

A CASE STUDY OF TEACHING DIGITAL  
CITIZENSHIP IN FIFTH GRADE

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A DISSERTATION

Submitted in partial fulfillment of the requirements  
for the degree of Doctor of Philosophy in the  
Department of Educational Leadership,  
Policy and Technology Studies  
in the Graduate School of  
The University of Alabama

TUSCALOOSA, ALABAMA

2016

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## ABSTRACT

The purpose of this case study was to explore the teaching of digital citizenship concepts and standards by fifth grade teachers in the Sunshine School System in Alabama. Digital Citizenship is the understanding of human, cultural, and societal issues related to technology, and the practice of legal and ethical behavior. A case study was chosen in order to explore the teaching of digital citizenship concepts and standards in-depth and discover how the participating fifth grade teachers in this district are educating their students about digital citizenship. The theoretical framework used for this study is the C3 Framework developed by Davina Pruitt-Mentle, Ph.D., education and technology expert. There are three dimensions to the model, Cyberethics, Cybersafety, and Cybersecurity that overlap, but also have differences that must be discussed separately. These differences include subject matter and psychological differences. Qualitative data were collected through face-to-face interviews in the teachers' classrooms, follow-up interviews, classroom observations, and lesson plans. The researcher utilized a cycle of three types of data coding to analyze the data: Holistic Coding (Dey, 1993), InVivo Coding (Charmaz, 2006), and Values Coding (Gable & Wolf, 1993). Themes resulting from the data analysis included technology standards, iPad orientation, student collaboration, real life situations, home connection, teacher control, dependence on computer teacher, false sense of security, digital footprint, social media, AUP/iPad agreements, physical use, plagiarism, citations, and inappropriate behavior. The participants were found to be unaware of the importance of teaching digital citizenship to their students. Although some participants included a small portion of digital citizenship in their discussions with students, none of the participants

honed in on digital citizenship as an ongoing process. It is important for teachers and administrators to stay abreast of emerging 21<sup>st</sup> century skills and technology, but not lose sight of the need for teaching students to be responsible digital citizens.

## ACKNOWLEDGEMENTS

Because I am (and always will be) a worrier, I have claimed Philippians 4:6 most of my life, and especially throughout the dissertation process. All the glory and honor that I may receive goes to God. I am thankful for his steadfast and unconditional love for me. I also want to thank my family for never giving up on me, leaving me alone when I needed time, and loving me regardless of my failures. Although my parents are deceased, they were such firm believers in education, I hope, somehow, I have made them proud.

Dr. Margaret Rice has been such an inspiration and support to me. She has picked me up when I was falling apart and encouraged me to keep marching on toward the prize. She is kind and never made me feel inadequate. Her rapport with her students, in class and out, is charismatic and makes me strive to have that kind of relationship with all my students. What an asset she is to The University of Alabama. I have gained a friend in Dr. Rice through this process, and for that I am forever grateful.

I would be remiss to not offer special thanks to Dr. Alan Webb for the many hours he spent with me at the Gadsden Center working on my paper and actually teaching me the dissertation process. He is an asset to this institution and his students. I am eternally grateful to him for his dedication to me as his student.

I would also like to thank Dr. Angela Benson, Dr. Mary Givens, and Dr. Becky Atkinson for serving on my committee and putting up with me in their classes. I learned so much from each of them and enjoyed the times spent together in their classes. Their dedication to their students is above admirable.

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CHAPTER I:  
INTRODUCTION

**Introduction**

The 21<sup>st</sup> century brought about an avalanche of technology infusion in schools, homes, and businesses across America. Research conducted by Common Sense Media (an independent non-profit organization that works with parents and educators), showed that children spend more of their time with digital media and related activities than they do with their families or in school (Orth & Chen, 2013). This directly affects the social, emotional and physical development of these children (Orth & Chen, 2013). Many younger children are learning socially unacceptable behavior online from other children, teenagers, or socially inappropriate adults (Hollingsworth, Dowdy, & Donovan, 2011). With the widespread use of technology in educational settings, teaching digital citizenship becomes partly the educational institutions' responsibility. The Alabama Course of Study for Technology (<http://alex.state.al.us/>) includes topics related to ethics; however, teachers may not be readily aware of the responsibility concerning online manners and the socially acceptable behavior their students should possess to better prepare them for adulthood, family responsibility, and careers. How can educators incorporate the tools needed by their students to become responsible digital citizens with all the many other demands placed on their time and planning?

The International Society for Technology in Education (ISTE) defines digital citizenship as students “who understand human, cultural, and societal issues related to technology, and practice legal and ethical behavior” (Ribble, 2009, p. 14). Students will be able to

1. Advocate and practice safe, legal, and responsible use of information and technology;
2. Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity;
3. Demonstrate personal responsibility for lifelong learning; and
4. Exhibit leadership for digital citizenship. (Ribble, 2009, p.14)

States bordering Alabama have taken similar measures to teach these same standards, modeled after the National Educational Technology Standards (ISTE•S) that ISTE created for students. Mississippi and Florida both created standards, but Georgia went a step further. On their website, they have published a Cybersafety guide with a step-by-step implementation process of how each system should plan for the safety of students while using the internet at school. There are training modules for each section of the school, and other resources to help the school system develop school specific plans (<http://www.gadoe.org/Technology-Services/Instructional-Technology/Pages/Cybersafety-Guide.aspx> ). It is both in narrative form and flow chart form for ease of use. However, no southeastern state, including Alabama, appears to have a curriculum adopted or even suggested on their sites for the teaching of state required technology standards. Alabama does have a separate website, Alabama Learning Exchange or ALEX (<http://alex.state.al.us/index.php> ), which is linked to the state department site with lesson plans, courses of study, and a variety of other resources, but nothing specifically addresses the teaching of digital citizenship.

With the advent of a truly global society, students must be taught the proper etiquette to work well with others both face-to-face, the traditional vehicle for communication, as well as the modern format of social media. Educators should model this behavior and not only be users of technology, but must also be responsible digital citizens. Leading is about being an example for those being led, so teachers must be the role models for the proper use of these tools that are

changing the business and personal landscape that could not have been predicted just a decade ago.

### **Statement of the Problem**

Many students in today's classrooms have very little regard for intellectual property, copyright, or trademarks (Oxley, 2011). Such students are downloading music and movies illegally, taking pictures, images, and words owned by someone else, but posted on the Internet, and claiming them as their own. Misuse of the English language in their assignments with text language, shortcuts and misspellings has become epidemic. Students use social media to bully and cause, many times, troubling issues for their friends and classmates, which become problems for the school (Oxley, 2011). Some behaviors are threatening and dangerous. While all of these are serious to the community of online members, they are also damaging to the students (Hollandsworth, Dowdy, & Donovan, 2011). The future looks bleak, unless an education process is established to shift this current behavior (Hollandsworth et al., 2011). There is a need for educating students about the effects of this unethical behavior (Oxley, 2011).

A serious concern is plagiarism and copyright infringement. Students of all ages seem to think it is permissible to use someone else's work and pass it off as their own, until they get caught (Ribble, Bailey, & Ross, 2004). Many universities have put in place roadblocks that help deter this, programs like "TurnItIn" and cameras installed in testing centers (The University of Alabama Student Handbook). The fear of being dismissed from a college or university may be incentive not to plagiarize for the majority of their students (Buchanan, 2014). High schools, middle schools, and elementary schools need to be more deliberate in educating students concerning plagiarism and copyright infringement. If students are educated about this and

understand the repercussions before they get to college, will there be a less of a temptation to plagiarize?

Another issue that must be addressed with students is the physical protection of software, networks, and equipment. Students should be taught to handle these responsibly and safely for the protection of everyone using the equipment or network (Anderson & Krathwohl, 2001). Viruses, malware, and other internet nuisances can be downloaded by an uninformed student and personal information can be stolen. The greatest limitation in teaching this type of information is that it changes daily. The educator must keep abreast of these changes (Pusey & Sedera, 2011).

A problem of greater risk is the privacy issue, especially with younger children. Predators, bullies, and identity thieves are sitting in wait for an unsuspecting child to enter a social network or reply to an email. While the goal is to educate children in making responsible decisions using social media and other aspects of the Internet, they still need to be protected with close supervision, limitations, and filters when possible. Children must be taught about the consequences that occur when poor decisions are made and how their identity and location can be detected by predators and thieves (Broughton, 2005). The recent media explosion of cyber breaches in the US by China, North Korea, and Russia demonstrate that even at a national level, the threats are very real and very potent to national security (Kroll, 2015).

Digital citizenship is a term that many do not really understand (Hollingsworth et al., 2011). It refers to the same guaranteed rights a person may have in a given space, but defining that space as the Internet. With any set of rights there comes a set of responsibilities as well. To be a member of a society, rules must be followed for the fairness of all parties involved (Fenaughty, 2012). Respect for others' rights, treating people and works fairly and honestly, and carrying out business or pleasure in a responsible manner is necessary for the community to be a

fair and working atmosphere. Therefore, the same measures apply to the community of people who share cyberspace. In other words, this global village, with a population of approaching eight billion on this planet, is now multiplied exponentially with the Internet connectivity explosion. Digital citizenship is not a to-do list or a “stagnant curriculum” to be used until the next adoption era. It is an ever-changing way of life that empowers students to be effective, responsible users. While policing Internet use is still a necessity, teaching digital citizenship delivers the skills and tools students need to communicate in a global society using 21<sup>st</sup> century means (Lindsay & Davis, 2010).

For the purpose of this study, digital citizenship was divided into the three categories used in the C3 Framework; Cybersafety, Cybersecurity, and Cyberethics (Pruitt-Mentle, n.d.). Cybersafety is concerned with keeping personal information safe, while avoiding online predators, financial scams, and other dangers. Cybersecurity addresses keeping equipment and networks safe from malware, viruses, and hackers. Cyberethics deals with proper online behavior, including being respectful and ethical (Melgosa & Scott, 2013).

### **Purpose of the Study**

The purpose of this case study was to explore the teaching of digital citizenship concepts and standards by fifth grade teachers in the Sunshine School System in Alabama. A case study was chosen in order to study in-depth and discover how the participating fifth grade teachers are educating their students about digital citizenship.

### **Significance of the Study**

Digital citizenship encompasses many areas of technology use. In social media, text messaging, and other places where people publish works, ideas, pictures, and opinions online, there is cyber-bullying, incorrect information posted as fact, and socially inappropriate behavior

(Hollingsworth et al., 2011). Many times the writers of these posts use phonemic spelling, acronyms, and omit capital letters and punctuation in the interest of speed (Cingel & Sundar, 2012). The majority of these incidents are also committed by adults (Hollingsworth et al., 2011).

This study can be beneficial for educators at all grade levels. Teachers can use the data from this study to evaluate how they are instructing their students in Cybersafety, Cybersecurity, and Cyberethics. Administrators might see how teachers must themselves be digital citizens, and be willing to have them attend more professional development on the topic and be willing to purchase more equipment when funds are available. The study would also add to the knowledge base regarding the teaching of digital citizenship and digital citizenship as curriculum.

### **Research Questions**

The overarching question for this study was as follows: how are Sunshine School system's fifth grade teachers teaching their students about digital citizenship? Sub questions included 1) how are Sunshine School system's fifth grade teachers teaching their students about Cybersafety; 2) how are Sunshine School system's fifth grade teachers teaching their students about Cybersecurity; and 3) How are Sunshine School system's fifth grade teachers teaching their students about Cyberethics?

### **Theoretical Framework**

The theoretical framework used for this study is the C3 Framework created by education and technology expert Davina Pruitt-Mentle. She stated,

C3 Framework has been adopted by numerous State Departments of Education and leading Internet Safety curriculum providers. Her research skills have led to a variety of opportunities, including the National C3 Baseline Study referenced by President Obama in his 60 Day Cybersecurity Policy Review, evaluation of Internet curriculum such as iKeepSafe, WebWiseKids, and D.A.R.E, development of the Cybersecurity CTE tract for Maryland, design of the C3 Framework and STEPP implementation, development of the SECURE IT initiative, a holistic approach program to promote C3 and connect to careers

in Cybersecurity, and recent launch of the C3 School Award Program. (National Initiative for Cybersecurity Education, 2013, p. 1)

Pruitt-Mentle (n.d.) referred to the C3 Framework as a theoretical framework that “can be used to inform a national, regional, or local agenda” (p. 2) regarding digital citizenship. The three dimensions of Cyberethics, Cybersafety, and Cybersecurity overlap, but also have differences that must be discussed separately. These differences include subject matter and psychological differences.

Cybersafety addresses online behavior, including offering personal information to only known safe sites, and avoiding any site not using https for transactions. It also includes minimizing and keeping personal information safe on social media sites and suggests the use of strong passwords. Cybersecurity focuses on keeping personal equipment secure in an online environment by installing virus protection and firewalls, running updates to keep up with new threats, and also updating software and operating systems to keep them secure. Cyberethics advocates choosing what is right over what is wrong in spite of the ease and ability to complete the task in an unscrupulous manner. It concerns appropriate and ethical behaviors. It addresses the respectable commitment and responsibility of online communities. Plagiarism, bullying, and hacking are examples of these.

### **Methodology**

Qualitative research is used when a problem or an issue needs to be explored rather than measured. Silent voices may be heard through qualitative studies and theories are developed using qualitative research. This type of research yields a more in-depth and intimate data finding due to face to face interviews with the people directly involved with the issue or problem and the observations on-site (Creswell, 2013).

The researcher chose to use the case study method. “A case study is an empirical inquiry that investigates a contemporary phenomenon in-depth and within its real-life context....” (Yin, 2009, p. 18). Case studies are particularistic, descriptive, and heuristic. The knowledge gained from a case study is more concrete and contextual because the researcher is the instrument of the study and experiences the study firsthand (Merriam, 2009). Case studies answer the *how* and *why* questions the researcher might have and are useful when the researcher wants to be as close to the issue in its natural setting to observe, interview participants, and inspect documents. This case study was instrumental in type, providing insight into the issue of teaching digital citizenship to fifth graders.

### **Assumptions of the Study**

There were several assumptions associated with this study. It was assumed that digital citizenship is being taught to some extent within the schools where the data were collected. During the interviews, the researcher assumed that that the respondents understood the interview questions and answered them honestly. To address this assumption, participants were made aware of the fact that interviewee identities would be protected. Although interview responses were used within the dissertation, interviewees were assured that no responses would be identified by individuals’ names.

### **Limitations of the Study**

The following limitations were included in the study. They were

1. All fifth grade teachers in the Sunshine School System did not participate;
2. All fifth grade teachers in the Sunshine School System did not have the same technology opportunities. Although most had an iPad cart, some did not. All teachers had computer lab time assigned to them; however,

3. There may have been biases in the interview responses and experienced by the researcher.

### **Operational Definitions of Terms**

Acceptable Use Policy - (AUP) a basic set of rules designed by the owner or manager of a network, web service, or large computer system that governs how the network, website, or system is used (Ribble, 2011).

App - shortened version of the term application; a small program that can be downloaded onto mobile devices (<http://www.dictionary.com/browse/app?s=t>).

Cell phone - sometimes called mobile telephone; short-wave analog or digital telecommunication device which is operated through a wireless connection through a subscription to service (Ribble, 2011).

Cookies - small text files given ID tags that are stored on the computer's browser directory or program data subfolders; created when a browser is used to visit a website that uses cookies to keep track of movements within the site, helps resume where user left off, remembers registered login, theme selection, preferences, and other customization functions (<http://www.allaboutcookies.org/cookies/>).

Cyber - prefix; referring to anything pertaining to the Internet.

Download - to save a file to your computer from another source (Ribble, 2011).

Email - message transmission via communication networks using the Internet (Ribble, 2011).

E-rate - federal funding that makes telecommunications and Internet more affordable for schools and libraries (<http://www.fcc.gov/guides/universal-service-program-schools-and-libraries>).

iPad - a handheld computing device launched by Apple, Inc. in January 2010. It is a mobile device, larger than a smart phone, but smaller than a laptop.

Plagiarize - to steal or pass off someone else's work as your own; giving no sources (Ribble, 2011).

Sexting - sending sexually explicit messages and materials by text message (Ribble, 2011).

Social Network - an online community of people, with commonalities, who use a website for communicating with each other (<http://dictionary.reference.com/browse/socialnetwork?s=t>).

Text Messaging - sending short messages via a device such as a cell phone (Ribble, 2011).

Title I school - school having at least 40% of students from low income families (families that qualify according to the United States Census's definition of low income).

Virtual - not real; refers to a concept related to reality (Ribble, 2011).

## CHAPTER II: REVIEW OF THE LITERATURE

The purpose of Chapter II is to provide an overview of the current literature concerning how teachers are teaching digital citizenship to elementary students. Resources are abundant concerning digital citizenship in reference to what it is, ways to teach it, and relating to teens and college students. Few studies were located concerning the teaching of digital citizenship in elementary schools. Although most states require technology standards to be integrated into the curriculum, there was little evidence found in the literature that this is being done. The sparse amount of information in the literature concerning the teaching of digital citizenship to elementary school students is an affirmation that more studies are needed.

Today, more than ever, students literally have the world at their fingertips, and they must be taught how to behave, react, and interact in a fast paced cyber-world (Oxley, 2011). Technology has changed the way information is received and understood. Before the Internet, people depended on newspapers, radio, and television to receive the news. There were no choices in what news was delivered or from what perspective it was heard (Simsek & Simsek, 2013). The Internet has allowed people to choose the news they want to know about, and ignore what does not interest them or that with which they do not agree (Gozalvez, 2010). In fact, this media encourages bold thinking, political thoughts, and offers experimental zones for deeper political thinking (Couldry, 2007). While this may be true, what should students know about being responsible citizens within the community of the World Wide Web?

Digital citizenship is learning to respect the rights of others and learning to interact in the massive new world technology has supplied. “Responsible and ethical use of the Internet is not something that children or teenagers, in particular, consider to be important, and serious consequences are beginning to emerge as a result of careless and offensive online behavior” (Oxley, 2011, p. 1). The responsibility to teach this type of character education is falling on the schools but according to Oxley, teachers cannot do it alone. She suggested that parents, teachers, governments, industry, and organizations must work together not only to keep children safe on the Internet, but to teach them ethical use of it and hold them accountable for such use.

Kaufman (2008) defined ethical use as “...based on decisions and actions that lead to a situation where all citizens survive, and have a positive quality of life” (p. 11). Ethics concerns a person’s values, both good and bad and deals with serious matters in an impartial way. Ethics cannot be changed by an authoritative body and uses specialized terminology when dealing with things that are approved or disapproved (Pass & Willingham, 2009). For example, if a runaway teen finds a considerable amount of money in a lady’s purse, but uses the money to buy food because he is hungry, then later turns in the purse to the police, are the teen’s actions ethical or unethical? (Pass & Willingham, 2009). Students not only need a set of rules, but they need to understand the basis for these rules and be able to apply what the rules say to different situations they may encounter (Oxley, 2011).

The International Society for Technology in Education (ISTE) created National Educational Technology Standards (NETS) for administrators, teachers and students (Ribble, 2009), which are now known as ISTE Standards•S, ISTE Standards•T and ISTE Standards•A (ISTE, 2015). These standards address the ethical use of the internet for students, teachers, and administrators. The increase of the number of reports of misuse and inappropriate behavior by

students led ISTE to create these standards. Many states patterned their own state standards after these. Alabama, for one, included ISTE's NETS in the curriculum's general information section as a foundation of the state's technology course of study. The state requires that the technology curriculum be taught from Kindergarten through the 12<sup>th</sup> grade (Alabama Course of Study, 2009).

Also, schools and libraries that depend on e-rate for funding are required by the Federal Communications Commission (FCC) to not only put measures into place that protect students from pornography and other inappropriate content, but that they educate students on ethical and appropriate online behavior (<http://www.fcc.gov/guides/childrens-internet-protection-act>). The Children's Internet Protection Act (CIPA) was enacted in 2000 to address concerns about dangerous content children might access using the Internet (<http://www.fcc.gov/guides/childrens-internet-protection-act>). This act requires participating schools and libraries to create, adopt, and put into place a policy about Internet safety with children. The policy must address

1. Access by minors to appropriate matter on the Internet;
2. The safety and security of minors when using electronic mail, chat rooms, and other forms of direct electronic communications;
3. Unauthorized access, including so-called "hacking," and other unlawful activities by minors online;
4. Unauthorized disclosure, use, and dissemination of personal information regarding minors; and
5. Measures designed to restrict minors' access to material harmful to minors.

This is enforced by the Federal Communications Commission (FCC). Schools and libraries that do not adhere to the CIPA law will risk losing their e-rate funding

<http://www.fcc.gov/guides/childrens-internet-protection-act>).

### **Importance of Teaching Digital Citizenship**

Teaching digital citizenship is important because it addresses the various levels and extremes of technology responsibility. Technology leaders may be concerned with one topic, while educators have a different list of concerns. Likewise, parents may have their own fears concerning technology use with their children. Ohler (2011) has asked educators to consider that students are actively digital in their personal lives, but when they are at school there is often a lack of digital activity. Do teachers expect students to power down when they come to school and then power back up when they get home from school? Or should the perspectives of educators be a realization that students live in a digital world where success is rated in terms of community, as well as abundance and bandwidth (Ohler, 2011)? Not recognizing the need for the use of technology in school sends a message to students that being connected is too either expensive or too distracting to be used effectively in the classroom. This attitude leaves students defenseless in areas of Cybersafety, Cybersecurity, and Cyberethics. However, grasping the idea of one's life where technology is included in the daily schedule at school, allows for the opportunity to teach students about Internet responsibility (Ohler, 2011).

Students are posting and behaving inappropriately online; believing they are completely anonymous. The fact that anything posted can become viral in a matter of hours, making personal information and data available to thousands of people is one thing that is not considered by many (Oxley, 2011). Videos and pictures that were posted "innocently" have found places in local and national newscasts. Also, once posted, things can never be erased. The Internet archives can generally pull up any given post on any given date. Students need to be taught to

tighten their privacy settings on all social media sites to lessen the opportunities for anything they post to be misused in any way (Oxley, 2011). Recently, a news story that was featured on the *Today Show* was about a sixth-grade teacher from Oklahoma who became concerned with her students' postings. She created a sign stating that her students thought it was acceptable to post inappropriate pictures of themselves online, and then she asked the Facebook community to share her post and identify the state that they were from in the comment section. The post went viral within hours. It reached all fifty states and several countries. She then deleted the post, but it continued to circulate. She used that moment to teach her students about their digital footprint, and how it cannot be completely erased (Pawlowski, 2014). Since then, there have been numerous similar Facebook postings.

Another important reason to teach digital citizenship is the digital footprint that students are creating daily, but many have no knowledge of what that means. The YouTube video *Digital Dossier* (<https://www.youtube.com/watch?v=ko1zh8Brmyc>) illustrates how the digital footprint begins at a person's birth and how the cycle continues throughout his life. In a blog post, Daniel Schwabel, a managing partner of Millennial Branding, a Gen Y research and consulting firm, discusses why a person's online presence tells more about them than a resume. Potential employers admit to "googling" job candidates before they ever make contact with them for an interview (Oxley, 2011). However, it is not just potential employers that search for personal information. Identity thieves, scammers, and fraudulent businesses aggressively search social networks for their next victims (Oxley, 2011).

The legalities of the content posted online leads to needing to teach students how to responsibly create positive digital footprints. Students do not consider the implications when posting embarrassing and revealing pictures, videos, and other such content (Oxley, 2011). If the

content goes viral, lawsuits are born, and what was once thought innocent turns ugly and costly (Oxley, 2011). Cyberbullying has also led to the deaths of teenagers (Oxley, 2011). One such case occurred when a mother faked her identity with 13-year-old Megan Meier. Megan thought she was talking to a boy who turned on her rather abruptly and broke her heart. The mother was vindicating her daughter who had been upset over something Megan had done. Depressed, Megan hanged herself (Oxley, 2011).

The most obvious reason to teach digital citizenship is for the protection of children and their privacy. Children may feel secure using the computer at home for games and socialization but they must be taught to be cautious when doing anything online. “One of the things to understand is that being online is the same as being in public. While using the Internet at home may feel safe and secure, there are very real privacy issues” (Broughton, 2005, p.11). Websites using cookies can direct marketing at children, which could alert online predators (Broughton, 2005).

Just as teachers have taught citizenship for ages, digital citizenship should be included in those lessons. Much of the content of teaching digital citizenship involves making responsible choices and using ethically sound judgment, as a good citizen would do. So, why not lace digital citizenship into the daily curriculum, making it current and relevant to the students’ lives? Age appropriate conversations should begin early and graduate into deeper focused understandings of the need for appropriate online and technological behavior (Orth & Chen, 2013). “In short, schools need to commit to a spiraling, integrated approach to teaching digital citizenship” (Orth & Chen, 2013).

## **Education Should Begin Early**

Many of the curriculums offered, that teach digital literacy and citizenship, are geared toward students in the middle schools and up (Hollandsworth, Dowdy, & Donovan, 2011). However, young children are using computers and other devices at home. In fact, The Neilson Company reports that while most adults consider their cell phone necessary for communication, their children consider them a lifeline (Hollandsworth et al., 2011). The Neilson Company also reports that six out of ten children, age ten, own a cell phone. Therefore, the parents must be educated themselves in order to teach their small children at home the ins and outs of using the Internet (Hollandsworth et al., 2011). Teaching Internet safety is not enough. Children need to know the proper ways to interact with others online; what is appropriate and what is not. Soon these children will be able to get an education, work, buy, sell, and trade online. Someone must oversee the proper education for these types of interactions (Hollandsworth et al., 2011). It must begin early. Suggestions for parents (Kavuk et al., 2011) in this endeavor are

1. Children's use of the Internet at home must be supervised by a parent;
2. Parents should limit the amount of time they allow their children to spend on the Internet;
3. Parents should be aware of what the child is doing on the Internet; what sites he is visiting and why;
4. The place where the child uses the Internet should be where the parent can see and be in control of what the child is doing. Children should not be left unattended and alone on the Internet; and
5. Awareness training concerning the ethical use of the Internet for parents would be of great use.

## **The School's Role**

“Obey the law, have respect for others, and act civilly and sensibly” (Villano, 2008, p. 2).

Villano has stressed that being a good digital citizen is virtually the same as being a good citizen of a community or country. It means obeying laws, having respect for others, and acting civilly and sensibly online. Educators are urged to help children think of online environments as communities of which they are a part; hoping that they will act more responsibly. Students should be taught that their online presence should grow and flourish. They should be creative and also think things through before they publish it to the web. They should know that once something is posted, it is there forever (in archives). Educators should take the lead and model the appropriate online behavior for their students (Villano, 2008).

Villano provided some illustrations of leading by example in his article. He suggested schools hold “Cybermites” for parents to come to the school and have the students teach them about digital citizenship. Outside speakers could be secured for this as well. He also suggested sponsoring some online learning for teachers and parents who are not up to speed on their technology skills. Teachers need to be users of technology themselves in order to teach these tools to their students. Blogs and wikis are a great way to start (Villano, 2008). Parents can only be a supportive part of the program when they are kept up to date and informed on current technology trends in education, as many of them work in areas where technology is not a factor. Most would welcome an opportunity to learn what they could about technology in a free and non-threatening environment (Villano, 2008).

Teachers can lead the way in this endeavor. Ribble stated that teachers must be avid users of technology. They must be inspired, optimistic, creative, civic-minded risk takers. If

technology is one of the keys to education, then teachers must take the lead. They should model appropriate behaviors and encourage students to be citizens of cyberspace (Ribble, 2001).

I also happen to think that technology will transform education, but only when a new generation of teachers have grown up with their handheld wireless multimedia devices, cheap flip video cameras, and who are currently doing/using digital imaging, video filming/editing/self-publishing, blogs, wikis, podcasts, My Space, Facebook, flickr, YouTube, Second Life, text messaging, Skype, video telephony, and the like as part of their everyday lifestyle. (Delacruz, 2009, p. 266)

### **C3 Framework: Promoting Responsible Use**

The theoretical framework used for this study is the C3 Framework created by education and technology expert Davina Pruitt-Mentle, Ph.D. It is divided into three dimensions:

Cyberethics, Cybersafety, and Cybersecurity. Although the dimensions overlap, they also have differences that must be discussed separately. These differences include subject matter and psychological differences. Originally written in 2000, this framework has been utilized by many agencies and organizations for guidance in designing their own policies and curricula.

The need to encourage socially and ethically responsible behaviors in an online community are not new ideas. Since the influx of computer networks in schools, students, teachers and administrators have been asked to sign AUPs. Internet filters and firewalls have been installed for the protection of student safety (Ribble, 2011). According to Pruitt-Mentle, students need to be educated as to why the rules and filters are in place. When students leave the safety of a school network with its firewalls and filters, they may enter an unblocked network that is completely open to dangerous activities. They must be taught how and why to make sound decisions when using the Internet (Pruitt-Mentle, n.d.).

Ethics is intended to represent a personal choice. Using the analogy of riding a bicycle, ethically we choose not to ride on our neighbor's grass. Safety refers to safe practices, i.e. ride on the right side of the road, and obey traffic laws. Security refers to additional items we have to do, for example, adjust gears and brakes. The first is a moral choice, the second is the way we behave, and the third requires

further action, and each operates at a different cognitive level and therefore needs to be broached differently. (Pruitt-Mentle, n.d., p.1)

President Obama referenced the National C3 Baseline Study in his 60-day Cybersecurity Policy Review (Pruitt-Mentle, n.d.). The initial C3 Baseline Study was conducted by the National Cyber Security Alliance (NCSA) in 2008 (Pruitt-Mentle, 2008). During the study, data were collected from 1,569 public and private U.S. K-12 educators and 94 technology coordinators and both qualitative and quantitative methodologies were employed. The survey was web-based and used the C3 Framework. The study aimed to identify educators' lack of knowledge in order to identify C3 topics that required training. Results of this study indicated "limited awareness programs and policies for students as well as discomfort and a general lack of fluency for educators" (p. 63). The conclusions were that the C3 Framework "is ideal for guiding the practice of the C3 movement nationally, within a region or even internationally. Unfortunately, experiences, literature, and the recent C3 Baseline Survey indicate that most local education agencies do not have policy frameworks on C3 education at all" (p. 12).

The NCSA has since conducted annual studies in 2010 and 2011 to test the attitudes of K-12 school employees about Cybersafety, Cybersecurity, and Cyberethics. Administrators, teachers, and technology coordinators were surveyed in private and public schools from across the nation. The last report from 2011, shows school employees are committed to bringing their students and teachers into the digital age, but fail to equip them with the basic skills that come with Cybersafety, Cybersecurity, and Cyberethics (<https://news.microsoft.com/2011/05/04/2011-state-of-cyberethics-cybersafety-and-cybersecurity-curriculum-in-the-u-s-survey/#sm.0000sufbqfbcefltw8f1wrjjvtb6h>).

The NCSA report shows that administrators, teachers, and technology coordinators disagree on many aspects of what should be taught and how. Only 55% of teachers surveyed felt

that teaching Cybersafety, Cybersecurity, and Cyberethics was their job, while a much greater percentage of administrators and technology coordinators felt that it should be taught in the classrooms. However, almost the same percentage of teachers agreed that their school systems were not doing a sufficient job in preparing their students in online safety, security, and ethics. Again, a greater percentage of administrators and technology coordinators believe their school systems are performing adequately (<https://news.microsoft.com/2011/05/04/2011-state-of-cyberethics-cybersafety-and-cybersecurity-curriculum-in-the-u-s-survey/#sm.0000sufbqfbcefltw8f1wrjvtb6h>).

More than one-third of the teachers surveyed received little or no professional development in their districts on Cybersafety, Cybersecurity, or Cyberethics. In all, 86% received less than six hours of professional development in these areas. Less than 50% of the teachers surveyed felt prepared to teach lessons relating to Cybersafety, Cybersecurity, and Cyberethics (<https://news.microsoft.com/2011/05/04/2011-state-of-cyberethics-cybersafety-and-cybersecurity-curriculum-in-the-u-s-survey/#sm.0000sufbqfbcefltw8f1wrjvtb6h>).

The study showed that the majority surveyed were in agreement that schools should have a curriculum in place that prepares students to be workforce ready, including the skills that relate to Cybersafety, Cybersecurity, and Cyberethics. Yet teachers readily admit that they are not teaching these skills. Some blame parents as the responsible leader in teaching these skills to students. Michael Kiser, executive director of the NCSA, stated, “Just as we would not hand a child a set of car keys with no instruction about how to drive, we should not be sending children out into the world without a solid understanding of how to be safe and secure online. It is critical to our national and economic security, and it’s our shared responsibility as parents, educators,

and citizens” (<https://news.microsoft.com/2011/05/04/2011-state-of-cyberethics-cybersafety-and-cybersecurity-curriculum-in-the-u-s-survey/#sm.0000sufbqfbceftw8f1wrjjvtb6h>).

Although studies were not located about teachers’ ability to teach digital citizenship concepts and standards, a study about pre-service teachers revealed supporting results. A study was conducted with pre-service teachers in a Mid-Atlantic university undergraduate technology course in the school of education (Pusey & Sadera, 2011). This was a required course for education majors. The majority of the students were sophomores and juniors. The course was designed to teach them to use 21<sup>st</sup> century online tools and to integrate the NETS standards into their lessons. They were given a ten-item test about C3 Knowledge (Cyberethics, Cybersafety, and Cybersecurity), which was based on the C3 framework. After a lengthy study, the results showed that the pre-service teachers did not have the required knowledge to teach their future students enough to keep them and their property safe digitally. A survey showed that the pre-service teachers felt that the responsibility to teach this C3 knowledge was in the hands of the IT department, the library media specialist and the parents. However, Pusey and Sadera (2011) held that just as teachers warn their students to watch for cars when crossing the street, they should also warn them about safety, ethics and security when using the Internet.

### **C3 Matrix**

The iKeepSafe Digital Citizenship C3 Matrix is one example of content developed using the C3 Framework. The Internet Keep Safe Coalition (iKeepSafe) was established in 2005 to help parents, educators, policy makers, and anyone working with youth in making good decisions concerning online trends and programs. Through the network, there are a number of tools and products offered to the community of digital members. This non-profit organization consults law enforcement agencies, government agencies, educators, policy makers,

corporations, and other contacts to maintain a continuous offering of positive resources (<http://iKeepSafe.org>).

The Digital Citizenship C3 Matrix (C3 Matrix), based on Bloom's Taxonomy (2001 revised edition), was designed to help teachers integrate digital citizenship into their current curricula. The three areas of focus are Cybersafety, Cybersecurity, and Cyberethics (C3). Anderson and Krathwohl (2001) posit that this matrix will also be of great value to policy makers and administrators in developing acceptable use policies and constructing goals for the learners. The matrix uses a "holistic and comprehensive approach to preparing students for 21<sup>st</sup> century digital communication" (Anderson & Krathwohl, 2001, p. 1).

The C3 Matrix levels measure competency three ways: basic, intermediate, and proficient. These are not based on a student's age or grade level but uses Bloom's Taxonomy of Educational Objectives (2001 revised edition), which organizes six cognitive abilities from simple to complex. The six, from simple to complex, are: remembering, understanding, applying, analyzing, evaluating, implementing, and creating. By using the taxonomy, the students' levels can be defined, allowing the appropriate level of instruction and curriculum type to be delivered. Levels may include students from various ages and grade levels (Anderson & Krathwohl, 2001).

The first category of the C3 Matrix is Cybersafety, which focuses on students' ability to stay safe online, protecting their identity and personal information, as well as learning to discern dangerous situations and online behaviors. The three skills pertaining to Cybersafety are

1. Recognize online risks, make informed decisions, and take appropriate actions to protect themselves while using technology systems, digital media, and information technology;
2. Make informed decisions about appropriate protection methods and secure practices within a variety of situations; and
3. Demonstrate and advocate for safe behaviors among peers, family, and community. (Anderson & Krathwohl, 2001, p. 4)

Each skill has a competency level of basic, intermediate, or proficient. The basic levels for all three skills in this category pertain to basic recognitions and descriptions of the skill. The intermediate level builds on the basic level and requires more discussion and modeling. The proficient level takes the first two levels a step farther asking the student to use, explain, adhere, and advocate.

The second category in the C3 Matrix is Cybersecurity. Cybersecurity addresses safe and responsible actions concerning the physical protection of hardware and software, plus personal information and resources that may lead to identify theft or hacking. The personal information addressed in this category leans more toward identify theft and financial ruin, whereas, Cybersafety addresses a more social type of personal information (stalkers, online predators, etc.). There are four skills listed under Cybersecurity. They are

1. Recognize security risks, make informed decisions, and take appropriate actions to protect themselves while using technology, technology systems, digital media and information technology;
2. Make informed decisions about appropriate protection methods and secure practices within a variety of situations;
3. Demonstrate commitment to stay current on security issues, software, and effective security practices; and
4. Advocate for secure practices and behaviors among peers, family, and community. (Anderson & Krathwohl, 2001, p. 5)

In this category, the competency levels are similar to the ones in Cybersafety, except that all the skills, except the first one, are not even considered in the basic competency level. A student would need to be at the least in the intermediate level to address these skills, which is one of the reasons these categories should not be taught in isolation, as they overlap, and build from one to another.

Cyberethics encompasses eight skills which may cause the illusion that this is a more important category to be taught. However, Cyberethics goes hand in hand with Cybersafety and

Cybersecurity. One does not override the other. It takes all three for a comprehensive overview of digital citizenship. The eight skills addressed in Cyberethics are

1. Understand and follow acceptable use policies (school, home, and community), and understand the personal and societal consequences of inappropriate use;
2. Demonstrate and advocate for ethical and legal behaviors among peers, family, and community;
3. Practice citing sources for text and digital information and make informed decisions about the most appropriate methods for avoiding plagiarism;
4. Make ethical and legal decisions when confronted with usage dilemmas while using technology, technology systems, digital media, and information technology;
5. Exhibit responsibility and netiquette (i.e., appropriate digital communication skills) when communicating digitally;
6. Recognize the signs, emotional effects, legal consequences of and effective solutions for cyberbullying;
7. Recognize appropriate time and place to use digital tools, techniques, and resources; and
8. Understand the importance of online identity management and monitoring (ORM). Advocate others to understand the importance ORM. (Anderson & Krathwohl, 2001, pp. 7-10)

A pilot study using the C3 Matrix was conducted in the Simi Valley Unified School District during the 2013-2014 school year. During the pilot, the committee met monthly to discuss the progress and problems of the program's implementation. They planned for further implementation of the components such as the self-assessment tool. During this particular meeting, they discovered that up until the beginning of the program the principal's role had been more like a police force because they felt that they would be the ones held accountable for large and small infractions of the acceptable use policy (AUP). The committee also realized that the teachers needed to be provided a curriculum that addressed digital citizenship, but also that staff, students and parents needed to be educated as well for the best interest of the whole community.

Because this program was going to be presented to the entire district, the committee wanted to be sure that all principals received the same knowledge at the same time and would

respond to any type incident in a uniform manner. For norming purposes, the committee created a survey with open ended questions for each principal to answer. Because of the variety of answers given, there was a need to meet and come to agreement about the different situations and incidents that may occur.

In September of the same year, the district drew up and implemented a new AUP with statements that began with “I will.” The legalistic jargon was changed to laymen’s language that students could read and understand. Also, a new curriculum was executed which included five lessons: responsible use, safe use, respectful use, respecting intellectual property, and cyberbullying. This curriculum is leveled by grades and includes various formats of media aligned to the accompanying AUP, which meet the requirements for E-rate and CIPA.

The last stage of the implementation in the pilot, before rolling the program out to the district was the realization of the important role that parents play in the success of a school. Using email, the committee provided the parents with information about Generation Safe, its resources, and the curriculum. Two parent nights were planned at the pilot schools to share the curriculum and allow the parents to ask questions. At the writing of this article, this was still in the planning stages and was not yet complete. The district launch was scheduled for the 2014-2015 school year. At this time, there is no update on the district roll-out (<http://iKeepSafe.org>).

### **Elements of Digital Citizenship**

According to Mike Ribble, there are nine elements to digital citizenship. He described these elements as a framework for understanding the many issues in technology. In his research, he discovered that groups were studying one or two of the elements, but that no one person had actually taken on digital citizenship as one topic. In his book, he discussed these nine elements at

length and offers scenarios with examples of appropriate and inappropriate behaviors as well as links to websites for further reading and keywords to use for searching (Ribble, 2011).

The first element is digital access. He defined this as “full electronic participation in society” (Ribble, 2011, p.11). Opportunities to fully participate in digital access are not open to everyone. Students from poor families, students with handicaps, and students who live in rural areas are not as likely to have the same access as most. Many poor families cannot afford to set up a home network. Special needs students may have physical limitations that affect their being digitally active. Also, living in a rural area where there is no internet access would be another deterrent to having full access (Ribble, 2011).

Digital commerce is another element of Ribble’s (2011) nine. Because students are already buying and selling online, they should be made aware of the dangers and possibilities of online transactions. Generation Y (ages 8-24) has spent over \$220 billion in online purchases. They need to understand that making a mistake at a young age may follow them for many years (i.e., credit rating). Lessons on becoming an informed and intelligent online consumer seem to be past due. Although digital commerce may not fit in the curriculum for the teacher, it is definitely important for the student to know, making it something that should be taught (Ribble, 2011).

Digital communication and etiquette are two more of the nine elements Ribble (2011) deems important for schools to address. Communication refers to the exchange of information and etiquette refers to standard of conduct. Students should be aware that tone and attitude can be misunderstood in emails, text messages, and social network postings. Once published, these postings become eternal documentation that can be retrieved at any time. Parents have been looked to in the past to teach their children socially acceptable behavior, but in the case of

technology, many parents are ill-equipped because of a lack of understanding about the technology itself and the protocol in using it. Therefore, many adults are the bad examples that students are following. For example, cell phones should not ring out loud in a public forum nor should they be answered until the recipient excuses himself. Responsible digital citizens realize that the choices they make are for the courtesy of a larger group of people (Ribble, 2011).

Digital literacy is defined as “the process of teaching and learning about technology and the use of technology” (Ribble, 2011, p. 26). As teachers learn new technologies to share with their students, many times the appropriate use of these is left out. The integration of technology in the classroom is at an all-time high, but often teachers have not had enough professional development on all the aspects of how to use it appropriately. Students are looking for new ways to learn and schools need to be equipped with the knowledge to present new options. Now is the time to create a new way to educate children. Teachers need the knowledge to help them plan for these ways (Ribble, 2011).

Digital law is another of Ribble’s (2011) elements. Never before has it been so easy to find information, post ideas, and publish materials on the internet. Ignorance cannot be an excuse for breaking laws online. Illegal file sharing became an issue early in the century when thousands of people were sharing music online on sites like Napster. Many people found themselves liable to the music industry, which brought charges against them. Families faced fines ranging from a few thousand dollars to much larger amounts because their children were downloading music from these sites. Sharing information is not illegal as long as it is being shared by the person who owns it. Intellectual property became a buzz word and school systems took a new look at copyright, plagiarism and fair use (Ribble, 2011).

Probably the most serious legal issue concerning digital law is sexting. The taking and passing back and forth of sexually explicit materials can mean detrimental consequences, especially if any of the parties are under age sixteen. It becomes a case of possession of child pornography then. This could mean jail time or having to register as a sex offender, which is a lifelong circumstance. Students must be made aware that what they do in the present can affect their futures. School districts are addressing technology related laws with a new perspective (Ribble, 2011).

Digital rights and responsibilities is another element in the list Ribble (2011) provides. As stated before, with any set of rights comes responsibilities. Digital users should be able to expect their intellectual property will not be plagiarized, vandalized, or used to harm someone else. Acceptable use policies (AUP) were created for this reason. It is a vessel for making people responsible for their online behavior. When individuals have to sign a document that is kept on file, it makes the ability to interact online a little more serious. Google, along with other technology companies, have chosen as their mottos good citizenship related statements, such as “do no harm.” Schools need to have an attitude of seriousness about these rights and responsibilities that they pass on to their students giving them an understanding of what is expected of them concerning online behavior (Ribble, 2011).

The final element in Ribble’s (2011) book is digital security. Networks and equipment must be secure for the protection of personal data. The practice of using virus protection software, making backups, and constructing firewalls is the very minimum that students should be taught about security. Also students should make a practice of running the recommended updates. Software is only as effective as the updates that have been installed. Students should be made aware of phishing and the many other attempts to hack into networks. Teaching digital

security helps to protect many people in the online community from hazards and destruction of data (Ribble, 2011). Teaching students about the many good, useful 21<sup>st</sup> century tools at their fingertips, and how to abide by the acceptable use policy is only part of the game. There are many negative and dangerous cyber-pitfalls that students must be made aware of and urged to resist. Michael Wesch is quoted as saying, “Our lives are so incredibly enmeshed with the digital. If you’re going to be a good citizen, you have to be a good digital citizen” (Waters, 2012, p. 36). Topics of concern with students are sexting and cyber-bullying which literally came from nowhere and are now at an epidemic state. Students need to be educated that anything they publish to the web or send by cell phone can be recreated, whether or not they delete it. Most teens do not realize that pictures posted to the web no longer belong just to them. They have published them for the world to see (Ohler, 2011).

Another one of the negative aspects of the online world is piracy. “Educators must teach students about online ethics: that hacking information, downloading illegal music (and movies), plagiarizing or causing damage to other people’s work, identity, or property online is a crime” (Villano, 2008, p. 2). Students should be informed that there are laws to protect the people who use the Internet. The laws are there to protect *them* as well as the others. Teachers should stress to students that there is a responsibility issue when using the Internet and that it should be taken seriously. Warren Arbogast, founder and president of an education technology consulting firm in Washington, DC, believes that parents should begin this education at home but it should not stop there. “To me, it comes back to the basics and the golden rule: Treat others as you want to be treated. If something isn’t yours, don’t take it. If you aren’t sure, err on the side of caution. These lessons have to start somewhere, and it’s essential for kids to learn them at home” (Villano, 2008, p. 5).

Digital health is a very important issue that should be discussed with students in schools and at home. Children need to know how to live socially appropriate digital lifestyles that are informed, safe, and healthy. Educators and parents should be coaching students on developing social and professional opportunities that are available to them online. Just as sex education in schools was resisted in the 1960s, many are simply not willing to teach the necessary elements of digital citizenship to their children and students (Ribble, 2011). “As we reflect on sex education we look back and wonder why it took us so long to do something that makes so much sense today” (Ohler, 2011, p. 27). Teaching proper online ethical behavior will be seen in the same light. Why not teach the content now that children so desperately need? (Ohler, 2011). While school districts must attend the symptoms of the problem, by installing internet filters and written policies, making them compliant with the law, there should be a plan in place to educate and develop those skills needed to be a digital citizen (Ohler, 2011).

Confucius is quoted as saying “If you govern the people logistically and control them by punishment they will avoid crime, but will have no personal sense of shame. If you govern them by means of virtue and control them with propriety, they will gain their own sense of shame, and thus correct themselves” (Willard, 2002, p. 1). Educators should realize that students need guidance in comprehending the required element of ethical behavior in this advanced age of technology. Students should know that everything they do on the Internet reflects who they are as a human being; their morals, values, and personalities. Willard has said that as children grow and develop cognitively, they begin to have a more realistic view of the world around them. There are three outside influences that aid this development. The knowledge that something they did caused harm to someone else usually brings about empathy and shame. Social disapproval will also bring about shame. When a student makes an inappropriate decision and his peer group

becomes aware of it, there are feelings of shame and embarrassment. Maybe the most influential of the three is the threat of punishment by an authority. Punishment brings about shame as well, but also fear and anger. These influences are instrumental in the moral and ethical behavior development of students (Willard, 2002).

Because of e-rate, most, if not all, Alabama public schools are CIPA compliant. Policing efforts of student internet use are in place in every school that depends on this federal funding. Administrators must sign a document agreeing to this. Internet filters and policies must be in place, but what about the teaching of digital citizenship to the students? “Studies show that school personnel often see Cybersafety instruction as unnecessary because the school has locked down its computer systems” (Melgosa & Scott, 2013, p. 47). Filters are necessary, but not perfect. Policies must be in place to protect students, but can be easily ignored. Adding a school-wide curriculum would be a more effective way to address students’ safety on the Internet while at school (Melgosa & Scott, 2013).

### **Surrounding States**

Alabama’s bordering states appear to be at the same level of integration of teaching digital citizenship to its students. The emphasis is placed on policing Internet use with filters, policies, and disciplinary actions for infractions. This is required by the FCC for school systems to qualify for e-rate funding. According to the websites of the individual state departments of education, none of the five, has a digital citizenship curriculum in place or even suggested. All five states have in-depth technology plans which include the requirements for e-rate funding (Georgia: [www.gadoe.org/Technology-Services/Infrastructure/](http://www.gadoe.org/Technology-Services/Infrastructure/), Tennessee: <http://www.tn.gov/sbe/Policies/3.204%20Technology%20Long-Range%20Plan.pdf>, Mississippi: <http://www.mde.k12.ms.us/OTSS/ET/state-technology-plan>, Florida: <http://www.fldoe.org/about->

[us/division-of-technology-info-services/bureau-of-edu-tech.stml](http://www.alsde.edu/division-of-technology-info-services/bureau-of-edu-tech.stml),

Alabama:<http://www.alsde.edu/Innovations%20Miscellaneous/Alabama%20PLAN%202020%2001092014.pdf#search=technology%20plan> ).

“Many policy makers lack awareness of the importance of digital citizenship, not fully realizing its existence and not fully realizing it must be intentionally taught” (Preddy, 2016, p. 2). In fact, many educators are unaware of what digital citizenship is and what all it involves. It should not fall on one teacher or department to teach. It should be a school-wide effort (Preddy, 2016).

### **Effectiveness of a Curriculum**

In 2010, Boyle conducted a quantitative quasi-experimental study on the effectiveness of a digital citizenship curriculum using Ribble’s Nine Elements (Ribble, 2011). His goal was to measure the effectiveness of the influence a digital citizenship curriculum had on the appropriate and inappropriate behaviors of secondary students in an urban school. His instrument was Ribble’s “Digital Driver’s License” for secondary students (Ribble, 2011). Ninth-grade students were divided into two groups; one group receiving the digital citizenship lessons (treatment), the other having no treatment. Post test scores were compared at the end of the unit (Boyle, 2010).

The post test results showed that of the nine areas reviewed, seven of them showed a significant difference in students’ normative behavior. Digital Etiquette, Digital Communication, Digital Literacy, Digital Commerce, Digital Law, Digital Rights and Responsibilities, Digital Health and Wellness all showed impressive gains after the curriculum was taught to one group. The elements reporting the highest gains were Digital Etiquette and Digital Rights and Responsibilities. Areas showing no specific change were Digital Access and Digital Security. The issues the researcher focused on were Digital Etiquette and Digital Rights and

Responsibilities. Digital Etiquette lessons addressed proper email use, social networking, cell phone misuse, and instant messaging issues. Digital Rights and Responsibilities lessons honed in on plagiarism, copyright infringement, and illegal file sharing. His findings showed a true relationship between the times spent addressing the issues and the higher post test results than the group that received no treatment (Boyle, 2010).

The curriculum in this study included four lessons for five ninety-four minute blocks and three oral presentations per student. The first four lessons consisted of cyberbullying, online safety, internet plagiarism, and online etiquette. The remaining issues regarding digital citizenship were covered in the oral presentations throughout the rest of the year. There is still much work to be done (Boyle, 2010).

Another example of a digital citizenship curriculum can be found on the Common Sense Education website. Common Sense (<https://www.commonsensemedia.org/about-us/our-mission#about-us>) is a non-profit organization that offers parents and educators information, tools, and lessons for bringing up children in a digital society. They also have reviews on new web tools and instructional videos. There is no charge for the use of these resources. Young refers to this as her “go-to” place for resources (Young, 2014).

The Los Angeles Unified School District initiated the district’s first Digital Citizenship Week in March, 2013. This campaign was partnered by Common Sense Education and kicked off at Western Avenue Elementary School. Local politicians, educators, special guests and students met to realize the seriousness of digital citizenship for the students. Students were encouraged to take ownership of their digital learning and how to be safe and responsible while online. Although, the kick-off celebration was a success, the leaders were left questioning how to engage the entire district. They launched a 1.1 initiative called the Common Core Technology

Project, hoping to enhance teaching and learning through technology giving all students the same opportunities to enrich their technology skills (Monterosa, 2015).

The second year brought about changes. They used social media to guide the project, teaching students about making digital footprints, creating online portfolios to help with college and job applications, staying safe and secure online, choosing passwords, cyber-bullying, and digital citizenship. Common Sense helped to guide this project by developing and supporting the content. It is an on-going project that changes as the digital world changes (Monterosa, 2015). “The conversation must go on if we are to ensure today’s students are prepared for 21<sup>st</sup> century opportunities” (Monterosa, 2015, p.32).

### **Programs for Digital Citizenship**

In Ft. Worth, Texas, a PK-12 school has integrated an online social media network into their curricula (Winn, 2001). There are tight controls, but the network allows teachers to teach appropriate online manners and behavior. This network is very comparable to Facebook and other such social sites. Students are allowed to create their own pages and profiles. Just like Facebook, they can post thoughts, ideas, pictures, videos, comments, and other content. They can join groups, like pages, and participate in discussions. The only real difference is access and accountability. The network is only open for students, teachers, and administrators. The outside world of spammers, advertisers, and predators is locked out. Students are protected. In fact, sub-networks were created to prevent the elementary students from interacting with high school or middle school students. Each sub-network is age appropriate. Adult and student conversations must be accountable, so there is no private messaging. Everything is public. There are no “friendships” either. In other words, everyone on your sub-network is your “friend.” Since all communication is public, it is acceptable, so there should be no suspicious online relationships.

Also, since all posts and communications are public, digital etiquette is the norm, creating integrity for all.

One teacher is charged with maintaining the site. She has created a tech apps class that will assist her in maintaining the site. Teachers have integrated the use of this into the curriculum. They are posting assignments and having students put their work online. The possibilities are endless (Winn, 2011).

Because businesses rely so much on good ethical behavior, they expect colleges and schools to educate students about ethics and train them how to handle situations in a positive manner. Many programs have come up short. Existing programs have been found to be inadequate in the teaching of ethics to college students (Kavuk et al., 2011). Generally, case studies and conversations using situated dilemmas have been used to test the students' ethical behavior. Role play has been found to be effective as it allows students the "feel" of being caught in the situation at hand. It also provides them with creativity and a little fun, which keeps the student engaged and involved in the process.

One project suggestion is to have students make videos for YouTube, teaching ethical behavior not only to their classmates but to others, as well (Kavuk et al., 2011). Before publishing the video to the web, students must meet the criteria on the rubric and have their classmates' approval. This project could be adapted for a high school or even a middle school project when teaching ethical behavior; having students wear another person's skin for a few uncomfortable moments. Students need to know how another person might feel when the roles are reversed. Being uncomfortable is a good way to drive home a point (Lehman et al., 2010). While the Internet has offered a rich space for its inhabitants to create and participate, online communities many times fall into the hands of a commercialized belief system that may

compromise their own ethical behavior. Having a framework of learning guidelines in the use of the Internet can help students make good ethical choices when using the Internet later in life (Bennett et al., 2009).

### **Help for Parents, Teachers, and the Community**

In a research study on teens and social networks, it was found that 94% of the parents surveyed have talked about online safety and appropriate internet behavior with their teens (Lenhart et al., 2011). A wide variety of topics were highlighted in these discussions. When the teens were surveyed, 88% of them agreed that they had participated in these types of discussions with their parents. Latino and low-income parents were less as likely to have had these discussions. Also, parents who do not participate in social media are not as likely to have these types of discussions with their teenager. Parents of pre-teens and younger teenagers are more likely to have had safety conversations with their children than parents of older teens (Lenhart et al., 2011).

The Federal Trade Commission has published a kit, Net Cetera, for parents and other community leaders to use with students in the education about digital citizenship (Net Cetera, 2013). It is free and can be ordered online from their website. There are two CDs of presentations, a book for students, a book for parents, and a book to help organize a community or classroom presentation. The parent book provides a brief synopsis of what digital citizenship is, definitions of other related terms, appropriate and socially acceptable digital behavior, suggestions, and a list of other resources the parent can use. The student book is much more condensed and in a more student-friendly format, but offers good tips and information.

The FBI (Federal Bureau of Investigation) has also published a free online program called FBI-SOS (Safe Online Surfing) Internet Challenge (<https://sos.fbi.gov/>). Teachers can

register their classes/schools online and students compete for a trophy. It is a month long comprehensive study of Internet safety for 3<sup>rd</sup>-8<sup>th</sup> grades. Its game like format makes it fun for students to compete, and the length of the program allows for every student in every class to have a chance to compete without taking away from classroom activities. At the end of the school year, the school with the highest total of student scores wins a trophy and a visit from an FBI agent. Participation is completely free. It is administered at Nova Southeastern University's Fischler School of Education and Human Services by the Common Knowledge Scholarship Foundation. It is sponsored in part by the Miami Dolphins, Time Warner Telecom, and the Enlightenment Foundation (FBI website).

Another website offering the same game type atmosphere is an international site from the Department of Education and the Commonwealth of Australia (<http://www.digitalcitizenship.nsw.edu.au/>). It is divided into three categories: primary, secondary, and parents. The secondary section is very interactive; allowing the student to select an avatar and decorate a bedroom space. It uses real-life circumstances like chat rooms, text messaging, and computer security. Like the FBI site, it is engaging and gives immediate feedback to the player. It could be used as a group activity or by an individual student. Registration to play is not required.

Common Sense is a non-profit organization that offers parents and educators information, tools, and lessons for bringing up children in a digital society. They also have reviews on new web tools and instructional videos. There is no charge for the use of these resources (<https://www.common sense media.org/about-us/our-mission#about-us>).

Parents should be included in the process of teaching digital citizenship to students. Students should know that parents have been informed about what is and is not appropriate

behavior online and in the use of equipment. Parents should not only be given a copy of the Acceptable Use Policy (AUP) but should actually sign that they have read it. Then parents can be considered part of the education force; members of the team (Orth, 2013).

### **Summary**

Encouraging and educating students to use socially acceptable and ethical behavior is not a new topic. However, a need has arisen that the same character education be applied to the existence of a student's online presence. Digital citizenship has been referred to as cyber-citizenship and cyber-awareness, but all these names point to the same issues concerning a person's responsibilities to the community of digital citizens. Students should be taught that the acceptable behaviors they have been taught at home and at school are the same behaviors that are expected when they are online. The Golden Rule applies in most religions and as well to the Internet. Students need to think how they would feel if someone were doing the same things to them (Willard, 2002).

One of the problems in teaching digital citizenship is that students do not know or are simply not willing to admit that people who control their futures and successes may use the student's digital footprint to make judgments for and/or against them. Colleges and universities can follow the footprint to make decisions about the student's acceptance in their programs. Some education programs in universities are asking their pre-service (student) teachers to take down their social networking sites until after graduation. In a sense, this is a way of protecting the young teacher from herself. After college, businesses follow that same footprint to determine if there is a future with their company for this former student (Ribble, 2011).

“A curriculum of digital citizenship will need to be taught at two levels at once- the horizontal (the world immediately around them) and the vertical (the connection to the rest of the

world)” (Ribble, 2011). This makes teaching digital citizenship a little tougher task than just using a textbook or lesson plans from a district. Students need to be prepared for working, competing, and living in a digital global society. This preparation should begin early, no later than 1<sup>st</sup> grade, before they learn inappropriate behaviors.

At the writing of this literature review, scholarly academic journal articles are not in abundance. There are many articles that define the various aspects of digital citizenship and related terms, however, few of those expound on the necessity of teaching these concepts to students for safety and ethical reasons. The perspective of this proposal is on the horizon of urgency for practitioners and classroom teachers. ISTE and other organizations have recognized the need for teaching Cybersafety, Cybersecurity, and Cyberethics. It has also become a much talked about topic on social media.

## CHAPTER III:

### METHODS

#### **Introduction**

The purpose of this single case study was to explore the teaching of digital citizenship concepts and standards by fifth grade teachers in the Sunshine School System. A case study method was chosen in order to study the topic in-depth and to discover how fifth grade teachers educate their students about digital citizenship. “Digital citizenship is a way of life,” and yet there is still a lack of responsible digital use by many people (Ribble, 2011, p. 2). Policing Internet use in schools is no longer going to be the only effective solution with students who will become digital adults. There must be an education process.

#### **Research Questions**

The overarching question for this study was as follows: how are Sunshine School system’s fifth grade teachers teaching their students’ about digital citizenship? Sub questions include 1) how are Sunshine School System’s fifth grade teachers teaching their students about Cybersafety; 2) how are Sunshine School System’s fifth grade teachers teaching their students about Cybersecurity; and 3) how are Sunshine School System’s fifth grade teachers teaching their students about Cyberethics?

#### **Setting of the Research**

The school system for this study, the Sunshine School System (pseudonym) is located in the heart of a small city in Alabama; the population is just over 37,000. The city’s largest employer is a large industrial plant. Other significant job sources are poultry processing plants,

small manufacturing plants, restaurants, health care and hospitals, and retail. The average annual salary is \$48,817.00 (Chambers, 2014).

The Sunshine School System began operation in 1889. It operated under the direction of a board then, as it does currently. There have been eleven superintendents since it was founded. In the beginning, schools had only eight grades. Grade levels were added each year until there were twelve. There is no record of the number of schools in that first operating year in the district of the Sunshine School System. Today, however, there are eight elementary schools (kindergarten-fifth grade), three middle schools (sixth-eighth grades), and one high school (ninth-twelfth grades). The school system has an Even-Start program, an Alternative School, a Parent Resource Center, a Community Education Program, and a Career Technical School. Also, high school students have the opportunity for dual enrollment with the local community college.

During the study, it was noted that furniture and equipment varied from school to school. The more affluent school had the oldest furniture and equipment because they do not receive Title I funds. The Title I schools had more and newer computers. Every participating classroom was equipped with a projector and at least one teacher computer. All but one of the participating classrooms also had an iPad cart with student iPads. The classroom with no cart did have student iPads.

### **Participant Selection**

The participants in the study were fifth grade teachers in The Sunshine School System in Alabama. The fifth grade was chosen as the focus of this study because the students are not yet teenagers. Since they are not in middle school and are the older children at the elementary level, the researcher feels this would be an opportune place to begin the study. Research shows that six out of ten children, age ten, own cell phones (Hollandsworth et al., 2011). Because studies show

that children begin using digital devices early, the researcher felt that the technology standards taught in fifth grade would be a beneficial place to begin (Hollandsworth et al., 2011).

There are sixteen fifth grade teachers in the Sunshine School System. All are female except one. All are certified by the state of Alabama, and have been deemed Highly Qualified by the State Department of Education in Alabama. All teachers were invited to participate in this study through an email sent by the researcher. Of the sixteen, eight volunteered, but one teacher had to drop out of the study for personal reasons.

### **Qualitative Research**

Qualitative research is used when a problem or an issue needs to be explored rather than measured. Silent voices may be heard through qualitative studies and theories are developed using qualitative research. This type of research yields a more in-depth and intimate data finding due to face to face interviews with the people directly involved with the issue or problem and the observations on-site (Creswell, 2013).

I think metaphorically of qualitative research as an intricate fabric composed of minute threads, many colors, different textures, and various blends of material. This fabric is not explained easily or simply. Like the loom on which the fabric is woven, general assumptions and interpretive frameworks hold qualitative research together (Creswell, 2013, p. 42)

Creswell's eloquent description of qualitative research reinforces and confirms the depth to which subjects can be studied using a qualitative method, specifically case study.

There are many different characteristics of qualitative research. It most often occurs in a natural setting, which puts the participants at ease. Natural settings make for a more relaxed, rich interview. The researcher collects data where the participants experience the issue or problem. The data are collected by the researcher herself, such as examining documents, conducting interviews, or just observing. She is the key instrument. She will then review the data and

organize it into themes or categories. It is a bottom up process, built by inductive and deductive reasoning. It is emergent by design. The participants bring meaning to the study with their own perspectives. The process may be ever changing according to the participants' perspectives and the data collected. It is a holistic account that looks at an issue from many perspectives and ideas as a much larger picture begins to emerge. The researcher must identify the commonalities and relationships of the data. Researchers find themselves becoming part of the study by identifying their knowledge of the problem, interests and background information that is related to the study, and what they may have gained from the study (Creswell, 2013).

The researcher chose to use the case study method. "A case study is an empirical inquiry that investigates a contemporary phenomenon in-depth and within its real-life context...." (Yin, 2009, p. 18). Case studies are particularistic, descriptive, and heuristic. The knowledge gained from a case study is more concrete and contextual because the researcher is the instrument of the study and experiences the study firsthand (Merriam, 2009). Case studies answer the *how* and *why* questions the researcher might have and are useful when the researcher wants to be as close to the issue in its natural setting to observe, interview participants, and inspect documents. This case study provided insight into the issue of teaching digital citizenship to fifth graders.

### **Researcher Positionality**

I have been teaching for more than 30 years. My first teaching experience was in a parochial pre-school setting. I have taught at the elementary, middle school, and high school levels in public schools. Since the first Apple IIe computers made their way into the classroom, I have been involved in integrating technology into the classroom experience. Innovation is intriguing, as I envision ways to use it with my students. After thirteen years at the middle school level, I found that my students loved technology, but were not using it to its fullest potential,

were not using it properly and appropriately, and had no foundation for Cybersafety, Cyberethics, or Cybersecurity. My focus and passion became teaching them to be safe and ethical while online, but to also take into consideration what content they allowed on the school's equipment and networks. I encouraged my co-workers to move forward, having students publish to the web, create projects, and embrace a healthy online presence. I feel the need to teach these standards is reasonable, urgent, and real.

Because of my experiences and compassion for this subject, there may be a bias present. As the researcher, I worked diligently to protect the data from personal bias. The use of member checks, triangulation, peer review, and external audit helped guard against bias.

### **Instruments**

The use of face-to-face, semi-structured interviews and classroom observations served as the main instrumentation of this study. Teachers were asked open ended questions in the interviews (see Appendix A). The researcher visited each classroom twice, at times that were decided upon by the researcher and the individual teacher. Lesson plans were examined for evidence that technology objectives concerning digital citizenship are being addressed.

The researcher kept a journal of her experiences while conducting interviews and classroom observations. Classroom observations were conducted to observe the participants to see if and how they were addressing digital citizenship during regular lessons that used technology. An observation guide was used to aid in this process (see Appendix E). The journal was used in external audits and may be used for further research in this area. It also served as a reminder for the researcher while writing the research findings from the observations, interviews, and lesson plans.

## **Data Collection**

Since the purpose of the study concerned the teaching of digital citizenship concepts and standards to fifth grade students, the researcher worked with the appropriate group of educators. After an informational email, introducing the study, teachers were asked to participate. Once the teachers agreed to participate, the interviews were scheduled in each of the teachers' classrooms, either on their planning period or after school. Each teacher was interviewed twice with interviews lasting approximately 30-45 minutes. A follow-up question was asked, via email, to clarify whether or not there were cyber-bullying issues in the participating classrooms. The researcher recorded each interview using a recording app on her iPad and later transcribed them using Microsoft Word.

Interviews were used because

Conversation is a basic mode of human interaction. Human beings talk with each other; they interact, pose questions, and answer questions. Through conversations we get to know other people, learn about their experiences, feelings, and attitudes, and the world they live in. (Kvale & Brinkman, 2009, p. xvii)

Research interviews are professional in nature but also are a casual exchange of daily life information, shared and discussed in the interaction of the interviewer and the interviewee (Kvale & Brinkman, 2009). Using interviews allowed the researcher to experience the dynamics of the participants' speech, body language and expressions, giving more voice and meaning to the participants of the study.

## **Description of Classroom Observations**

Classroom observations were scheduled with the teachers at times when their students were using computers or other connected devices. Observation guides were used to document whether or not digital citizenship was being addressed. The researcher kept a journal during her classroom observations and coded the journal for evidence of the teaching of digital citizenship.

During the observations, the researcher was looking for confirmation that areas of digital citizenship, such as plagiarism, citations, safety, etc. were being addressed.

Teachers were observed in their classrooms during instruction time with their students using the class set of iPads. Scheduling and holidays became an issue for observations at School A. Students in fifth grade were going to space camp and there were also several programs scheduled that only allowed for one classroom observation for Teachers 1, 2, and 3. Teachers 4, 5, 6, and 7 were each observed twice. All observation times varied from 15-60 minutes each, according to the completion of a lesson or an agreed time frame between the teacher and the researcher. The researcher used an observation guide for recording quick data. The researcher also kept an observation journal with a detailed account of her visit and her thoughts.

The first visit to Teacher 5's classroom found the students with their reading texts on their desks, and the teacher in front of the room with her text. She had forgotten the scheduled visit. She moved to the computer and projector. Her white board had a zebra striped border that made reading the vocabulary presentation difficult. She continued with the presentation even though the images were not loading, and some were covering the words in the presentation. There was no reference to digital citizenship. The next visit found the students taking an online reading test using Reading Street. She demonstrated for me how she uses her laptop to monitor their progress and scores. This allows her to conference with her students immediately, and plan for re-teaching. There was no mention of Cybersafety, Cybersecurity, or Cyberethics.

At the end of this lesson in December, she allowed her students to work on their 4-H project. It was a cookie recipe project. Her students were allowed to search cookie recipes using Google with no direction. She did walk around the room. Students were observed looking at sites that led to them to getting off the path of finding cookie recipes. One student found a bakery

website. He began looking at birthday cakes. This led to him super hero sites. This continued until he reached a site that was obviously blocked because the filter permission page popped up. Had the filter software been down that day, what might he have seen?

In the classroom next door, students were using sites the teacher had written on the board. Teacher 6 had shown two short video clips about ocean life. Students were then required to answer questions about the video. She provided web pages where they could find the answers. The approved websites for finding answers were listed on the white board. She referred to this lesson as a research lesson. She reminded her students to cite the website they used to answer each question. She also told the students that the questions must be answered in their own words.

Both visits to School D were more encouraging than the other schools' visits. Teacher 7 provides her students with approved websites that correlated with her lesson plans. She had reviewed the chosen sites for content. On the first visit, students were searching for facts about the American flag. She reminded her students to cite which of the two websites they used, and reminded them to use correct grammar, punctuation and capitalization. She told them to read the entire article and not copy the first thing they read. She asked them to summarize the facts in their own words. She and her practicum student walked among the students the entire time. The second visit was a similar experience. The students had recently taken a field trip to the Tennessee Aquarium. This assignment was a writing lesson about their favorite animal from the trip. They were to find facts, draw a picture, and write a passage about this animal. This time, however, the teacher showed the students step-by-step how to navigate this particular website that she provided. This site had ads on it, so she constantly reminded them to stay on the website and to not click on something to the side. The students worked in small groups of 3. The teacher

moved around the room the entire hour. Cyberethics and Cybersafety were both addressed in these visits.

A researcher misses so many opportunities to observe what is being taught by not being in the classroom every day, the entire day. These observations are only a sampling, but were chosen times by the teacher. The researcher asked for observation times when the students would be using the devices. The initial interviews had already been conducted when the observations began, and the teachers were aware of the subject of this study.

It was the intention of the researcher to observe the teachers during their iPad orientation in their classrooms. This would have been an ideal time to observe the training that teachers provide for their students in using iPads for research and navigating applications. The IRB protocol was not submitted and approved in time for the observation of that event. However, the iPad orientation was addressed in the individual interviews.

### **Lessons Plans**

The researcher asked participants to provide a sampling of their lesson plans showing when technology was used. Teachers in the Sunshine School System use a lesson plan template (see Appendix D) making the lesson plans uniform in appearance. Because the template is concise, the lesson plan appears to not offer much information. The lack of information given may confirm what is not being taught, or it could be that there is simply not enough space given for the teacher to be very detailed about her lesson. From the lesson plans, the researcher was looking for confirmation that areas of digital citizenship, such as plagiarism, citations, safety, etc. were being addressed. A sample lesson plan is shown in Figure 1.

Week View				
Monday 01/11/2016	Tuesday 01/12/2016	Wednesday 01/13/2016	Thursday 01/14/2016	Friday 01/15/2016
<b>Morning Work 7:40am - 8:10am</b> Work on Pres. NB - using iPads	<b>Morning Work 7:40am - 8:10am</b> Work on Presidents NB - use iPads and other books in class	<b>Morning Work 7:40am - 8:10am</b> Work on Presidents NB - use iPads and other books in class	<b>Morning Work 7:40am - 8:10am</b> Work on Presidents NB - use iPads and other books in class	<b>Morning Work 7:40am - 8:10am</b> Work on Presidents NB - use iPads and other books in class
<b>Reading 8:10am - 9:30am</b> Test on Weslandia U3 Wk. 6 Interactive Review - using DVD 182-183 - Skill Supporting Details for Main Idea  Show video on generalizations WB 248  <b>Homework:</b> Read "Tripping Over the Lunch Lady"  <b>Standards:</b> 21.b, 1, 38, 40.a, 41, 43, 41.a	<b>Reading 8:10am - 9:30am</b> Read Aloud on famous composer on p. 47b Generalize p. 48-49 Fresh Read - from Weslandia - "Bobbie's Chance" p.95-96 Go over story "Lunch Lady" with accompanying WS including ques.marked about specific skills WB260 Voc.  <b>Science 9:30am - 11:00am</b> X Marks the Spot - Diagram of body Your Digestive System WS - fill in blanks of passage & Review HW -The Inside Tract WS - includes diagram of Digestive System  <b>PE 10:00am - 10:30am</b>  <b>Science 11:00am - 12:00pm</b> See [redacted]  <b>Lunch 12:10pm - 12:35pm</b>  <b>Science 12:40pm - 1:15pm</b> See [redacted]  <b>Science 11:15am - 12:00pm</b> See [redacted]  <b>Lunch 12:10pm - 12:35pm</b>  <b>Science 12:40pm - 1:40pm</b> See [redacted]  <b>Social Studies 1:40pm - 2:30pm</b> Give the balance of the Pres. NB pgs. and assignments for their President or First Lady Go over requirements for NB, Pres. Research & Technology Presentation, & Dolls	<b>Reading 8:10am - 9:30am</b> Point out hyperbole in the story see TMS0d Read "Square Dancing" - Persuasive Text p. 70  <b>Science 9:30am - 11:00am</b> Correct Inside Tract - Review diagrams Add kidneys & bladder to Max model. Students use iPad to go to <a href="http://kidshealth.org/parent/general/body_basics/digestive.html#">http://kidshealth.org/parent/general/body_basics/digestive.html#</a> and further investigate the workings of the digestive system.  <b>PE 10:00am - 10:30am</b>  <b>Science 11:00am - 12:00pm</b> See [redacted]  <b>Lunch 12:10pm - 12:35pm</b>  <b>Science 12:40pm - 1:15pm</b> See [redacted]  <b>Strincs 1:15pm - 2:00pm</b> <b>Social Studies 2:00pm - 2:30pm</b>  Use WS - To Be President - Discuss requirements for President Students write a response to question about the requirements to be Pres. of the U.S.	<b>Reading 8:10am - 9:30am</b> Test on "Tripping Over the Lunch Lady"  Give Bio. Book Report Sheet to be done on their Pres. or First Lady Bio. Due Feb. 2  <b>Science 9:30am - 11:00am</b> Use Popplet App on the iPads to have students create a graphic organizer that they could use to help them study the Digestive system. It should include 5 facts and 1 illustration. Focus on parts of the system, key terms, and order of events in digestive process  <b>PE 10:00am - 10:30am</b>  <b>Science 11:00am - 12:00pm</b> See [redacted]  <b>Lunch 12:10pm - 12:35pm</b>  <b>Science 12:40pm - 1:30pm</b> See [redacted]  <b>Social Studies 1:30pm - 2:30pm</b> Work on Pres. Research in the Library	<b>Reading 8:10am - 9:30am</b> Reading Sleuth to accompany "Lunch Lady"  <b>Social Studies 9:30am - 10:00am</b> <b>PE 10:00am - 10:30am</b> <b>Music 10:30am - 11:00am</b> <b>Science 11:00am - 12:00pm</b> See [redacted]  <b>Lunch 12:10pm - 12:35pm</b> <b>Science 1:00pm - 1:45pm</b> Handout on Skin & Hair - The Integumentary System show video on skin at kidshealth.org  <b>Science 1:45pm - 2:30pm</b> See [redacted]

Figure 1. Sample lesson plan

### Participant Data Security

Transcribed interviews, classroom observation guides, the researcher's journal, and copies of lesson plans have been kept in a notebook in the researcher's own home. They are secured and not available for access by the general public. They are available by request to the members of the dissertation committee, the teachers involved, and a peer reviewer.

## Data Analysis

The researcher utilized a cycle of three types of data coding to analyze the data from the interviews. Coding methods were chosen from Johnny Saldana's book, *The Coding Manual for Qualitative Researchers* (Saldana, 2013). The author has compiled many methods of coding for researchers to utilize in qualitative studies. Triangulation was accomplished by examining the data from different points of reference (i.e., interviews, classroom observations, lesson plans).

The first cycle of coding used Holistic Coding (Dey, 1993). Holistic coding looks at the data as a whole, and attempts to identify themes or concepts within the whole, rather than analyzing line by line, phrase by phrase, or word by word. This type of coding is usually used in preparation for a more detailed coding approach. Holistic Coding is ideal when the researcher has a general idea of what to look for. This sets up broad categories for the researcher to dissect with other means of coding. It lays a foundation for further coding of the data (Dey, 1993).

The second cycle of coding was In Vivo Coding (Gable & Wolf, 1993). This method takes the literal words used from the culture of the participants and may provide themes from the actual spoken words. This method of coding is appropriate for case studies as it gives voice to the study's participants. In Vivo Coding lends itself well to use with teachers, who are a culture unto themselves. Teacher terminology is unique to the profession and may not be easily understood by the general public. The researcher chose several quotes of the participants' actual words to use in this study to confirm her personal belief about the outcome of this study.

Values coding, used in the final cycle, provides rich data as it involves the belief system, values, and attitudes of each participant. It lends itself to being a more personal level of coding as it permits the researcher to see through the participants' own lens. However, Values Coding has critical overtones that the researcher chose not to use. Instead, Characteristic Coding, an

adapted version of Values Coding, was utilized to determine the teachers who manifested the characteristics of a responsible digital citizen, and who teach their students the importance of digital citizenship. These characteristics were evident in the interviews and in the classroom observations.

After the interviews were conducted and transcribed, the researcher listened to the audible data while checking the transcriptions for errors. She made corrections for cross-talking and misunderstood words. She then saved the audible data on her computer with a back-up stored online for security. She saved the transcriptions in a file in a like manner. Transcriptions were printed out to use for coding. Research questions were typed out, leaving a large amount of space for emerging concepts to be noted. One copy was attached to each transcription, and one saved for tallying the totals.

The researcher read each interview and noted themes in the margins. She looked for like themes and themes that stood out individually. After each interview was marked, she began identifying themes under each research question. Themes related to Cybersafety, Cybersecurity, and Cyberethics were noted appropriately under those questions. After all the interviews were coded holistically, the researcher combined all the themes and prioritized them according to how many times they were mentioned by the participants. The totals were recorded on a copy of the research questions. During the first cycle of coding, themes that emerged were teacher responsibility, technology standards, iPad orientation, AUP/iPad agreements, and physical use of the equipment.

The second cycle of coding began with the teacher's actual words. The researcher looked for quotes during the interviews or any notations made during the classroom observations that would support the findings from the holistic coding. She highlighted those quotes in the

interview transcriptions or the classroom observation guides and journal entries. She linked them with the appropriate topics of Cybersafety, Cybersecurity, or Cyberethics. Some of the teachers' words could have been used under more than one topic. These topics overlap (Anderson & Krathwohl, 2001).

The second cycle of coding, which uses the teachers' actual words, resulted in several themes about the teaching of digital citizenship. From this cycle, student collaboration, real life situations, home connection, digital footprint, social media, plagiarism, citations, and inappropriate behavior emerged. The researcher began to connect the themes found at this cycle with the theme of teacher responsibility, found in the first cycle.

The final cycle of coding was a form of Values Coding. Values Coding has critical overtones that the researcher chose not to use. Characteristic Coding, an adapted version of Values Coding, was utilized to determine the teachers who manifested the characteristics of a responsible digital citizen, and who teach their students the importance of digital citizenship. Teachers were asked questions about their daily use of technology, both for personal and professional use. Characteristics were identified about the teachers' investment in technology.

In the final cycle of coding, the researcher began to see how much teacher responsibility, found at the first cycle of coding, plays a role in all three levels. Dependence on the computer teacher, teacher control, and a false sense of security emerged as themes at this level which point back to teacher responsibility. Could the level of the teachers' investment of the teaching of digital citizenship be related to the level of her consciousness about digital citizenship? It seemed that teachers who were more adept at technology were more committed to the responsibility of what should be taught. It is necessary to mention an important methodological concept utilized in the ongoing research. Theoretical Sampling can be described as a process where the data

continually refine themselves (Merriam, 2009). Data collection and analysis were simultaneous and ongoing. As data were collected, the researcher used them to inform further data collection. All data were coded to ascertain the major themes. After reflecting on the data collection and data analysis of each interview, any emergent themes were addressed in the future interviews. For example, as the interviews were being coded, any new theme that seemed to emerge brought up follow-up questions.

### **Classroom Observation Analysis**

While visiting the classrooms, the researcher sought confirmation that Cybersafety, Cybersecurity, and Cyberethics were being addressed by the participating teacher in a lesson, a mentioned reminder, or the use of posters or bulletin boards. Teacher 1 reminded her students to keep their iPads in the center of their desks so that she could see them at all times. Examples of some verbal reminders from the participants were not copying word for word, staying on the assigned web page, and noting the URL of the chosen website. The classroom observation analysis provided minimal information that related to the codes or themes that emerged from the interview data. No new codes or themes emerged from the analysis.

### **Lesson Plan Analysis**

When analyzing the lesson plans, the researcher was looking for any references to teaching digital citizenship, such as using technology safely, not plagiarizing, etc. However, digital citizenship was never mentioned (or the appropriate standards notated) in any of the lesson plans even when the teacher planned to use the iPad for research or creation. Technology standards were only mentioned in one lesson plan (Teacher 7). Technology use (iPads) was documented as a part of many lessons (all participating teachers). The lesson plan analysis did

not provide any information that related to the codes or themes that emerged from the interview data and no new codes or themes resulted from the analysis.

### **Validity**

Creswell (2013) introduces eight strategies of validation. They are triangulation, prolonged engagement and persistent observation, peer review or debriefing, negative case analysis, clarifying researcher bias, member checking, rich thick description, and external audits. For this study, five of these strategies are applicable.

Member checks were used to help maintain the validity of the study. Member checks allow members of the study to view the data status (interviews, surveys, and observations) during the study. This process helps keep the researcher accountable and the study valid (Savin-Baden, 2013). Member checks occurred periodically during the study. Members of the study were offered the opportunity to view the transcriptions of the interviews, the classroom observation guides, and the lesson plans and how they were coded.

Using interviews, classroom observations, and lesson plans was a way of triangulating this study. Triangulation is a method of cross examination at multiple points (Merriam, 2013). Seven 5<sup>th</sup> grade teachers, from four elementary schools, participated in the study to broaden the spectrum for data collection and validity. Two of the elementary schools are non-Title I schools, meaning that they do not receive Title I (federal) funding. The other participating schools are classified as Title I schools. Several data sources were chosen. Interviews (with follow-up interviews), classroom observations and lesson plans were the multiple sources for data collection. Using evidence from different sources helps to identify themes or perspectives (Creswell, 2013).

Peer review was also used to keep the researcher honest and focused. A peer reviewer asked the researcher questions about the study that provoked thoughts about the method of data collection and interpretation of the data meaning. The peer reviewer has knowledge about the process and/or the topic (Creswell, 2013). Written accounts were kept from each peer review session.

External audits permit a third party who is not connected in any way to the study to assess the findings, interpretations, and conclusions to see if they are supported by the data. The auditor looks at raw data, such as journals and interview transcriptions, to see how the research unfolds and to examine the accuracy of the findings (Creswell, 2013). The researcher chose an auditor who was familiar with technology trends. The auditor considered the classroom observation analysis and lesson plan analysis in comparison to the interview data. She questioned the researcher about her findings and conclusions. Her conclusions matched conclusions of the researcher.

Clarifying researcher bias helps the reader understand the positionality of the researcher. She may have prejudices based on her prior experiences that could change her interpretation of the data (Creswell, 2013). In this case, the researcher is a long time educator with experience using computers and technology in the classroom.

### **Ethical Considerations**

The participants' privacy and identity were protected by the researcher. Participants' names were coded by numbers (i.e., Teacher 1-7) to be referred to in Chapters IV and V. No school nor the school system were identified in any way. For the study, the school system is referred to as the Sunshine School System. Schools were named School A-H. The location was referred to as the state of Alabama or as being in the southeastern United States.

Transcribed interviews and copies of lesson plans have been filed in a notebook in the researcher's own home. They are secured and not available for access by the general public. They are available by request to the members of the dissertation committee, the teachers involved, and a peer reviewer.

## CHAPTER IV:

### FINDINGS

The purpose of this case study was to explore the teaching of digital citizenship concepts and standards by fifth grade teachers in The Sunshine School System in Alabama. A case study was chosen in order to study in-depth and discover how fifth grade teachers in The Sunshine School System are educating their students about digital citizenship; the overarching question that drove the data collection for this qualitative study. From the main question three more specific questions were derived. They are 1) how are fifth grade teachers in the Sunshine School System teaching their students about Cybersafety; 2) how are fifth grade teachers in the Sunshine School System teaching their students about Cybersecurity; and 3) how are fifth grade teachers in the Sunshine School System teaching their students about Cyberethics? The C-3 Framework, developed by Davina Pruitt-Mentle, includes three areas of digital citizenship; Cybersafety, Cybersecurity, and Cyberethics. They are to be considered a whole for teaching purposes, yet each component has its own unique features and differences (Pruitt-Mentle, n.d.).

This chapter presents the findings from the research conducted in the interviews, classroom observations, and teacher lesson plans from fifth grade teachers in The Sunshine School System. Of the eight elementary schools, there were four schools represented in the study and a total of seven teachers. All participating schools are departmentalized in 5<sup>th</sup> grade with the exception of School C, where the fourth and fifth grade teachers teach both fourth and fifth grade students. There were three schools in the study that receive federal funding (Title I), and one non-Title I school.

All fifth grade teachers in the school system and their principals were sent an email which introduced the study, assured confidentiality, and encouraged participation. IRB consent forms were sent out to volunteers. IRB Approval can be found in Appendix F. After teachers agreed to participate, the researcher began setting up interviews and classroom observations. The principals of each participating school were very enthusiastic about the study taking place in their buildings. The participating teachers range in age and experience from a first year teacher to one of 35 years' experience. The seven teachers are described in Table 1. Information about the participating schools is shown in Table 2.

Table 1

*Participating Teachers*

School	Teacher	Gender	Highest Degree	Years' Experience
School A	Teacher 1	F	Educational Specialist	18
	Teacher 2	F	Master's	35
	Teacher 3	F	Master's	32
School B	Teacher 4	F	Master's	24
School C	Teacher 5	F	Education Specialist	21
	Teacher 6	F	Bachelor's	<1
School D	Teacher 7	F	Bachelor's	<1

Table 2

*Participating Schools*

Teacher	School	Teacher/Student Ratio	Student Demographic	Community
1	A	1:20	Majority White (0 Hispanics)	Middle-Upper Class
2	A	1:21	Majority White (0 Hispanics)	Middle-Upper Class
3	A	1:20	Majority White (0 Hispanics)	Middle-Upper Class
4	B	1:22	Majority Black (2 Whites, 4 Hispanics)	Poor (High crime, drug activity)
5	C	1:21	Majority Black (2 Whites, 3 Hispanics)	Middle-Lower Class (semi-rural)
6	C	1:17	Majority Black (2 Whites, 1 Hispanic)	Middle-Lower Class (semi-rural)
7	D	1:18	Majority Black (1 White, 3 Hispanics)	Poor

**Research Question Findings**

This study was driven by one overarching question. How are Sunshine School System’s fifth grade teachers teaching their students about digital citizenship? The C3 Framework guiding the study lent three sub questions. They were 1) how are fifth grade teachers in the Sunshine School System teaching their students about Cybersafety; 2) how are fifth grade teachers in the Sunshine School System teaching their students about Cybersecurity; and 3) how are fifth grade teachers in the Sunshine School System teaching their students about Cyberethics? This section will present the themes that emerged during the analysis of the data. The data were collected from teacher interviews, classroom observations, and a sampling of lesson plans from each teacher.

## Overarching Research Question

Themes resulting from the data analysis that answered the overarching research question, how fifth grade teachers teach their students about digital citizenship, included technology standards, iPad orientation, student collaboration, real life situations, home connection, and teacher responsibility. Each theme is described in this section.

**Technology standards.** When asked what comes to mind when the term digital citizenship is mentioned most teachers responded with a similar response referring to teaching children to become responsible users of the Internet, staying safe online, and the humane treatment of others. However, Teacher 4 did reply that when she was recently employed by the Sunshine School System, this was a totally new term for her. Most of the teachers were aware of the technology standards, but only two had actually been told how to integrate them in their daily lesson plans. “Across the curriculum, across the board...” is how Teacher 7 described how she was instructed the state standards should be taught. She did say though, that no one had ever told her how to integrate the *technology* standards into her curriculum. She uses the Alabama Course of Study to guide her. Four teachers admitted to not using the standards in their daily lesson plans at all, even though they were aware that they do exist and fall under their responsibility.

Teacher 6 gave a more detailed process for how she uses the standards. She teaches science and math to the fourth and fifth graders at her school. “I start with my science standards and I integrate once I get that part going. I use technology in just about every lesson.” She went on to say that no one has ever told her how to teach the technology standards. In fact, she said that no one had ever mentioned them to her at all.

Only two participating teachers admitted to using the standards in their daily lesson plans. The teachers at School A say that they have never been told to teach the technology standards.

When asked how she uses the state technology standards, Teacher 4 said, “I don’t know that I actually use the state standards for technology perhaps. Trying to think... You know, there were suggestions made as far as things I could do.”

**iPad orientation.** At School A, the fifth grade uses a contract type agreement that the parent and student have to sign concerning iPad usage (see Appendix B). There is also a system wide technology acceptable use policy agreement (see Appendix C) in the student handbook that must be signed each year as well. As far as orientation with the student and iPad is concerned, there is no conformity within the system as to how this is carried out. According to the participants’ interviews, some of the teachers do an informal briefing with their students, while others are more formal. They review the agreement, and talk at length with their students. They model acceptable handling of the device; unplugging, plugging, placement of device on their desks, and general physical handling of the iPad itself. Most of the participants referred to the paper agreement that has to be signed as the orientation.

Teacher 2 made an interesting point. She described how the iPad orientations have changed since they first received iPads in the classroom. In response to a question about the students’ orientation to the devices, she replied, “Well, it has changed a little bit in the last couple of years because students today often have an iPad or similar device at home, so I used to have a very strict kind of orientation...”. She went on to say that children tend to handle the devices more responsibly, than the students did in earlier years of the 1.1 initiative. However, Teacher 4 described her students handling of the devices as “real careless” (Teacher 4). There may be a difference since Teacher 4 is at a Title I school, whereas Teachers 2 and 3 are in a more affluent school.

These were common issues with each participating teacher as their schools have recently become 1.1 iPad schools. Six of the seven participating teachers do iPad orientations with their students at the beginning of the year, whether formal or informal. All students and parents are required to sign an agreement. Teacher 3 does not have an iPad orientation, although her students and their parents must sign the agreement. When asked about whether or not she has an iPad orientation, her reply was, “Usually not, because they know more than I do.”

**Student collaboration.** Fortunately for these participating teachers, there is always at least one student in their classes who can offer them technical advice or assistance. They admittedly are not technology experts and are open to allow students to share tips, tricks, and shortcuts that they have learned. When asked how she handles a really tech savvy student, one participant replied,

Those are the ones I count on. I mean, I depend on them too to show me things. Every now and then we'll run into a glitch; something will happen; it's not working well, and I'll say who knows how to use a Mac well? Or who thinks they know more about the iPad? Come over here and help me out! And a lot of times, they'll be the ones to help me solve the problem or if they didn't know it right off between them helping and me thinking about it, you know we were able to work it out. (Teacher 2)

All of the participating teachers have their students help them with the daily dispersal of the iPads. The students also return them to the carts and plug them in for charging. Teacher 6 said “I give them the responsibility where they think that they have the power, but they're the ones that take out the iPads and plug them in and turn the switch on. They're monitored, and they think they have more reign in it, but realistically, it's just something that's helping me out. I keep an eye over those kids more...” (Teacher 6).

**Real life situations.** Teacher 5 talked about using real life situations in her classroom to teach appropriate digital use. Even though they cannot access Facebook and other social media sites in the classroom, she knows her students have accounts. She encourages them to not use

social media at their age, but she does offer appropriate ways that social media can be used. Once, she used a clip from the George Lopez show about how an older person can befriend a child and make that child think it is a peer. She believes that using real life situations will “bring it home to them.” Teacher 5’s coworker had a scary real life situation happen in her classroom with the iPads. Somehow, someone on the outside of the school’s firewall was making phone calls to the iPads in her room. At first, the teacher thought the students were doing it until she answered one of the calls. The school system’s technology team had to address the issue. Teachers 2 and 3 admit that they do not address social media with their students, but will have conversations with them when the students want to talk about something they read on a social media site. Teacher 4 reminds her students that it is easier to post something ugly, rather than to say it to the person’s face. She tells them if they are not willing to say it to that person, they should not post it.

Teacher 2 uses real life examples when teaching her students how to cite a website they used for retrieving information. She said that students will cite (for example) History.com as their source. She uses the school’s library, a small city library, then the larger city library as examples. She asks, “Where did you get your information?” The student may reply with the inappropriate response. She then tells them, “That is like you telling me, ‘Oh, I got it from the School A’s library. Okay, when you walk in the school library, how many books are in there? Mrs. Bridges has told me there are thousands of books in there. There are more at the Rainbow Library, and even more at the Sunshine City Library. Which book did you use? And how did you know what page to use?” She uses the comparisons of physical libraries to History.com and other websites; trying to make students see how they need to be specific when using a citation such as History.com. “...I try to get them to understand that the website is what is typed up at the top of

their screen, that they literally need to tell me all of that, they can't just say History.com” (Teacher 2).

**Home connection.** The Sunshine School System has a “Bring Your Own Device” (BYOD) policy, but the high school implemented a 1:1 laptop initiative last year, and the elementary and middle schools have iPad and laptop carts, so the BYOD is not as popular as it was in the beginning, though is still in effect. Teacher 5 mentioned that her school still encourages students to bring their own devices to school. She feels if she can teach her students to use their own devices appropriately that they will think about what she said concerning appropriate behavior when they are at home. She tells her students, “I know you know a lot about computers, but it's inappropriate. You can't just use it and do anything at school. It's up to your parents at home, but at school...” She tells them that ultimately it is up to them how they portray themselves online.

Several of the participants mentioned their students having devices at home being a help in how the students handle the devices at school. Teacher 7 says she has to remind them from time to time about jerking the cords out of the iPads, but most of the time they do a good job with it because they do have devices at home. Teacher 2 mentioned how them having their own devices has changed her iPad orientation.

**Teacher control.** Every participant at some point in the interview process mentioned supervision and control. This was also evident in the classroom observations. Some participants choose to set rigid usage controls. Students are only allowed to use the web addresses the teacher writes on the board or on their assignment. These teachers (Teacher 6 and Teacher 7) feel that students in fifth grade are not mature enough or responsible enough to do any browsing or searching on their own. In a few of the participants' classrooms, students have lost privileges with devices due to their defiance in following instructions. Teacher 5 had an autistic student

who was restricted from device use for the remainder of the year for overriding the internet filter every time they changed the password. The student refused to tell the authorities how she was able to do this, so she lost her privilege. Classroom observations showed that Teacher 7 always chooses the websites for the students and navigates them thoroughly before giving them to her students.

**False sense of security.** A few teachers have a false sense of security concerning the Internet filter, iBoss, used by the school system. Teacher 4 believes that her students cannot get around or past that filter to inappropriate sites. However, she tells her students to tell her if they accidentally get on a site that is inappropriate or “bad.” She feels some personal responsibility when using the Internet with her students. “I tend to roam the room when the students are on the Internet” (Teacher 4). All the participants agreed that walking around the room while their students use devices or computers is necessary. Teacher 6 feels completely responsible. She believes that her students are capable of breaking through the filter better than anyone. She does not depend on the filter because images and thumbnails can still be displayed. “You have to be very aware of what your students are doing on the Internet” (Teacher 6).

The observations at School A found students using the Internet to search freely for information and answers. It is clear that some teachers may depend on the filter, iBoss, to create a secure environment for their students to safely search the Internet. When asked if she was aware of the Children’s Internet Protection Act (CIPA), Teacher 2 said that teachers in her building have been encouraged to help students with their online use and behavior regarding texting, emails, and other social media, but she said their computer had lessons addressing those issues, as well. Six of the seven teachers asked were not aware of what the CIPA law is.

**Summary of overarching research question findings.** Participating teachers use their content area state standards to plan and execute their lesson plans on a daily basis. However, though aware that state technology standards exist, which are specific to the technology education required by the state department, they do not include these standards in their lesson plans. Most begin each year with an iPad orientation, although a few do not. All teachers have an agreement signed by the parent and the student, though. Although the participating teachers do feel a sense of responsibility when their students are using the Internet, some depend on the computer teachers in their respective buildings to teach digital citizenship.

### **Sub Research Question 1**

Themes resulting from the data that answered the first sub research question about how fifth grade teachers were teaching their students about Cybersafety included dependence on the computer teacher, teacher control, digital footprint, and social media. Each concept is described in this section.

**Dependence on computer teacher.** The three teachers at School A depend heavily on the computer teacher in their school to teach the students about Cybersafety. “She is a huge part of our picture” (Teacher 1 referring to the computer teacher). According to Teacher 1, the computer teacher uses Digital Passport (Common Sense Media) with her students. These are more formal type lessons out of context with the classroom curriculum. Teacher 1 says that she addresses more informally issues of interest or events that lend a need to discuss. Teacher 2 confirmed this. She mentioned the times she discusses Cybersafety are in the “teachable moments” when there has been a news event, local or national that involved Cybersafety. Her discussions are also more informal. Teacher 3 stated that although Facebook is blocked through

the Internet filter, iBoss, at school, she talks with her class about the importance of being careful when talking to someone online; not giving out their names or locations.

Teacher 6 does not discuss Cybersecurity with her students. She says they do not talk about it because they have “the computer lady here, and we have the guy that comes twice a week. Her co-worker, Teacher 5, made no mention of the computer teacher at their school, nor did Teachers 4 or 7. Some of the Title I schools have chosen to keep their labs unmanned to use funds for other purposes. The teacher is scheduled class time but she is responsible for her students.

**Teacher control.** Teachers 6 and 7 depend on their controlled usage policy; which allows for no freedom on the iPads. Specific websites are given, by each respective teacher, for assignments and research. Students are not allowed to change the image on the home page or lock screens. The same rule applies when they take their students into the computer labs. The teacher controls what is on their screens at all times. Students are not allowed to browse or have any free time. Teacher 5 uses the controlled approach most of the time but will allow her students to use Google from time to time when they are searching for special projects.

During an observation in November with Teacher 7, students were instructed to choose one of two websites written on the board, chosen by the teacher, to find facts about the United States flag. Then during the December observation, Teacher 7 gave her students a specific web address to answer questions about their favorite animal they had seen on a recent field trip to the Chattanooga Aquarium. Students were not allowed to search on their own. When asked about how she approaches Cybersafety with her students, she replied, “I give them the websites I choose. They’re predetermined...” (Teacher 7). She does not allow her students to browse or

search on their own. She places them in groups of her choosing. “They work in groups, so the partners will kind of tell on each other if they do” (Teacher 7).

At School A, the observation found Teacher 2 very specific with her students concerning an assignment for a unit review on the digestive system. She chose Popplet, an iPad app that she wanted the class to use. Popplet is a webbing app that allows students to organize their thoughts/facts. Teacher 2 gave them very specific instructions as to the minimum number of branches they were to have in their finished project. She allowed the students to work with a friend of their choosing. Although she did not walk among them, she stationed herself at the front of the room to observe their activity. She reminded them to keep their iPads in the center of their desks. On that same day, across the hall, Teacher 3 allowed her students to search the web for idioms to use in a booklet they were making. No specific web address was given.

**False sense of security.** Teacher 4 feels that Cybersafety is not an issue in her classroom. She depends on the iBoss filter and says her students cannot get past it. Teacher 4 believes that the filter is difficult to get past without using the override password. She admits to being somewhat negligent in teaching Cybersafety. “You know, we’ve probably...maybe...have gotten a little lax in that just because of...*I can’t get past it*” (referring to the filter). This false sense of security resonated throughout the entire interview with Teacher 4. She mentioned five times in the interview how controlled the filter is, but finally admitted that sometimes the students can accidentally “get on something.” Students are instructed to tell the teacher if they accidentally access something offensive. She subscribes to an online software application that she uses for spelling, vocabulary and reading (Spelling City). The fifth grade reading series is also online (Scott Foresman Reading Street). Since she uses these programs when she uses her iPads, she

may not feel the need to be overly concerned about the possibilities using the Internet with fifth graders.

During observations at School A, it was noted that students were searching the Internet with no guided direction. Students in Teacher 3's classroom (School A), were searching for idioms online with supervision. One student asked if he could use dictionary.com. She nodded her head. Teacher 5 stated that she does not depend on the filter. "I notice our filtering system doesn't pick up everything, and no filtering system will." However, during an observation in her classroom, her students used Google to search for cookie recipes for a 4-H project. She admitted, "...sometimes I do let my kids get on things, research, and I'm not standing over them." She did go farther by saying when there is a breach of trust, the students have to sit beside her with their iPads.

**Digital footprint.** When something is posted online, it can often be retrieved even if the individual deletes that post, message, website, etc. The gathering of information related to the author's name and picture becomes a type of history for that person, known as his digital footprint or digital dossier. Parents, many times unknowingly, create the beginning of that digital footprint by posting sonogram pictures from the pregnancy and childhood.

(<https://www.youtube.com/watch?v=ko1zh8Brmyc>).

Teacher 6 shared her frustration with trying to convince her students that they are literally representing themselves by what they post online. She asks her students if they would want their mothers to read everything that they post. If that would be a problem, then they should rethink what they are doing online. "Instilling once it's there, it's always there. It never goes away. They have such a hard time grasping that concept that it's never going away. Somebody can always find it" (Teacher 6).

Teacher 4 had an unusual but rather comical event take place in her classroom. A student videoed himself saying curse words, and somehow sent it to all the iPads in the classroom. When he was confronted, he responded that he had not done that. He said that the person in the video was not him. She used that teachable moment to talk about how when things get posted online, they can be retrieved even after the post has been deleted. "...when you film yourself doing stuff, and then you send it out for the world, that it is going to be there" (Teacher 4). She also talked with them about how easy it is to say things online that you would never say to someone's face. Her students are using Facebook and Snapchat, and talk openly about it.

**Social media.** Social media is a tool for networking with others; be it family, coworkers, classmates, friends, etc. There are many different formats of social media. Students in the fifth grade, according to these participating teachers, are using Facebook and other such sites. Any time Cybersafety was mentioned in the interviews, all seven teachers, at some point, mentioned social media. All seven admit that they do not discuss Cybersafety in the classroom unless there has been an issue or a student asks a question. Six of the seven teachers have their own Facebook accounts.

Teacher 5 stresses to her students about being appropriate. "We also try to...use real life situations that could arise using social media inappropriately. I know some of them are going to use it, but I do tell them the appropriate ways to use it and let them know it's up to them the way they use it" (Teacher 5). All seven participants say the majority of their students are using at least one form of social media.

**Summary of sub research question 1 findings.** Again, dependence on the computer teacher to actually teach Cybersafety skills is the central plan with several of the participants. Some of the participating teachers employ very rigid controls on Internet use, believing this

keeps their students safe. Several teachers have a false sense of security where the Internet filter is concerned, thinking their students cannot by-pass it. Being inside the walls of a school, and virtually behind a fire wall with a filter in place creates a feeling of being safe.

Teachers were either aware of the possibilities of allowing their students free reign with a search engine, dependent on the school system's filter, or seemingly not very conscious of the dangers. None of the teachers interviewed seemed negligent in their duties of student responsibility, however, Teacher 1 stated, when asked how she approaches Cybersafety with her students, "...Miss Henderson [pseudonym], our technology teacher, uses the Digital Passport program and so she focuses on the Cybersafety in her classroom in more formal lessons, and then just informally, I discuss with my students, especially as things come up and as it's needed." To the other extreme, Teacher 7's response was emphatic when asked if she allowed her students to use a search engine. "No free browsing. Absolutely not! I don't want that responsibility!" (Teacher 7).

## **Sub Research Question 2**

Themes identified in the data that answered the question concerning how fifth grade teachers were teaching their students about Cybersecurity were AUP/iPad agreements, and physical use. These themes will be described in this section.

**AUP/iPad agreements.** Every student and teacher in the Sunshine School System is required to sign an acceptable use policy (AUP). Teachers' copies are placed in their personnel files. Students and parents must sign the student form and it is filed in the student's cumulative folder. Schools with iPads (elementary) also have iPad usage outlined in their agreement. The AUP informs the teacher/student/parent of what is considered acceptable use in the area of technology. It is very detailed and clear. After reading the policy, it should be understood what is

accepted and expected. One of the schools in this study also has a school specific iPad agreement form they ask the students to sign. It is kept in their student records.

Unfortunately, the participating schools in this study use the AUP/iPad agreement as their main orientation to the devices for teaching Cybersecurity. Each teacher mentioned this agreement in the interviews. The teachers at School A have a computer teacher that they depend on to actually teach their students about all the facets of digital citizenship. Teacher 2 did say that she always warned her students about not setting up accounts online without the permission of their parents, and to always keep their passwords private.

Most of the teachers referred to the AUP as a paper for parents to sign. Teacher 4 said the paper stressed the proper use of the device. Teacher 3 said, “We have a list that we send home of the etiquette and such that we expect them to use with the iPads, and get the parents to sign it.” It seems that the AUP is more of a formality for legal purposes, and not taken very seriously by any of the participants.

**Physical use.** Teacher 7 uses her “tech savvy” students to maintain the storage and charging of her classroom iPads. She trains them to plug them in and unplug them. Teacher 4 has experienced struggles with her students changing the settings on their iPads. She talks with them about why they need to leave the settings alone. She has even had a student accidentally take an iPad home. Teacher 6 says that she does not talk much about security because they have “the computer lady here and we have the guy that comes twice a week (system tech)”. However, Teacher 6, as well as the other participants, has a group of tech savvy students who are in charge of distributing and taking up, plugging in and charging her iPads. She has trained them how to handle them; what to do and not do. Teacher 5 has had issues with the iPads blinking and the screens going black. She also has noticed that her students, when in the computer lab, are apt to

click on everything on a webpage. Because of this, she now tells them about how easily a virus or other malware can destroy the computer and the student's work. She also warns them about clicking on links because that can "...put your information out there,"

Teacher 2 asked her children during her observation to keep their iPads in the middle of their desks at all times. Her interview responses confirm her reasoning. She explained that if she can see the iPad in the center of the desk, she is "...less likely to worry about it falling on the floor" (Teacher 2). She also requires the students to keep it in the center of their desks so that she can monitor what they are doing on their devices.

The use of the cameras was an issue when the 1.1 initiative first started. The teachers felt that the cameras could cause a problem for students staying on task, but according to Teacher 2, they made the decision to give students access to the cameras and deal with any issues as they arose. They would need the cameras for many of their projects. She feels that it worked out well, and sees the students using the devices more responsibly as the initiative progresses.

**Summary of sub research question 2 findings.** Cybersecurity is not a subject that the participants consider or teach. Other than the physical use and "getting the paperwork signed," they do not teach Cybersecurity to their students. They may believe that their students are too young for this type of education. Teacher 4 was surprised by a question about students who are junior hackers. She replied, "Oh my goodness! That's kind of old for mine...".

### **Sub Research Question 3**

Themes resulting from the data that answered the question, how fifth grade teachers teach their students about Cyberethics, included plagiarism, citations, and inappropriate behavior. Each concept is described in this section.

**Plagiarism.** Plagiarism is defined as “an act or instance of using or closely imitating the language and thoughts of another author without authorization and the representation of that author's work as one's own, as by not crediting the original author”

(<http://www.dictionary.com/browse/plagiarism?s=t>). When asked what type conversations she has with her students concerning Cyberethics, Teacher 1 said that plagiarism is really the only ethical topic they discuss in regards to digital citizenship. She uses her iPads for research mainly, but also for games, and applications. She would like to add more technology related topics into her lesson plans but is focusing on content currently, as she has only been back in the elementary classroom three years, after an eleven year teaching stint at Jacksonville State University. Teacher 2 talks about plagiarism when her students are doing research projects or writing reports. She struggles with students not being able to take notes and summarize, but rather wanting to copy and paste, many times using unfamiliar vocabulary. She tells her students, “...it’s not yours, somebody spent a lot of time on that. Don’t use words in your report that you don’t know what they mean....” Teacher 3 confirms this by explaining that her students have a hard time giving answers to research questions in their own words. Teachers 5 and 6 teach about plagiarism to their students by having them read the content, then telling them to pretend they are having a conversation with someone who needs to know what they read. They did it together as a class, and the teachers modeled how to summarize in their own words for the students. Teacher 5 put a paragraph from the Internet on her whiteboard. She read it to them, and said, “Doesn’t that sound wonderful?” then explained that she could not use it because those were not her words. She then walked step by step with her students; teaching them to paraphrase. During an observation, Teacher 6 reminded her students that they should not copy word for word. Teacher 7 defines plagiarism for her students and tells them not to do it.

**Citations.** In only three of the seven classrooms, students are required to cite a source of information when doing research. This citation is a very simplified one; the web address (URL) of the website used. When asked about intellectual property and citations, Teachers 1, 3, and 4 admittedly do not teach it nor do they require it. When asked how she addresses intellectual property, and if she requires her students to cite their work, Teacher 1 stated “It’s not a part of my rubric. It’s not a part of the requirements for the project right now.” However, she did say that some of her students just naturally cite their websites. She admits that citations should be a part of her rubric, and hopes to add them. Teacher 7 has such rigid control policies that she gives her students the web address to use, therefore, she knows their source. She does not want the responsibility of allowing them to search on their own. Teacher 5 also provides her students with websites but she still requires them to cite using the web addresses that they actually used. She said, “If they used the Internet for research, they have to put down the website that they’ve gone to, the details, so that I can go back and pull it up.” She said her students do very well with this, and is surprised how naturally it comes to them, now that she requires it. Teacher 6 requires the web address, but has warned her students that they will have to cite much more information in middle school.

**Inappropriate behavior.** At this level, the focus on plagiarism is the main ethical consideration for these participating teachers. Cyber-bullying was not mentioned as a major issue by any of the participating teachers. They believe that their students use, but are not very active on social media and social media is not accessible at school. The participants are secure in their practice of monitoring what their students do on their devices or computers. One teacher did have a scare in her classroom with an outsider calling her students’ iPads, but when that was resolved, there were no more issues. Teacher 3 said, concerning cyber-bullying, “I have had

minor incidences, but I address those one-on-one, and I try to keep students on websites that are assigned most of the time. Also, with our strong filter at school it helps. It's usually in appropriate pictures of things like farting...Lately, our students have been fairly innocent!" (Teacher 3).

Teacher 6 has a zero tolerance policy for inappropriate behavior concerning online relationships. She informs her students at the first of the year that if they write something inappropriate, untrue, or hurtful, she will resolve the issue with a conference with the student and his parents. She reminds her students, "I'm not going to accept that. It doesn't matter if you've written it about somebody in this room or just somebody in general. This is not how you want to be treated and that's not how you should act."

**Summary of sub research question 3 findings.** The main focus in teaching Cyberethics for the participants in this study is plagiarism. They are concerned when students copy and paste or copy word for word from their sources. They do hope that students learn new vocabulary when doing research, but want the students to know what the words that they use mean. Few teachers require citations, but those who do only require a simple website documentation.

Cyber-bullying is really not an issue in any of the participating classrooms. Since social media is not accessed at school, it is not an issue at this age. Teachers deal with the minor incidents as they happen.

CHAPTER V:  
DISCUSSION, IMPLICATIONS, CONCLUSIONS, AND RECOMMENDATIONS

**Introduction**

The purpose of this qualitative case study was to explore the teaching of digital citizenship concepts and standards by fifth grade teachers in the Sunshine School System in Alabama. A case study was chosen in order to study in-depth and discover how fifth grade teachers are educating their students about digital citizenship. Interviews, classroom observations, and a review of lesson plans was chosen as the method for data retrieval. This chapter will discuss the findings from Chapter IV, how they relate to the literature, and any new information that emerged during the study. Suggestions for further studies will be recommended.

**Discussion of Research Questions**

The overarching question that drove the research for this study, how fifth grade teachers in the Sunshine School system are teaching their students about digital citizenship, seemed at first like it would be an easy question to answer. With so many schools using technology more and more each year, the researcher felt that there would be countless articles at her disposal, as well as similar studies done. However, the information available is geared more toward college students, teenagers, and teachers. Very little information concerning digital citizenship with elementary school children is available. The articles that are available are practitioners' articles, rather than research based, peer reviewed journal articles. ISTE has published many of the practitioners' articles and books. The researcher gleaned valuable and practical information from these. The overarching question, how fifth grade teachers in the Sunshine School are teaching are

their students about digital citizenship, was answered with five themes: technology standards, iPad orientation, real life situations, home connection, and teacher responsibility. These themes will be discussed in this section.

### **Technology Standards**

The Alabama Technology Course of Study has two standards which apply to the teaching of digital citizenship: practice safe use of technology systems and applications and describe social and ethical behaviors related to technology use. Examples of practicing safe use of technology systems and applications are protecting personal information, avoiding inappropriate websites, and exiting any inappropriate site entered accidentally (AL COS, 2009). Teachers 4 and 5 both made mention during their interviews that they tell their students to come to them if they accidentally get into a website they should not be in. Teacher 5 tells her students to be honest with her about how they accessed it; letting them know that she does trust them and that accidents happen. The other standard, describe social and ethical behaviors related to technology use, involves the use of technology for collaboration, avoiding plagiarism, and citing any sources used (AL COS, 2009). Most of the participating teachers in the study mentioned the avoidance of plagiarism in their discussion of Cyberethics.

When this course of study came out in 2009, the researcher recalls her administrator suggesting that she teach technology standards to the students in her middle school library. The system technology director refuted that saying that it was the classroom teacher's responsibility, and that the standards should be taught "on the fly" as the teacher teaches her curriculum. He insisted that students will remember what they learn if it is associated with their classroom content.

Working in a middle school gave the researcher a plethora of instances and examples of why younger children should be taught to be safe and ethical while online. She witnessed her students having Facebook drama being played out at school; drama that included parents' and older siblings' inappropriate behavior inciting children to fight. Middle school students also had no inhibitions about copying and pasting information and pictures from the internet without ever citing their sources. If students were taught to be responsible digital citizens at an early age, would that impact their online behavior?

### **iPad Orientation**

Though the researcher was not able to actually observe the participating teachers' orientation with their students and their iPads, she deduced from the interview questions that it mainly consists of having the students and their parents sign an agreement. The teachers reviewed the document orally with their classes. The document discusses physical treatment, use, and software. Teacher 3 admitted not having an actual orientation stating that they (the students) know more than she does.

Fifth graders are on the cusp of being teenagers, so this would be an ideal time to use the iPad orientation as a stepping stone to beginning an inclusive program and commitment to the teaching of digital citizenship. Most students at this level have cell phones or at least personal devices with Internet capability. A vast number of students have an online presence at this age, yet somehow are not grasping the Internet as a community like the physical community in which they reside (Hollandsworth et al., 2011).

The school in Ft. Worth, Texas that integrated a social media network just for their school community (Winn, 2001) chose to make a conscious effort. Because of concern over newsworthy topics, such as student-teacher relationships and cyber-bullying, the school district

created a social network just for their district where students and teachers must be accountable at all times. There are no private messages and everyone in the network is friends. Students can create their own pages, but essentially every member can read every post. This type of social media encourages student safety and teacher responsibility. Teachers use this network for curriculum purposes, while modeling for their students, responsible online behavior. There were four stages in the implementation of this social network: creation, introduction, integration, and expansion and new curriculum. The students were oriented to the network by having the middle school student pilot the program. Soon the entire school system was added. Although a lengthy process, the students received more training and orientation than the students in the current study. An AUP is not a substitute for orientation (Winn, 2011).

Presently, schools can use Google Classroom, Edmodo, and other applications with their students that promote responsible posting. The high school in the Sunshine School System uses Google Classroom and is a Google Apps for Education school (GAPE).

### **Real Life Situations**

Situations concerning Internet safety and responsibility have been covered by the media in movies, television movies and sitcoms, documentaries and news specials. Internet crime is reported daily, and seems to be mounting in occurrences. Yet these real life situations are not enough to teach children the seriousness of online behavior, both socially and ethically. Teacher 5 talked about using clips from a television sitcom to help make her students understand about being safe online. While that is appropriate, that alone is not enough. Teachers must include all aspects of digital citizenship in their daily lesson plans to make an impact in changing inappropriate online behavior.

Another argument for the use of social media in the school setting is that social media already plays a huge role in the lives of students. This would be a real life connection for the students. “Social media can serve as an engaging instructional tool when purposefully aligned with curriculum” (Monterosa, 2015, p.31). Monterosa argues that students need to be taught to be critical, but creative with online content to be successful in college and their future careers. Inappropriate use of social media has caused students to be denied acceptance to college and also loss of employment. Therefore, educators need to help students create a positive digital footprint, such as portfolios and presentations (Monterosa, 2015). This could be adapted for elementary school use.

### **Home Connection**

With the 1:1 initiative in many schools today, the B.Y.O.D. policy has been downplayed, but teachers who allow students to bring devices from home to use at school have a good chance of leading those students to make wise choices with their devices when they use them at home. They may associate what the teacher said with the device at hand.

The teacher could go a step farther and cultivate a partnership with the parents in teaching digital citizenship. Villano (2008) made some valid points about leading by example in his article. He suggested schools hold “Cybermites” for parents to come to the school and have the students teach them about digital citizenship. District technology leaders and other experts could be invited to participate in educating the parents, too. He also suggested sponsoring some online learning for teachers and parents who are not up to speed on their technology skills. Teachers need to be users of technology themselves in order to teach these tools to their students (Villano, 2008). Parents can only be a supportive part of the program when they are kept up to date and informed on the latest and greatest, as many of them work in areas where technology is

not a factor. Parents may welcome an opportunity to learn what they could about technology in a free and non-threatening environment. Therefore, it is imperative that schools offer parents a part in the digital citizenship education for their students (Orth & Chen, 2013). Educators can help parents know what to monitor in their students' digital lives, and how to guide their students to make responsible decisions. "Alignment between school and home with regards to digital citizenship and healthy digital usage is a hallmark of a 21<sup>st</sup> century school" (Orth & Chen, 2013, p.58).

### **Teacher Control**

The data indicated that all the participating teachers feel they need to be in control of students' use of the Internet in their classrooms. However, teachers are so pushed for time with testing preparation and state mandates that the very basic education of students, such as citizenship in any form, may fall short. For example, two of the interviews in this study were interrupted by an instructional coach and a counselor who were delivering more work for the teachers being interviewed. Teachers are under a great amount of pressure.

This is not a recommendation for a new program or new curriculum content, but a call for social consciousness on the part of the teachers, administrators, and parents. Students' online behavior can influence their social lives and school culture climate. More important is the safety of the students while online. Digital citizenship needs to be modeled and encouraged by administrators and teachers to be proactive in the creation of positive roles models. It may mean that educators learn to think differently regarding the Internet (Hollandsworth et al., 2011).

Many teachers believe that their students know more than they do about the Internet and technology related devices and applications (DeFranco, 2011). While they may be more familiar with what is trending, many of these same students are posting private and personal information

online (DeFranco, 2011). Teachers should educate themselves and take the lead. Students need to learn how to create online portfolios, resumes, presentations, and run management systems. This will require many hours online (DeFranco, 2011). While filters are necessary to be eligible for E-rate, teachers must stop relying on that filter to protect their students (Melgosa & Scott, 2013). Instead they should educate their students about Cybersafety, Cybersecurity, and Cyberethics. School districts can enforce policies concerning Internet safety with consequences clearly stated. The district can decide if they would like to incorporate a digital citizenship curriculum or have the teachers integrate it into their daily lesson plans. Again, involving parents in this type campaign will add to its successfulness (Melgosa & Scott, 2013).

### **Discussion of Sub Research Question 1**

Cybersafety focuses on students' ability to stay safe online, protecting their identity and personal information, as well as learning to discern dangerous situations and online behaviors. This is not innate, it must be taught. Students have a natural curiosity that can lead to dangerous situations. Education is one way to possibly effect change in inappropriate behavior. Fear can be an incentive but is only temporary. In sub research question 1, how fifth grade teachers in the Sunshine School System are teaching their students about Cybersafety, five themes emerged: dependence on the computer teacher, teacher control, false sense of security, digital footprint, and social media. These themes will be discussed in this section.

**Dependence on computer teacher.** While the computer teacher at School A is apparently doing a sufficient job in training digital citizens, the students there should see digital citizenship modeled by their classroom teachers as well. Teacher 6 mentioned the computer teacher at her school, too. The computer teacher is a resource teacher who only sees those students once or twice a week for 30-45 minutes. She does not spend enough time with each

child to foster every teachable moment or to build a trusting relationship like the classroom teacher does.

Teaching digital citizenship should not be a rigid plan repeated over and over. The changes in technology are constant and often hard to keep up with. Educators must have/use dynamic tools for an ever evolving technology education. In a society with smartphones and other such devices, students need daily guidance in becoming responsible digital citizens in the 21<sup>st</sup> century (Anderson, Krathwohl, 2001). This kind of guidance can take place in those classrooms during informal conversations and formal lessons. Assigning projects using technology would be an opportune time to reinforce digital citizenship. Holding technology fairs, like many schools, is another way to make the parents and the public aware of the need to teach digital citizenship while driving the point home with students.

Rather than dependence on one teacher, like the computer teacher, the entire school should be a unified network or collaborators focused on the same goals for their students. “Collaboration can help build a coalition to help other educators and administrators see the value and importance of digital citizenship” (Preddy, 2016, p. 2). Policy makers may not realize the urgency for teaching digital citizenship or even what it actually entails. They may not understand that it must be included in the curriculum as it is not intuitive. Many state and local guidelines have not yet included digital citizenship (Preddy, 2016).

**Teacher control.** While some of the participating teachers have set rigid usage controls on the iPads; not allowing students to browse or search on their own, there will come a time when that student is allowed to do so. The teacher they have the next school year may allow them to search the web, or they may have free reign of their home computer. Students must be taught the responsibility that comes with an online search.

A quote by Confucius says, “If you govern the people logistically and control them by punishment they will avoid crime, but will have no personal sense of shame. If you govern them by means of virtue and control them with propriety, they will gain their own sense of shame, and thus correct themselves” (Willard, 2002, p. 1). Educators should realize that students need guidance in comprehending the required element of ethical behavior in this advanced age of technology. Students should know that everything they do on the Internet reflects who they are as a human being; their morals, values, and personalities. Willard says that as children grow and develop cognitively, they begin to have a more realistic view of the world around them. There are three outside influences that aid this development. The knowledge that something they did caused harm to someone else usually brings about empathy and shame. Social disapproval will also bring about shame. When a student makes an inappropriate decision and his peer group becomes aware of it, there are feelings of shame and embarrassment. Maybe the most influential of the three is the threat of punishment by an authority. Punishment brings about shame as well, but also fear and anger. These influences are instrumental in the moral and ethical behavior development of students (Willard, 2002).

Because of e-rate, most, if not all, Alabama public schools are CIPA compliant. Policing efforts of student internet use should be in place in every school that depends on this federal funding. Administrators must sign a document agreeing to this. Internet filters and policies must be in place, but what about the teaching of digital citizenship to the students? “Studies show that school personnel often see Cybersafety instruction as unnecessary because the school has locked down its computer systems” (Melgosa & Scott, 2013, p. 47). Filters are necessary, but not perfect. Policies must be in place to protect students, but can be easily ignored. Adding a school-wide curriculum would be a more effective way to address students’ safety on the Internet while

at school (Melgosa & Scott, 2013). More than anything, raising the consciousness level of the general population in any school is the responsible, appropriate method for addressing digital behaviors.

Controlling what websites students access may keep down incidences of inappropriateness, but what lesson does that teach the student? The goal should be to empower students to make smart, responsible decisions and choices when using the Internet. They need to understand the ethical consequences behind every choice they make while online. A California school uses the acronym POISE to help parents partner with the school in teaching digital citizenship.

When your child makes a mistake: Pause: take a moment and remember to breathe...children make mistakes. Open-minded: keep a dialogue going; try to see all sides of the issue. Information collection: take time to collect all relevant information before reacting. Seek that teachable moment: use the school's expertise to problem solve. Empower kids through education: they can't become responsible without having responsibility. (Orth & Chen, 2013, p. 60)

The participating teachers who controlled their students' iPad use by only allowing them to use websites that they provided were well meaning, but failed to understand that by controlling their students' Internet activity, they were not educating them in being responsible digital citizens. When those students graduate to middle school and then to high school, they will not have a strong knowledge base for making good decisions and online relationships. Education is key.

**False sense of security.** Dependence on a filter is a dangerous existence. Filters are necessary to fulfill the CIPA law requirements; necessary for e-rate; but are not foolproof. While they are in place to protect students from visiting harmful, inappropriate websites, they can be overridden. Many useful websites are blocked because there may be a chat option, or another potentially dangerous opportunity. Teachers are given a password for the privilege of bypassing

the filter. That password is delivered, usually, by email. Students who are tech savvy and driven may find ways to get the password. Teachers may leave their email open all day, and when they leave the room, there can be a breach of privacy. Some teachers write the password down and put it in a place that is easy for them to see, however, students may see it also. Students who are avid tech users can watch a teacher type in the password, and know it immediately. This makes even more sense to educate students about digital citizenship.

Teacher 4 thinks that since she cannot bypass the filter that her students cannot. She admitted to being negligent in teaching Cybersafety because the filter is in place. Many times students can get offensive material just by doing a search. The short descriptions, many times, may be graphic and disturbing. Also, thumbnail pictures are not caught by the filter most of the time. This is the main reason Teacher 6 provides her students with websites, and does not allow them to search on their own. Teacher 5 has an Autistic student who can bypass the filter, and cannot explain how she does it.

“Studies show that school personnel often see Cybersafety instruction as unnecessary because the school has locked down its computer systems” (Melgosa, 2013, p. 46). Depending on a filter is not teaching responsible online behavior to students. While they may be safe online at school, there is no filter at home or other public networks. Besides, there are times when the filter may be down, and that outage may go unreported for hours or days. Also filtering software is not perfect. Many times thumbnails of pictures are not filtered and valuable educational sites may be blocked due to an ad or forum attached. Tools such as the C3 Matrix were created to aid teachers in integrating the technology standards that deal with Cybersafety, Cybersecurity, and Cyberethics (Melgosa, 2013).

**Digital footprint.** Students are creating, on a daily basis, a digital footprint, but many have no knowledge of what that means. Daniel Schwabel, a managing partner of Millennial Branding, a Gen Y research and consulting firm, discussed in a blog post, why a person's online presence tells more about them than a resume. Potential employers admit to "googling" job candidates before they ever make contact with them for an interview (Oxley, 2011). However, it is not just potential employers that search for personal information. Identity thieves, scammers, and fraudulent businesses aggressively search social networks for their next victims (Oxley, 2011).

Teacher 6 was the only teacher to actually use the term digital footprint, though many referred to talking with their students about how their social media postings and other Internet activity can follow them throughout life. She had a unique way of challenging her students about what they post online. She asked them to ask themselves if they would want their mothers to read what they posted. If their answer was no, then they should rethink what they were about to post. If she had told her students about their digital footprint in no relation to what they were doing at the time, it may have been a moot point. Connecting those little life lessons with the activity the students are involved in adds a moral glue that helps them remember it the next time they are involved in a similar activity.

Many times younger children innocently post online personal information, like the street they live on. A predator can use Google maps to find the child, who could be at home alone. A picture posted of a child that has a tag which identifies where it was made, which could lead to an abduction or inappropriate encounter (Oxley, 2011). While this alone is scary enough, the posted information becomes part of that child's digital footprint, which could be archived

forever. This is a good reason for educating students about Cybersafety, Cybersecurity, and Cyberethics.

**Social media.** The school in Ft. Worth, Texas that integrated an online social media network into their curricula (Winn, 2001), with tight controls allowed the teachers to teach appropriate online manners and behavior. This network was very comparable to Facebook and other such social sites. Students were allowed to create their own pages and profiles. Just like Facebook, they could post thoughts, ideas, pictures, videos, comments, and other content. They could join groups, like pages, and participate in discussions. The only real difference was their access and accountability. The network was only for students, teachers, and administrators. Students were protected from the outside world. Each sub-network was age appropriate, keeping the elementary students separate from the middle and high school students. Private messaging was not an option. There were no “friendships,” everyone on your network is your “friend.” Since all communication is public, it must be acceptable, so there were no suspicious online relationships. Also, since all posts and communications were public, digital etiquette was the norm, creating integrity for all. This could be easily managed in similar free online programs on a smaller scale for teachers who want to work on digital citizenship skills within their classrooms.

It is understandable why a teacher may feel it unnecessary or even inappropriate to discuss social media with her elementary school students. However, fifth grade may be the most opportune age to begin addressing social media issues. These students are at the brink of being teenagers, who will be graduating to middle schools, where social issues are abundant. Learning appropriate social behavior for online relationships seems like a valuable experience which could be easily worked into a curriculum for morally and ethically sound results. Applications like

Edmodo, Google Classroom, Twitter, Skype in the Classroom, and others could prove to be valuable for both curriculum and teaching digital citizenship. “By harnessing social media as a tool for teaching and learning, we help students develop a positive footprint and engage in positive practices online. This also has implications for college and career success” (Monterosa, 2015, p.31).

### **Discussion of Sub Research Question 2**

Cybersecurity is an issue that is not really addressed by many of the participating teachers. The question of why could be that the teacher simply is not aware of Cybersecurity issues with her students, but more than likely is that the teacher realistically does not know what all Cybersecurity entails or even what it indeed is. She knows to train her students how to handle the device, and she gets parents and students to sign the AUP, which she files away. Sub research question 2 asked how fifth grade teachers in the Sunshine School System are teaching their students about Cybersecurity. It was answered with only two themes: AUP/iPad agreements and physical use. These themes will be discussed in this section.

**AUP/iPad agreements.** Although the AUP is an efficient tool for communicating the expectations of users with devices, it should not be the only form of education about Cybersecurity. Cyber-attacks have been newsworthy events for the past several years, and could be discussed, for example, in a current events discussion in a history lesson. Students are prepared for emergencies such as earthquakes, tornadoes, and fire, why not a cyber-attack?

An AUP, and likewise the iPad agreement, is a definition of the rules and expectations of use of a device or network. They lay out for the student what can and cannot be done on the device or school network. However, very few AUPs teach the use of digital technology (Ribble, 2011). Ribble found, while doing research, that statistics show that schools using AUPs have

policies that are not working in critical areas. An AUP has no validity unless it is enforced by the school administration. Administrators should know that schools need policies that students can follow and teachers can support. Ribble recommends that school districts review their current AUPs and discuss whether or not it is addressing the use and misuse of digital technology in their schools (Ribble, 2011). An AUP should not be the only means of communicating Cybersecurity.

**Physical use.** The participating teachers take care of their classroom devices by storing them properly and having students charge them each afternoon. The majority of them have taught their students the proper way to plug them in and store them in the carts. Teacher 7 is the only teacher who does not have a cart, but she lets her more tech savvy students plug each one in every afternoon.

While none of the participating teachers felt they were actually teaching Cybersecurity, they each mentioned the physical care/use of their devices by students. Cybersecurity entails so much more. Students should be able to recognize security risks and make decisions accordingly. They should be able to make responsible decisions about secure practice (i.e., wifi hotspots, sharing, etc.). They should commit to stay current on security issues and be an advocate among their peers for secure practices (Anderson & Krathwohl, 2001). The researcher feels that Cybersecurity is important but going beyond identification of intrusive applications, and resistance of online temptations may be an issue for older students.

### **Discussion of Sub Research Question 3**

Teachers began teaching their students ethical behavior as early as 1960. Character education has never left the school (Ohler, 2011). Teachers should begin teaching Cyberethics, as well, at the elementary school level. There should be a consequence for students who are

behaving unethically online, just as there would be when a student behaves in an unethical way with his classmates. Sub research question 3, how fifth grade teachers in the Sunshine School System are teaching their students about Cyberethics, was answered with three concepts: plagiarism, citations, and inappropriate behavior. These concepts will be discussed in this section.

**Plagiarism.** Teacher 1 stated that plagiarism was really the only topic related to digital citizenship that she and her co-workers (Teachers 2 and 3) addressed in their classrooms. They depend heavily on their computer teacher to teach the other aspects of digital citizenship. Teachers 5 and 6 also address plagiarism with their students and share examples of how students can make certain they are not plagiarizing. They model it for their students. Teacher 7 defines it for her students, and tells them that they should not do it. Teacher 4 admits that she does not do any research or reports, so plagiarism is not an issue in her classroom.

The Internet has made it much easier and more convenient for students to plagiarize. By cutting and pasting, students can finish assignments in record time. Research papers can also be found online. There are two types of plagiarism: intentional and inadvertent. Intentional is self-explanatory; the student intentionally meant to copy someone else's work. Inadvertent plagiarism happens when a student may have the same idea as the author or cites the information incorrectly. However, plagiarism is considered cheating and can have harsh consequences (Willard, 2002).

Fifth grade students should have a good understanding of plagiarism and know how to avoid it, according to the state standards (AL COS, 2009). Teachers need to help students understand that what they are copying from the Internet is someone's property. In a sense, it is

stealing to copy someone else's work and pass it off as your own. Lessons on how to summarize a paragraph might help students do a better job writing from sources.

**Citations.** Teachers 2, 5, and 6 were the only participating teachers who required their students to use any type of citation. Most of the time, they only required the web addresses of sites where they retrieved their information. Teacher 2 struggles with her students not citing the entire web address. She wants to be able to find the exact article they may have used from History.com, for example. Even though Teachers 5 and 6 usually provide their students with a choice of websites to use, they ask the students to cite the website just so the students will become accustomed to creating a works cited page. Teacher 7 provides the websites as well, but only requires a citation if the students had a choice of more than one website to use.

Fifth grade teachers who do not require their students to cite the source of their information are setting up their students for failure. When those students get to middle school, they will be required to list their citations in a simple form. However, in high school the requirements for references get more strenuous as those teachers are preparing their students for college. The researcher has seen how high school students struggle with their references for formal papers, both print and non-print. Since the researcher has been a middle school librarian, and is currently a high school librarian, she has seen this first hand. Students in fifth grade should be taught how to cite their sources, according to the state standards.

The Alabama Course of Study states that fifth grade students should be able to cite sources of text and digital content (AL COS, 2009). The C3 Matrix makes that standard more specific. Students should be able to practice citing sources of text and digital information and make informed decisions about the best practices for avoiding plagiarism. At the very basic level

of the C3 Matrix, the student should be able to discuss the importance of respecting the rights of others regarding their work (Anderson & Krathwohl, 2001).

**Inappropriate behavior.** While teachers may have a “zero tolerance policy” (Teacher 6) for cyber-bullying and other inappropriate behaviors, both online and not, there is nothing stopping that behavior from happening outside the classroom door. Students need to be educated about the social, emotional, and mental effects of cyber-bullying, harassment, and other types of offensive actions. Character education is built into the curriculum in lower grades. It should include online behavior. As students progress in age and grade level, such lessons could be built upon.

“Responsible and ethical use of the Internet is not something that children or teenagers, in particular, consider to be important, and serious consequences are beginning to emerge as a result of careless and offensive online behavior” (Oxley, 2011, p.1). The responsibility of teaching this form of character education seems to fall naturally on the schools when in fact, it should begin at home. According to Oxley, teachers cannot do it alone. She suggests that parents, teachers, governments, industry, and organizations work together, not only to keep children safe on the Internet, but to teach them ethical use of it and hold them accountable for such use. Schools need the help of the parents to educate and enforce digital citizenship with its students. Therefore, should schools not be willing to help educate the parents about digital citizenship first?

### **Implications for Educators and Recommendations for Practice**

From the data, discussions, and conclusions drawn, the following are implications for educators. Included are the thoughts and recommendations from the researcher who is also a seasoned educator.

There needs to be a fresh look at the technology standards that relate to digital citizenship. The standards can be easily integrated into lesson plans and daily routines if the teachers take ownership of teaching their students to become responsible digital citizens. Teachers should take notice of what habits students have regarding the use of digital technology, and make corrections when mistakes are made, rather than waiting on a computer teacher to address it. These skills should not be taught in isolation.

Another area that may need revamping is the iPad orientation done in fifth grade when the iPads are rolled out (at the beginning of each year). Teachers should not assume that all students are familiar with iPads and digital technology. DeFranco (2011) warns against believing that students know more than educators about the Internet. This would be an opportunity to introduce the C3 Matrix and begin a Cybersafety campaign.

The school system may want to review their AUP. Ribble (2011) found that many schools' AUPs were not effective in deterring infractions. As technology changes, the AUP should reflect those changes. A committee could be formed to ask critical questions about the validity and timeliness of the current AUP, and suggestions could be made for updates. The entire school system could collaborate so that there are common goals and a common language in teaching digital citizenship and for the acceptable use of the school's network and equipment.

Parents could also be an integral part of the task of teaching digital citizenship. If schools offered parents information, some training, and ideas of inappropriate behaviors to correct, they could help at home. After all, parents are buying devices for their students to use at home and at school. Schools would benefit from the support from a parent who has knowledge of what digital citizenship is. "Alignment between school and home with regards to digital citizenship and healthy digital usage is a hallmark of a 21<sup>st</sup> century school" (Orth & Chen, 2013, p. 58).

Education is key in teaching digital citizenship. Teachers should not depend on a filter to stop accidental incidences and inappropriate behavior. The same is true of the tight control teachers use; supplying all the websites for students to use. The filter is only a buffer and should never be depended on solely. Students can be taught how to search responsibly and how to navigate through websites without getting off task. While the responsibility is great, the student learns nothing.

Teachers and administrators should stay abreast of emerging 21<sup>st</sup> century skills and technology, but not lose sight of the need for teaching students to be ethically and morally sound. Doing so should be a natural process in planning and carrying out lesson plans. The benefits greatly outweigh the preparation. Cybersafety, Cybersecurity, and Cyberethics are three separate parts to digital citizenship but cannot be taught in isolation because they are interrelated and they overlap (Anderson & Krathwohl, 2001).

### **Limitations**

As projected in Chapter I, all the fifth grade teachers did not volunteer to participate in the study. Each received the same invitation by email, as did their principals (for informational and professional courtesy purposes). Teachers 2 and 5 volunteered immediately. The other participants were slower in responding due to various issues. Teachers 6 and 7 are new teachers and did not feel that they would be a valuable part of the study. Teachers 1 and 3 did not think they would have time to participate initially. Teacher 4, somehow, missed the invitation email. Several principals were very enthusiastic about the possibility of the study taking place in their schools.

Through a grant, the board of education furnished iPads and carts for all eight elementary schools. They were initially marked for the fifth grades, but some principals opted to place them

with their fourth grade teachers. One of the schools in this study did not have an iPad cart in the fifth grade classrooms. Teacher 7 only had 13 iPads for her students to use, which is one of the reasons why she always put her students into pairs or groups of three to work with the iPads. She did not have the same technology opportunities as the other participating fifth grade teachers in this study. However, all fifth grade classes in all schools have a comparable amount of time each week in the computer labs.

### **Conclusions**

This study's purpose was to determine how Sunshine School system's fifth grade teachers were educating their students about digital citizenship. A case study was conducted in the Sunshine School System in Alabama to explore this purpose. Seven teachers were studied and found to be unaware of the urgency in teaching digital citizenship to their students. While found to be proficient in content as classroom teachers, one common thread was lacking. Although some teachers included a small portion of digital citizenship in their discussions with students, none of the participating teachers really honed in on digital citizenship as an ongoing process.

The teachers at School A depended on their computer teacher to teach digital citizenship to their students, and then they mentioned aspects of it in lessons, such as plagiarism, as it was appropriate. Misconduct issues, concerning digital citizenship, were dealt with as they occurred. Teacher 4 does not use her iPads for research; only for her reading program and Spelling City, the subscription software she purchases with her teacher allocation, so she does not find it necessary to teach about plagiarism. Teachers 5 and 6 teach some digital citizenship components as they make assignments, such as plagiarism, simple citations, resisting the urge to click on every pop-up, social media, physical use, and digital footprints. Teacher 7 uses a more controlled

approach with the Internet, but does address some Cyberethics issues, such as physical use of the equipment, simple citations, and not clicking on ads.

Teachers should model appropriate behaviors and encourage students to be citizens of cyberspace (Ribble, 2001). During the interview process, the researcher asked each participating teacher some questions about her daily technology use, including any personal use. Not one teacher considered herself to be a “techie” on more than a minimal scale. Could it be that being invested personally in a technology enriched environment, both as a user and a creator, would raise the consciousness about digital citizenship? Should teachers be encouraged to use technology outside the classroom as well as during school hours? Would it change anything?

At the conclusion of this study, the researcher sees a need to raise the consciousness of all teachers, but specifically fifth grade teachers, concerning the impact of digital citizenship. Students are laying digital footprints every day. These footprints could be harmful to their futures.

### **Recommendations for Future Research**

Based on the data from this study and the drawn conclusions, the following paragraphs are recommendations for future research. As technology progresses in this digital age, new problems and approaches will arise. Teachers have an opportunity now to prepare students for 21<sup>st</sup> century digital communication using the C3 Framework and the curriculum models developed from it, such as the C3Matrix (Anderson & Krathwohl, 2001).

Additional research on how fifth grade teachers in other school systems in Alabama are teaching their students about digital citizenship would be beneficial to the overall picture. Also, fourth and sixth grade teachers could be included in further research. Any instructional programs or methods used could be studied as well.

A study from the students' perspectives would be interesting. This type study might be telling in nature as to whether or not their teachers' methods and lessons are being retained. Students could be surveyed as they might tend to be more honest in an anonymous forum.

Comparing teachers who are avid technology users, both personally and professionally, versus those who only do what they are required to do every day in their classrooms, with the equipment purchased for their classrooms might prove to be a valuable study in the teaching of digital citizenship to students. The researcher believes that teachers who are invested on a personal level with technology may be more apt to teach their students to be responsible digital citizens, more than the teacher who never branches out, who will not try new methods, apps, programs, and equipment, and who does not use technology for personal reasons.

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## APPENDIX A:

### TEACHER INTERVIEW QUESTIONS

1. State your name. Tell me a little about yourself. Your colleges and degrees. How many years of experience?
2. When I say *digital citizenship*, what comes to your mind? How would you define it?
3. How much do you depend on the state standards to guide your lessons to include technology concepts? Explain.
4. In your iPad orientation at the beginning of the year, how do you approach Cybersafety? Is this an on-going topic all year? Explain.
5. If you had a student who appeared to be more tech savvy than your other students, what concerns would you have?
6. What type lessons or conversations do you have with your students concerning Cyberethics, such as plagiarism, piracy, humane treatment of others, etc.?
7. Students tend to feel like the Internet is a shopping mall of information. How do you address intellectual property? How are they required to site their sources on all their assignments?
8. How much do you talk with them about Cybersecurity (keeping equipment and networks safe and secure)? What kind of focus do you place on Cybersecurity?
9. Cyber-hacks have become a serious terroristic threat to the United States. What would you say to a student who appears to be a junior hacker?
10. Do you see your students mature responsibility-wise using technology by the end of the year? Explain. Can you give me some examples?
11. Describe for me a typical day in your life, from the time you get up until you go to bed.
12. Do you consider yourself “techie”? Why or why not?
13. What devices do you use on a regular basis?

APPENDIX B:

SCHOOL A IPAD AUP

**iPad Acceptable Use Policy**

\_\_\_ I will make sure that my hands are clean before using the iPad.

\_\_\_ I will always use two hands when carrying the iPad.

\_\_\_ I will make sure that I always know where the iPad is.

\_\_\_ I will make sure to have an adult plug in the iPad when I know that the battery is low.

\_\_\_ I will only use apps and programs that my teacher has instructed me to use.

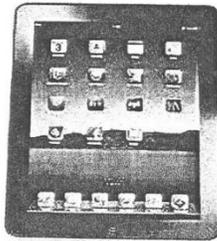
\_\_\_ No food or liquids around the iPad - EVER

\_\_\_ I will be responsible and make smart learning choices while using the iPad.

\_\_\_ I understand that if I do not follow these and other instructions for using the iPad that it will be taken away from me.

\_\_\_\_\_  
Student Signature

\_\_\_\_\_  
Parent Signature



## APPENDIX C: SCHOOL SYSTEM IPAD AUP



### ██████████ iPad Policy, Procedures, and Information 2013-2014

To learn is to pursue understanding. To teach is to encourage and enable the pursuit of understanding.

#### 1. TAKING CARE OF YOUR IPAD

Students are responsible for the general care of the iPad they have been issued by the school. iPads that are broken or fail to work properly should be taken to the student's teacher or advisor.

##### 1.1 General Precautions

- The iPad is school property and all users will follow this policy and the ██████████ acceptable use policy for technology.
- Only use a clean, soft cloth to clean the screen, no cleansers or liquids of any type.
- Cords and cables must be inserted carefully into the iPad to prevent damage.
- iPads and cases must remain free of any writing, drawing, stickers, or labels that are not the property of the ██████████.

##### 1.2 Carrying iPads

The protective cases provided with iPads have sufficient padding to protect the iPad from normal treatment and provide a suitable means for carrying the device within the school. The guidelines below should be followed:

- iPads should always be within the protective case provided by the district.
- No other items should be stored or carried within the iPad case to avoid pressure and weight on the screen.

##### 1.3 Screen Care

The iPad screens can be damaged if subjected to rough treatment. The screens are particularly sensitive to damage from excessive pressure on the screen.

- Do not lean on the top of the iPad when it is closed.

deletion. iPad malfunctions are not an acceptable excuse for not submitting work. Teachers will instruct students on methods of managing workflow.

### 3.2 Network Connectivity

The GADSDEN CITY SCHOOLS School District makes no guarantee that their network will be up and running 100% of the time. In the rare case that the network is down, the District will not be responsible for lost or missing data.

## 4. SOFTWARE ON iPADS

### 4.1 Originally Installed Software

The software/Apps originally installed by ██████████ must remain on the iPad in usable condition and be easily accessible at all times. From time to time the school may add software applications for use in a particular course. The licenses for this software require that the software be deleted from iPads at the completion of the course. Periodic checks of iPads will be made to ensure that students have not removed required apps.

### 4.2 Additional Software

Students are not allowed to load extra software/Apps on their iPads. ██████████ will synchronize the iPads so that they contain the necessary apps for school work. Students will not synchronize iPads or add apps to their assigned iPad, including synching to home or personal iTunes accounts.

### 4.3 Inspection

Students may be selected at random to provide their iPad for inspection. iPads are the property of ██████████ School District, and any staff member may confiscate any iPad at any time for any purpose.

### 4.4 Procedure for re-loading software

If technical difficulties occur or illegal software, non-██████████ installed apps are discovered, the iPad will be restored from backup. The school does not accept responsibility for the loss of any software or documents deleted due to a re-format and re-image.

## 5. ACCEPTABLE USE

The use of the ██████████ School District's technology resources is a privilege, not a right. The privilege of using the technology resources provided by the ██████████ is not transferable or extendible by students to people or

groups outside the district and terminates when a student is no longer enrolled in the [REDACTED].

Students will follow the Acceptable Use Policy that is in the Student Handbook signed at the beginning of the school year. Failure to do so will result in the students' loss of use of the iPad.

Parent Name (Please Print):

\_\_\_\_\_

Parent Signature: Date:

\_\_\_\_\_ Date: \_\_\_\_\_

Student Name (Please Print):

\_\_\_\_\_

Student Signature:

\_\_\_\_\_ Date: \_\_\_\_\_

**INTENTIONAL DAMAGE:** Students/Parents are responsible for full payment of intentional damages to iPads

#### Student Pledge for iPad Use

- I will take good care of my iPad.
- I will never leave the iPad unattended.
- I will not take my iPad into the restrooms or locker rooms.
- I will never loan out my iPad to other individuals.
- I will charge my iPad's battery daily.
- I will keep food and beverages away from my iPad since they may cause damage to the device.
- I will not disassemble any part of my iPad or attempt any repairs.
- I will protect my iPad by only carrying it while in the case provided.
- I will use my iPad in ways that are educational, appropriate and meet GCS expectations.
- I will not place decorations (such as stickers, markers, etc.) on the iPad or deface

groups outside the district and terminates when a student is no longer enrolled in the [REDACTED].

Students will follow the Acceptable Use Policy that is in the Student Handbook signed at the beginning of the school year. Failure to do so will result in the students' loss of use of the iPad.

Parent Name (Please Print):

\_\_\_\_\_

Parent Signature: Date:

\_\_\_\_\_ Date: \_\_\_\_\_

Student Name (Please Print):

\_\_\_\_\_

Student Signature:

\_\_\_\_\_ Date: \_\_\_\_\_

**INTENTIONAL DAMAGE:** Students/Parents are responsible for full payment of intentional damages to iPads

#### Student Pledge for iPad Use

- I will take good care of my iPad.
- I will never leave the iPad unattended.
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- I will protect my iPad by only carrying it while in the case provided.
- I will use my iPad in ways that are educational, appropriate and meet GCS expectations.
- I will not place decorations (such as stickers, markers, etc.) on the iPad or deface

APPENDIX D:  
LESSON PLAN TEMPLATE

Subject:  Week:  Time Allotted:	Materials:
Objectives:	Activities/Assignments:  Before:  During:  After:
Expected Outcome:	

COS:	
Assessments:	

APPENDIX E:  
CLASSROOM OBSERVATION GUIDE

**Setting**

Date\_\_\_\_\_

Observation Start Time\_\_\_\_\_ Stop Time\_\_\_\_\_

# of students\_\_\_\_\_

**Room Description and Student Characteristics**

**Student Groupings**

\_\_Seat Work

\_\_Small Group

\_\_Pairs

\_\_Whole Class

\_\_Other:

**Teacher Roles**

\_\_Lecturing

\_\_Interactive Direction

\_\_Discussion

\_\_Modeling

Facilitating

Other:

**Learning Activities**

Creating

Testing

Research

Writing

Drill and practice

Software/online program learning

**What devices were students using?**

iPad/tablet

Desktop computer

Digital camera

iPod/other small handheld

Interactive whiteboard

Laptop/Netbook

Calculator

Other:

**What devices did the teacher use?**

iPad/tablet

Desktop computer

Digital/video camera

iPod/other small handheld

Interactive whiteboard

Laptop/Netbook

Projector

Document camera

Probes

Other:

**Digital Citizenship concepts addressed**

Cybersafety

Cybersecurity

Cyberethics

APPENDIX F:  
IRB APPROVAL

Office for Research  
Institutional Review Board for the  
Protection of Human Subjects

October 23, 2015

THE UNIVERSITY OF  
**ALABAMA**  
RESEARCH

Julie Lumpkin Payne  
Dept. of Instructional Leadership  
College of Education  
Box 870302

Re: IRB#: 15-OR-325 "A Case Study of Teaching Digital Citizenship in the Fifth Grade"

Dear Ms. Payne:

The University of Alabama Institutional Review Board has granted approval for your proposed research.

Your application has been given expedited approval according to 45 CFR part 46. Approval has been given under expedited review category 7 as outlined below:

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies

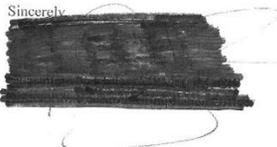
Your application will expire on October 22, 2016. If your research will continue beyond this date, complete the relevant portions of the IRB Renewal Application. If you wish to modify the application, complete the Modification of an Approved Protocol Form. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants. When the study closes, complete the appropriate portions of the IRB Request for Study Closure Form.

Please use reproductions of the IRB approved stamped consent forms to obtain consent from your participants.

Should you need to submit any further correspondence regarding this proposal, please include the above application number.

Good luck with your research.

Sincerely,



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FAX (205) 348-7189  
TOLL FREE (877) 820-3066