 2014). Participants were asked to comment on their levels of understanding of the question content, the accuracy of the wording, the order of the questions, and how much time it took to complete the survey. The researcher then made corrections as needed to the survey components. There were a few spelling issues corrected. Two participants felt there was one wordy and confusing question. After reviewing, it was decided to leave this question as written. There was also a question with repeated words. Most participants felt it was well worded and liked the concept of

this study.

The survey and interview items were considered the best way to elicit the information needed for this research study. Several drafts were created and changed. Pilot surveys were given to teacher colleagues (Appendix H) not associated with the study to complete after they took the pilot study survey for teachers and for parents (Appendix I). Seven parents and six teachers served as participants for piloted items. The pilot study comment forms helped in finding the proper sequence, spelling errors, duplicated and incorrect information, and a lack of bias.

Data analysis. Creswell (2014) recommended six steps to analyze qualitative data. These six steps were used for each survey item and interview question in this study.

> Organize and prepare data . . . Read or look at all data . . . Start coding data in chunks or segments . . . Use the coding process to generate a description of the setting or people as well as categories and themes . . . Code items for clarity of information where needed . . . Use the coding process to generate a description of the setting or people as well as categories or themes for analysis . . . Advance how the description and themes will be represented in the qualitative narrative . . . And Make an interpretation of the findings and results. (Creswell, 2014, p. 197)

The data were transcribed and analyzed looking for patterns, themes, and distinctive perspectives (Butin, 2010). Data gathered from the initial survey items helped determine the final interview questions. Interview sessions included data on personal observations of mannerisms where possible and listening to answers as well as recording data in two sessions with a LiveScribe Echo Smartpen (Butin, 2010). Notes were taken in the other five sessions. Much of these data are explained and illustrated through frequency distribution tables in Chapter 4. A frequency distribution table is “a table with

a single variable" (Diez, Barr, & Cetinkaya-Rundel, 2013, p. 35).

Qualitative coding. Coding qualitative data is not as straightforward as quantitative data. In qualitative observations and interviews, participants respond to open-ended questions and freely provide their views and opinions (Creswell, 2014). An interview "allows the researcher control over the line of questioning" (Creswell, 2014, p. 191).

Creswell's (2014) step four in analyzing qualitative data states, "Use the coding process to generate a description of the setting or people as well as categories or themes for analysis" (p. 199). Description covers information about the people, places, or events. This step helped with detailed descriptions and narratives. It also helped in setting themes or categories. According to Creswell, "not all information given can be used because of the breadth and depth of the topics covered . . . this data should be aggregated into five to seven themes" (p. 195). These themes were determined by the number of times the topic was raised and how well each theme fit with the other comments collected.

Using five to seven themes from the major findings helped to display the perspectives of the individuals in the study. These themes helped interconnect thoughts and ideas (Creswell, 2014). In this study, coding meant setting categories to tie the narratives together. The coding/selecting of categories with the survey responses were validated through researchers familiar with the qualitative coding process. Emails were sent requesting their expertise. Responses were gathered through emails, text, and video chat.

Threats to Validity

Threats to validity involved participants who might not have understood the

terminology of the survey. It could also be influenced by the format of the interviews, as it was not possible to observe behaviors in two of the interviews which were conducted by phone. Another threat to validity was that only two interviews were recorded using the LifeScribe pen. The other five were recorded using notes and memory, which could have resulted in missed data.

Summary

A social constructivist method design research was utilized to determine levels of cyber safety awareness between teachers and parents in K-12 environments. Survey items were given in an online Google Docs form. The survey took between 5-10 minutes to complete. The survey was strictly voluntary, and no compensation was given for this study.

The first round of survey items was validated through teachers and parents who were not affiliated with this research. They were given the link for the pilot survey and were asked additional questions such as how well the questions were written, how long it took to complete the survey, if the questions were in sequential order, and what needed changing to make the survey more meaningful. All responses and potential changes were considered and addressed before the actual survey was administered. The second phase of the research involved interviews.

After the data were collected, they were sorted by looking for common themes and choosing which data were relevant for this research study.

The purpose of this social constructivist design was to determine how teachers and parents in K-12 environments understand and educate themselves on cyber safety. This research explored how teachers and parents find and use resources available to stay informed of the constant threats and changes for students while online.

Through the research, process assumptions were tested, and procedures of technology use were questioned. Work completed determined specific recommendations for schools in educating teachers and parents. Materials used and shared in this study were given in a confidential manner. Perspectives from individual teachers and parents will be used to access the need for more training. It was the hope of the researcher to be able to first determine if there was a need to educate this community of teachers and parents on cyber safety and then, if necessary, to develop a plan to put more training into place.

Chapter 4: Findings

Introduction

An online study was conducted to investigate cyber safety awareness among teachers and parents. This study was conducted in order to investigate the following research questions.

1. In what ways do teachers/parents in K-12 environments monitor their students'/children's online use?
2. To what extent are teachers and parents in K-12 environments aware of cyber safety issues?
3. What methods do teachers/parents in K-12 environments use to learn and stay current about topics concerning cyber safety for themselves and their students/children?

This chapter covers the overview of the methodology used; the overview of major themes; the procedures for recruitment, the participation, and data collection for phase one; the procedures for recruitment, the participation, and data collection for phase two; the presentation of detailed findings; and the summary.

Overview of Methodology

The study was conducted in two phases: an online survey and follow-up interviews. Survey items were validated through teachers and parents not involved in the study. The survey consisted of a mixture of multiple choice and open ended descriptive items. Survey items were then analyzed to determine underlying themes and from that, interview questions were developed and administered through four face-to-face interviews, one online interview, and two phone interviews.

Overview of Major Themes

As the data were analyzed, three themes emerged. The themes developed were reality versus perceptions, need versus the desire to learn more about cyber safety, and ever-changing cycles of new technology to be learned. Once the interviews were completed, work was done to determine links to the themes and the research questions.

Reality versus perception. Reality versus perception covers areas where the participants thought they knew something, but the findings later showed that they were not as knowledgeable about that topic as they thought. It also includes assumptions by participants that other's actions are wrong and the participants are right. The results showed how the perceptions and realities were defined. Reality versus perception appeared nine times when evaluating the data.

Need to learn more about cyber safety. Twelve times in the study, participants voiced their experiences or concerns and ended with the comment, but "I need to know more" or "we need to know more."

Ever-changing cycles of new technologies to be learned. The final theme that surfaced six times was that technology changes quickly. Many participants voiced the concern that it was nearly impossible to keep up unless technology is the field of employment.

Procedures for Recruitment, Participation, and Data Collection for Phase One

Online survey reports were checked every day and new requests for participants were posted online. Once the survey was closed, a final report was printed. Multiple pages were taped together to form a map-type product. There was one for the teacher survey responses and another for the parent survey responses. Using the Creswell (2014) steps mentioned in Chapter 3, these items were read, analyzed, and color coded by topic

and grouping. Notes were made, categories were determined, and totals gathered.

A total of 68 participants took the initial survey from phase one of the study. Forty teachers in five different states and 28 parents in seven different states participated. Table 2 illustrates most participants came from North Carolina.

Table 2

States Represented

States Represented	Teachers	Parents
North Carolina	36	21
Virginia	1	2
Florida	1	1
Iowa	0	1
Ohio	1	1
Missouri	1	1
South Carolina	0	1
Totals	40	28

Although the survey was open to participants from across the U.S., 90% of teachers and 75% of parents surveyed indicated they lived in North Carolina.

All grade levels in K-12 were represented by both teachers and parents. As recorded in Table 3, most of the teachers were from the middle grades; however, more parents from both primary grades and high school were represented.

Table 3

Teachers/Parents Grade Levels Represented

Grade Levels Represented	Teacher Surveys Completed n (%)	Parent Surveys Completed n (%)
Grade K-2	5 (13%)	13 (31%)
Grades 3-5	6 (15%)	8 (19%)
Grades 6-8	25 (62%)	8 (19%)
Grades 9-12	4 (10%)	13 (31%)
Totals	40 (100%)	42 (100%)

In the parent category, some parents selected more than one grade level

represented. Thirteen parents of primary grade children (Grades K-2) represented 31% of the parent study participants. Eight parents of elementary-aged children (Grades 3-5) represented 19% of the participants. Eight parents of middle school-aged children (Grades 6-8) made up 19% of the participants, and 131 parents of high school-aged children (Grades 9-12) represented 31% of the participants.

Procedures for Recruitment, Participation, and Data Collection for Phase Two.

Initially, there were nine *yes* and 15 *maybe* answers in response to a question asking if the participants would be interested in participating in phase two of the study. All *yes* and *maybe* participants were contacted for the opportunity; however, only seven people participated in the interviews. Table 4 illustrates that six of the interviews were conducted by phone or in person, and one was conducted virtually.

Table 4

Breakdown of Interviewed Participants

Participant	Teacher or Parent	Interview Method	Method of Recording
Participant 1	Teacher	Face-to-Face	Notes
Participant 2	Teacher	Face-to-Face	Notes
Participant 3	Teacher	Face-to-Face	Notes
Participant 4	Teacher	Google Hangouts	LiveScribe
Participant 5	Parent	Speaker Phone	LiveScribe
Participant 6	Parent	Phone	Notes
Participant 7	Teacher	Face-to-Face	Notes

The research process utilized four individual interviews with two teachers and two parents and one small group of three interviews of teachers, so a comparison of perspectives could be examined. Participants were informed of their right to refuse to answer any question or leave the interview sessions without consequence. Interviewees were informed that their responses would be deleted at their request. No participants

chose to leave the sessions or have their data deleted once the process was started. There was an eighth participant who began an interview, but she became frustrated with trying to make the online interview work and cut off contact.

Participant 1, Participant 2, and Participant 3 were CTE teachers from another district who approached the researcher during a training conference and expressed a desire to do the interviews then instead of online because they would not have the time later with other family obligations. The LiveScribe pen was not available at the time, so notes were taken. Participant 4 responded to a request for an online focus group through Google Hangouts and the LiveScribe pen was used to record the conversation. As she was the only participant to join the Google Hangout, the conversation became an interview. The LiveScribe data were reviewed immediately after the interview. Notes were transcribed to be added to the previous data.

Participants 5 and 6 also signed up for the online focus group but were unable to figure out how to download the software needed to make the Google Hangout work; thus, the need to switch to interviews versus focus groups came into the process. Participants 5 and 6 opted to call. The Livescribe pen was used on the first call. The LiveScribe pen data were reviewed immediately after the interview. When it was determined that the participant could not be heard, notes were written from memory and from the researcher's comments made with the LiveScribe pen. Notes were taken on the second call and transcribed immediately after the interview.

Participant 7 was another walk up requesting the interview be done then versus during family time. Again, the LiveScribe pen was not available. Notes were taken. Four teachers and two parent participants took part in the interview portion of this research.

Presentation of Detailed Findings from Research

Research Question 1. Survey Items 4 and 5 and responses to Interview Questions 2 for teachers and 2 and 3 for parents were used to answers the research question, "In what ways do teachers/parents in a K-12 environment monitor their students'/children's online use?"

Survey Item 4: To what extent do you monitor your students/children while they are using technology devices capable of Internet access? (Choose only one). The choices given were never, rarely, sometimes, frequently, and always.

Teachers. Of the 40 teachers who responded, 13 (33%) felt they always monitor, 21 (53%) frequently monitor, three (7%) sometimes monitor, three (7%) rarely monitor, and no teachers said they never monitored their students.

Parents. When the 28 parent participants were asked how often they monitor their children, five (18%) participants reported they always monitored, 12 (43%) indicated that they frequently monitored, nine (32%) reported sometimes monitoring, one (4%) rarely monitored, and one (3%) never monitored their children's online use. A summary of both parent and teacher responses is shown in Table 5.

Table 5

What Degree Do Teachers/Parents Monitor Students/Children on the Internet

Provided Responses	Teachers n (%)	Parents n (%)
Always	13 (33%)	5 (18%)
Frequently	21 (53%)	12 (43%)
Sometimes	3 (7%)	9 (32%)
Rarely	3 (7%)	1 (4%)
Never	0 (0%)	1 (3%)
Totals	40 (100%)	28 (100%)

Survey Item 5. The expanded, open-ended response item that followed was Survey Item 5, "Please use the space provided to briefly describe how you monitor (if you do) your students/children while they are using devices capable of Internet access. If not applicable, please type N/A."

Teachers. Teachers gave multiple responses. Twenty-six teachers surveyed reported that they generally walked around the room to monitor their students. Eight teachers reported using programs like DYKnow, a software program that allows teachers to monitor student screens while they are working and lock down screens when students move into areas of concern. Two teachers reported using iTALC, an opensource classroom monitoring software; and six teachers reported they checked the history of students' classroom computers if they were suspicious of inappropriate activity. Two teachers reported using other students to help keep them accountable. One reported using Google Classroom to limit student work on particular sites.

Parents. Parents also listed multiple responses. Parents stated they generally stayed in the same room as the children using technology. They checked the history of the devices, and two parents required children to charge devices in parent rooms overnight. According to one parent's comments, "this change was made after watching

news reports of children being arrested and charged for posting nude pictures from their devices."

Interview Question 2 for teachers: What concerns do you have about how your students are monitored while using devices online in your classroom? One teacher commented that even when programs like DYKnow are used, students know how to block the sites and they are not effectively monitoring all students unless they are constantly up and walking around the room.

Two teachers mentioned the need for better firewalls, while another teacher felt that the district blocks too many sites. Two teachers felt that parents drop the ball at home and use technology as a babysitter.

Interview Question 2 for parents: What concerns do you have about how your children are monitored while using devices online in your homes? One parent commented that they have child lock technology on the devices at home. They also commented they had a system where the child's calls and text are duplicated on their phone. The other parent stated, "Everything changes so fast! I don't understand a lot of the new changes and by the time I figure one thing out, software is updated, and I have to learn something newer."

Interview Question 3 for teachers. Interview Question 3 was different for teachers and parents. Interview Question 3 for teachers will be used in Research Questions 2 and 3.

Interview Question 3 for parents: According to responses from the survey items, some parents felt they were informed about cyber safety but did not feel the need to monitor their children because they "trust them to do what's right." What are your thoughts on that comment? Two parents just shook their heads in disbelief; and one

stated, “I wish I could talk to that parent.” The question both parent participants had in the interview sessions were, “What about ghost applications?” This topic was also mentioned in the earlier survey questions.

Research Question 2. Survey Items 6-15 and 17-18 and Interview Questions 1 and 2 for teachers and 2 and 3 for parents were used to answer Research Question 2, “To what extent are teachers and parents in a K-12 environment aware of cyber safety issues?”

Survey Item 6: Please briefly explain what you know about what types of information that can be gathered on users while they are accessing the Internet.

Teachers. The 40 teachers who participated in this study submitted a total of 90 different answers for this question. The first category of answers, *personal information*, came from 39 of the teacher participants. It covered personal information such as age, birthdate, name, ethnicity, phone, location, school, educational level, passwords, email addresses, Internet Protocol (IP) addresses, social security numbers, background information, and job information.

Table 6

Beliefs Regarding Online Information Collection

Categories of Responses	Of the Responses by Teachers n (%)	Of the Responses by Parents n (%)
Category 1: Personal Information	39 (43%)	33 (49%)
Category 2: Online Shopping	10 (11%)	8 (12%)
Category 3: Browsing History	17 (19%)	10 (15%)
Category 4: Public Profiles	9 (10%)	7 (10%)
Category 5: All Data is Collected	6 (7%)	7 (10%)
Category 6: Only Minimal is Collected	4 (5%)	1 (1%)
Category 7: I Don't Know	3 (3%)	2 (3%)
Category 8: Did not answer	2 (2%)	0 (0%)
Totals	90 (100%)	68 (100%)

The second category, *online shopping*, had 10 responses and covered types of data including shopping preferences, spending habits, likes/dislikes, TV/movie preferences, and personal interest.

Category 3, *browsing history*, had 17 responses and covered searches/ websites/browsing history, number of times a site is visited, cookies, advertisement tracking, shopping preferences, hacking, store information, and public identifications. One participant stated, "If you look up Yorkie dogs more than once, you start getting dog advertisements on your next searches." Table 6 illustrates the categories, numbers, and teacher/parent tallies. Category 4, *public profiles,* had nine responses which included Google platforms, pictures, contacts, family/friend/contact information, microphones, and cameras.

Category 5, *all data are collected*, had six and included anything, everything, and much information. One participant responded, "There is much to be gathered." Category 6, *I don't know,* had seven with comments like, "I'm not sure," "I have no idea," "minimal data," "lots of information at home," and finally "no data from school."

Category 8 showed that two participants did not respond to this question.

Parents. Of the 28 parents who participated in the survey item about the types of information that can be gathered, the majority, 33 (96%), listed answers that were coded in the *personal information* category.

Teachers. In the same vein, the majority of teacher comments, 39 (43%), indicated that they perceived *personal information* as the main type of information gathered.

Survey Item 7: How informed are you about cyber safety issues? (Choose only one). The choices given were not at all informed, somewhat informed, actively informed, very informed, and can direct someone for help on the issues.

Teachers. The responses to Survey Item 7 are charted in Table 7. Three participants, nearly 8% of the total teachers surveyed, noted they were very informed about cyber safety and could help others learn about it.

Table 7

How Informed are Teachers/Parents About Cyber Safety Issues

Levels of Informed	Teachers n (%)	Parents n (%)
Very Informed and Can Help Others	3 (8%)	5 (18%)
Actively Informed & Seeking More Information	14 (35%)	13 (46%)
Somewhat informed	22 (55%)	10 (36%)
Not at All Informed	1 (2%)	0 (0%)
Totals	40 (100%)	28 (100%

Fourteen teachers (35%) indicated they were actively informed and were seeking more information. Twenty-two (55%) reported they were somewhat informed, and one (2%) chose not informed at all.

Parents. Five parents (18%) indicated they were very informed about cyber

safety and could help others. Thirteen (46%) noted they were actively informed and were seeking more information. Ten (36%) reported they were somewhat informed and zero chose not informed at all.

Survey Item 8: Please explain your answer to the previous question concerning how well informed you are about cyber safety issues.

Teachers. One teacher responded, "I think I am informed, but cyber safety is constantly evolving." Another responded, "I understand the dangers of social media for children and young adults, but I am always wanting more updated information." Another teacher commented, "I am aware of problems that are happening but don't know how to stop what is happening sometimes." Last, a teacher commented, "I just know some devices/applications that can be used to monitor students."

Another comment from a teacher was, "I only know what I've read and what others have told me." Some mentioned professional development (PD) and first of year emails from their districts but no follow-up after the initial letters home and newsletters. One wrote, "As a young millennial I've grown up learning about the Internet as it has evolved. I feel confident that I use the Internet safely and monitor my classroom's Internet activities well."

Parents. A parent wrote in the descriptive section of this question, "I am aware of the issues and have done some reading." A concerned parent responded, "I'm aware of the dangers and can currently protect myself and my kids. However, I know as my children get older it is going to be more complex and there are already things I'm not really knowledgeable about (e.g., Snapchat)." Several stated they have read articles or attended cyber safety classes.

One parent stated, "I know that my son should not talk to anyone online that he

doesn't know in person first." Another wrote, "My husband is an IT specialist and keeps me informed of any cyber concerns." And finally, "I stay up-to-date with the news and have watched the Boy Scout videos on the subject."

Survey Item 15: How aware are you of programs called ghost applications on smartphones? (Mark only one). The answer choices given were, "I can explain what the term means, and I understand how it works"; "I can explain what the term means but I do not know how it works"; and "I have not heard of them." Table 8 illustrates how teachers and parents ranked themselves as to knowledge of ghost applications, what they are, and how they work.

Table 8

How Well Teachers/Parents Understand Ghost Applications

Answer Choices Given	Teachers n (%)	Parents n (%)
Can Explain & Understand How It Works	3 (7%)	10 (36%)
Can Define but Do Not Know How It Works	14 (35%)	7 (25%)
Have Not Heard the Term	23 (58%)	11 (39%)
Totals	40 (100%)	28 (100%)

Teachers. Three (7%) surveyed teachers reported that they could explain what ghost applications are and how they work. Fourteen (35%) indicted they could define ghost applications but did not understand how they work, and 23 (58%) had not heard of the term ghost applications.

During the interview portion of this research, teachers were asking what ghost applications were and how to find out more about them. Ghost applications were explained, and these teachers were directed to free websites listed at the end of this report. Ghost applications are hidden behind images like the calculator or camera icon on phones. This is used to hide activities that others, such as teachers and parents, cannot

see (S. Wind, personal communication, January 19, 2016).

Parents. Ten (36%) surveyed parents reported they could explain what ghost applications were and how they work. Seven (25%) noted they could define ghost applications but did not understand how they work, and 11 (39%) had not heard of the term ghost applications.

In the interview item asking about cyber safety concerns, two parents asked for ghost applications to be explained and asked where they could go to find more information. Ghost applications were explained, and these parents were directed to the free websites listed at the end of this report.

Survey Item 17: How informed are you about the laws concerning cybercrimes? The answer choices were, "Very Informed and Can Direct Someone for Help on the Issue"; "Actively Informed and Seeking More Information"; and "Somewhat Informed; Not at all Informed." These results for the first part of these items are illustrated in Table 9.

Table 9

How Informed Teachers/Parents are About Cyber Laws

Choices Given	Teachers n (%)	Parents n (%)
Very Informed & Can Direct Someone for Help on the Issue	0 (0%)	4 (14%)
Actively Informed & Seeking More Information	4 (10%)	3 (11%)
Somewhat Informed	25 (63%)	10 (36%)
Not at All Informed	11 (27%)	11(39%)
Totals	40 (100%)	28 (100%)

Teachers. Of the 40 teachers surveyed, none indicated they were very informed on cyber laws. Four (10%) surveyed teachers were actively informed and seeking to find more information. Twenty-five (63%) teachers noted they were somewhat informed, and

11 (27%) teachers surveyed were not informed at all about cyber laws.

Parents. Four (14%) of the 28 parents surveyed felt they were very informed on cyber laws. Three (11%) parents surveyed stated they were actively informed and seeking more information. Ten (36%) parents felt they were somewhat informed, and 11 (39%) parents surveyed were not informed at all about cyber laws.

Survey Item 9: Have you ever shared cyber safety issues with a parent/teacher? The answer choices were yes/no. Table 10 illustrates the numbers from the yes/no for this item.

Table 10

Teacher/Parents That Shared Cyber Safety Issues with a Parent/Teacher

Answer Choices	Teachers shared with parents n (%)	Parents shared with teachers n (%)
Yes	27 (67%)	23 (82%)
No	13 (33%)	5 (18%)
Total	40 (100%)	28 (100%)

Teachers. Of the 40 teachers surveyed, 27 (67%) answered that they had shared cyber safety issues with the parents, and 13 (33%) responded that they had not.

Parents. Of the 28 parents who responded, 23 (82%) said they had shared cyber safety issues with teachers, and five (18%) said they had not.

Survey Item 10. The expanded open-ended question for Survey Item 9 was Survey Item 10: "In the space provided, please briefly explain how and why, as a teacher/parent, you have shared information about cyber safety issues with parents/teachers? If not applicable, please type N/A."

Teachers. When asked how or why they had shared information, 27 (67%) responded N/A and did not leave a comment. Two (5%) did not answer the descriptive

question. Of the 11 (28%) who answered, there were a variety of reasons given. One teacher (3%) responded, "I have noticed students that try to access things and when explaining it to the parents, they had no idea their children knew how to do that." Five (13%) of the contacts were because of classes, trainings, or workshops offered for the parents as a community awareness piece. Four (10%) of the responses were parent contacts because the student was caught on inappropriate sites at school or part of a group needing discipline form Internet violations at school.

Parents. Twenty-one (75%) parents responded N/A. Three (11%) did not answer the question. Four (14%) gave a variety of answers. One (2%) responded, "I would expect teachers to be well informed about Internet safety if working with school aged children." One (2%) responded, "The conversation was just in passing." Another parent (2%) stated, "The school had a class and I shared insights I had learned." One (2%) commented,

> When my son brought cyberbullying issues of a classmate to my attention during middle school, I encouraged him to talk to the school guidance counselor about it and followed up with the school police officer after he told me he had talked to them.

Survey Item 11: Have parents/teachers shared information about cyber safety issues with you? The answer choices were yes/no. Table 11 illustrates the numbers from the yes/no of this item.

Table 11

Parents/Teachers That Shared Cyber Safety Issues with Teachers/Parents

Answer Choices	Teachers responded How Many Parents Shared n (%)	Parents Responded How Many Teachers Shared n (%)
Yes	4 (10%)	12 (43%)
No	35 (88%)	15 (54%)
No Answer	1 (2%)	1 (3%)
Total	40 (100%)	28 (100%)

Teachers. Of the 40 teachers surveyed, four (10%) answered yes, parents had shared cyber safety issues. Thirty-five (87%) answered no, parents had not shared cyber safety information. One (5%) of the teachers surveyed did not answer this survey item.

Parents. Of the 28 parents surveyed, 12 (43%) answered yes, teachers had shared cyber safety issues. Fifteen (54%) answered no, teachers had not shared cyber safety issues. One (%) of the parents surveyed did not answer this survey item.

Survey Item 12. The expanded open-ended response that followed was Survey Item 12, "In the space provided, please briefly explain how, and why, parents/teachers have shared information about cyber safety with teachers/parents? If not applicable, please type N/A."

Teachers. Thirty-two (80%) of the teachers responded N/A to the descriptive question on whether parents had shared cyber safety issues with them. Four (10%) did not answer. One (2%) teacher responded that the contact was in relation to a "cyberbullying incident." Another teacher (2%) reported that the contact involved an "incident at home that carried over to school." A third teacher (2%) reported that the contact was in response to "staff-to-staff information"; and a fourth teacher (2%) responded, "I am aware of issues in my district."

Parents. Seven (25%) parents responded N/A to the descriptive question on whether they had shared information on cyber safety with a teacher. One (4%) did not answer. Twenty (71%) stated they shared information through classes offered at the school as well as school and classroom newsletters. One participant stated, "Too many ways to list. What stands out the most was the term 'digital cocaine' when comparing the addiction of cell phones and the Internet." One of the N/A participants added, "I'm usually on top of it before teachers are."

Survey Item 13: Have you communicated with school administration about cyber safety issues? The answer choices were yes/no. Table 12 illustrates the breakdown of yes/no of this item.

Table 12

Teacher/Parent Communication with School Administration on Cyber Safety

Answer Choices	Teachers communicating with the District on Cyber Safety Issues n (%)	Parents Communicating with the District on Cyber Safety Issues n (%)
Yes	16 (40%)	1 (4%)
No	24 (60 %)	27 (96%)
Totals	40 (100%)	28 (100%)

Teachers. Of the 40 teacher participants, 16 (40%) answered yes to communicating with school administration. Twenty-four teachers (60%) answered no, indicating they had not communicated with school administration about cyber safety issues.

Parents. Of the 28 parent participants, one (4%) answered yes, they had communicated with school administration. Twenty-seven (96%) answered no, they had not communicated with school administration about cyber safety issues.

Survey Item 14. The open-ended response that followed was Survey Item 14, "In

the space provided, please briefly explain how, and why, you have communicated with school administration about cyber safety issues. If not applicable, please type N/A."

Teachers. Twenty-one (52%) of the teachers participating responded N/A. Five (12%) did not answer. Six (15%) responded having to report inappropriate use of computers and websites by students. Four (10%) reported incidents of cyberbullying and nude pictures being shared by students through an application called Snapchat. Teachers noted learning when the parents got involved that they knew more details about what was going on between the students and the inappropriate sharing. Two (5%) communicated through new teacher training programs at the school level. One (3%) participant "had to report an inappropriate slide show being disseminated during their class," and another one (3%) requested that "administration come to their classroom and talk to the students about cyber safety laws."

Parents. Twenty-two (79%) of the parents participating responded N/A. Four (14%) did not answer. One (4%) responded, "My children do not use social media yet"; and another (3%) responded that she "communicated through a parent class on cyber safety." One of the N/A participants added again, "I'm usually on top of it before teachers are."

Survey Item 18. In the descriptive part on this item, teachers and parents were asked to briefly explain their answers concerning laws about cybercrimes.

Teachers. One (2%) teacher stated, "I know cyber laws exist, but the need to study more to know more about them." Another (2%) teacher stated, "I know some about cyber laws but an unaware about others." Three (7%) others stated that they are unaware of cyber laws. Two (5%) teachers stated they had either read articles on cyber laws or had heard a little about them on the news.

Three (7%) teachers talked about students getting into trouble for posting inappropriate pictures and from that they learned that students and, in some cases, parents can be prosecuted for cyber laws. One (2%) spoke about "hearing of stings, convictions, and task force occurring to stop cybercrimes"; and one another mentioned, "learning tips from the local news channel."

One (2%) participant commented, "I had no frame of reference, other than my college orientation." Another participant (2%) mentioned going to PD on the topic but wanting to learn more.

Parents. Two (7%) participants mentioned in the detailed explanation portion of this question that they know of up to four cases where adolescents in their area were warned for sharing inappropriate pictures online. Another participant (3%) stated, "there can be fines or jail time, depending on the crime." A fourth (3%) participant stated they "did not know anything about cyber laws."

Four (14%) parents mentioned that cyber issues are "constantly evolving and that it has not been their focus." One (3%) wanted to know more, and another (3%) mentioned taking coursework on network security. One (3%) who claimed to be the spouse of a law enforcement officer stated, "Cybercrimes are hard to track down even when the laws are clearly broken." One participant stated, "It's a felony"; and another stated, "Laws are a grey area and they are strict concerning minors."

Interview Question 1 for teachers: What issues related to cyber safety are you now concerned about? One teacher was concerned that "students conduct searches where they feel safe and end up clicking on links that take them to inappropriate sites. Some students are very good about getting around the firewalls and block the district has placed on the computer." One teacher voiced concern about how well parents monitor

their children at home. It was stated, “Are they monitoring? Especially when children have technology in their rooms.”

Three teachers stated they were worried about programs like Snapchat and Kick, which seem to be the latest thing among their students. They worry about students being kidnapped or hurt for posting too much personal information. There was concern from all three about cyberbullying among students and how it seems to be affecting behaviors in the classrooms.

Interview Question 1 for parents: What issues related to cyber safety are you concerned about? Some of the concerns from the parent group were, “Too much, untrue and information of an inaccurate nature is out there.” Another parent stated, “Sadly, there is no privacy on the Internet.” A third parent stated, “I turn off my microphone and camera when I am not using them”; and a fourth parent commented, “Google platforms are bad for gathering data.”

One parent was concerned that some teachers are not monitoring well when the students are using devices in the classroom. Another parent reported not monitoring their own children online. A third parent commented that “parents are using technology as a babysitter and that not much is being done about the constant threats.”

Research Question 3. Survey Items 9-14 and 16 and Interview Questions 2 and 3 for teachers and 2 for parents answer Research Question 3, “What methods do teachers/parents in a K-12 environment use to learn and stay current about topics concerning cyber safety for themselves and their students/children?”

Survey Items 9-14 were already discussed with Research Question 2 and are discussed further in Chapter 5.

Survey Item 16: In the space provided, please briefly explain the steps you

would take if you wanted to learn more about cyber safety. Participants were not limited to how many answers they could put in their responses. Teachers and parents listed several different strategies. Even though there were multiple answers, the answers given were very similar. These have been summarized into eight categories in Table 13.

Table 13

What Teachers/Parents Would Do to Learn More About Cyber Safety

Responses by Participants	Teachers n (%)	Parents n (%)
Search the Internet	17 (41%)	23 (55%)
Ask an Expert	9 (21%)	8 (19%)
Local News	0 (0%)	4 (10%)
Take a Class	8 (19%)	3 (7%)
Word of Mouth	4 (10%)	1 (2%)
Magazine Article	3 (7%)	1 (2%)
Ask a Child	1 (2%)	2 (5%)
Total Answers	42 (100%)	42 (100%)

Teachers. Seventeen (41%) teachers responded that they research the topics online or look up forums and blogs on the topic. Nine (21%) responded they would contact the technology specialist in their district and schools. None of the teachers surveyed looked to local news sources for cyber safety information. Eight (19%) teachers would take a class, webinar, or seminar to learn more about cyber safety. Of the teachers surveyed, four (10%) would ask a friend or colleague, three (7%) would read magazine articles on the topic, and one (2%) asked a child.

Parents. Twenty-three (55%) parents responded that they research the topics online or look up forums and blogs on the topic. Eight (19%) responded they would contact law enforcement or ask a teacher. Four (10%) of the parents surveyed looked to local news sources for weekly segments on cyber safety information. Three (7%) parents would take a class, webinar, or seminar to learn more about cyber safety. Of the parents

surveyed, one (2%) would ask a friend or colleague, one (2%) would read magazine articles on the topic, and two (5%) would ask a child.

Interview Question 1 for parents: What issues related to cyber safety are you concerned about? Parents mentioned some schools offer evening classes, but they interfere with their children's sports and other activities. Parents were more interested in learning about free programs they could complete on their own time.

Interview Question 3 for teachers. According to responses from survey items, some teachers felt they were informed, but there was no real training offered at school on cyber safety. Interview Question 3 asked, "Is there training offered at your school and if so, to what extent?"

One teacher commented that the training is not offered at school unless she teaches it. There are PDs within that district, but this participant felt the classes were offered at a bad time or location and were not encouraged. Another teacher stated, "What training there is available is totally outdated. The presentation observed used My Space as the most up-to-date social media application."

In a grouping of three teachers, there were comments about researching what they needed to know on their own or asking colleagues for help. Again, it was stated that "Professional development is available but not encouraged."

One teacher spoke from a parent's point of view and stated that their school "only offered one technology class for parents the previous year." Six (15%) commented that their schools sometimes offer evening classes for parents and teachers, but it is usually on a night they have other obligations and not as a teacher training. Ten (25%) teachers reported going to the building technological person for questions, and 36 (90%) researched their question online.

Some stated that they are available through the districts but not usually at a time when the teachers can go without missing valuable time in the classrooms. Most teachers suggested that there be more training on a regular basis for teachers. According to conversations in the interview sessions, the cyber safety/issues trainings currently offered by districts are not encouraged, meaning they are not on the required training list for teachers; and unless they go looking for that specific training, they usually do not understand it is available.

Interview Question 4 was used to tie the principles behind this research together. It was used to find if participants realized their part of the sphere of influence or if they look to others to fill in the gaps.

Summary

Forty teachers and 28 parents participated in an online survey. Four teacher participants and two parent participants participated in the follow-up interview questions. Data were collected throughout the process of surveys and interviews for this study. Items and questions were sorted, analyzed, and grouped into like categories. Three themes were established while analyzing the results of these responses. They were reality versus perceptions, need versus the desire to learn more about cyber safety, and ever-changing cycles of new technology to be learned.

This study opened the dialog into what participants felt about the issues surrounding cyber safety. Participants (teachers and parents in the K-12 environments) were vocal about the desire to know more. The survey items and responses as well as the interview questions and responses were recorded in this chapter.

Chapter 5 reviews where this research started and the process it took to establish the grounds for the research. Chapter 5 explains the researcher's perspective in detail for

the results from this study, how it was interpreted, how the results answered the research questions, and the meaning and recommendations there were in moving forward.

Chapter 5: Conclusions and Recommendations

Introduction

Throughout this study, it has been imperative to learn as much as possible about the factors behind how well teachers/parents are protecting students/children who are using the Internet while in their care. This study sought to investigate the following research questions.

1. In what ways do teachers/parents in K-12 environments monitor their students'/children's online use?
2. To what extent are teachers and parents in K-12 environments aware of cyber safety issues?
3. What methods do teachers/parents in K-12 environments use to learn and stay current about topics concerning cyber safety for themselves and their students/children?

Before beginning the study, background information was gathered on topics such as cognitive development levels, risky behaviors of teenagers while in the presence of other teens, risks associated with online bullying, and how students prefer to talk to their peers about trouble online versus talking to their parents. Studies were examined that brought to light the fact that perception and reality are not necessarily the same for teachers and parents when looking at cyber safety issues. An investigation into cyber safety laws determined that technology is changing so fast that cyber laws have not been able to keep up with the current needs and many laws have not changed.

Today's students learn by exploring. They spend more time online than most adults spend in a 40-hour week at work, according to Henry J. Kaiser Foundation (2010). They are influenced by what their peers are doing and are not always cognitive about the

repercussions of their actions. They need, more than they will admit, adult intervention to guide them through this process. According to Singer and Revenson (1996), it was felt that "Piaget believed that the child plays a very active role in the growth of intelligence. The child learns by doing. The world is not just observed and imitated but interpreted" (p. 13).

The Internet is a massive, constantly changing environment. Children have the potential to be exposed to an adult world every time they log into a device with Internet access. A mixed-methods investigation was conducted to examine how well teachers and parents are informed about online cyber safety and what they do to learn more, to stay up-to-date with changes, and to protect the students/children in their care.

This chapter covers Interpretations and Conclusions, Limitations and Delimitations, and Recommendations.

Interpretation and Conclusions

Research Question 1: In what ways do teachers/parents in K-12 environments monitor their students'/children's online use? Teachers reported that in order to have more control over the Internet use in the classroom, they walked around the room, used software to allow them to monitor students, checked student histories, and limited students to certain online software packages. Some even reported using other students to help them monitor what was going on that they might not catch on their own. According to one teacher interviewed in this study, "There is almost always a student or two in a classroom that loves to tell the teacher what other students are doing." One teacher voiced a concern during the interview sessions about how well parents were monitoring children at home and wondered if they were "dropping the ball."

Parents reported that they stayed in the room and, like teachers, checked the

history of the devices their children used. Some reported using parenting software to track sites their children visited while online. Others reported that after learning about students getting into trouble with their devices, they secured their children's devices in parent rooms at night for charging. One parent voiced a concern that teachers were not monitoring students who were using devices capable of Internet access.

Most teachers and parents monitored student/child Internet activity on a regular basis. A few individuals expressed that they trusted their children and therefore did not monitor them while they were using the Internet.

Implications of findings from Research Question 1. The findings indicated that parents and teachers do monitor as well as they know how to, but some participants wanted more information on the different tools available for monitoring. Even when teachers and parents feel they are monitoring adequately, there are always students and children who get around the protections offered and still get into trouble. Students can learn how to bypass Internet filters through an Internet search. "With kids so technologically astute nowadays, it's becoming more and more prevalent . . . Kids will always be one step ahead of any filters or software restriction you apply" (McComsey, 2016, p. 1).

Learning more about cognitive development, risky behaviors, and experiential learning as well as cyber safety might help in the understanding of how important it is to monitor any activity a student/child does while using the Internet. One teacher reported, "My district provides DYKnow so that teachers can monitor the students and some of the students block DYKnow so they will not be monitored. Finding and stopping that activity has proven to be difficult." Students and children have grown up as digital natives and finding their way around settings is not difficult for them. At home and

elsewhere, these bypass artists

> simply download a full version of Firefox that runs on a memory stick, available at PortableApps.com, bring it to school, and away they go-no filters and no barriers, since the portable Firefox is invisible to whatever filters you have in place. (McComsey, 2016, p. 2)

Teachers typically take classes on cognitive development as a part of their training. A refresher course might be helpful for the teachers who have been teaching more than 5 years. Offering classes at the school or in an online, self-paced atmosphere could help teachers and parents on the trends involving cognitive development and risky behaviors among teens as an introduction to why it is imperative to monitor students and children while they are working on devices that have an Internet connection. Seeing more than just the online issues and looking at the stages of development can open the mind to why students and children behave differently when they are with their peers.

According to Standards for Professional Learning (n.d.), "Learning communities apply a cycle of continuous improvement to engage in inquiry, action research, data analysis, planning, implementation, reflection, and evaluation" (p. 1). Before starting a cyber-awareness program for teachers and parents, develop a team to work through what is needed and expected from the program. What are the short-term and long-term goals? What do the participants want to gain from this project? Who are the stakeholders? How will the group evaluate the program and determine if it is one that will continue to improve for teachers and parents? What follow-up to the training would be offered?

Once the team has developed the what, how, and why of the programs lessons, it will be necessary to seek professionals who specialize in those topics. In addition, teachers or parents who have knowledge on a particular subject should be encouraged to

volunteer their time. Through the program, it will be important to try to engage the community in continuous improvement (Standards for Professional Learning, n.d.).

Research Question 2: To what extent are teachers and parents in K-12 environments aware of cyber safety issues? It was clear that most participants understood what types of information could be gathered from their online activities, but other aspects of cyber safety were not known to teachers or parents. For example, participants were asked about a category of applications called ghost apps. More than half of the participants did not know what ghost apps were.

Even more troubling, however, were the three teacher responses indicating that they were not sure what type of information could be gathered from visiting Internet sites, and four teachers who responded that only minimal information could be gathered. On the parent side, two responded that they did not know what could be gathered; and one responded, "Not a lot is gathered."

When asked how informed they were, participants voiced the need to learn even more. One teacher responded, "I know what I have learned through workshops, news, and word of mouth." Another teacher wrote, "I know minimally about cyber safety issues involving my students."

On this issue, parents in this study seemed to be more prepared. One parent left a lengthy comment:

> I feel like just when I think I have thought of everything that could go wrong, something new comes up and then I must find a new way to deal with that. For instance, Snapchat. They now have memories that can be for your eyes only, that you need a code to get into, but this I feel encourages kids to take pictures that maybe they would not normally take, and think they are safe in doing so, but if

someone hacks their account, or they shared a picture with just one person, it can affect them for the rest of their lives.

S. Wind (personal communication, January 19, 2016) backed up this statement. In a seminar on cyber safety attended by the researcher, Wind noted that many teachers and parents do not always understand that Snapchat owns the pictures taken on their software; and even though the pictures may disappear from a screen, Snapchat owns and can do anything they want with that picture.

When asked how, when, and to whom they shared information about cyber safety, teachers and parents alike noted that they received information at the beginning of the school year when all the new papers went home. Participants from both groups shared that they had attended classes offered at various schools and had shared information then. Sometimes, information was shared when a student got into trouble and all parties had to be brought into the mix to find a resolution to the problem. Teachers most often communicated with parents on this subject through notes home and classroom or school newsletters.

When asked about cyber safety awareness, the general response from both groups of participants was that they were not as aware as they would like to be. Both sides found themselves lacking in adequate knowledge to protect their students and children, as the technology continues to change rapidly.

Implications of findings from Research Question 2. More training on cyber safety is needed. Studies have been conducted by NCSA and Microsoft for the past 3 years. Of the 1,000 teachers, 200 technology coordinators, and 400 administrators surveyed,

A little over half the teachers or administrators said they felt equipped to talk to

> students about protecting their safety and privacy online . . . But when it comes to what was actually taught in the classroom about online ethics and safety, the common response by most teachers was *nothing.* (Watters, 2011, pp. 1)

Paralleling the current study's findings, the NCSA study reported, "The educators in the survey all expressed interest in more information on these issues and agreed that being able to address cyber-safety and cyber-ethics in the classroom was a high priority for their professional development" (Watters, 2011, p. 3).

> One teacher interviewed for this current study made a powerful statement:
>
> I teach students how to use the Internet and be safe and even I was a victim when someone put a pop-up on my screen, and I clicked on it believing there was a problem with my computer that needed fixing. It took months and a new computer to resolve the issue and the spammers keep calling.

With the constant changes in the Internet, there needs to be a constant move to educate the public.

Here, it would behoove the schools to have information available in the front office and on their website that teachers and parents could access to learn more about cyber safety issues. Schools and teachers could add links or suggested sites, webinars, or free resources to try in their newsletters on a continuous basis.

Drago-Severson (2004) taught about four pillars and how they help communities grow. "They are (1) teaming/partnering with colleagues within and outside the school, (2) providing teachers with leadership roles, (3) engaging in collegial inquiry, and (4) mentoring" (Drago-Severson, 2004, p. 17). Teaming is her first pillar. In this pillar all parts of the community work together. They share information and help each other understand how working together makes for a stronger team. Each team reflects on their

values and the meaning of those values and how they affect the school's environment. They reflect, collaborate, share perspectives, and learn others' ideas (Drago-Severson, 2004). This could develop as teachers and parents work with their communities to learn more and become more aware about cyber safety issues. As with Research Question 1, developing a program to educate the entire community benefits all. The students/children benefit from this knowledge that can now be used to help them understand the good and bad of working in an online environment.

Research Question 3: What methods do teachers/parents in K-12 environments use to learn and stay current about topics concerning cyber safety for themselves and their students/children? Many of the participants conducted Google searches to learn about cyber issues; however, the searchers were reactive rather than proactive. They usually occurred after a problematic issue surrounding Internet use had occurred, not before. Participants reported that some school systems offered PD for teachers. Other schools offered night classes for parents and teachers on cyber safety, but many participants chose not to attend because of other obligations.

Likewise, some participants stated there were classes offered through the district but not at times they could go without having to miss work or write lesson plans for a substitute. Some participants stated they had read articles and had tried to be diligent in listening to local or national news channels for updates on cybercrimes but still felt unaware about cybercrime laws. One teacher stated, "We all need to be better educated about cyber laws and safety."

Implications of findings from Research Question 3. Teachers are learning in fast-paced trainings; and many are not comfortable with, nor understand, the new tools they are required to use. Parents come to some school-provided trainings but get most of

their information from learning about someone in trouble or watching the news. Participants from both groups chose researching on the Internet as their number one choice for finding help on a new Internet topic.

PD works best if it is relevant to what the teacher needs to learn and use (Gulamhussein, 2013). "We need to find more effective ways to support the continual learning of adults across levels of the system and to make fundamental changes in the system itself" (Drago-Severson, 2009, p. 14). Survey the participants first and find out what they already know and are wanting to learn. Seek out professionals to help with the training (Gonzalez, 2016). Involve the teachers who are skilled enough to teach other teachers. Teachers need to engage in the decision-making for their PD (Drago-Severson, 2009).

Professional develop should be based on research and proven practice. There should be a system set up to address the different needs of the different teacher learners, such as mentors and specialized training sessions (Drago-Severson, 2009). It should be set to accommodate the busy schedules of teachers, such as webinars that can be recorded and played at the teacher's convenience. Last, there should be follow-up to make sure the teachers understand the training and are able to use that training (Drago-Severson, 2009).

According to Standards for Professional Learning (n.d.),

> Leaders artfully combine deep understanding of and cultural responsiveness to the community they serve with high expectations and support for results to achieve school and school systems goals. They embed professional learning into the organization's vision by communicating that it is a core function for improvement and by establishing and maintaining a public and persistent focus educator

professional learning. (p. 1)

Part of learning and improving in any area involves making that improvement program a community effort. If cyber safety issues are a priority and are campaigned as a school goal, it will be important to work with the parents and community to learn more and grow. In that way, the types of relevant, well-planned training offered will help that sphere of influence grow.

Parent participants voiced that they get their information by conducting online searches, attending school-provided trainings, or asking a professional. Just as was mentioned for the teacher training, survey the parents first to establish their levels of understanding and what topics they want to learn more about. Popular topics are listed on sites like Teachhub.com to help in establishing a list of starter topics (Murray, n.d.). Video tutorials found online could be used as a tool to teach parents where to find tutorials to be viewed on their own time. Like teachers and students, parents have diverse needs. Be prepared to offer alternative ways to meet the needs of each group or individual.

Connection to Theory

The overlapping spheres of influence (Epstein, 2011) recognize that knowledge from the family, school, and community work together to help all three groups. When all parties are involved, much more is achieved. "A trusting relationship is crucial" (Drago-Severson, 2009, p. 126). Building that trusting relationship between the sphere of influence is imperative for the growth and safety of students and communities.

When educators look at a student as a child, they start to see the family as part of the community that works together to develop and educate the child (Epstein, 2008). These partnerships work together to "improve school programs, provide family support,

increase parents' skills and leadership, connect families with others in the school and in the community, and help teachers with their work" (Epstein, 2008, p. 7).

Limitations and Delimitations

The purpose of this study was to determine levels of cyber safety awareness among K-12 teachers and parents, in order to determine the need to provide more resources or education related to this topic.

Limitations. There was not a sufficient number of books or peer-reviewed articles on the cyber safety issues, as this is a new topic. Most of the research found was from articles produced in the last few months of this research study. The lack of peer-reviewed articles may have limited the scope of the literature review and the resulting study.

Additionally, the use of N/A in survey questions limited the number of responses. It was expected that participants who answered *NO* to a survey item would put *N/A* for the open-ended follow-up to that survey item; however, there were more than double the *N/A* answers than there were *NO* responses. This fact limited the data collected.

This study was originally designed to incorporate online focus groups. The difficulty came in the fact that in order to conduct an online focus group, all participants needed to download the program being used prior to the focus group time. Most participants did not know how or did not want to download software they were unfamiliar with onto their computers. Focus groups were then forced to become individual or small group interviews by phone, online, or face to face. As a result, the LifeScribe pen was only used in two interviews, and the other interviews relied on notes from the researcher. Although the researcher tried to recreate the exact words from the interview sessions, it is possible that her notes were not exact in all circumstances. This imprecision might have

affected final interpretations of the data.

Delimitations. "Delimitations are choices made by the researcher which should be mentioned. They describe the boundaries that you have set for the study" (Divergent Web Solutions, 2018, p. 1). Originally, one district was to be used for this study. That district did not approve the study in the first round of approvals, and it was felt that waiting to obtain these approvals would be too time consuming. The decision to conduct the study online was made in order to complete the study in less time.

The use of Facebook as a way to promote the online surveys was an additional delimitation. The researcher determined it was an effective way to elicit survey responses; however, using Facebook meant that it was possible for participants who were not teachers or parents to take the survey. The researcher cannot be certain that every survey returned was from a participant from either group.

The decision not to include student perspectives was also a delimitation. Studying student perspectives may have provided more in-depth coverage in order to add to the body of limited research on this topic.

Recommendations Based on Findings

Improved professional learning. It is recommended that educators receive multiple sessions of PD related to cyber safety. Some school systems have developed teams of coaches to help focus on year-round training and guidance. Teachers in their districts learn new ways of using technology in the classroom and how to avoid pitfalls and problems. More than a one-time training, these teams are available to the teachers throughout the year and collaborate and participate in their PD to ensure questions are answered and learning is richer and useful (Souderton School District, 2017).

Teachers in this study felt they needed more quality time for PD concerning

technology and cyber issues. Frenzel (2018) stated, "only14 % of teachers use digital curricula weekly. A major reason for this is teacher unfamiliarity and discomfort with technology . . . Many teachers are forced into using technology they are unfamiliar or uncomfortable using" (p. 1).

Souderton School District (2017) suggested four steps to improving technological learning: demonstrate technology's benefits; offer continual PD opportunities; hire more tech gurus; and research and select technology that offers an easy learning curve. Being asked to integrate new technology learned in a short PD session is not effective. If teachers do not get hands-on time to learn how to use technology properly, they rarely use it (Frenzel, 2018). "Administrators must provide personalized, continuous professional development" (Frenzel, S., 2018, p. 2). Some participants in this study suggested that school districts offer online courses they could work through on their own time. More real-time, year-round training, including summer workshops, that enhances technology skills for teacher and parents needs to be developed.

Instructional technology trained staff leaders. "Ensuring staff keeps up with new skills is one of four main new cybersecurity trends at Gartner, the research firm that provides IT-related insight for business" (Pascopella, 2017, p. 2). Some schools are unable to hire IT staff because of the associated cost. Instead, they hire someone who embraces lifelong learning and try to train them to be their tech leaders (Pascopella, 2017). It is recommended that school systems hire qualified IT personnel to help educate and train both teachers and parents.

Utilize free resources. It is recommended that teachers and parents be made aware of the free resources available to support understanding of issues related to Internet use. Parentsknowmore.com includes lists and suggestions for parents to guide their

children while online and in teaching cyber citizenship. The site lists other free resources to obtain more information. Each of these sites also lists other free resources that can be used to help protect children when they are experimenting and learning in an online environment. Schools can position flyers in the front office area or add some of the resources available to their websites and bulletins. The school technology specialist could be a possible resource for parents with questions. In the interview sessions, it was typically the school technical person who was organizing the training for parents through the Parent Teacher Association meetings. The local police departments are also good resources for more information on cyber safety issues and laws.

Use available tracking software. There are several software programs available to teachers for monitoring computers in the classroom. It is generally up to the district to allow the software packages to be used in their districts. DYKnow was mentioned earlier. Another resource, NetSupport School.com (n.d.), is just one of the tools schools can use. "NetSupport School ensures a teacher can easily monitor student screens, the applications they are using, the websites they are visiting, what they are typing and who they are collaborating with" (NetSupport School.com, n.d., "Classroom Instruction," para. 1). Teachers can monitor live screens of what sites their students are working on or visiting. They can block sites or send messages to the individual students (NetSupport School.com, n.d.).

There are also new programs available to parents for monitoring and tracking their children. Parents can sign up for a Family Safety account through Windows 10. They get "activity reports for all online activity from the child account, and can block any apps, games or sites that they want" (Martindale & Widder, 2017, p. 3).

Share knowledge. Finally, it is recommended that parents and teachers regularly

share information on topics surrounding cyber safety. Teachers can share knowledge by talking and adding links and references to their bulletins and websites. Parents involved with technology can speak to teachers or to groups of students about cyber safety. Figure 5 was shared through a Facebook post and has since been reshared by many. This simple act can help inform teachers, parents, and the community in general about how to stay current in the ever-changing cyber world.

Figure 5. 10 Apps Teens are Using That Parents Need to Know. Source: https://appsolutelyapril.com/2018/03/21/10-apps-teens-are-using-that-parents-need-to-know/

Recommendations for Further Study

This pertinent topic needs to be explored further. This study had a total of 68 participants from six states. While the information gathered was useable in assessing the local need, a larger study would be more comprehensive and might allow for generalizations across age groups and locations. In addition, a larger study might give a better understanding of where to go next in the areas of training to improve cyber safety for schools, teachers, and parents.

Next, it is recommended that student perspectives on cyber safety be examined. The student voice is an important one and studying student perceptions might lead to targeted educational programs on this topic.

Finally, it is recommended that a future study examine the training that preservice teachers receive on cyber safety. Understanding the strengths and deficits of preservice training in cyber safety might lead to a more robust training program for teachers.

Summary

Training students to use technology should help them to succeed in a technology-driven society. Using technology in the classroom can be a great tool to enhance instruction, but it should not take the place of direct instruction. There are many great educational sites and activities online, but these should be pretested or run through safe filters before using in the classroom.

This study was an eye-opening experience. It confirmed that there is a need for more training on cyber safety issues. Many parents and teachers are genuinely concerned about this issue but feel they lack the resources and time to adequately protect students/children in the online environment.

References

Ailincai, R., & Weil-Barais, A. (2013). Parenting education: Which intervention model to use? *Procedia – Social and Behavioral Sciences, 106*(2013), 2008-2021. doi: 10.1016/j.sbspro.2013.12.229

Alim, F., Cardozo, N., Gebhart, G., Gullo, K., & Kalia, A. (2017). *Spying on students: School-issued devices and student privacy.* Electronic Frontier Foundation. Retrieved April 18, 2017, from http://www.eff.org/files/2017/04/13/student-privacy-report.pdf

Arneson, P., & Kufner, B. E. (2016). Teaching employment skills using active learning strategies. In Fisher, D. J. (Ed). *Innovative instructional strategies in business education: National business education association yearbook* (Vol. 54, pp. 14-25). Wayne, NE: National Business Education Association.

Bentley, H., O'Hagan, O., Raff, A., & Bhatti, I. (2016). *How safe are our children? The most comprehensive overview of child protection in the UK 2016.* London: NSPCC. Retrieved October 23, 2016, from https://nspcc.org.uk/globalassets/documents/research-reports/how-safe-children-2015-report.pdf

Bjerede, M., & Krueger, K. R. (2015). How digital equity can help close the homework gap. *The Journal, 42*(5), 6-7.

Bolkan, J. (2016). Survey: Teachers say tech distractions more concerning than privacy, security. *The Journal.* Retrieved January 27, 2016, from https://thejournal.com/articles/2016/01/26/survey-teachers-say-tech-distractions-more-concerning-than-privacy-security.aspx

Bolkan, J. (2017). The things are coming. *The Journal, 44*(2), 18-20.

Bryant, V. R. (2013). *21st century youth using critical thinking skills and practicing cyber safety when making digital decisions: An analysis of the digital devices and decisions of youth and parental perspectives of the same.* Available from ProQuest Dissertations & Theses Full Text: The Humanities and Social Sciences Collection. (pp. 1-20). (UMI No. 36900915)

Butin, D. W. (2010). *The education dissertation: A guide for practitioner scholars.* Thousand Oaks, CA: Corwin.

Campbell, C., & Jane, B. (2012). Motivating children to learn: The role of technology in education. *International Journal of Technology and Design Education*, *22*(1), 1-11. doi:10.1007/s10798-010-9134-4

Chang, R. (2016). U.S. k-12 teachers reluctant to integrate social media in classrooms. *The Journal*. Retrieved August 31, 2016, from https://thejournal.com/articles/2016/08/23/us-k12-teachers-reluctant-to-integrate-social-media-in-classrooms.aspx

ChildLine (n.d.). Retrieved March 18, 2017, from https://www.childline.org.uk/about/about-childline

Creswell, J. W. (2014). *Research design*. *Qualitative, quantitative, and mixed methods approach* (4th ed.). Los Angeles, CA: Sage Publications.

Diez, D. M., Barr, C. D., & Cetinkaya-Rundel, M. (2013). *Openintro statistics* (2nd ed). Creative Commons license. Retrieved from www.openintro.org

Divergent Web Solutions. (2018). *Stating the obvious: Writing assumptions, limitations, and delimitations.* Retrieved May 13, 2018, from https://www.phdstudent.com/Choosing-a-Research-Design/stating-the-obvious-writing-assumptions-limitations-and-delimitations

Drago-Severson, E. (2004). *Helping teachers learn: Principal leadership for adult growth and development.* Thousand Oaks, CA: Corwin.

Drago-Severson, E. (2009). *Leading adult learning: Supporting adult development in our schools.* Thousand Oaks, CA: Corwin.

Epstein, J. L. (2008). *School, family, and community partnerships: Your handbook for action* (3rd ed.). Thousand Oaks, CA: Corwin.

Epstein, J. L. (2011). *School, family, and community partnerships: Preparing and improving school* (2nd ed.). Philadelphia, PA: Westview Press.

Fogarty, M. (2015). *NC Instagram investigation expands.* Retrieved April 12, 2015, from https://www.wccbcharlotte.com/news/local/NC-Instagram-Investigation-Expands--247694941.html

Florida State University. (2014). *Inside the teenage brain: New studies explain risky behaviors.* Retrieved March 9, 2017, from https://news.fsu.edu/news/education-society/2014/08/28/inside-teenage-brain-new-studies-explain-risky-behavior/

Foss, S. K., & Waters, W. (2007). *Destination dissertation.* Lanham, MD: Rowan & Littlefield Publishers, Inc.

Francisco, C. (2015). *Sixth graders could face sex offender's status due to sexting.* Charlotte News, Weather and Sports, WCCB. Retrieved April 12, 2015, from http://www.wccbcharlotte.com/internal?st=print&id=296821281&path=/news/top-stories

Frenzel, S. (2018). *Getting teachers comfortable with technology.* Retrieved April 18, 2018, from www.districtadministration.com/article/getting-teachers-comfortable-technology

Goldin, C., & Katz, L. (2008). *The race between education and technology.* Cambridge, MA and London, England: The Belknap Press of Harvard University.

Goldsborough, R. (2015). Loving our devices too much. *Tech Directions, 74*(6), 7.

Gonzalez, J. (2016). *How to plan outstanding training for your teachers.* Retrieved May 21, 2018, from https://www.cultofpedagogy.com/tech-training-for-teachers

Gordan, D. (2015). Bringing high tech to a low-income district. *The Journal*. Retrieved June 24, 2015, from http://thejournal.com/Articles/2015/06/23/Innovator-Darryl-Adams.aspx?=THEMOB&p=1

Gulamhussein, A. (2013). *Teaching the teachers: Effective professional development in an era of high stakes accountability.* Retrieved May 21, 2018, from www.centerforpubliceducation.org/teachingtheteachers

Hart Research Associates. (2011). *Who needs parental controls? A survey of awareness, attitudes, and use of online parental controls*. Hart Research Associates. Retrieved November 11-12, 2016, from https://www.fosi.org/policy-research/needs-parental-controls

Henderson, R. G. (2016) Moving beyond the printed page: Communicating in the digital age. *Business Education Forum: Official Publication of the National Business Education Association, 70*(3), 29-32.

Henry J. Kaiser Family Foundation. (2010). *Daily media used among children and teens up dramatically from five years ago.* Retrieved from https://www.kff.org/disparities-policy/press-release/daily-media-use-among-children-and%20teens-up-dramatically-from-five-years-ago

Jacobs, H. H. (2014). *Leading the new literacies*. Bloomington, IN: Solution Tree Press.

Krueger, K. (2016). Seal of privacy: Building a trusted learning environment. *The Journal, 43*(3), 31-34.

Lantzy, J. E. (2009). *Protecting children in cyberspace: A higher education case research.* Available from ProQuest Dissertations & Theses Full Text: The Humanities and Social Sciences Collection. (pp. 1-3). (UMI No. 3343806)

Lapan, R. T., Kardash, C. M., & Turner, S. (2002). Empowering students to become self-regulated learners. *Professional School Counseling, 5*(4), 257.

Little, C. (2015a). *Police: Nude photos of students shared at Hough high school.* Charlotte News, Weather, and Sports, WCCB. Retrieved April 12, 2015 from http://www.wccbcharlotte.com/2015/02/11/police-nude-photos-of-students-shared-at-hough-high-school/

Little, C. (2015b). *Juvenile charged after nude photos of students shared at high school.* Charlotte News, Weather, and Sports, WCCB. Retrieved April 12, 2015, from http://www.wccbcharlotte.com/2015/03/16/juvenile-charged-after-nude-photos-of-students-shared-at-hough-high-school

Lundberg, S., Romich, J., & Tsang, K. P. (2007). *Decision-making by children.* (IZA DP. No. 2952). Retrieved February 21, 2017, from http://ftp.iza.org/dp2952.pdf

Marggraff, J. (2010). *The future of the pen?* Retrieved July 10, 2017, from https://www.youtube.com/watch?v=Np1XTFNpru4&feature=youtu.be

Martindale, J., & Widder, B. (2017). *Sorry kid, access denied: Our favorite, free parental control software.* Retrieved May 13, 2018, from https://www.digitaltrends.com/computing/best-free-parental-control-software

McCarrick, K., & Li, X. (2007). Buried treasure: The impact of computer use on young children's social, cognitive, language development and motivation. *AACE Journal, 15*(1), 73-95. Retrieved from http://eric.ed.gov/?q=Technology+too+young&id=EJ805602

McComsey, L. (2016). *How students bypass internet filters and what you can do about it.* Retrieved May 13, 2018, from https://www.k12usa.com/2016/09/08/bypass-school-internet-filters

McLeod, S. (2007). *Carl Rogers*. Retrieved February 24, 2017, from https://www.simplypsychology.org/self-concept.html

McLeod, S. (2008). *Bruner.* Retrieved February 24, 2017, from www.simplypsychology.org/bruner.html

McLeod, S. (2009). *Jean Piaget.* Retrieved February 24, 2017, from www.simplypschology.org/piaget.html

McLeod, S. (2015). *Jean Piaget*. Retrieved February 24, 2017, from https://www.simplypsychology.org/piaget.html

Mounts, N. S. (2015). Why are teens brains designed for risk-taking? *Psychology Today.* Retrieved March 8, 2017, from https://www.psychologytoday.com/blog/the-wide-wide-world-psychology/201506/why-are-teen-brains-designed-risk-taking

Mulka, L. (2014). *Cyber literacy for the digital age* (1st ed.). Warwick, RI: B.E. Publishing.

Murray, J. (n.d.). *Technology in the classroom: Running a parent class.* Retrieved May 21, 2018, from http://www.teachhub.com/technology-classroom-running-parent-class

National Cyber Security Alliance. (2016). *Keeping up with generation app.* Retrieved August 27, 2016, from https://www.staysafeonline.org./download/datasets/19790/Keeping_up_with_generation_app_findings_Summary.pdf

NetSupport School.com (n.d.). Classroom instruction (para. 1).

Pascopella, A. (2017). *Four trends K12 district leaders should know for cybersecurity.* Retrieved September 27, 2017, from https://www.districtadministration.com/article/four-trends-district-leaders-should-know-cybersecruity

Piehler, C. (2015). Survey: 93% of teachers believe that personal devices connect students to real-world learning. *The Journal*. Retrieved June 24, 2015, from https://thejournal.com/articles/2015/06/23/survey-mobile-devices-connect-students-to-real-world-learning.aspx

Price-Mitchell, M. (2011). Book review of school, family, community partnerships: Preparing educators and improving schools. *The School Community Journal, 21*(1). Retrieved July 5, 2017, from https://www.adi.org/journal/2011ss/Price-MitchellSpring2011.pdf

Schaack, A. V. (2009). *Speed of information access: Podcast vs Pencast-presentation.pdf.* Retrieved July 10, 2017, from https://www.engaging-technologies.com/solutions/livescribe-smartpens/smartpen-research

Schaffhauser, D. (2016) Arizona state in-service teachers take tech to school. *The Journal.* Retrieved January 27, 2016, from https://thejournal.com/articles/2016/01/25/arizona-state-sees-good-results-when-in-service-teachers-take-tech-to-school.aspx

Schaffhauser, D., & Nagel, D. (2016) Teaching with tech: A love and hate story. *The Journal, 43*(5), 6-14.

Singer, D. G., & Revenson, T. A. (1996). *The Piaget primer: How a child thinks.* (Rev. ed). New York: Penguin Group.

Souderton School District. (2017). Retrieved December 30, 2017, from https://www.districtadministration.com/techx/awards/souderton-area-school-district-souderton-pennsylvania

Standards for Professional Learning. (n.d.). The professional learning association. Retrieved May 21, 2018, from https://learningforward.org/standards

Stone, J. (n.d.). *What are Soft Skills?* Retrieved January 7, 2017, from https://www.livecareer.com/career/advice/jobs/soft-skills-in-demand

Storypark.com/cybersafety. (2017). Retrieved July 24, 2017, from www.storypark.com/cybersafety

Urban, D. J. (2016). What millennials are learning from Dale Carnegie. *Business Education Forum: Official Publication of the National Business Education Association, 71*(1), 10-12.

Wagner, T. (2012). *Creating innovators: The making of young people who will change the world.* New York: Scribner.

Watters, A. (2011). *How well are schools teaching cyber safety and ethics?* Retrieved March 13, 2018, from https://www.kqed.org/mindshift/11801/how-well-are-schools-teaching-cyber-safety-and-ethics

Weibell, C. J. (2011). *Principles of learning: 7 principles to guide personalized, student-centered learning in the technology-enhanced blended learning environment.* Retrieved March 12, 2017, from https://principlesoflearning.wordpress.com

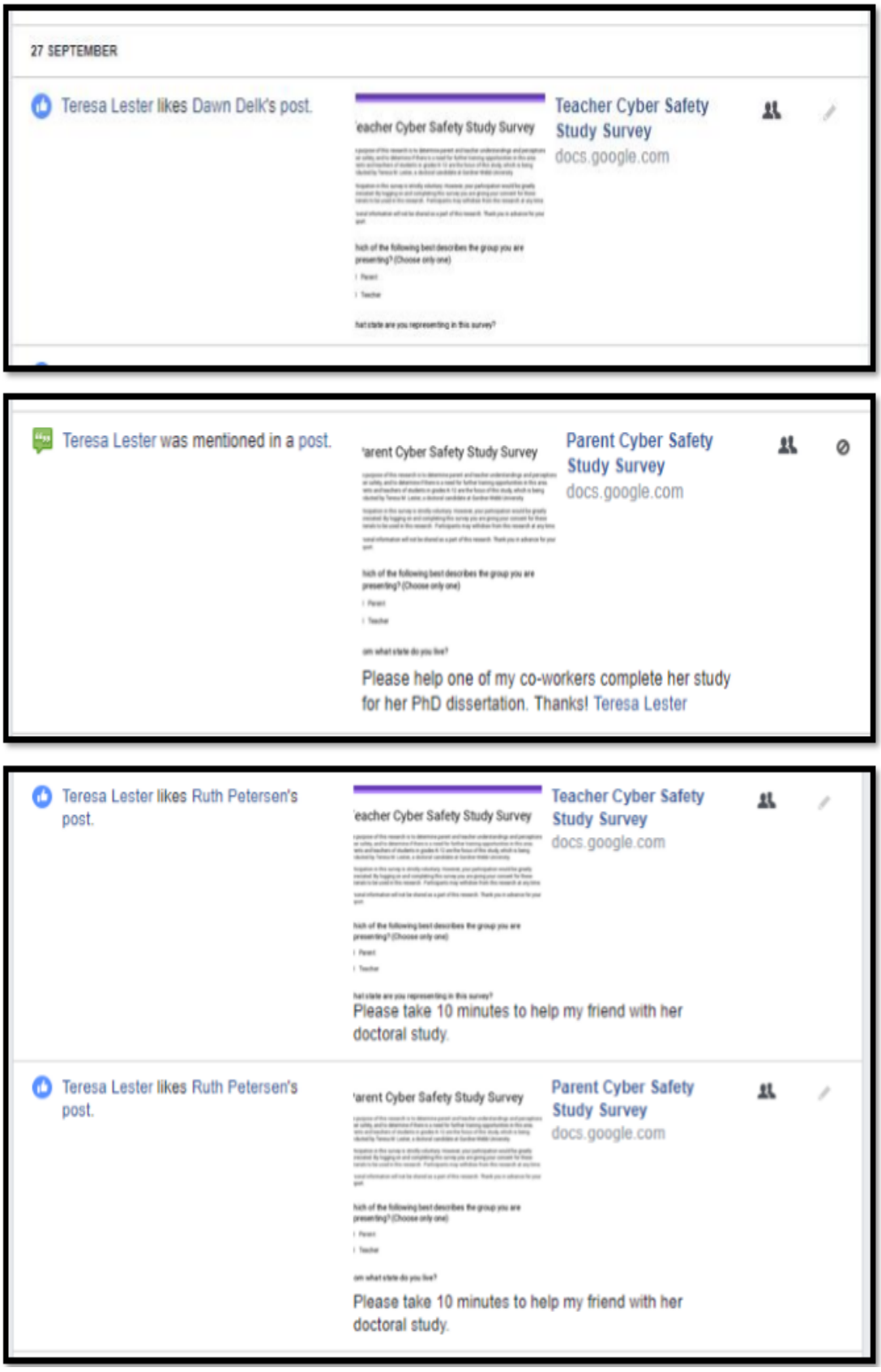
Whiteside, L. (2013). *The impact of the one-to-one laptop initiative on teacher perceptions of instructional delivery and student engagement in middle school mathematics.* Retrieved November 7, 2014, from http://search.proquest.com.ezproxy.gardner-webb.edu/pqdtlocal1008885/docview/1496775901/CFC5571ADA784C49PQ/5?accountid=11041

Wiley, B. L. (2014). Leading for global competence: A schoolwide approach. In H. H. Jacobs (Ed.), *Leading the new literacies* (pp. 122-160). Bloomington, IN: Solution Tree.

Woolley, W. L. (2010). *Bullying in the twenty-first century: From schoolyard to cyberspace.* Available from ProQuest Dissertations & Theses Full Text: The Humanities and Social Sciences Collection (pp. 139-142). (UMI No. 3422759)

Appendix A

Facebook Solicitation page


27 SEPTEMBER
Teresa Lester likes Dawn Delk's post.
eacher Cyber Safety Study Survey
Teacher Cyber Safety Study Survey
docs.google.com
Teresa Lester was mentioned in a post.
arent Cyber Safety Study Survey
Parent Cyber Safety Study Survey
docs.google.com
Please help one of my co-workers complete her study for her PhD dissertation. Thanks! Teresa Lester
Teresa Lester likes Ruth Petersen's post.
eacher Cyber Safety Study Survey
Teacher Cyber Safety Study Survey
docs.google.com
Please take 10 minutes to help my friend with her doctoral study.
Teresa Lester likes Ruth Petersen's post.
arent Cyber Safety Study Survey
Parent Cyber Safety Study Survey
docs.google.com
Please take 10 minutes to help my friend with her doctoral study.

Appendix B

Google Forms Teacher Survey

Teacher Cyber Safety Study Survey

The purpose of this research is to determine parent and teacher understandings and perceptions of cyber safety, and to determine if there is a need for further training opportunities in this area. Parents and teachers of students in grades K-12 are the focus of this study, which is being conducted by Teresa M. Lester, a doctoral candidate at Gardner-Webb University.

Participation in this survey is strictly voluntary. However, your participation would be greatly appreciated. By logging on and completing this survey you are giving your consent for these materials to be used in this research. Participants may withdraw from this research at any time.

Personal information will not be shared as a part of this research. Thank you in advance for your support.

* Required

1. **Which of the following best describes the group you are representing? (Choose only one)**
   Mark only one oval.
   - ◯ Parent
   - ◯ Teacher

2. **What state are you representing in this survey?**

3. **What grade levels are you representing in this survey? (Choose all that apply)**
   Mark only one oval.
   - ◯ Grades K-2
   - ◯ Grades 3-5
   - ◯ Grades 6-8
   - ◯ Grades 9-12

4. **To what extent do you monitor your students while they are using technology devices capable of Internet access? (Choose only one)**
   Mark only one oval.
   - ◯ Never
   - ◯ Rarely
   - ◯ Sometimes
   - ◯ Frequently
   - ◯ Always

5. **Please use the space provided to briefly describe how you monitor (if you do) your students while they are using devices capable of Internet access. If not applicable, please type NA.**

6. **Please briefly explain what you know about what types of information that can be gathered on users while they are accessing the Internet.**

7. **How informed are you about current cyber safety issues? (Choose only one)**
Mark only one oval.

- ◯ Not at all informed
- ◯ Somewhat informed
- ◯ Actively informed and seeking more information
- ◯ Very informed and can direct someone for help on the issues

8. **Please explain your answer to the previous question concerning how well informed you are about cyber safety issues.**

9. **Have you ever shared information about cyber safety with a parent?**
Mark only one oval.

- ◯ Yes
- ◯ No

10. **In the space provided, please briefly explain how, and why, as a teacher, you have shared information about cyber safety issues with parents? If not applicable, please type NA.**

11. **Have parents ever shared information about cyber safety issues with you?**
Mark only one oval.

- ◯ Yes
- ◯ No

12. **In the space provided, please briefly explain how, and why, parents have shared information about cyber safety issues with you? If not applicable, please type NA.**

13. **Have you communicated with school administration about cyber safety issues?**
Mark only one oval.

- ◯ Yes
- ◯ No

14. **In the space provided, please briefly explain how, and why, you have communicated with school administrators about cyber safety issues. If not applicable, please type NA.**

15. **How aware are you of programs called Ghost Applications on Smart phones? (Mark only one)**
Mark only one oval.

- ◯ I have not heard of the term
- ◯ I can explain what the term means, but I do not know how it works
- ◯ I can explain what the term means, and I understand how it works.

16. **In the space provided, please briefly explain what steps you would take if you wanted to learn more about cyber safety.**

17. **How informed are you about the laws concerning cyber-crimes?**
Mark only one oval.

- ◯ not at all informed
- ◯ Somewhat informed
- ◯ Actively informed, and seeking more informaiton
- ◯ Very informed, and can direct someone for help on the issues.

18. **In the space provided, please briefly explain your answer on the laws concerning cyber-crimes. If not applicable, please type NA.**

Thank you for completing this survey.

In a few weeks, I will be conducting an online focus group to discuss issues related to this topic in further detail.
I will be looking for approximately seven to ten parents of children in grades K-12 to participate. The focus group opportunity is voluntary, and again, personal information will not be shared.

19. **Are you interested in taking part in the online focus group session?**
Mark only one oval.

- ◯ Yes *Skip to question 20.*
- ◯ No *Skip to "Thank you for your participation.."*
- ◯ Maybe *Skip to question 20.*

Thank you for your participation.

Stop filling out this form.

Thank you for your interest in taking part in the teacher focus group.

Below you will have an opportunity to sign up to participate in an online interview session with seven to ten participants about the topics covered in the survey you just completed. E-mails will only be used to contact you should your name be selected. Next are the guidelines for the online sessions.

I. Introduction of moderator: Hello, my name is Teresa Lester. I will serve as the moderator of this focus group. During this focus group session, I will record the conversations. These recordings will be used to ensure accuracy when I transcribe the data into the research report. By logging into the focus group sessions you are consenting to the use of the verbal communications you provide.

II. Purpose: The purpose of this focus group is to allow each of you an opportunity to discuss your views on cyber safety awareness. The information gathered will be used as data points in my dissertation.

III. Selection of participants: Every person who participated in the phase one survey questions was given an opportunity to attend the focus group sessions. Where multiply participants respond, a random drawing will be conducted.

IV. Guidelines: All opinions are important in this session. I will guide the discussion but will be focused on listening and recording your answers. In the event that a question or topic makes you feel uncomfortable, you may decline to answer. You have the right to end the session at any time you feel the need to exit. If you do not want your part of the sessions recordings used, please let the researcher know before you leave the session. I will honor your request to have that part of the session recording deleted.

These five guidelines will be repeated the day of the online session. Thank you for supporting this research.

20. **What is your first name?** *

21. **Please leave your e-mail information so that you can be contacted should your name be chosen for the teacher focus group interview session . You have the right to change your mind at any point about participating. Thank you.** *

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Appendix C

Google Forms Parents Survey

Parent Cyber Safety Study Survey

The purpose of this research is to determine parent and teacher understandings and perceptions of cyber safety, and to determine if there is a need for further training opportunities in this area. Parents and teachers of students in grades K-12 are the focus of this study, which is being conducted by Teresa M. Lester, a doctoral candidate at Gardner-Webb University.

Participation in this survey is strictly voluntary. However, your participation would be greatly appreciated. By logging on and completing this survey you are giving your consent for these materials to be used in this research. Participants may withdraw from this research at any time.

Personal information will not be shared as a part of this research. Thank you in advance for your support.

* Required

1. **Which of the following best describes the group you are representing? (Choose only one)**
   Mark only one oval.
   - ◯ Parent
   - ◯ Teacher

2. **From what state do you live?**

3. **Which grade levels are you representing in this survey? (Choose all that apply)**
   Check all that apply.
   - ☐ Grades K-2
   - ☐ Grades 3-5
   - ☐ Grades 6-8
   - ☐ Grades 9-12

4. **To what extent do you monitor your children while they are using technology devices capable of Internet access? (Choose only one)**
   Mark only one oval.
   - ◯ Never
   - ◯ Rarely
   - ◯ Sometimes
   - ◯ Frequently
   - ◯ Always

5. **Please use the space provided to briefly describe how you monitor (if you do) your children while they are using devices capable of Internet access. If not applicable, please type NA.**

6. **Please briefly explain what you know about what types of information that can be gathered on users while they are accessing the Internet.**

7. **How informed are you about cyber safety issues? (Choose only one)**

Mark only one oval.

- ◯ Not at all informed
- ◯ Somewhat informed
- ◯ Actively informed and seeking more information
- ◯ Very informed and can direct someone for help on the issues

8. **Please explain your answer to the previous question concerning how well informed you are about cyber safety issues.**

9. **Have you ever shared information about cyber safety issues with a teacher?**

Mark only one oval.

- ◯ Yes
- ◯ No

10. **In the space provided, please briefly explain how, and why, as a parent, you have shared information about cyber safety issues with teachers. If not applicable, please type NA.**

11. **Have teachers ever shared information about cyber safety issues with you?**
Mark only one oval.

- ◯ Yes
- ◯ No

12. **In the space provided, please briefly explain how, and why, teachers have shared information about cyber safety issues with you. If not applicable, please type NA.**

13. **Have you communicated with school administrators about cyber safety issues?**
Mark only one oval.

- ◯ Yes
- ◯ No

14. **In the space provided, please briefly explain how, and why, you have communicated with school administrators about cyber safety issues. If not applicable, please type NA.**

15. **How aware are you of programs called Ghost applications on Smart phones? (Choose only one)**
Mark only one oval.

- ◯ I have not heard of the term
- ◯ I can explain what the term means, but I do not know how it works
- ◯ I can explain what the term means, and I understand how it works.

16. **In the space provided, please briefly explain what steps you would take if you wanted to learn more about cyber safety.**

17. **How informed are you about the laws concerning cyber-crimes?**
Mark only one oval.

- ( ) Not at all informed
- ( ) Somewhat informed
- ( ) Actively informed, and seeking more infromation
- ( ) Very informed, and can direct someone for help on the issues

18. **In the space provided, please briefly explain your answer about laws concerning cyber crimes. If not applicable please type NA.**

Thank you for completing this survey.

In a few weeks, I will be conducting an online focus group to discuss issues related to this topic in further detail.
I will be looking for approximately seven to ten parents of children in grades K-12 to participate. The focus group opportunity is voluntary, and again, personal information will not be shared.

19. **Are you interested in taking part in the online focus group session?**
Mark only one oval.

- ( ) Yes *Skip to question 20.*
- ( ) No *Skip to "Thank you for your participation.."*
- ( ) Maybe *Skip to question 20.*

Thank you for your participation.

Stop filling out this form.

Thank you for your interest in taking part in the parent focus group.

Below you will have an opportunity to sign up to participate in an online interview session with seven to ten participants about the topics covered in the survey you just completed. E-mails will only be used to contact you should your name be selected. Next are the guidelines for the online sessions.

I. Introduction of moderator: Hello, my name is Teresa Lester. I will serve as the moderator of this focus group. During this focus group session, I will record the conversations. These recordings will be used to ensure accuracy when I transcribe the data into the research report. By logging into the focus group sessions you are consenting to the use of the verbal communications you provide.

II. Purpose: The purpose of this focus group is to allow each of you an opportunity to discuss your views on cyber safety awareness. The information gathered will be used as data points in my dissertation.

III. Selection of participants: Every person who participated in the phase one survey questions was given an opportunity to attend the focus group sessions. Where multiply participants respond, a random drawing will be conducted.

IV. Guidelines: All opinions are important in this session. I will guide the discussion but will be focused on listening and recording your answers. In the event that a question or topic makes you feel uncomfortable, you may decline to answer. You have the right to end the session at any time you feel the need to exit. If you do not want your part of the sessions recordings used, please let the researcher know before you leave the session. I will honor your request to have that part of the session recording deleted.

These five guidelines will be repeated the day of the online session. Thank you for supporting this research.

20. **What is your first name?** *

21. **Please leave your e-mail information so that you can be contacted should your name be chosen for the parent focus group interview session . You have the right to change your mind at any point about participating. Thank you.** *

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Appendix D

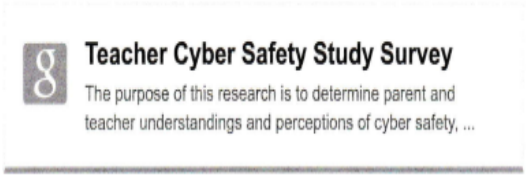
Email Solicitation Page

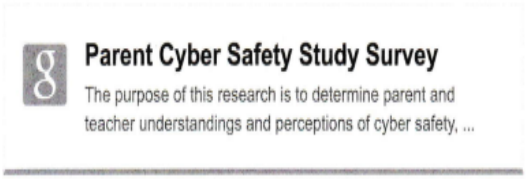
Date: Saturday, September 30, 2017 2:15 PM

Please consider completing one of following surveys or passing the links on to a friend or family member who teach or have children in the K-12 classrooms.

If you are a teacher or parent of K-12 students, would you be willing to take a survey to help me with my doctoral study on cyber safety awareness? This survey should take approximately 10 minutes to complete. You will also be given an opportunity to participate in an online focus group session to take place approximately three weeks after the original survey. Thank you in advance for taking the time to complete the survey, and please feel free to share through social media!

Parent Cyber Safety Study Survey Parent Survey and Teacher Cyber Safety Study Survey Teacher survey.





Appendix E

Interview Questions and Script

The interview questions were as follows:

1) What issues related to cyber safety are you now concerned about?
2) What concerns do you have about how your students/children are monitored while using devices online in your classroom/home?
3) (For teachers), According to responses from the survey items, some teachers felt they were informed but there wasn't really training offered at school on cyber safety. Is there training offered at your school and if so, to what extent?

   (For parents), According tor responses from the survey items, some parents felt they were informed about cyber safety but did not feel the need to monitor their children because the "trust them to do what's right." What are your thoughts on that comment?

Interview Outline

I. **Introduction of moderator:** Hello, my name is Teresa Lester. I will serve as the moderator of this/these interviews. During the process of this interview session, I will be using a LiveScribe digital Smartpen to record all conversations. These recordings will be used to ensure accuracy when I transcribe the data into the research report. No video recordings will be used, and you will remain anonymous. Buy participating in this online/face-to-face/phone interview, you are giving your consent for the notes from these voice recordings to be used in this research. Do you verbally agree? (Wait for responses).

II. **Purpose:** The purpose of this/these interview (s) is to allow each of you an opportunity to discuss your views on cyber safety awareness that the stage one surveys may not have covered. The information gathered will be used as evidence in the research report.

III. **Selection of participants:** Every person who participated in the phase one survey questions was given an opportunity to attend the interview sessions. Each participant who responded yes or maybe to the interview invitation was sent an e-mail and information to join. Not all who responded yes or maybe chose to join the online/face-to-face/phone interview (s).

IV. **Guidelines:** Each of you will be given a number. When you speak, I will refer to the number instead of your name. This will help in ensuring your anonymity. Please consider the fact that you may have different opinions from others in the group. Please allow each person to take speak freely and wait quietly and respectfully for your turn. Please feel free to politely respond to one another once they have completed their say on the questions presented. There are no right or wrong answers to these questions. All opinions are important in this session. I will ask that all cell phones be silenced. If you should need to step away to take a phone call or use the restroom, please return quietly. I will guide the discussion but will be focused on listening and recording your answers. If a question or topic makes you feel uncomfortable, you have the right to not answer or leave the study. Your answers will not be used in this study should you choose to leave.

V. **Icebreaker:** Before we begin, I would like to know how many of you are feel this is an important topic to explore and why or why not you feel that way?

VI. **Questions Set 1: What issues related to cyber safety are you now concerned about?**

VII. **Transition:** The survey questions in phase one asked about issues with cyber safety issues while online.

VIII. **Question Set 2: What concerns do you have about how your students/children are monitored while using devices online in your classroom/home?**

IX. **Transition:** Thank you.

X. **Question Set 3 *for teachers*: According to responses from the survey questions, some teachers felt they were informed but there wasn't really training offered at school on cyber safety. Is there training offered at your school and if so, to what extent?**

Question Set 3 *for Parents*: According to responses from the survey questions, some parents felt they were informed about cyber safety but did not feel the need to monitor their children because they "trust them to do what's right." What are your thoughts on that comment?

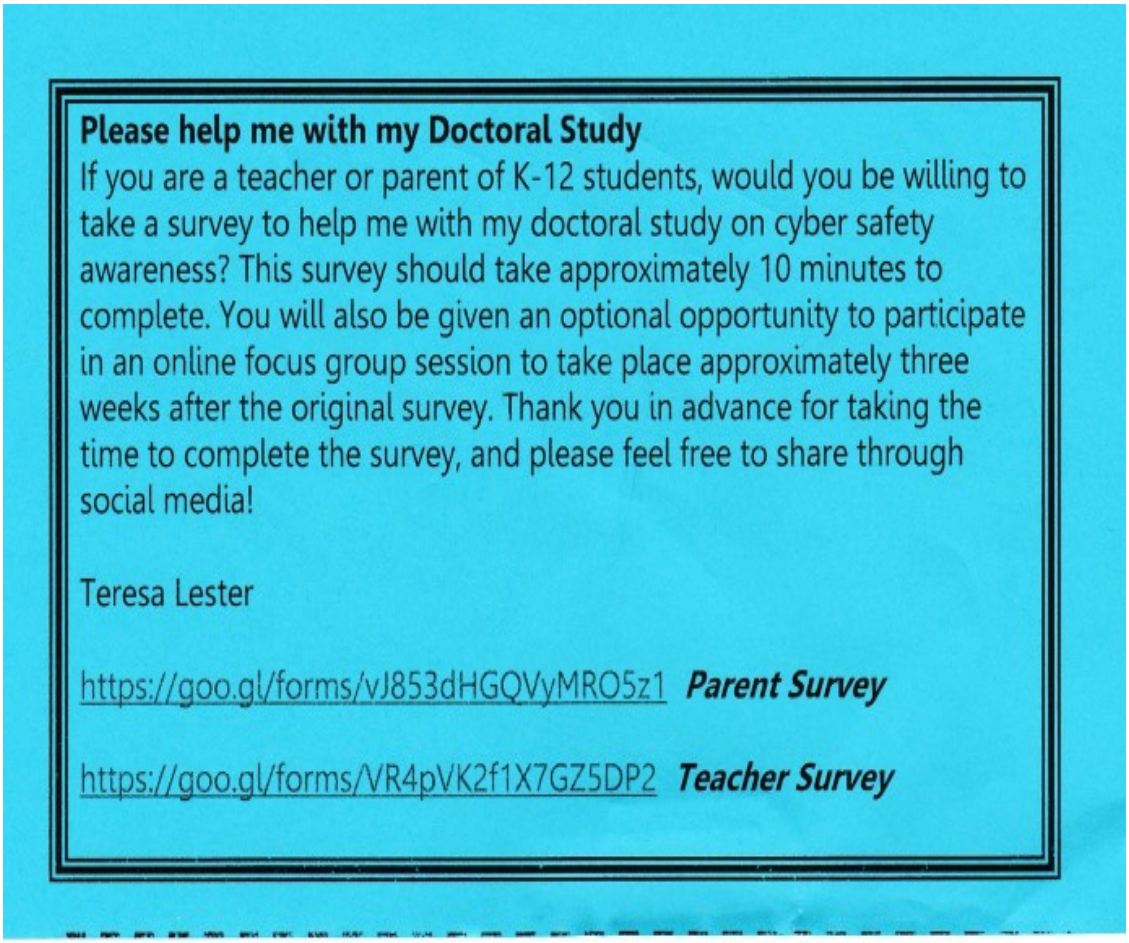
XI. **Transition:** Let's talk a little about online protection.

XII. **Question Set 4 (RQ4): Who do you feel is responsible for protecting your students/children while online line and why?**

XIII. **Wrap up:** We have now addressed all the questions I have for you today. Is there anything else you would like to touch on before we dismiss from this interview session? Thank you for your time and responses for this research project. Have a great day.

Appendix F

Flyers Listing Separate Links for Study



Please help me with my Doctoral Study

If you are a teacher or parent of K-12 students, would you be willing to take a survey to help me with my doctoral study on cyber safety awareness? This survey should take approximately 10 minutes to complete. You will also be given an optional opportunity to participate in an online focus group session to take place approximately three weeks after the original survey. Thank you in advance for taking the time to complete the survey, and please feel free to share through social media!

Teresa Lester

https://goo.gl/forms/vJ853dHGQVyMRO5z1 ***Parent Survey***

https://goo.gl/forms/VR4pVK2f1X7GZ5DP2 ***Teacher Survey***

Appendix G

LiveScribe 2GB Echo Smartpen Information

DETAILS

2GB of Memory for Recordings and Notes

When digitizing your notes and audio you'll need storage space; with 2GB of memory, your smartpen has it. The 2GB smartpen can hold over 200 hours of audio[1] or over thousands of pages of notes.

Record and Play Back

Smartpens record everything you write and hear so you'll never miss a word. Replay your meetings or lectures simply by tapping on your notes[2].

Save, Search and Organize

Echo Desktop saves your notes and recordings to your computer for fast, easy access to what's important. Search for words within your notes and find what you need fast.

Send and Share

Easily share your notes and audio from Echo Desktop as PDF's or audio files.

[1] Actual recording time varies by audio quality setting.
[2] Livescribe paper required. Don't record without permission
[3] Mobile device access requires the Livescribe+ App or Flash®–enabled web browser.

The Echo smartpen only works with Livescribe dot paper

TECH SPECS

Echo smartpen

- Sleek, ergonomic design
- Anti-roll body design
- ARM 9 processor
- 96 x 18 OLED display
- 2GB NAND flash
- Lithium ion rechargeable battery (non-removable)
- Weight = 36 g
- Length = 158 mm

System Requirements

Mac® System Requirements

- Mac OS® X 10.8.5 and above
- 300 MB free disk space
- Available USB 2.0 port
- Internet connection

Windows® System Requirements

- Windows 7 or Windows 8 and above
- 300 MB free disk space
- Available USB 2.0 port
- Internet connection

Appendix H

Pilot Survey for Teachers

Pilot Teacher Cyber Safety Study Survey

The purpose of this research is to determine parent and teacher understandings and perceptions of cyber safety, and to determine if there is a need for further training opportunities in this area. Parents and teachers of students in grades K-12 are the focus of this study, which is being conducted by Teresa M. Lester, a doctoral candidate at Gardner-Webb University.

Participation in this survey is strictly voluntary. However, your participation would be greatly appreciated. By logging on and completing this survey you are giving your consent for these materials to be used in this research. Participants may withdraw from this research at any time.

Personal information will not be shared as a part of this research. Thank you in advance for your support.

* Required

1. **Which of the following best describes the group you are representing? (Choose only one)**
   Mark only one oval.
   - ◯ Parent
   - ◯ Teacher

2. **What state are you representing in this survey?**

3. **What grade levels are you representing in this survey? (Choose all that apply)**
   Mark only one oval.
   - ◯ Grades K-2
   - ◯ Grades 3-5
   - ◯ Grades 6-8
   - ◯ Grades 9-12

4. **To what extent do you monitor your students while they are using technology devices capable of Internet access? (Choose only one)**
   Mark only one oval.
   - ◯ Never
   - ◯ Rarely
   - ◯ Sometimes
   - ◯ Frequently
   - ◯ Always

5. **Please use the space provided to briefly describe how you monitor (if you do) your students while they are using devices capable of Internet access. If not applicable, please type NA.**

6. **Please briefly explain what you know about what types of information that can be gathered on users while they are accessing the Internet.**

7. **How informed are you about current cyber safety issues? (Choose only one)**
Mark only one oval.

- ◯ Not at all informed
- ◯ Somewhat informed
- ◯ Actively informed and seeking more information
- ◯ Very informed and can direct someone for help on the issues

8. **Please explain your answer to the previous question concerning how well informed you are about cyber safety issues.**

9. **Have you ever shared information about cyber safety with a parent?**
Mark only one oval.

- ◯ Yes
- ◯ No

10. **In the space provided, please briefly explain how, and why, as a teacher, you have shared information about cyber safety issues with parents? If not applicable, please type NA.**

11. **Have parents ever shared information about cyber safety issues with you?**
Mark only one oval.

- Yes
- No

12. **In the space provided, please briefly explain how, and why, parents have shared information about cyber safety issues with you? If not applicable, please type NA.**

13. **Have you communicated with school administration about cyber safety issues?**
Mark only one oval.

- Yes
- No

14. **In the space provided, please briefly explain how, and why, you have communicated with school administrators about cyber safety issues. If not applicable, please type NA.**

15. **How aware are you of programs called Ghost Applications on Smart phones? (Mark only one)**
Mark only one oval.

- I have not heard of the term
- I can explain what the term means, but I do not know how it works
- I can explain what the term means, and I understand how it works.

16. **In the space provided, please briefly explain what steps you would take if you wanted to learn more about cyber safety.**

17. **How informed are you about the laws concerning cyber-crimes?**
Mark only one oval.

- not at all informed
- Somewhat informed
- Actively informed, and seeking more informaiton
- Very informed, and can direct someone for help on the issues.
- Option 4

18. **In the space provided, please briefly explain your answer on the laws concerning cyber-crimes. If not applicable, please type NA.**

Thank you for completing this survey.

In a few weeks, I will be conducting an online focus group to discuss issues related to this topic in further detail.
I will be looking for approximately seven to ten parents of children in grades K-12 to participate. The focus group opportunity is voluntary, and again, personal information will not be shared.

19. **Are you interested in taking part in the online focus group session?**
Mark only one oval.

- Yes *Skip to question 20.*
- No *Skip to "Thank you for your participation.."*
- Maybe *Skip to question 20.*

Thank you for your participation.

Stop filling out this form.

Thank you for your interest in taking part in the teacher focus group.

Below you will have an opportunity to sign up to participate in an online interview session with seven to ten participants about the topics covered in the survey you just completed. E-mails will only be used to

contact you should your name be selected. Next are the guidelines for the online sessions.

I. Introduction of moderator: Hello, my name is Teresa Lester. I will serve as the moderator of this focus group. During this focus group session, I will record the conversations. These recordings will be used to ensure accuracy when I transcribe the data into the research report. By logging into the focus group sessions you are consenting to the use of the verbal communications you provide.

II. Purpose: The purpose of this focus group is to allow each of you an opportunity to discuss your views on cyber safety awareness. The information gathered will be used as data points in my dissertation.

III. Selection of participants: Every person who participated in the phase one survey questions was given an opportunity to attend the focus group sessions. Where multiply participants respond, a random drawing will be conducted.

IV. Guidelines: All opinions are important in this session. I will guide the discussion but will be focused on listening and recording your answers. In the event that a question or topic makes you feel uncomfortable, you may decline to answer. You have the right to end the session at any time you feel the need to exit. If you do not want your part of the sessions recordings used, please let the researcher know before you leave the session. I will honor your request to have that part of the session recording deleted.

These five guidelines will be repeated the day of the online session. Thank you for supporting this research.

20. **What is your first name?** *

21. **Please leave your e-mail information so that you can be contacted should your name be chosen for the teacher focus group interview session . You have the right to change your mind at any point about participating. Thank you.** *

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Appendix I

Parents Pilot Survey

Pilot Parent Cyber Safety Study Survey

The purpose of this research is to determine parent and teacher understandings and perceptions of cyber safety, and to determine if there is a need for further training opportunities in this area. Parents and teachers of students in grades K-12 are the focus of this study, which is being conducted by Teresa M. Lester, a doctoral candidate at Gardner-Webb University.

Participation in this survey is strictly voluntary. However, your participation would be greatly appreciated. By logging on and completing this survey you are giving your consent for these materials to be used in this research. Participants may withdraw from this research at any time.

Personal information will not be shared as a part of this research. Thank you in advance for your support.

* Required

1. **Which of the following best describes the group you are representing? (Choose only one)**
   Mark only one oval.
   - ◯ Parent
   - ◯ Teacher

2. **In what state do you live?**

3. **Which grade levels are you representing in this survey? (Choose all that apply)**
   Check all that apply.
   - ☐ Grades K-2
   - ☐ Grades 3-5
   - ☐ Grades 6-8
   - ☐ Grades 9-12

4. **To what extent do you monitor your children while they are using technology devices capable of Internet access? (Choose only one)**
   Mark only one oval.
   - ◯ Never
   - ◯ Rarely
   - ◯ Sometimes
   - ◯ Frequently
   - ◯ Always

5. **Please use the space provided to briefly describe how you monitor (if you do) your children while they are using devices capable of Internet access. If not applicable, please type NA.**

6. **Please briefly explain what you know about what types of information that can be gathered on users while they are accessing the Internet.**

7. **How informed are you about cyber safety issues? (Choose only one)**
Mark only one oval.

- ◯ Not at all informed
- ◯ Somewhat informed
- ◯ Actively informed and seeking more information
- ◯ Very informed and can direct someone for help on the issues

8. **Please explain your answer to the previous question concerning how well informed you are about cyber safety issues.**

9. **Have you ever shared information about cyber safety issues with a teacher?**
Mark only one oval.

- ◯ Yes
- ◯ No

10. **In the space provided, please briefly explain how, and why, as a parent, you have shared information about cyber safety issues with teachers. If not applicable, please type NA.**

11. **Have teachers ever shared information about cyber safety issues with you?**
Mark only one oval.

- ◯ Yes
- ◯ No

12. **In the space provided, please briefly explain how, and why, teachers have shared information about cyber safety issues with you. If not applicable, please type NA.**

13. **Have you communicated with school administrators about cyber safety issues?**
Mark only one oval.

- ◯ Yes
- ◯ No

14. **In the space provided, please briefly explain how, and why, you have communicated with school administrators about cyber safety issues. If not applicable, please type NA.**

15. **How aware are you of programs called Ghost applications on Smart phones? (Choose only one)**
Mark only one oval.

- ◯ I have not heard of the term
- ◯ I can explain what the term means, but I do not know how it works
- ◯ I can explain what the term means, and I understand how it works.

16. **In the space provided, please briefly explain what what steps you would take if you wanted to learn more about cyber safety.**

17. **How informed are you about the laws concerning cyber-crimes?**
Mark only one oval.

- ◯ Not at all informed
- ◯ Somewhat informed
- ◯ Actively informed, and seeking more infromation
- ◯ Very informed, and can direct someone for help on the issues

18. **In the space provided, please briefly explain your answer about laws concerning cyber crimes. If not applicable please type NA.**

Thank you for completing this survey.

In a few weeks, I will be conducting an online focus group to discuss issues related to this topic in further detail.
I will be looking for approximately seven to ten parents of children in grades K-12 to participate. The focus group opportunity is voluntary, and again, personal information will not be shared.

19. **Are you interested in taking part in the online focus group session?**
Mark only one oval.

- ◯ Yes *Skip to question 20.*
- ◯ No *Skip to "Thank you for your participation.."*
- ◯ Maybe *Skip to question 20.*

Thank you for your participation.

Stop filling out this form.

Thank you for your interest in taking part in the parent focus group.

Below you will have an opportunity to sign up to participate in an online interview session with seven to ten participants about the topics covered in the survey you just completed. E-mails will only be used to contact you should your name be selected. Next are the guidelines for the online sessions.

I. Introduction of moderator: Hello, my name is Teresa Lester. I will serve as the moderator of this focus group. During this focus group session, I will record the conversations. These recordings will be used to ensure accuracy when I transcribe the data into the research report. By logging into the focus group sessions you are consenting to the use of the verbal communications you provide.

II. Purpose: The purpose of this focus group is to allow each of you an opportunity to discuss your views on cyber safety awareness. The information gathered will be used as data points in my dissertation.

III. Selection of participants: Every person who participated in the phase one survey questions was given an opportunity to attend the focus group sessions. Where multiply participants respond, a random drawing will be conducted.

IV. Guidelines: All opinions are important in this session. I will guide the discussion but will be focused on listening and recording your answers. In the event that a question or topic makes you feel uncomfortable, you may decline to answer. You have the right to end the session at any time you feel the need to exit. If you do not want your part of the sessions recordings used, please let the researcher know before you leave the session. I will honor your request to have that part of the session recording deleted.

These five guidelines will be repeated the day of the online session. Thank you for supporting this research.

20. **What is your first name?** *

21. **Please leave your e-mail information so that you can be contacted should your name be chosen for the parent focus group interview session . You have the right to change your mind at any point about participating. Thank you.** *

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