# IMPLEMENTING APPROPRIATE USE OF TECHNOLOGY: A CASE STUDY ON HOW RURAL SECONDARY STUDENTS APPROACH DIGITAL CITIZENSHIP

by

Jill A. Lilly

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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APPROVED BY:

Rick Bragg, Ed.D., Committee Chair

James Eller, Ed.D., Committee Member

## ABSTRACT

The purpose of this intrinsic case study is to discover the approach of rural secondary students regarding their attainment and practice of digital citizenship in a learning environment that utilizes technology. The theory guiding this research study is Kohlberg's theory of moral development as it emphasizes how individuals establish their ethics and values because digital citizenship teaches students to use the Internet in an ethical and appropriate manner. The qualitative inquiry was conducted using an intrinsic case study in a small rural secondary public school. Convenience sampling was utilized, giving way to 18 adolescent participants and 10 teachers at the school. All participants were well-versed in using technology. The data were obtained via semi-structured interviews with students and teachers, observations in classrooms, and an analysis of the Acceptable Use Policy. The collected data were analyzed, coded, and categorized into common themes pertaining to the research questions. The results indicated that digital citizenship is approached in multiple ways. The results also indicated that the participants expressed a correlation between one's ethics and morals and their actions while using technology. The implications of the findings suggest that frequent instruction of digital citizenship occur and that students receive guidance on the use of proper ethics and morals when using technology. The implications also suggest that consequences and repercussions be explained to prevent inappropriate use of technology by adolescents.


*Keywords*: digital citizenship, technology, cyberbullying, digital plagiarism, secondary students, case study

**Copyright Page (Optional)**

## Dedication

This manuscript would not have been possible without God's presence and helping hand in my life. God allowed me to overcome several health scares in my life. From a lifesaving surgery to surviving three strokes, God remained a constant force and empowered me to persevere in the doctoral journey.

My family has also helped me with this process. Their support and positive influence have been an uplifting and overwhelming source of strength as I navigated the creation of this manuscript. My husband, my children, and my parents have helped to make this endeavor possible. Their encouragement has been invaluable and reassuring, helping me to overcome the obstacles that I faced throughout.

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## List of Abbreviations

Acceptable Use Policy (AUP)

Information and Communication Technologies (ICT)

Information Technology (IT)

International Society for Technology in Education (ISTE)

# CHAPTER ONE: INTRODUCTION

## Overview

One of the purposes of educating students is to instill them with knowledge so that they can not only thrive in their future but strengthen and enhance civilization. Preparing students to appropriately engage in a world that utilizes technology is a priority for most educational institutions (Curran & Ribble, 2017). Most of the current youth population is well-acquainted with using forms of technology. According to the American Academy of Pediatrics (2013), the average adolescent spends more than 11 hours a day using various modes of media. Known as digital natives, these young individuals have been reared in an environment that prioritizes the use of technology, thus increasing their proficiency for it (Liebenberg et al., 2018; Martin et al., 2020). The prevailing use and reliance on technology have necessitated the establishment of guidelines to provide instruction for appropriate conduct for current students. A review of the existing literature regarding the creation and implementation of protocols for responsible use of technology has revealed the importance of digital citizenship. Providing instruction for the proper use of technology, digital citizenship instills accountability for one's actions, thus promoting qualities related to good citizenship (Choi, 2016; Jones & Mitchell, 2016; Ribble, 2009). The following will entail an intrinsic case study to secondary students' approach of digital citizenship. The background of the issue will be presented, including the historical, social, and theoretical contexts of digital citizenship. The problem statement, purpose statement, and the significance of the study will be explained. The research questions will be stated and explained, followed by a list of pertinent definitions. The chapter concludes with a synopsis of these components.

## Background

The necessitation for digital citizenship has a rich foundation. As technology has progressed, so has the demand for guidelines to regulate and direct proper use of the Internet. Much of current society functions with the efficiencies afforded by technological advances, which will continue to evolve. The need for digital citizenship instruction has been noted in the academic realm because many research studies have been conducted for exploration. The following will explain the historical, social, and theoretical frameworks about the topic of digital citizenship.

## Historical Context

The Internet was introduced to individuals and the field of education in the early 1980s (Das & Nagar, 2019). It soon became a useful learning tool for students. Throughout the 1980s and 1990s, the Internet continued to forge new advantages but also produced challenges (Ribble, 2015). As a result, an interest in establishing ethics while students used the Internet began (Ribble, 2015). To educate students on these dangers, the National Education Technology Standards (NETS) were developed (Ayad & Ajrami, 2017; Ribble, et al., 2004). These standards provided guidelines for respectful and ethical use of the Internet. Many schools wanted to prohibit students from using the Internet (Ribble, 2015). Many students were using the Internet in an inappropriate manner, such as for cheating. Technology use experienced a surge in the early 21st century as the Internet became increasingly accessible on mobile devices, such as smartphones and tablets (Godfrey, 2016; Hollandsworth et al., 2017; Ribble, 2009; Ribble, 2015). Since this time, there have been increased occurrences of cyberbullying, digital plagiarism, illegal downloading, and cybercrimes (Dedebali & Dasdemir, 2019; Ribble et al., 2004; Sari et al., 2020). As technological innovations are developed, the use of technology

progresses. Individuals thrive on these innovations, resulting in a dependence on technology that has escalated throughout the 21st century. Thus, the need for education on the advantages and disadvantages of using technology has been established (Pedersen et al., 2018). In 2007, Ribble and Bailey's *Digital Citizenship in Schools* presented the purpose of digital citizenship instruction and explained nine components pertaining to digital citizenship (Hui & Campbell, 2018). The International Society of Technology for Educators (ISTE) replaced the NETS, establishing updated standards for teachers and students to appropriately use technology in 2007 (Ebersole, 2019).

**Social Context**

One of the purposes of using technology is to promote communication amongst users. As a result, the number of individuals using social media to form connections, express ideas, and exchange information has increased. Examples of social media platforms include Facebook, Twitter, Instagram, and Snapchat (Sari et al., 2020). Given the increased use of social media by many adolescents, they need to use various formats of social media in a respectful manner (Mattson, 2017). For society to continue to thrive, adolescents must learn to successfully coexist in a moral demeanor. Students must realize that their use of technology can influence and impact others (Hui & Campbell, 2018). One of the components of digital citizenship for students to grasp is the attainment of acceptable social norms because technology molds society (Dedebali & Dasdemir, 2019). It has become imperative that there is a need for students to use technology ethically. The advent of technology across the developing world lends a strong foothold to cyberbullying, which is increasing globally (Choi, 2016; Martin et al., 2020). Prior to the invention of the Internet, many adolescents engaged in forms of bullying and intimidation toward other individuals. However, cyberbullying is increasing because the user engages in technology

to allege threats and insults anonymously (Hui & Campbell, 2018). Pertinent to the ethical use of technology is instruction on respecting the civil liberties of all individuals (Basarmak et al., 2018). Teaching adolescents this skill will promote respectful behavior as an adult, thus encouraging civil communication and promoting a thriving society.

**Theoretical Context**

The purpose of students attaining the skills encompassed within digital citizenship is employing adolescents to use technology ethically (Ibiricu & van der Made, 2020; Ribble, 2015). In doing so, digital citizenship directs students avoid possible pitfalls of technology use. Students use their ethics to decide if they will avoid or commit abusive behaviors online, such as cyberbullying, digital plagiarism, or fraud. Because the use of technology is increasing, especially amongst the youth population, a multitude of scholarly studies have been implemented to ascertain how an individual's morals impact his or her online conduct. Harrison and Polizzi (2021) assert that Bandura's theory of moral disengagement illustrates how adolescents explain their actions by disconnecting them from their morals. According to this theory, adolescents disregard their ethics and elect to commit a delinquent behavior based on the specific conditions of the situation. Kim and Choi (2018) investigated the determining role of the ethics of an adolescent regarding his or her actions while using technology. This study posits that promoting sound ethics in education implores students to use the Internet respectfully and without harm to others. Additionally, Vlaanderen et al. (2020) explored the online actions and behaviors of adolescents using Ajzen's theory of planned behavior. According to this theory, "a person's attitude toward certain behavior is based on one's behavioral beliefs," (Vlaanderen et al., 2020, p. 3). The morals of an individual dictate his or her decorum while using technology.

## Problem Statement

The problem is that many rural secondary students are using technology to commit unethical behaviors, such as cyberbullying, digital piracy, digital plagiarism, and fraud (Brandau et al., 2021; Curran & Ribble, 2017; Hui & Campbell, 2018; Jones & Mitchell, 2016; Kara, 2018). Performing immoral actions utilizing technology can result in criminal consequences for the offender and psychological implications for the victim (Chan et al., 2020; Vlaanderen et al., 2020; Xu et al., 2019). Technology use is increasing across the world. Accessibility to the Internet is a cultural norm and is used in most aspects of life (Basarmak et al., 2018; Sari et al., 2020). Individuals now rely on the Internet for work, education, entertainment, social experiences, and banking (Al-Abdullatif & Gameil, 2020). Current students have grown up in a world that this propelled using technology. Individuals who are aged 15-24 entail 70.6% of global Internet use (Kinci & Strach, 2021). Known as digital natives, these individuals are well-acquainted with using methods of technology and are often more knowledgeable than teachers (Dedebali & Dasdemir, 2019; Kinci & Strach, 2021). The surge in the use and dependency of technology has created a need for students to receive crucial instruction on how to use it appropriately and responsibly (Al-Abdullatif & Gameil, 2020; Basarmak et al., 2018; Hui & Campbell, 2018). Receiving this education as adolescents will create adults who know how to use technology ethically.

Digital citizenship refers to the skills necessary to use technology properly. Learning the components of digital citizenship provides students with knowledge on how to avoid the detriments of technology use, such as cyberbullying and plagiarism (Curran & Ribble, 2017; Hui & Campbell, 2018; Korucu & Totan, 2019). Receiving pertinent instruction on digital citizenship prepares students for future participation in society, which will entail the continued use of

technology (Basarmak et al., 2018; Ghosn-Chelala, 2019; McGillivray et al., 2016). Learning and applying skills for responsible Internet use allows students to continue to employ the skills as an adult. Digital citizenship also emphasizes digital netiquette, which refers to the rules that an individual uses when communicating online (Martin et al., 2019; Martin et al., 2020). These rules and norms pertaining to using civil and honest statements when communicating with others. Digital citizenship also prepares students to thrive in a future society that relies on the use of technology, as indicated by the following:

> Competent digital citizens are able to respond to new and everyday challenges related to learning work, employability, leisure, inclusion and participation in society, respecting human rights and intercultural differences (Richardson & Milovidov, 2019, p. 10).

Teachers need to be cognizant of digital citizenship and incorporate it across the curriculum for it to be effective (Ghosn-Chelala, 2019Al-Abdullatif & Gameil, 2020). Despite the standards and resources dedicated to the instruction of digital citizenship, little research has been conducted to determine how secondary students internalize it. Current research focuses on digital citizenship from the perspective of educators, as well as organizations that deem it necessary, such as the International Society of Technology for Educators (ISTE) (Huffman et al., 2019). Additional research conducted to discover how secondary students perceive digital citizenship will result in effective methods to make the instruction more meaningful to students (Martin et al., 2019).

**Purpose Statement**

The purpose of this intrinsic case study is to discover the perceptions of rural students regarding digital citizenship in a secondary learning environment in southern West Virginia. At this stage in the research, student perception of digital citizenship will be generally defined as their discernment of the instruction received in school about the responsible and appropriate use

of technology. The theoretical framework guiding the research study is Kohlberg's stages of moral development because it focuses on how adolescents realize their sense of ethics and apply it when making decisions that direct their actions.

**Significance of the Study**

Being cognizant of how secondary students approach digital citizenship is relevant for several reasons. The study will make contributions to the field of education empirically because the results of the case study will be applicable to further studies about students using digital citizenship. This study will also make pertinent contributions to Kohlberg's stages of moral development. Finally, this qualitative inquiry will make practical benefits to current and future educational practices regarding the ethical use of technology.

**Empirical Significance**

Obtaining data to determine how secondary students approach the concept of digital citizenship is critical for developing further educational programs that teach the necessary skills to practice digital citizenship. Previous studies have indicated that how students internalize their instruction on the appropriate use of the Internet in academic and nonacademic settings determines how students will utilize digital citizenship (Jones & Mitchell, 2016; Kim & Choi, 2018). This qualitative study will use data to make inferences regarding the outcomes and will produce suggestions to make digital citizenship more meaningful to future adolescents. This study will create a basis for additional research studies about the role of digital citizenship in educational institutions. The implications of the study will influence how future students ethically use technology, which is beneficial as these current students will continue to use technology as it evolves throughout their lives.

**Theoretical Significance**

The study will also make contributions to Kohlberg's stages of moral development. This theory categorizes the progression of a child's moral development per his or her reasoning (Kohlberg & Hersh, 1977; Sosler, 2019). Students employ their sense of ethics while using technology; it is what compels them to use it appropriately or inappropriately. Learning in a digital environment provokes students to make moral decisions (Lucey & Lin, 2020). The objective of teaching students the skills of digital citizenship is to train students to use technology ethically, thus imploring them to use the higher stages of Kohlberg's moral development. Academic honesty is promoted with the moral development of a student (Koh, 2012). The findings of the study will identify methods to advance the moral development of secondary students, particularly in the realm of technological application.

**Practical Significance**

Relevant to the field of education, this study emphasizes the role of digital citizenship for students in a world where the dependence on technology is surging. This qualitative study can be substantial to the field of education because it improves the instruction of digital citizenship by emphasizing the needs and views of the students. The educational needs of students are constantly changing, requiring instructional strategies to be revised (Huffman et al., 2019). While the goals of digital citizenship have remained the same, the composition of students has evolved. Instruction that is specific to the students' needs is more effective. The adolescent age group comprises the largest users of the Internet, especially the use of various platforms of social media (Dedebali & Dasdemir, 2019; Kinci & Strach, 2021). As the extent of use increases, so does the need to teach adolescents how and why to use technology appropriately. Adolescents are in a stage of development in which they are forming their personal identities, and many rely on social

media as they progress into young adulthood (Kim & Choi, 2018). Providing secondary students with instruction on the purpose of avoiding inappropriate conduct thereby decreases the negative risks and dangers of technology use (Al-Abdullatif & Gameil, 2020; Curran & Ribble, 2017; Basarmak et al., 2018). One purpose of digital citizenship is to prepare students to function responsibly and ethically when using technology as adults (Ghosn-Chelala, 2019; Godfrey, 2016; Curran & Ribble, 2017). Although the advent of the Internet has yielded numerous advantages for society, it has also produced many hazards. This study seeks to discover the influence of digital citizenship instruction on students in secondary schools by focusing on their perceptions. The information obtained will provide insight into the application and evaluation of digital citizenship skills. Because students will continue to utilize technology once they graduate high school, they must learn to use technology responsibly. Technology use has become a cornerstone of modern society and its role will increase and evolve in the future.

## Research Questions

Technology assumes an enormous role in contemporary society by functioning as a pillar of daily existence across all spectrums of society. The use of technology is multiplying worldwide and is embodied in most aspects of life, including communication, entertainment, and education (Tangul & Soykan, 2021). For this role to progress as civilization evolves, current adolescents need to use technology ethically and appropriately. Many educational institutions, parents, and teachers are driving students to acquire and practice digital citizenship. The purpose of the research study is to discover how secondary students approach digital citizenship. With this in mind, the following describes the research questions that will guide the inquiry.

## Central Research Question

How do rural students perceive digital citizenship in a secondary learning environment in southern West Virginia?

## Sub-Question One

How do secondary students relate their ethics as they acquire the skills encompassed in digital citizenship?

## Sub-Question Two

How do secondary students apply their morals when practicing digital citizenship for academic and nonacademic purposes?

## Sub-Question Three

How do secondary students characterize digital citizenship in a society that increasingly utilizes technology?

## Definitions

1. *Citizen*- A citizen is a person who is entitled to the legal rights, privileges, and duties afforded by the nation and state of residence (Dedebali & Dasdemir, 2019).
2. *Digital citizenship*- Digital citizenship refers to the instruction students receive on how to use technology properly and responsibly (Curran & Ribble, 2017; Hui & Campbell, 2018; Korucu & Totan, 2019).
3. *Digital ethics*- Digital ethics is how users of the Internet interact with one another in a moral and responsible manner (Sari et al., 2020; Varlan & Tomozei, 2018).
4. *Digital identity*- Digital identity is how an individual regard themselves and how others perceive that individual's online activity (Martin et al., 2019).

5. *Digital native*- A digital native is an individual that has been born in the digital world (Dedebali & Dasdemir, 2019; Kinci & Strach, 2021).
6. *Digital netiquette*- Digital netiquette refers to the etiquette or rules that one follows while using technology (Martin et al., 2019; Martin et al., 2020).
7. *International Society of Technology for Educators (ISTE)*- The International Society of Technology for Educators (ISTE) is an organization provided to educators who use technology to implement instruction (Dawkins, 2020; Huffman et al., 2019).

## Summary

The problem is that many secondary students are inappropriately using technology. The purpose of this qualitative inquiry is to discover how secondary students approach digital citizenship. Understanding how secondary students regard digital citizenship, which is teaching students to use technology ethically, will provide insight on how to make it relevant for subsequent students. There are numerous reasons that digital citizenship is necessary for the educational realm. Digital citizenship is designed to prevent students from negatively using technology, including cyberbullying, digital plagiarism, and committing various cybercrimes. Receiving instruction in digital citizenship provides students with a solid foundation of knowledge for using the Internet responsibly and respectfully. Digital citizenship instruction for adolescents is designed to prepare them to use technology ethically as adults. Data obtained from this research study will result in understanding how students regard digital citizenship and provide insight on developing standards for teaching students to use technology appropriately. By valuing the perceptions of students, a foothold for a future that incorporates the proper and sustainable use of technology is established. Digital citizenship is necessary for a society based almost existentially on the promotion and use of contemporary technology.

# CHAPTER TWO: LITERATURE REVIEW

## Overview

A methodical review of the literature was carried out to examine the approach of digital citizenship for adolescents in secondary schools. This chapter will provide a discussion of the literature about the relevance of digital citizenship in secondary education. The theoretical framework will consist of Kohlberg's stages of moral development. Following the survey of the theoretical framework, a synthesis of current literature about the significance of digital citizenship for students will be conveyed. Digital citizenship and its purpose will be explained, followed by the need for it. The current strategies used to implement digital citizenship will be presented. Regarding the instruction of digital citizenship, the views of teachers will be addressed. The synthesis of the literature on digital citizenship will end with a discussion of future implications. The chapter will conclude with a discussion of the need for this qualitative inquiry, which is based on an evident gap in the literature.

## Theoretical Framework

The purpose of this intrinsic case study is to discover the perceptions of rural students regarding digital citizenship in a secondary learning environment in southern West Virginia. Students must rely on their existing morals to follow the established guidelines of technology application (Casa-Todd, 2018; Huffman et al., 2019). Being cognizant of the formation and evolution of the ethics of a secondary student is necessary to ascertain how to convey the pertinence of digital citizenship. Therefore, Kohlberg's stages of moral development will serve as the theoretical framework for this research study.

### Origin of Kohlberg's Stages of Moral Development

Appreciating Piaget's theory of cognitive development in children, Kohlberg, a Harvard psychologist, aimed to determine how the morals of children are formed (Baxter & Boblin,

2007). Additionally, Kohlberg desired to measure and assess Piaget's belief that the moral logic of children evolves as children age (Yuping Zhao et al., 2018). Believing that a child's moral decisions were based on their cognition, Kohlberg conducted a longitudinal research study in which he presented a scenario of a moral dilemma to 75 early adolescent and older American boys (Baxter & Boblin, 2007). The Heinz Dilemma was the most used scenario to obtain the data for the research study (Baxter & Boblin, 2007; Sosler, 2019; Yuping Zhao et al., 2018). In this dilemma, a poor husband steals an expensive drug that will save the life of his sick wife. The participants were asked to explain if they agreed or disagreed with the actions of the husband. Based on the responses, Kohlberg postulated that the morals of an individual evolve as he or she grows. He developed three levels and six stages of moral development, spanning from early childhood through adulthood (Kohlberg & Hersh, 1977; Sosler, 2019; Yuping Zhao et al., 2018).

The core of Kohlberg's stages of moral development is the appropriate and ethical conduct of individuals, which is determined by one's guiding principles as they mature. "Each of the Kohlberg stages of moral judgement represents a step toward a more genuinely or distinctly moral judgement," (Kohlberg, 1966, p.21). Occupying the established stages of moral development, the preconventional level is first and consists of two stages, the punishment-and obedience and instrumental-relativist (Kohlberg & Hersh, 1977; Sosler, 2019; Yuping Zhao et al., 2018). In these stages, young children are concerned with avoiding punishments and obtaining rewards (Kohlberg & Hersh, 1977; Sosler, 2019; Yuping Zhao et al., 2018). During the preconventional level, young children learn to prevent chastisements by complying with the demands of a caregiver. They also behave in a manner that fits their needs. The next level is the conventional level and is comprised of two stages, the interpersonal concordance stage and the law-and-order orientation stage (Kohlberg & Hersh, 1977). Individuals in this level behave in a

manner that conforms with a group; they are adhering to established rules that have been determined by society. In the interpersonal concordance stage, children aged seven to eleven conform to actions that appease others (Kohlberg & Hersh, 1977). Children choose to obey authority figures in the law-and-order stage (Kohlberg & Hersh, 1977). The postconventional level is the culminating level and consists of two stages, the right and social contract stage and the universal ethical principles stage (Sosler, 2019; Yuping Zhao et al., 2018). In this final level, the behavior of individuals is directed by their personal principles and based upon their innate philosophical assumptions. The focus of this level is on the humane rights and concerns of others (Sosler, 2019; Yuping Zhao et al., 2018). In the final stage of moral development, the universal ethical principles stage, individuals use their conscience and moral principles (Sosler, 2019).

**Kohlberg Augments Digital Citizenship**

Kohlberg's stages of moral development give credence to students acquiring digital citizenship. Through the use of classroom management, teachers direct students on appropriate moral behaviors while delivering instruction (Kohlberg, 1966). "Anchoring their digital literacy in a moral construct is critical for providing context and helping them develop safe and responsible decision-making skills," (Dotterer et al., 2016, p. 60). One of the major demands of practicing digital citizenship is adhering to moral stipulations (Godfrey, 2016; Wang et al., 2021). Kohlberg's stages of moral development illustrate how children deepen their understanding of the sense of acceptable and unacceptable behavior. "This theory explains how moral intelligence is constructively developed and how it determines a person's ability to perform ethical reasoning," (Wisesa et al., 2019, p. 96).

Kohlberg's stages of moral development are used as the theoretical framework and will provide the foundation of the study. The purpose of this inquiry is to determine how secondary

students perceive the use of digital citizenship, which refers to using technology responsibly and ethically. Because Kohlberg's stages of moral development describe how individuals apply their sense of morals to their actions, this theory explains how adolescent students allow their morals to impact their use of technology. With this in mind, the research questions for this study focus on how the moral development of secondary students effects their use of technology. The interpretation of data gathered from the primary document, interviews, and observations will also be based on Kohlberg's stages of moral development. Specifically, the analysis of the researcher will emphasize the themes of moral development that are conveyed as secondary students use technology. The results of the study will disclose how secondary students relate and apply moral development while using various modes of technology.

## Related Literature

Influencing nearly all aspects of life, the Internet dominates modern society. Approximately 95% of Americans use the Internet for a wide variety of purposes (Miniwatts, 2020). Developed to enhance ways of life, the Internet has become incorporated into nearly all facets of daily existence, such as entertainment, banking, shopping, education, and livelihood. It has become the crux of civilization (Brewer et al., 2018). Not only is the use of technology in education and society expanding but is also evolving at a rapid pace (Al-Abdullatif & Gameil, 2020; Kinci & Strach, 2021; Ozgur, 2021; Venkatesh et al., 2003). Through mobile Internet devices, such as smartphones, laptops, and tablets, students can extend their use of technology. Many affiliates in the field of education, including parents, teachers, administrators, and other stakeholders, are exhibiting safety concerns for children who utilize technology abundantly. A systematic review of literature about the magnitude of digital citizenship has conveyed a vital need for the instruction of it in schools to teach children how to use technology responsibly and

safely (Curran & Ribble, 2017; Hui & Campbell, 2018; Jones & Mitchell, 2016; Kara, 2018). Students utilize various forms of technology for academic purposes, but also for nonacademic purposes, such as gaming and social media (Godfrey, 2016; McGillivary et al., 2016; Saputra & Al Siddiq, 2020). Although current students are well-versed in using technology, they need to be educated on its hazards (Godfrey, 2016; Philips & Lee, 2019). Cyberbullying, cybercrimes, digital plagiarism, and digital piracy are examples of negative uses of technology (Martin et al., 2020; Waters, et al., 2020; Xu et al., 2019). One of the major components of digital citizenship is the influence of an individual's moral attitude, which serves as a predecessor for the inclination to use technology in an inappropriate manner (Lee et al., 2018). The moral facet of digital citizenship also makes individuals responsible for their online behavior (Atif & Chou, 2018). Learning to use technology appropriately prepares children to use it responsibly as adults, thus promoting a civil and democratic society.

**Information and Communications Technology (ICT)**

Known as ICT, the transmission and exchange of digital information dominates the world in various approaches. "ICT refers to various technologies that allow access to information through telecommunications," (Koh et al., 2022, p. 101). The field of ICT is known for two momentous developments: the mobile phone in the 1960s and the Internet in the 1980s (Flesher Fominaya & Gillan, 2017). Expanding since then, the domain of ICT has evolved into a mainstay for humanity. "ICT is increasingly integrated at the heart of society," (Sari et al, 2020, p.83). Presently, the Internet enables individuals to transmit and transfer data in a near-instant manner. Examples of ICT devices include smartphones, laptops, tablets, and online gaming devices. The production and acquisition of these instruments are increasing globally to meet the current demands of individuals who are inclined to remain online (Neshati & Daim, 2017; Touloupis &

Athanasiades, 2020). In addition, ICT-related occupations are projected not only to increase but to have the highest growth rate (Johnson et al., 2021; 2022). In a society that relies on the use of technology, ICT employment opportunities are abundant. However, ICT companies, such as Google and Apple, expect their prospective staff to be well-acclimated with ICT and its facets (Johnson et al., 2021; 2022). This field of expertise will not progress without trained employees. There is an imperative urgency to educate students with the knowledge and skills that will prepare them for an occupation that involves ICT (Johnson et al, 2021; 2022). Students will need instruction in the areas of science, technology, engineering, and mathematics (STEM) subjects. ICT has also been incorporated into current education during the COVID-19 pandemic, in which students received their classroom instruction via online environments (Koh et al., 2022). Regardless of the numerous advantages offered through ICT, many hazards can also ensue. Digital citizenship ensures that students will use ICT ethically, avoiding the dangers that can accompany it. Examples of these possible dangers include cyberbullying, releasing private information unwillingly, and committing cybercrimes.

**Internet Creates Concerns for Educators**

The Internet was introduced to society in the 1980s, creating an atmosphere of worldwide communication (Das & Nagar, 2019). During the following decade, many educational institutions incorporated student access to the Internet to facilitate learning. Since that time, the use of the Internet had exploded, making it became more accessible to citizens with the onset of mobile technology (Ribble, 2015). Examples of devices that employ mobile technology include laptops, tablets, and smartphones. Correlating with the increased use of technology was the growing concern for using it ethically (Ribble, 2015; Sauers & Richardson, 2019). Numerous educational professionals detected secondary students using technology to plagiarize material

and pirate existing work from the Internet. This rising concern initiated the incorporation of programs in schools to teach students to use technology responsibly.

### *The Inception of Acceptable Use Policies*

In efforts to strengthen student culpability when using technology, the United States government created several such programs, including Digital Promise and ConnectED (McKnight et al., 2016). The Federal Communications Commission enforced the Children's Internet Protection Act (CIPA) in 2001, which was required for all schools that received E-Rate funds (Sauers & Richardson, 2019). The E-Rate program allows schools to communicate in an inexpensive manner (Sauers & Richardson, 2019). When E-Rate was implemented in 1996, 14% of the K-12 classrooms in the United States had access to the Internet, whereas nearly all classrooms have it currently (Sauers & Richardson, 2019). To comply with CIPA, schools enacted Acceptable Use Policies (AUPs), which are forms in which parents and students acknowledged the consequences of inappropriate use of technology. These forms indicate specific modes of suitable online actions while also detailing improper behaviors (Robinson & McMenemy, 2020). In achieving this notion, AUPs empower students with the skills and components of digital citizenship. AUPs also serve to manage the behavior of students and teachers when using technology (Sauers & Richardson, 2019). These policies, which vary from school district to school district, are designed to target specific areas of technology abuse, such as cyberbullying and fraud (Sauers & Richardson, 2019). To be effective in conveying the guidelines and expectations of digital citizenship, the wording of an AUP must be written so that parents and students can easily acknowledge the terms being described (Robinson & McMenemy, 2020).

### *Ribble Creates Digital Citizenship*

Because many AUPs were found to be ineffective, National Education Technology Standards (NETS) and the International Society for Technology in Education (ISTE) established ethical standards of technology for students, teachers, and administrators to follow (Ribble, 2015). Schools began to provide mobile technologies to students, which also contributed to the growing desire for students to be taught to use technology responsibly (Ribble, 2015). As a response to this growing concern for students to use technology ethically, Ribble (2009) developed nine specific elements for children to attain that would ensure the safe and appropriate use of technology. These nine elements encompass digital citizenship and establish standard guidelines for students utilizing technology (Akcil & Bastas, 2021). The foundation of digital citizenship is related to character education and reflects the progression of individuals as technology evolves (Ribble, 2015). Thus, through digital citizenship, students will be prepared to continue to use technology responsibly throughout adulthood.

The following are the nine elements that comprise digital citizenship: digital access, digital commerce, digital communication, digital literacy, digital etiquette, digital law, digital rights and responsibilities, digital health and wellness, and digital security (Curran & Ribble, 2017; Ribble & Park, 2020). These elements teach children to navigate the Internet safely and to respect others. The elements of digital citizenship also make students aware of the consequences of using the Internet in a harmful manner, such as by committing cyberbullying or digital plagiarism. To simplify the comprehension and delivery of digital citizenship, the nine elements are placed into three categories: respect, educate, and protect (Curran & Ribble, 2017; Hui & Campbell, 2018). Students learn to respect themselves and others in an online environment. They are taught methods of Internet safety, and they also learn to guard themselves against potential harm.

To meet the demands and developments of new technology, an additional two elements have been suggested. The new recommendations are cloud computing and digital tools (Akcil & Bastas, 2021). Cloud computing is a system in which individuals utilize shared computing resources (Cong et al., 2021). Through cloud computing, users can access information found on the Internet and also store it. Growing rapidly since 2006, examples of cloud computing include Amazon Elastic Compute Cloud and Google App Engines (Cong et al., 2021). The additional element of digital tools refers to mobile devices, such as tablets and resources found on the Internet.

**Digital Natives Warrant Digital Citizenship**

The students who occupy the current educational institutions of today are known as digital natives. Born during the digital age, these individuals have been reared in an environment that heavily relies on the use of technology. The lives of digital natives are intertwined with the Internet; they do not know life before its inception (Warf, 2018). The Internet and technology assume large roles in the lives of digital natives. Their early associations with technology have produced a generation of individuals who are well-informed about its diverse uses and multiple applications (Kesharwani, 2020). Because of this, it is the overwhelming belief that digital natives understand how to navigate various modes of technology successfully and safely. However, many digital natives lack technical skills that promote the responsible use of technology (Smith et al., 2020; Warf, 2018). The benefits of digital citizenship are paramount for the children of today. Shaped by modern social media, digital natives need to be educated on the evolving pitfalls of technology (Smith et al., 2020). Additionally, parents should also be aware of the benefits of the acquisition of digital citizenship. In doing so, parents of digital natives can

become cognizant of the cognitive and behavioral impacts brought on by using the Internet (Judd, 2018).

**Purpose of Digital Citizenship**

The purpose of digital citizenship is to produce citizens that "make good choices, recognize intelligent technological behavior, and continually analyze their behavior in the use of various techniques," (Godfrey, 2016, p. 18). Individuals are taught practices that instill a suitable and respectful use of technology. Many students have not attained skills that promote the safe use of the Internet, increasing the need to learn the possible hazards of it (Moon, 2018). In the current digital age, children need to learn how to operate the Internet in an environment in which they are free from harm. According to Moon (2018), "access to knowledge is required to foster understanding and create informed students that have learned the skills they will need to navigate the potential harms of digital access" (p. 292). Digital citizenship intends to prevent students from using modes of technology carelessly or immorally. Because of the increased use of technology, many individuals are linking their online and offline behavior, resulting in precarious actions (Fedeli, 2020). Learning to manage online behavior influences one's social demeanor. In a global atmosphere that is contingent upon the use of technology, the acquisition of digital citizenship is necessary for lifelong learning (Aldosari et al., 2020). In attaining and practicing digital citizenship, secondary students are becoming equipped to continue to use technology effectively and as productive members of society. Students are learning essential skills that are necessary for future employment (Moon, 2018). Digital citizenship does not represent regulations for students to follow, but as a method to objectify and resolve obstacles presented to any individual that utilizes technology (Ribble, 2015). Embodying a concept for users of technology to acquire, digital citizenship is designed to benefit civilization. Students will

be prepared to see society thrive as the use of technology increases and evolves (Neumann, 2016). Digital citizenship provides a solid foundation for students to use technology ethically for their future, which makes them qualified for a variety of opportunities. Students who receive an education in digital citizenship will have a more successful existence with technology (Kinci & Strach, 2021). These young individuals will be cognizant of the actions that constitute appropriate behavior when using various modes of technology (Aldosari et al., 2020). The reason for digital citizenship is to promote digital literacy, civic behavior, and proper online communication. It also is designed to decrease the dangers associated with improper use of technology, which include digital plagiarism, cyberbullying, and cybercrimes.

***Digital Literacy***

Although adolescents are assumed to be able to effectively operate technology, many lack the skills to do so. These individuals are deficient in their digital literacy, which is the ability to access and examine the information from the Internet (Lee, 2018; List, 2019 Potyrala & Tomczyk, 2021). Many students tend to believe false reporting found online. Becoming knowledgeable about digital literacy can prevent exposure to a danger on the Internet (Lee, 2018). Adolescents that have increased digital literacy can often avoid unsound digital practices, such as Internet scams that can steal personal information. Digital literacy compels students to use higher-order thinking skills and prepares them to be successful in the 21st century (Sadaf & Johnson, 2017). Being able to think critically about data retrieved from the Internet enables students to function effectively as adults; decision-making skills are imperative for progress and growth. The need for digital literacy is so great that new national guidelines have been established to promote it (Sadaf & Johnson, 2017). These guidelines will provide direction and guidance for the future of current students. Digital literacy is also becoming an increasing

necessity for future employment (Potyrala & Tomczyk, 2021). Once students have successfully mastered their ability to navigate digital technology, they will be prepared for many opportunities of occupations.

### *Use of Civic Engagement*

One of the objectives of digital citizenship instruction is to promote citizen participation in democracy. Being involved in public concerns and political matters refers to civic engagement (Themistokleous & Avraamidou, 2016). As students learn from their social studies courses, staying informed of political and social issues is an expectation in a democratic society. The Internet has made it easier for individuals to stay informed of political occurrences, such as important legislative issues. Civic participation among the youth has grown due to increased Internet use, which allows adolescents to become well-acquainted with it (Crnic, 2017). Because Internet access is widely available, civic engagement has increased (Boulianne, 2009; Jones & Mitchell, 2016). Citizens are now able to access a plethora of civic topics via mobile devices. Research has also conveyed that the establishment of online social networks has increased the involvement of individuals in democratic aspects, including educational and political awareness (Atif & Chou, 2018). Many individuals use the Internet to keep apprised of current political occurrences and to remain informed of societal issues (Jorring, 2018). Digital citizenship teaches students to appropriately participate in matters about civics, such as respecting opposing viewpoints. Many schools are also promoting civic education through online activities and lessons (Themistokleous & Avraamidou, 2016). Teaching students to practice citizenship skills, such as appropriate debating and professional expression of opinions, throughout their lifespan is at the core of digital citizenship. When students accomplish this, they are allowing democratic values to flourish.

### *Appropriate Use of Communication*

Digital citizenship is essential because it teaches students to interact with others properly in an online environment. The use of Information and Communication Technologies (ICT) equipment has increased in schools and society since the turn of the 21st century (Touloupis & Athanasiades, 2020). The Internet permits international communication and the exchange of information. Research conveys that digital citizenship is important "because of the mass use of information and communication technologies," (Kara, 2018, p. 172). It is pertinent that students learn to maintain their privacy and respect the privacy of others. It is also imperative that students conscientiously conduct correspondence. Digital citizenship emphasizes the use of ethical communication when using technology (Hui & Campbell, 2018; Saputra & Al Sissiq, 2020). Many students are unaware of the ramifications of forging anonymous online friendships (Touloupis & Athanasiades, 2020). Learning appropriate communication skills for online use teaches children to practice proper interactions in the future.

### *Decrease Negative Occurrences*

Despite the advantages offered by technology, many disadvantages also accompany it. One of the purposes of digital citizenship is to teach students the importance of avoiding dangerous behaviors associated with Internet use. Designed to promote Internet safety, digital citizenship aims to prevent detrimental actions, which include digital plagiarism, cyberbullying, and cybercrimes (Hutson et al., 2018; Kowalski et al., 2014; Saputra & Al Siddiq, 2020).

**Digital Plagiarism.** Many secondary students use technology to commit digital plagiarism, which is the unlawful use of another's material (Blau & Eshet-Alalai, 2017). Access to the Internet has increased the instances of digital plagiarism (Ennam, 2017). Although students have been plagiarizing material well before the invention of modern-day technology, the

Internet allows students to simply copy and paste material from a webpage and pass it off as their own (Ennam, 2017; Olivia-Dumitrina et al., 2019; Neumann, 2016). Teachers that detect plagiarized material choose to deliver consequences. Many high schools and higher education institutions have severe ramifications for committing digital plagiarism. Much attention is now placed on resolving digital plagiarism. There are programs, such as Turnitin, that check student work for plagiarism (Balbay & Kilis, 2019). Teaching students to use proper citation of material found online is also being taught to decrease the instances of digital plagiarism (Ennam, 2017; Olivia-Dumitrina et al, 2019).

**Cyberbullying.** Digital citizenship is designed to prevent instances of cyberbullying committed by students. Cyberbullying occurs when individuals use an online platform to harass and intimidate others (Vlaanderen et al., 2020). While bullying has presented problems in schools and society in the past, cyberbullying has increased since students can use the Internet to connect with others easily. Using an online platform, such as social media, to repeatedly inflict harmful and aggressive behavior on others constitutes cyberbullying (Martin et al., 2020; Touloupis & Athanasiades, 2020; Waters, et al., 2020). Instances of cyberbullying have increased as Internet access has grown (Hutson et al., 2018; Jones & Mitchell, 2016; Kowalski et al., 2014; Phillips & Lee, 2019). Many students will deliver threatening behavior toward others anonymously via the Internet. Mobile technology has permitted this offense to occur in any location. Adolescents can inflict cyberbullying using their smartphones at any time. The infraction of cyberbullying tends to occur most frequently among users who are between the ages of 12 and 15 (Symons et al., 2017). It is during this adolescent phase of life that individuals are seeking autonomy and establishing their personal identity (Symons et al., 2017). Thus, adolescents must acquire digital citizenship. In learning and practicing digital citizenship,

students are taught the importance of appropriate interaction and communication in an online format (Xu et al., 2019). Students also learn that their actions online are a direct reflection of their behavior as citizens (Waters, et al., 2020). Cyberbullying, an intentional offense towards another, results in numerous adverse effects for the victims, including self-harm, increased stress, and attempts of suicide (Vlaanderen et al., 2020; Xu et al., 2019). Isolating a specific cause of cyberbullying can be difficult. One noted cause of cyberbullying is the lack of morals amongst digital natives (Zhong et al., 2021). In many cases of cyberbullying, parents are unaware of their child's online behavior, thus increasing the importance of digital citizenship (Martin et al., 2020). Because cyberbullying has escalated, many states are now considering it to be a criminal offense with prison time given consequently (Chan et al., 2020). There are several ways in which digital citizenship serves to curtail the instances of cyberbullying. Improving the digital etiquette of youth, digital citizenship aims to crease cyberbullying by teaching students the pertinence of moral behavior (Zhong et al., 2021). Digital citizenship also allows adolescents to understand the negative impacts of cyberbullying and teaches them the importance of maintaining empathy with others (Vlaanderen et al., 2017). With this knowledge, students learn to exercise ethical behavior.

**Cybercrimes.** Another dangerous online behavior that is being committed by students is various cybercrimes. Examples of these infractions include hacking, fraud, stolen property, and identity theft (Al-Abdullatif & Gameil, 2020; Phillips & Lee, 2019). Students use the Internet to steal private information from others, such as bank accounts and other confidential information. It is illegal to use the Internet to transmit information (Ozdamli & Ercag, 2019). Many adolescents commit cybercrimes because the Internet allows them obscurity and access to a plethora of personal information from the victim (Bossler, 2021). Adolescents also enact cybercrimes because the rewards are more meaningful than possible punishments (Bossler,

2021). Cybercrimes are punishable by fines and in extreme cases, prison time. Because digital citizenship teaches students to use the Internet ethically, it instills the ramifications of committing cybercrimes.

**Digital Piracy.** The act of replicating or dispersing online content without proper consent from the author constitutes digital piracy (Lee et al., 2018). Committing digital piracy is a violation of copyright laws. Adolescents perform digital piracy by downloading music, computer programs, movies, and other online content from the Internet (Lee et al., 2018). These actions tend to be relatively straightforward for tech-savvy adolescents to implement. Currently, digital piracy represents one of the biggest dangers to society (Bossler, 2021). The financial and industrial ramifications of digital piracy are tremendous and endured by countless individuals and institutions. Employment positions are reduced, corporations experience a profit loss, and the government collects less revenue due to digital piracy (Lee et al., 2018). Numerous legislative acts have been created to curtail these effects (Lee et al., 2018). Most of these policies and regulations are designed to prevent the instances of digital piracy, while some have been enacted to punish the offenders. However, despite the conception of these laws, adolescents are still committing digital piracy for a plethora of reasons. Many adolescents are unaware of the negative consequences that result from digital piracy (Lee et al., 2018). Students learn these consequences as they acquire digital citizenship. Submitting to peer pressure is another reason that adolescents commit digital piracy (Lee et al., 2018). Driven by a need for acceptance, many adolescents choose to download unauthorized material from the Internet. Adolescents also fall victim to digital piracy when they have a strong desire for specific data from the Internet. From their perspective, the benefit of obtaining online material means a great deal more than experiencing an imposed penalty (Bossler, 2021). As previously stated, one of the purposes of

digital citizenship is to curb the instances of digital piracy. Lee et al. (2018) posit that the ethics of an adolescent will determine if he or she perpetrates digital piracy. Thus, the moral aspects incorporated within digital citizenship are beneficial for adolescents.

**Digital Responsibility and Digital Etiquette**

One of the pillars of digital citizenship is digital responsibility, which is also referred to as digital etiquette. These concepts involve an individual's obligation to use technology in a manner that is respectful to others. Digital responsibility and digital etiquette ensure that individuals using technology are adhering to proper online protocols that ensure safety and regard for others (Wang & Xing, 2018). Parents and teachers and other stakeholders have noticed an increase in the number of negative occurrences of online behavior (Dunaway & Macharia, 2021). Examples of such negative occurrences include cyberbullying, hacking, and posting inappropriate comments. The adolescents of today, known as digital natives, lack sufficient knowledge regarding digital laws, rights, and responsibilities (Hawamdeh et al., 2022; Moon, 2018). Many of these adolescents are well-familiar with technology and tend to use it to further their interests, such as social media and entertainment. Providing instruction to use technology safely has become increasingly imperative because many adolescents are self-educated (Moon, 2018). When a question or query arises, most children are quick to execute a search on Google to find an instant answer, giving little concern its credibility. Teaching students digital responsibility equips them with knowledge of conducting online actions following an acceptable norm (Curran & Ribble, 2017). Digital responsibility and digital etiquette also allow adolescents to learn the implications of considering others when they are online. Students must learn that their use of technology impacts others (Hui & Campbell, 2018). The consequences of making reckless decisions while online can be harmful to others. The repercussions of such decisions can

result in adverse effects, such as low self-esteem, increased stress, and depression (Dunaway & Macharia, 2021; Harrison & Polizzi, 2021). The merits of becoming responsible while using technology are beneficial for the present and also for the future as the role of technology continues to evolve in society. The need for acquiring digital etiquette has become acute for children and adolescents. The American Academy of Pediatrics currently advises children and adolescents on the virtues of learning digital etiquette (Wang & Xing, 2018).

**Cyber Ethics**

Incorporated within the vast configuration of digital citizenship is an emphasis on using technology suitably and respectfully. "Cyber ethics is the philosophic study of ethics about computers, encompassing user behavior and what they are programmed to do, and how this affects individuals and society" (Kalu et al., 2020, p. 3). This increasingly valued component of digital citizenship is designed to promote a civilized use of technology in a manner that is diplomatic with not only the user but also with other individuals. Many adolescent users of technology tend to exhibit corrupt actions, such as digital violence, Internet addiction, academic dishonesty, falsification of data, and copyright violations (Mata et al., 2019). The goal of teaching students cyber ethics is to prevent them from displaying such harmful actions. The pertinence of cyber ethics is crucial for adolescents because it is the morals of the individual that dictate how he or she uses technology (Varlan & Tomozei, 2018). Adolescent users who lack sound ethical principles need more guidance than those who use their conscience to guide their online actions. According to Mata et al, (2019) a strong correlation exists between the morals of the user of technology and the resulting behaviors that ensue. Given this notion, many government and educational institutions have initiated guidelines for the ethical use of technology. For these guidelines to be effective, the use of ethics must be reiterated (Kalu et al.,

2020; Mata et al., 2019). Although it is challenging to oversee, requiring students to focus on moral behavior is a stipulation of cyber ethics. School administrators, teachers, parents, and students are entitled to knowledge regarding the use of cyber ethics so they will become proficient in applying it (Kalu et al., 2020; Mata et al., 2019). Obtaining the skills that are embodied within cyber ethics is greatly relevant to the future of a flourishing society, one that values respect and consideration for others.

**Digital Citizenship Instruction in Schools**

Many national and state government institutions are in support of requiring digital citizenship instruction in educational institutions. As a result, many states have adopted a mandatory curriculum to provide instruction for digital citizenship to students (Ebersole, 2019). Technology specialists and classroom teachers partake in this responsibility. D'Olimpio (2021) postulates that the skills required for digital citizenship should be taught to young students and then practiced frequently until they become ingrained. Since its inception, several methods have been created to provide instruction for digital citizenship. Regardless of the specific strategy or model that is implemented, the instruction is necessary for students so they will be adequately prepared for their future (Basarmak et al., 2018; Godfrey, 2016; Ribble, 2015). Many opportunities for prospective employment are contingent upon the successful use of technology. Students also learn to function and attain abilities that will allow them to thrive in a society that depends on technology (Dedebali & Dasdemir, 2019). The role of the Internet being incorporated into society will increase in the future. In addition to Ribble's nine elements of digital citizenship, which were previously described, the ISTE has developed standards for learning to use technology properly. However, adequate instruction can only be provided by educators that

have been trained to effectively teach the components of digital citizenship (McGillivray et al., 2016; Philips & Lee, 2019).

### *Development of ISTE*

Established in 1979 by experts, the ISTE stipulates guidelines that promote the use of educational technology in the United States (Ayad & Ajrami, 2017). "ISTE standards are the definitive framework for successfully implementing digital strategies to positively impact learning, teaching, and leading in our technology-powered world," (Ayad & Ajrami, 2017, p. 108). These guidelines indicate standards for teachers and students to achieve so they will become proficient users of technology. The standards were revised in 2017 and are designed for teachers, coaches, and students to increase their knowledge and applications of technology (Dondlinger et al., 2016; Ebersole, 2019). Revisions in the ISTE's standards correlate with the novel demands of technology in an evolving society. In 2020, the ISTE developed higher-level thinking questions to guide the actions of youths as they use the Internet (Buchholz & Moorman, 2020).

The following are the focus of the standards for students: empowered learner, digital citizen, knowledge constructor, innovative designer, computational thinker, creative communicator, and global collaborator (ISTE, 2021). Encompassed within these standards are ideologies to prepare students for their future use of technology (Casa- Todd, 2018; Huffman et al., 2019). Rather than have students simply memorize facts and basic knowledge, the ISTE standards for students increase their critical thinking abilities (Martin et al., 2019). By incorporating higher-level thinking skills, children learn to evaluate the information they attain, as opposed to simply supplying it.

It is the goal of the ISTE to have teachers and administrators direct students to use technology in a manner that is conducive to the positive growth of students. To achieve this goal, the ISTE has created standards for teachers and administrators as guidance for teaching students to use technology responsibly and ethically (ISTE, 2021). These standards are designed to equip students with a foothold on establishing global civic participation when using technology while providing documentation for educators to follow. To accommodate the needs of teachers, technology coaches, and administrators, the ISTE organizes yearly conferences that provide instruction on their established standards (ISTE, 2021). These opportunities allow educators to expand their expertise on implementing the norms of digital citizenship, thus providing students with a solid foundation on how to use digital citizenship for the duration of their academic and nonacademic life.

### *Teaching Strategies and Programs for Digital Citizenship*

The concepts and skills that constitute digital citizenship can be taught to students via numerous strategies. While many teachers implement direct instruction methods for teaching the concepts of digital citizenship, it is more effective to use a variety of strategies at a slower pace (Yarbo et al., 2016). Students are more likely to attain knowledge when it is presented in a gradual method. Beneficial teaching strategies that involve complex learning include games, think-alouds, and guided practice (Buchholz et al., 2020). These strategies compel students to understand their behavior and actions while using technology. Research has shown that it is more effective for digital citizenship to be taught in all schools across a diverse curriculum (Basarmak et al., 2018; Ghosn-Chelala; 2019; Hui & Campbell, 2018). Curran and Ribble (2017) posit that digital instruction should be provided frequently, at an early age, and continued through adulthood. This will increase the student's exposure to digital citizenship, especially in an

environment in which the dynamics are constantly evolving. According to Jones and Mitchell (2016), high school-age students are independent and require creative instruction where they can practice their learned skills. These students are on the cusp of becoming independent and partaking in society as adults. Established curriculums for the instruction of digital citizenship have been developed for educators who do not feel comfortable with delivering digital citizenship instruction. Current programs that provide digital instruction for students are the REP model, Google Education, Ntesmartz. Common Sense, and iSafe (Curran & Ribble, 2017; Godfrey, 2016; Martin et al., 2019; Moon, 2018; Phillips & Lee, 2019). Although the need for digital citizenship instruction for students is established, there is considerable discussion about who should be responsible for providing the specific instruction: classroom teachers or technology specialists (Phillips & Lee, 2019). On one hand, technology specialists are highly familiar with the concepts of technology. However, classroom teachers experience a more in-depth relationship with their students. Regardless of the party designated for the teaching of digital citizenship, it is ultimately the responsibility of the educational institution to provide training for students to use technology appropriately and safely (Moon, 2018).

### *Increased Need for Training Educators*

The students who currently occupy classrooms are known as digital natives because they have grown up using technology and are very familiar with it (Liebenberg et al., 2018; Kinci & Strach, 2021). On the other hand, educators born before 1980, known as digital immigrants, are unfamiliar with using technology (Liebenberg et al., 2018). Teachers who are digital immigrants require training to incorporate aspects of technology in their curriculum (Hui & Campbell, 2018; McGillivray et al., 2016). According to the ISTE standards written for teachers, they are to exhibit and encourage digital citizenship (Martin et al., 2019). However, many teachers lack the

knowledge to fulfill this standard. In addition, many teachers lack the confidence to appropriately implement digital citizenship (Ozgur, 2021). Educators who experience a decrease in anxiety and an increase in self-efficacy regarding digital citizenship provide an optimal learning experience (Choi et al., 2018). As teachers become more familiar with aspects of digital citizenship, they will be better prepared to teach it. Current and future educators will benefit from understanding how to teach their students about digital citizenship (Fedeli, 2020). Thus, it is imperative for prospective teachers to learn effective methods for the instruction of digital citizenship. Preservice teachers also need adequate training in order to model digital citizenship, which is beneficial for student learning (Lucey & Lin, 2020). Most preservice teachers are knowledgeable of cyberbullying and digital plagiarism but struggle with other aspects of digital citizenship, such as copyright laws and global awareness (Armfield & Blocher, 2019).

**Role of Principals**

Serving as the head of the school, the principal exerts a crucial position of authority about all aspects of digital citizenship. To fulfill this role adequately, the principal must be knowledgeable about the use of technology for students (Raman et al., 2019). He or she must also be a tenacious leader for the teachers, staff, and students at the school (Brown, 2021; Esplin, et al., 2018; Hollandsworth et al., 2017; Raman et al., 2019). Otherwise, the school will be without direction, resulting in disarray. The principal must determine and implement policies and procedures regarding student use of technology (Brown, 2021; Raman et al., 2019). To be an effective leader for the school, the principal must also be present in classrooms and serve as support for teachers who may struggle with teaching digital citizenship (Esplin, et al., 2018). Because principals are responsible for students who use technology inappropriately, they tend to

act as disciplinarian (Hollandsworth et al., 2017). In this capacity, administrative action serves to deter students from unethical and irresponsible use of technology.

Guidance has been developed to help administrators who struggle with understanding the intricacies of digital citizenship. As previously stated, the ISTE has created five standards for administrators to follow to accommodate principals that struggle with comprehending digital citizenship (Esplin et al., 2018; Raman et al., 2019). These standards serve as direction for principals to carry out, thus ensuring that digital citizenship is not only being taught in schools but is also being enforced.

## Perception of Digital Citizenship

For digital citizenship to be effective, it is pertinent to understand how teachers, students, and parents perceive it. The behavior of adolescents is a combined influence of teachers and parents (Martin et al., 2021). Analyzing and comprehending how teachers, students, and parents approach digital citizenship will make practicing and applying it more effective. “At this point, understanding what students’ value is important in order to develop policies and practices to make digital citizenship embedded in educational programs,” (Ata & Yildirim, 2019, p. 420).

Addressing the needs and concerns of students will result in a foundation for students to utilize digital citizenship in their future. In addition, research has conveyed how many teachers regard digital citizenship as necessary (Curran & Ribble, 2017; Hui & Campbell, 2018; Martin et al., 2019; Phillips & Lee, 2019). While research has been conducted to determine how students regard digital citizenship, most of these studies represent students of higher education (Kara, 2018; Korucu & Totan, 2019). Very few studies have been implemented to determine how secondary students approach digital citizenship.

### *Teacher Perception of Digital Citizenship*

Many current members of the educational realm condone the teaching of digital citizenship. According to research, many teachers realize the need for digital citizenship to be incorporated into the education of their students (Godfrey, 2016; Phillips & Lee, 2019). Areas of improvement for digital citizenship have been noted by many teachers, including the need for students to have a greater sense of empathy (Martin et al., 2019). It is also a prevalent consideration that digital citizenship instruction occurs over several consecutive academic years (Curran & Ribble, 2017; Hui & Campbell, 2018; Martin et al., 2019). The reflections and perceptions of teachers indicate areas of revision and reform for a digital citizenship curriculum.

### *Student Perception of Digital Citizenship*

Many students of higher education have expressed their views on digital citizenship. When learning the elements of digital citizenship, most students prefer updated teaching strategies and the use of new forms of technology (Korucu & Totan, 2019). Current adolescents are impressed with newer methods of innovation and appreciate using them. Students also favor learning more specific concepts rather than receiving information that is generalized (Adorjan & Ricciardelli, 2019). Many students have been privy to learning about the overviews of using digital citizenship and want to learn additional information. Additionally, students want to learn about digital citizenship in a manner that is relevant to them (Adorjan & Ricciardelli, 2019). The benefits of learning are greater when the subject is meaningful to students and their lifestyles. Because students are digital natives, they prefer active and hands-on learning, opposing direct instructional methods, such as lectures (Kara, 2018; Liebenberg & Ellis, 2018). Instructional strategies that promote student autonomy and hands-on learning will be more beneficial. Research also reveals that many students believe the Internet should be used safely and

responsibly (Kara, 2018). In understanding the purpose of digital citizenship, students are more apt to learn it.

### *Parent Perception of Digital Citizenship*

The rapid progression of technology has caused many parents and guardians to have increased apprehension about their children's use of it. Many parents and guardians are experiencing heightened uncertainty about their child's demeanor while being online (Brewer et al., 2018). Internet safety and appropriate behavior while using technology have become a high priority for many parents and caregivers (Mark & Nguyen, 2017; Martin et al., 2021). Many parents lack the expertise to monitor their children's use of technology and feel inadequate to prevent their children from engaging in hazardous online behavior (Schifflet-Chila et al., 2016). Many tech-savvy children are not deterred by the installation of certain filters and parameters to prevent online access; they can bypass these obstructions (Symons et al., 2017). To protect their children online, a majority of parents and guardians consider it necessary for their children to acquire and apply the skills within digital citizenship. Many parents and guardians are digital natives, finding that their children are more familiar with using technology. Because most parents and guardians are unfamiliar with using technology, it is a hardship for them to comprehend critical aspects of digital citizenship (Wang & Xing, 2018). While parents may struggle with using technology, they want their children to behave appropriately while using technology.

## Ethical Behavior of Adolescents

Secondary students are in the adolescent period of development, which is a transition from childhood to adulthood. Adolescence is a timespan that is recognized by biological, cognitive, and psychological changes (Brewer et al., 2018; Shifflet-Chila et al., 2016). During

this transformation, many adolescents struggle with emotions and a desire for acceptance. Many youths also experience challenges as they adapt to these changes, particularly as they establish their sense of ethics, which are "the moral principles that govern people's behavior and the way they conduct life's activities," (Richardson & Milovidov, 2019, p. 63). It is the ethics of an adolescent that will guide their online behavior, and the acquisition of digital citizenship hinges upon one's ethics.

Currently, most adolescents use technology a great deal during their daily lives. As these individuals are developing their identity and sense of ethics, many tend to rely on the influence of technology (Shifflet-Chila et al., 2016). Adolescents that have well-formed ethics are aware of the consequences of their online behavior and are less likely to be impacted by social figures, such as peers and media influences (Richardson & Milovidov, 2019). Students with strong ethics are more likely to apply digital citizenship to their lives. The morals and ethics of an adolescent affect their actions online (O'Reilly et al., 2020). In addition, adolescence is also a time in which many children seek and assert autonomy (Symons et al., 2017; Wang & Xing, 2018). Upholding strong and positive ethics is imperative as adolescents become independent young adults. Youths that exert sound ethics will become civil members of society while those that ignore ethics are less likely to be active members of society (Richardson & Milovidov, 2019).

**Role of Moral Identity and Moral Disengagement**

For digital citizenship instruction to be successful, students must recognize the position and relevance of their morals. Introduced in the 1980s, the concept of moral identity refers to the significance of being a moral individual (Helwig, 2017). Moral identity is not uniform, and it varies from person to person. "A moral identity is fully achieved once a person has established a moral self-ideal that is internally motivating and entails a sense of moral responsibility,"

(Helwig, 2017, p. 79). Adolescents can independently develop their moral identity based on their personal perspective of moral obligations. An individual's moral identity determines their moral behavior because those that hold their morals to be pertinent are less likely to commit wrongdoing (Cuadrado-Gordillo & Fernandez-Antelo, 2019). On the other hand, those that value their morals are more likely to use technology appropriately.

Moral disengagement also impacts the demeanor of an individual, causing him or her to behave inappropriately. Disconnecting oneself from his or her malfeasance in an attempt to justify constitutes moral disengagement (Cuadrado-Gordillo & Fernandez- Antelo, 2019; Ouvrein et al., 2018). For instance, an adolescent who decides to commit digital piracy, such as illegally downloading a movie, may rationalize it by claiming to need the movie. Similar to moral identity, moral disengagement also forecasts unethical and belligerent behavior (Ouvrein et al., 2018; Wang et al., 2017). Via moral disengagement, adolescents will continue to execute unethical actions because they can defend these actions. One effort to curtail moral disengagement is to teach students to use empathy (Wang et al., 2017). Digital citizenship instruction implores students to use their ethics to guide their behaviors.

**Effective Digital Citizenship**

The relevance of digital citizenship is extensive. It is valuable for students while they are in elementary and secondary schools, as well as when they are adults. Although individual institutions of education are assigned the task of teaching digital citizenship, it is a combined effort with parents and guardians that makes it most effective (Huda et al., 2017; Mark & Nguyen, 2017; Martin et al., 2019; Wang & Xing, 2018). "Educating kids and young adults to be digitally literate and savvy digital citizens implies a holistic effort and synergy among educators, parents, and caregivers," (Fedeli, 2020, p. 88). The collaboration of these parties provides a

unified exertion for the betterment of children. According to Dotterer et al (2016), an optimal curriculum for digital citizenship ensures that parents are an integral component. With this in mind, students are expected to follow appropriate technology standards at home and school. Adolescents that maintain a firm connection with their families and community are not as apt to commit infractions while being online (Bossler, 2021). Teachers, parents, and community stakeholders working in tandem provide moral direction for children, which then instills a solid foundation for digital citizenship to be practiced in the future (Huda et al., 2017). This collaborative effort to accomplish a common goal is beneficial for the current youth generation, as they are charged with overseeing the future of society.

**Future Direction of Digital Citizenship**

The need for students to attain the elements of digital citizenship is apparent. Current students are proficient users of technology and will continue to do so as technology evolves, which occurs at an increasing rate with each passing year (Kinci & Strach, 2021). Digital citizenship is "an essential tool for the present technological savvy world," (Das & Nagar, 2019, p. 317.) It is a method to equip students with an understanding of why it is imperative to use technology ethically. In addition to providing knowledge and skills for students to use technology appropriately, digital citizenship is designed to influence them throughout adulthood (Curran & Ribble, 2017; Godfrey, 2016; Jorring, 2018). Students must be prepared to use technology in their future, and digital citizenship will provide them an opportunity to do so. The youths that learn digital citizenship will have a more beneficial outcome with utilizing technology (Kinci & Strach, 2021).

Digital citizenship delivers education for citizens to protect their personal freedoms, as well as teach them to respect the rights of others (Saputra & Al Siddiq, 2020). However, despite

the increasing recognition of digital citizenship, there is room for improvement. Because many schools closed during the COVID-19 pandemic in 2020-2021, schools were forced to use virtual education for their students. Adhering to social distancing guidelines to prevent the spread of the virus, face-to-face instruction ceased in numerous areas of the world. Countless teachers and students alike were unprepared for online instruction (Buchholz et al., 2020). Many teachers lacked the knowledge to deliver effective virtual instruction while many students were deficient in using technology appropriately. During this time, many teachers noticed their students were not applying the skills of digital citizenship (Akcil & Bastas, 2021; Buchholz et al., 2020). These teachers observed their students cheating and committing digital plagiarism. Thus, many students are continuing to use technology in a corrupt manner.

For digital citizenship to be effective in the educational realm, careful consideration should be placed on its results (Jones & Mitchell, 2016). It is important to evaluate how students use technology and implement interventions to correct their mistakes. Digital citizenship will only be successful if it is implemented authentically and is conducive to the needs of students.

Although the future cannot be predicted, it is reasonable to expect that technology will assume a much greater role. Technical innovations and revolutions are undoubtedly the waves of the future. Current students must be prepared to utilize these prospective developments responsibly (Mojarro et al., 2019). As students enter the workforce in adulthood, they will be required to follow specific regulations regarding the technological capacities of their specific occupation. Maintaining a high sense of morals will be expected by future employers. As the future role of technology evolves, the curriculum and components encompassed within digital citizenship should also evolve to meet future demands. Currently, the curriculum for digital citizenship is created without student input (Mattson, 2017). Allowing students to contribute to

the curriculum will make it relevant and meaningful for them. Adorjan and Ricciardelli (2019) posit that an increase in student influence and perspective for future digital citizenship programs will make the concepts of digital citizenship more valuable and significant.

## Summary

Technology currently assumes an immense role in most aspects of life, and it is bound to increase. Individuals of all ages use it in their daily lives for a variety of purposes, such as education, entertainment, and communication. As the role of technology continues to grow, individuals must be educated on how to use it appropriately and responsibly. Based on Kohlberg's stages of moral development, the objective of the research is to understand and examine how secondary students approach digital citizenship because digital citizenship emphasizes using ethical practices of technology. A systematic review of the literature about the significance of digital citizenship was examined. The review conveyed the foundation and purpose of digital citizenship, which is to teach children to use technology safely and ethically. The review of literature also revealed the dangers of using technology, which include cyberbullying, digital plagiarism, and committing cybercrimes. In addition, instructional strategies and targeted standards are given by the ISTE to be attained were presented in the literature review. Because the principal serves as the overseer of the entire school, the role of administrators regarding the inclusion of digital citizenship was presented. The perception of teachers, students, and parents was discussed. The literature review incorporated the key components necessary for digital citizenship to be productive for all students. Also conveyed was the future role of digital citizenship, which is becoming more pertinent as technology flourishes. It is essential for secondary students to master the concepts of digital citizenship so they will be equipped to successfully exist in a world that continues to incorporate technology in nearly all

aspects of life. Digital citizenship makes it possible for students to realize how their values and principles direct their online behavior. As their sense of ethics matures, their understanding of using technology responsibly will occur. Ultimately, for the concepts of digital citizenship to be effective, parents, students, teachers, and other stakeholders must work in tandem to reinforce the skills.

Educators are charged with the obligation to prepare students to be successful in the future, regardless of the path chosen. Educating students on digital citizenship readies them for an ethical, safe, and appropriate use of technology that is designed to influence them for the future. Thus, instruction for digital citizenship is relevant for all students. Recent literature has conveyed the importance of effective instruction for digital citizenship. Because little research has focused on the approach of secondary students regarding digital citizenship, there exists a gap in the literature for this topic. The research study, which examines the secondary student approach of digital citizenship, is valuable and relevant for the field of education. The information obtained from the inquiry will provide insight on how digital citizenship instruction can be revised to be more conducive to the learning needs and interests of current and future students.

# CHAPTER THREE: METHODS

## Overview

The purpose of this intrinsic case study is to discover the perceptions of rural students regarding digital citizenship in a secondary learning environment in southern West Virginia. Presently, technology assumes a large role in society. Because this role is expected to increase throughout the lifespan of current students, there is a need for them to learn how to use technology in a respectfully and properly (Curran & Ribble, 2017; Hui & Campbell, 2018; Korucu & Totan, 2019). Digital citizenship provides this necessary instruction to students by equipping them with a foundation of knowledge that will influence them as they utilize technology throughout adulthood. An intrinsic case study will be implemented to obtain personal information about how secondary students approach digital citizenship. This chapter will explain the research design and the research questions. The participants, procedures, and role of the researcher will be conveyed. The data collection methods and the data analysis process will also be explained. The chapter will conclude with a discussion of trustworthiness and ethical considerations.

## Research Design

To thoroughly discern how secondary students approach digital citizenship, the researcher will conduct a qualitative research study. A qualitative research study is implemented to gather data from participants regarding an issue or problem so their personal experiences can be understood (Creswell & Poth, 2018). It concentrates on the perspective of the participants being studied, as opposed to focusing on the view of the researcher (Hancock & Algozzine, 2017). A qualitative research study allows the researcher to investigate multiple factors that are involved in a phenomenon (Hancock & Algozzine, 2017). In this instance, the issue being

explored by the researcher is how secondary students approach or perceive digital citizenship. Implementing a qualitative study is conducive to illuminating the personal reflections of the participants. Qualitative research discloses various facets of the situation being researched and is best used to examine subjects that pertain to real-world situations (Rashid et al., 2019). Thus, this type of inquiry will generate the first-hand responses of the students and will be conducted in the natural environment, which is the school setting.

The specific qualitative research approach utilized will be a case study. This approach allows the researcher to closely examine the situation or occurrence that is being studied (Creswell & Poth, 2018; Hancock & Algozzine, 2017; Rashid et al., 2019; Yin, 2018). Firsthand details of the specific scenario are disclosed on an intimate level when a researcher employs a case study. Implementing this approach allows the case to be described through multiple data collections from the participants, which permits its intricacies to be conveyed (Ebneyamini & Moghadam, 2018). The use of a case study for investigative research emanates from the fields of anthropology and sociology in the early previous century, being implemented to describe specific aspects of cultural behavior (Creswell & Poth, 2018). Case study research then gained recognition from prominent researchers in the realm of social sciences, which include the disciplines of psychology, medicine, and law (Creswell & Poth, 2018).

For this particular research study, the case study design has been because it will allow the personal views of secondary students regarding digital citizenship to be conveyed. Because of this, a case study produces an enriched understanding of the issue being examined (Marrelli, 2007). In addition, a case study allows the researcher to probe the case in a real-life scenario (Aczel, 2015). Thus, the researcher gains first-hand knowledge of the situation or occurrence that is being investigated.

The researcher will specifically conduct an intrinsic case study, which allows the researcher to become familiar with the topic and the participants of the study, thus establishing in-depth connections with them. This design is appropriate because it focuses on the specific problem (Creswell & Poth, 2018). A single case study applies to "circumstances and conditions of an everyday situation," (Yin, 2018, p. 50). Ethically using technology is relevant because it is used frequently by most members of society. It is a common occurrence in current times. Understanding how secondary students approach digital citizenship readies educational institutions for future instructional methods on digital citizenship. Executing an intrinsic case study will allow the researcher to gain knowledge from secondary students about digital citizenship, which will help to ensure that students will learn how to use technology responsibly (Ghosn-Chelala, 2019).

## Research Questions

The purpose of the case study is to ascertain how rural secondary students regard digital citizenship. The following research questions are posed to describe how rural secondary students regard digital citizenship.

### Central Research Question

How do rural students perceive digital citizenship in a secondary learning environment in southern West Virginia?

### Sub-Question One

How do secondary students relate their existing sense of ethics to the skills encompassed in digital citizenship?

**Sub-Question Two**

How do secondary students apply their morals when practicing digital citizenship for academic and nonacademic purposes?

**Sub-Question Three**

How do secondary students characterize digital citizenship in modern society which increasingly utilizes technology?

**Setting and Participants**

The following will describe the location of the case study. A description of the participants is also included. Being cognizant of the specific setting and participants used in this case study is relevant to understanding the outcomes of the research.

**Setting**

The case study took place in a small high school within a rural community that is located in southern West Virginia. The county in which the school abides is 99.5% rural, with a total population of 11,959 occupants (U.S. Census Bureau, 2020). Of this population, 21.1% of the residents live in poverty while 75.8% of the households have computers (U.S. Census Bureau, 2020). Because of the minuscule population, the school building houses the only middle school and only high school in the county. This school was chosen for several reasons as the site for the case study. First, the students are familiar with using technology. Each student is issued a laptop to use for academic purposes, both in school and at home. Second, the school system requires that students receive training in digital citizenship. At the time of the study, it was the responsibility of each Advisory teacher to provide one course of instruction for digital citizenship. Lastly, this school was chosen because the county educational system requires that each student sign and agree with an Acceptable Use Policy (AUP). The AUP form compels the

students to acknowledge responsible and appropriate behavior while using technology. The AUP form also informs the students of the consequences of using technology inappropriately. The enrollment consisted of 442 students. The school has 33 teachers, with a teacher-to-student ratio of 13.39. Overseeing the school were two administrators who have been in their positions for four years. The faculty of this school is amiable, professional, and competent. The community in which the school is located is cohesive. For this research study, the school was given the pseudonym J.S. High School.

**Participants**

Secondary students were selected as the participants of this case study for several reasons. The participants were competent with navigating technology and were assigned a laptop by the Technology Integration Specialist to use in school and at home for educational purposes. Each participant was an adolescent, being 13 to 15 years of age. The participants were either in eighth grade or ninth grade. These participants were able to make decisions about their behavior and were cognizant of the ramifications of their decisions. The majority of the participants were Caucasian, with 10% of them being African American and/ or mixed. All of the participants were classified as rural and reside in an impoverished county with a low rate of employment (U.S. Census Bureau, 2020). The participants were selected from a population of 442 students, with 220 males and 222 females. Of this total population, one is Asian, seven are black, two are Hispanic, 23 are of mixed ethnicities, and 409 are white. There are 236 students who receive SNAP benefits from the federal government. The chosen adolescent participants were capable of partaking in a case study that seeks their particular perspectives. Each participant is unique in his or her upbringing, ethics, and academic motivation and will offer a varying outlook regarding digital citizenship. To maintain confidentiality, each student was assigned a pseudonym.

## Researcher Positionality

The need for digital citizenship to be instilled within modern education curricula is imperative. It will guide current adolescents to use technology ethically and responsibly throughout their lives. The impetus for this qualitative inquiry is to understand how secondary students perceive digital citizenship. In conveying their viewpoints, educators and parents are offered opportunities to modify the methods and appeal of digital citizenship. The following sections will relay the interpretive framework and philosophical assumption of the researcher to provide additional reasoning for the case study. These will lay the foundation for implementing the research study.

## Interpretive Framework

Before beginning the research, the researcher, through experience, has formed views about the topic being studied. Known as the interpretive framework, these views will direct the research process and procedures (Creswell & Poth, 2018). For this qualitative study, the researcher will be using the interpretive framework of pragmatism. According to Creswell and Poth (2018), a researcher practicing this framework will focus on the results of the research. For this case study, the primary objective for the researcher is to ascertain how secondary students approach digital citizenship when using technology. Focusing on the results will produce innovative insights on how to make digital citizenship increasingly relevant to adolescents. In addition, Creswell and Poth (2018) state that a researcher adhering to pragmatism will utilize multiple methods to gather research. The researcher conducted three types of data collection: an observation of the participants, an interview with the participants, and an analysis of the Acceptable User Policy the participants follow in their school. Conducting a case study permits the researcher to analyze the revelations of the participants specifically and closely.

## Philosophical Assumptions

The personal beliefs and convictions of the researcher underly the entire process of the case study. Known as philosophical assumptions, these ideologies represent the fundamental principles of the researcher. More specifically, the researcher bears definitive ontological, epistemological, and axiological presumptions that will impact the research study. Ontological assumptions pertain to the researcher's view of reality (Creswell & Poth, 2018; Rashid et al., 2019). Epistemological assumptions constitute what determines reality. This assumption concentrates on knowledge and evidence that is provided by the participants (Creswell & Poth, 2018). Axiological assumptions refer to the values of the researcher (Creswell & Poth, 2018). The personal inclinations of the researcher also constitute axiological assumptions. The implications of these philosophical assumptions on the case study are detailed in the following.

### *Ontological Assumption*

The ontological assumption involves the nature of reality (Creswell & Poth, 2018). The view of reality varies from person to person and may potentially contradict the view of reality maintained by the researcher. Multiple realities are studied when conducting a case study (Creswell & Poth, 2018). The present study is designed to report the information that is asserted by the research. Specifically, the case study seeks to determine how secondary students in a rural school approach digital citizenship. The researcher assumed that adolescents would have a positive approach to digital citizenship, one that is diligent and principled. The researcher also assumed that the participants have learned from previous mistakes when using technology. In this qualitative study, the researcher will be analyzing and reporting on the multiple perspectives that are conveyed by the participants. The realities of the participants will be revealed through the data collection of the personal interviews and the observations conducted in the classrooms.

### *Epistemological Assumption*

The epistemological assumption pertains to ascertaining knowledge (Creswell & Poth, 2018). For this case study, the researcher utilized epistemological assumptions when relaying the intimate viewpoints of the participants regarding how they approach digital citizenship. Implementing a case study allows the researcher to establish a personal rapport with the participants. The data reported are the outcome of a variety of sources, which include analyzing primary source documents, conducting interviews, and completing multiple observations of the participants. The knowledge obtained from this case study on how adolescent students perceive digital citizenship is a manifestation of the participants and is evident in their intimate beliefs.

### *Axiological Assumption*

The beliefs, principles, and morals of the researcher constitute the axiological assumption (Creswell & Poth, 2018). The researcher is a 42 female who has been teaching secondary social studies education for 20 years. Over this elongated career, the researcher has been privy to the evolution of adolescent technology use and has developed core principles regarding the importance of digital citizenship. For this case study, the researcher supports and condones the application of digital citizenship for adolescent students. Although the participants may not value digital citizenship, the researcher believes that digital citizenship is important because it promotes the ethical use of technology. In addition, the researcher regards it as an essential practice that is necessary for future use of technology.

## The Researcher's Role

Ascertaining the participants' perceptions regarding digital citizenship is the main goal of the researcher. To achieve this, the researcher became well-familiar with the participants to properly understand their individual reflections about the use of digital citizenship. The

researcher interviewed each participant, using open-ended questions designed to allow the participant to reflect and share his or her thoughts about digital citizenship. The researcher also closely examined the behavior of the participants while they utilize technology in the classroom. To accomplish a quality research study, the researcher employed reflexivity, which is examining how one's position impacts the research (Reyes, 2020). The position of the researcher includes the demographics and standing of the researcher (Kamlongera, 2021). Disclosing this information allows the research to remain objective. In this case study, the researcher is an educated veteran teacher who is well-experienced with using technology in the classroom. Although the researcher is a social studies teacher at J.S. High School, none of the participants were students in her classes. Therefore, she holds no influence over them as the components of the case study are conducted. As an experienced teacher who incorporates technology within the curriculum, the researcher assumed that most of the students are familiar with using technology. The researcher also had a preconceived notion that most students are not familiar with the components of digital citizenship and will not perceive it to be important. When conducting the analysis of the case study, the researcher was biased to believe that some students will not practice digital citizenship faithfully. These assumptions will prevail during the research process.

**Procedures**

The case study consisted of several procedures. First, the researcher established the case and its boundaries, which is how secondary students approach digital citizenship. The researcher then determined the procedures for collecting and analyzing the data. The researcher also confirmed how the participants would be protected from the study. The researcher then sought permission to conduct the case study at the school. However, before data collection could be initiated, the institutional review board (IRB) had to approve the study. This approval is found in

Appendix A (Creswell & Poth, 2018; Yin, 2018). The IRB reviewed the research plan and how the participants were to be treated before approving the research (Liberale & Kovach, 2017). Following approval from the IRB, the researcher recruited participants using convenience sampling. Parental permission was asked via a letter explaining aspects of the study. Once parental permission was given and documented, the researcher began collecting data. Three methods of data collection were implemented for this case study, which included using documents, interviews with the participants, and direct observations of students. The researcher first examined the Acceptable Use Policy (AUP) form that the students sign in which they acknowledge appropriate and inappropriate behavior when using technology. Secondly, the researcher conducted interviews with the participants. The objective of the interviews is to understand the background knowledge of secondary students regarding digital citizenship and also to learn how the students approach it. The interviews were transcribed for analysis, and then noted on a chart according to the pseudonym of the participant. The chart will allowed the researcher to later organize the obtained data into common themes and categories. The final method of data collection consisted of implementing observations of the participants applying the skills of digital citizenship in specific classrooms at J.S. High School. Details of the observation were documented on a form, which is found in Appendix B. Following the three methods of data collection, the data was analyzed, coded, and organized into common themes regarding how secondary students approach digital citizenship. The researcher then made inferences of the themes in accordance with the objectives of the study. The themes were reported and then answers to the posed research questions were provided with evidence from the research. Data that is not related to the research questions was discarded.

**Permissions**

It is necessary to obtain informed documented consent for various facets of this case study. The IRB approval letter is found in Appendix A. The form that provides authorization for the case study to occur at the school is located in Appendix E. This form affirms the site approval. Because the students are minors, permission for participation in the case study was acquired from parents or guardians. This form can be found in Appendix D. It describes the purpose of the study, the procedures, and considerations for the participants.

**Recruitment Plan**

Unlike implementing a quantitative study, no specific guideline regarding sample size for a qualitative study is established. Because there is no explicit method to calculate the number of participants for a qualitative study, the researcher determined it based on the research design and his or her knowledge of the population being examined (Boddy, 2016; Mthuli et al., 2021; van Rijnsoever, 2017). In this instance, as a veteran secondary educator, the researcher is familiar with secondary students and implemented a case study to ascertain firsthand reflections of the participants. As a result, the researcher chose to use 20 participants for the case study to obtain a broader view of how secondary students approach digital citizenship. Using 20 participants adequately represented the reflections of secondary students (Saunders & Townsend, 2016). This chosen number of participants also allowed the personal thoughts of the students to be elicited, which is the core purpose of implementing a case study (Saunders & Townsend, 2016). Employing this number of participants ensured that the researcher obtains data saturation, meaning that no new information was discovered. The researcher knew when data saturation was reached because no new data from the case study was discovered (Boddy, 2016; Guest et al., 2020; van Rijnsoever, 2017). The type of sampling used was purposive sampling. According to

Moser and Korstjens (2018), the participants chosen for purposive sampling are based on the beliefs of the researcher because they are seen as providing the most information. The facets of purposive sampling are relevant to the study because the researcher is using her expertise to select quality participants (Andrade, 2021). The sampling procedure used was convenience sampling, which is drawn from a population that is conveniently accessible (Andrade, 2021). The participants were procured via an email that describes the purpose and procedure of the case study. The email for recruitment can be found in Appendix F.

**Data Collection Plan**

Implementing multiple methods of data collection is an aspect of conducting a case study (Creswell & Poth, 2018; Yin, 2018; Zahle, 2019). Using a variety of methods to collect data provides credence and support for the findings of the case study. Multiple methods of data collection contribute to the precise representation of the case being explored (Creswell & Poth, 2018). Most importantly, using multiple types of data resources allows the researcher to conduct an in-depth investigation of the case being explored (Yin, 2018). The more sources of data utilized, the stronger the findings of the case study. To discover how secondary students approach digital citizenship, the researcher instituted three methods of data collection. The first method of data collection consisted of examining a document provided by the school, which is the AUP form. Analyzing this form provided the researcher with the necessary background knowledge of student recognition of acceptable behavior when using technology. The second method of data collection was a semi-structured interview with the participants. For the third type of data collection, the researcher completed a direct observation of secondary students in a classroom in which they practice digital citizenship. The data was gathered in this specific series to allow the researcher to expand her knowledge of how secondary students regard the utilization

and practice of digital citizenship. Beginning the data collection with analyzing the AUP provided the researcher with crucial background knowledge of the required technology regulations that students are expected to follow. The information gathered from this first source contributed to information that was needed to be obtained from the interviews with the participants. Collecting data from observations culminated the process because it will allowed the researcher to witness the practice of digital citizenship firsthand and is based upon information discovered from the previous methods of data collection.

**Document Analysis**

The AUP form for J.S. High School served as documentation for research. A document is evidence of an occurrence, thus establishing a method of data collection (Yin, 2018). In addition to providing imperative background knowledge for the research, documents also offer a method of discreet data collection (Bowen, 2009; Cardno, 2018; Ridder, 2019). Analyzing a document will guide research, offering suggestions for additional exploration. The data retrieved from the document is objective and impartial. The AUP form examined in this research study established the methods of digital citizenship that the students are expected to follow. Explaining the principles and standards for students to use technology responsibly, this form stipulated acceptable and unacceptable behavior. Examples of unacceptable behavior include using appropriate language and behavior, using the Internet for educational purposes, and agreeing not to divulge personal information. It also served as a record that students have agreed to use technology safely and ethically. The AUP form for J.S. High School is provided in Appendix C. Research question one is addressed by analyzing the AUP form because students are agreeing to use technology appropriately and ethically. The information collected from this source provided evidence for sub-question one.

### *Document Analysis Plan*

Once the data was collected from the AUP form, it was examined and analyzed so that the relevant findings could be discovered. The approach implemented was based on Yin's inductive strategy, in which the data is evaluated from the "ground up" without being based on an existing theory (2018, p. 169). The researcher initiated the analysis of the AUP in accordance with the first three of Yin's five phases of analysis (2015). Using the first phase, compiling, the researcher organized initial notations into a coherent arrangement (Yin, 2015). Known as memos, the notations are specific thoughts and impressions regarding the information presented (Lester et al., 2020; Saldana, 2011; Yin, 2018). The memos reflected the incorporation of a student's ethics in the explained regulations of proper use of technology. The researcher then employed the second phase, disassembling, in which coding is used to further dissect the collected data (Yin, 2015). Codes are a word or brief phrase given to summarize the information presented by the memos (Lester et al., 2020; Saldana, 2011; Skjott Linneberg & Korsgaard, 2019). The created codes were based on the presented research questions (Yin, 2015; Yin 2018). The use of codes pertaining to the ethical use of technology allowed for a thorough examination of the data. The analysis then progressed to the third phase, which is reassembling. During this phase, the data was arranged into new arrays, such as tables and matrices, so that similarities and relationships can be detected (Saldana, 2011; Yin, 2015; Yin, 2018). The similarities were then arranged so that themes could be assembled.

## Individual Interviews

The purpose of interviewing the participants is to discover their thoughts and insights on digital citizenship on an intimate level. Interviews allow the feelings and reflections of the participants to be explained (Moser & Korstjens, 2018; Yin, 2018). The information provided to

the researcher builds additional knowledge about the specific case being studied (Young et al., 2017). To promote flexibility, the interview questions were semi-structured, thus allowing the participant to provide additional knowledge to the question (Young et al., 2017; Zahle, 2018). Although each participant was asked the same questions about their ethics and digital citizenship, each participant was allowed to elaborate upon their answers. The researcher was then able to obtain additional knowledge with additional insight offered by the participant. Each of the three posed research questions was addressed in the interview process. The following questions are the open-ended questions for the semi-structured interviews:

***Individual Interview Questions***

1. What is your favorite class in school? Why?
2. Describe the role that technology plays in your life. In other words, explain how you use technology.
3. Digital citizenship refers to using technology responsibly and ethically. What does this mean to you? SQ1
4. Why should students receive instruction about digital citizenship? CRQ
5. How have you received instruction regarding digital citizenship? CRQ
6. How do your teachers place an emphasize digital citizenship when you complete assignments that utilize technology? In other words, how do teachers stipulate the use of ethics while using technology? SQ2
7. How should the components of digital citizenship be delivered in school? In other words, should it be taught uniformly to the entire school? SQ2
8. What role will technology play in your future? SQ3
9. How do you apply your knowledge of digital citizenship when utilizing technology for

academic and nonacademic purposes? SQ2

10. How will digital citizenship and your ethics influence your future use of technology? SQ1
11. How would you encourage your peers to practice digital citizenship? CRQ
12. What skills are needed for children and adolescents to practice digital citizenship? SQ1
13. What is the significance of an individual's sense of ethics on their actions? SQ1
14. How do you think that the ethics of an individual are relevant to the implementation of digital citizenship? SQ1
15. How should your morals determine your actions as you use various modes of technology for academic and nonacademic purposes? SQ3
16. How can you and your peers receive education on the importance of using upstanding morals when using technology for academic and nonacademic purposes? SQ3
17. What suggestions do you have for having adolescents implement moral behavior when using technology for academic and nonacademic purposes? SQ3
18. How is technology used in current society? CRQ
19. How do you and your peers label digital citizenship, which is using technology respectfully and ethically? CRQ
20. How is the relevance of digital citizenship being conveyed to you and your peers? CRQ
21. What input do you have to make the practice of Internet safety more beneficial for secondary students? CRQ
22. Is there any other information you would like to add about digital citizenship and using technology ethically? CRQ

The first two questions are designed to establish a comfortable environment for the

interview. Beginning the interview process with relatively simple questions builds a rapport between the researcher and the participant (Young et al., 2017). The second question allows the student to gauge his or her use of technology and to recognize how technology is used. Known as digital natives, the participants have grown up in a world that relies on the use of technology (Dedebali & Dasdemir, 2019; Kinci & Strach, 2021; Neumann, 2016). By realizing their use of technology, the participants become aware of the positive and negative impacts that accompany the use of technology.

Questions three through five are reflective questions designed for the participant to assess and evaluate his or her instruction in digital citizenship. Question three defines digital citizenship, which is important because while many students are familiar with instructional methods to use technology responsibly, many do not recognize the term "digital citizenship," (Ribble, 2015). Question four is designed to have the student evaluate the importance of digital citizenship. Recognizing negative aspects of technology use is a characteristic of digital citizenship (Basarmak et al., 2019). Question five invites the student to indicate how he or she has received digital citizenship instruction. Learning digital citizenship in schools teaches students to use technology ethically and responsibly (Hui & Campbell, 2018; McGillivray et al., 2016; Ribble, 2015).

Questions six and seven are devised to have the participant reflect upon the significance of digital citizenship instruction. Since the role of technology has increased in education, policies and standards have been created to teach students about the proper use of technology. The International Society of Technology for Educators (ISTE) has created standards of learning for students to master. These standards focus on the responsible and ethical use of technology (Ayad & Ajrami, 2017; Ebersole, 2019; Huffman et al., 2019). Receiving education on these standards

paves the way for responsible technology use as the students continue to grow.

Questions eight through ten are asked to allow the student to explain how he or she currently uses digital citizenship and to speculate on how he or she will apply it in the future. Receiving instruction on aspects of digital citizenship prepares students to use technology ethically throughout their lives (Ghosn-Chelala, 2019; Ribble, 2015). These questions also allow the student to realize how he or she uses their morals to guide their behavior while using technology currently and in the future.

Question eleven is designed to allow the participant to consider how to make digital citizenship relevant to other students. Conveying a sense of empathy, students are using their morals to reflect on how to encourage peers to use digital citizenship (Kohlberg & Hersh, 1977). This question also is designed to have the student recognize methods that will influence students to use technology in an ethical manner, which is determining what is distinguishing between inappropriate and appropriate technology use (Ibiricu & van der Made, 2020).

Questions twelve through fourteen pertain to the specific skills and ethics encompassed within digital citizenship. In learning technical skills that promote ethical behavior, students can practice responsible behavior while using technology (O'Reilly et al., 2020; Richardson & Milovidov, 2019). Implementing actions that are the result of positive ethical behavior is the core of digital citizenship. Being cognizant of appropriate ethical conduct impacts an adolescent's online demeanor (Huda et al., 2017; Zhong et al., 2021).

Questions fifteen through seventeen encourage the participant to examine how he or she employs their sense of morality when using technology for academic and nonacademic uses. Many adolescents use the Internet as a means to plagiarize written material when completing school assignments. One of the purposes of digital citizenship instruction is to teach students to

avoid digital plagiarism so that they will become successful in their academic future (Neumann, 2016). The acquisition of digital citizenship also prepares students to use their morals when using the Internet for nonacademic purposes, such as using various platforms of social media. Students become aware of the consequences and legal ramifications of using social media to harass or cause harm to others (Kinci & Strach, 2021).

Questions eighteen and nineteen allow the participant to describe the increasing role of technology in current society and explain how he or she assesses digital citizenship. Understanding how adolescents acknowledge digital citizenship is relevant to the overall development of modern youths, who tend to rely heavily on the use of technology in their everyday lives (McGillivray et al., 2016). For digital citizenship instruction to be effective in educational institutions, it needs to be relevant and pertinent to the concerns of current adolescents.

Question twenty allows the participant to reflect upon how the concept of digital citizenship is being shown in his or her educational institution. Being cognizant of current digital citizenship instruction allows for an understanding of instilled content that is effective. The success of digital citizenship is contingent upon the instructional strategies being implemented by teachers (Yarbro et al., 2016). Student input offers vital feedback for the achievement of digital citizenship.

Questions twenty-one and twenty-two offer the participant an opportunity to give additional advice and information about digital citizenship. They can express thoughts and perceptions that were not addressed in the previous twenty questions. Student achievement is increased when the relevance of the content is important to them (Adorjan & Ricciardelli, 2019). These questions value the knowledge and technological expertise of the student.

### *Individual Interview Data Analysis Plan*

The data collected from the individual interviews was abundant and extensive. Once the interviews were transcribed, the researcher began the analysis using Yin's first three phases of analysis (2015). Similar to the analysis of the AUP, the researcher compiled the data using memos and then was assembled into a meaningful order (Saldana, 2011; Yin, 2015). Following this, the researcher proceeded with disassembling the data, Yin's second phase of analysis (2015). During this phase, the researcher applied codes to the compiled data. Coding offers the researcher an opportunity to form a close connection with the material conveyed from the interview (Locke et al., 2020). More specifically, in vivo coding was used, which was determined from the participants' answers in the interviews (Saldana, 2011). Reading and reviewing the codes multiple times allowed the researcher to discover the data that was relevant to the posed research questions. The researcher then progressed to reassembling, Yin's third phase of analysis, in which the data was rearranged (2015). Developing new arrays for the data allows patterns and themes to be discovered (Yin, 2018). The reoccurring codes were then placed into three centralized themes.

## Observation

Following the interviews, the researcher conducted formal and direct observations of the participants. The purpose of the observation was to inform the researcher about the case being studied within its natural environment (Fetters & Rubinstein, 2019; Morgan et al., 2017). Viewing the case in its natural environment provides real-world data to the researcher (Yin, 2018). The natural environment for this case study is the classroom. Specifically, classrooms that utilize technology for student learning. To implement this method of data collection, the researcher observed how students apply their knowledge of digital citizenship in various learning

activities in school. The researcher documented aspects of the students' application using a form, which is presented in Appendix B. Behavior that was noted as inappropriate use of technology included being on an unapproved website, stealing information from the Internet or another student, and/ or altering the existing programs and filters on the school mobile device. The researcher completed this method of observation three times in various classrooms, with each time being unscheduled so that the students did not alter their behavior while being viewed. The researcher served as a non-participant observer and conducted the observations in a secondary classroom for approximately thirty minutes. Each secondary classroom was selected based on the use of technology in the lesson being taught. The data received from the observations provided evidence for sub-questions one and two.

***Observation Analysis Plan***

Similar to the data collected from the AUP form and the individual interviews, the data collected from the observations was immense and was analyzed using Yin's first three phases of analysis (2015). The form used by the researcher to conduct the observations allowed for immediate reflections of observed behavior to be recorded, which aided in the analysis because it provided a framework for data analysis to occur (Fetters & Rubinstein, 2019). Known as fieldnotes, these preliminary documentations captured the prominent thoughts from the researcher during the observation (Saldana, 2011). The observation form permited the researcher to make initial reflections and memos which were key when interpreting the specific documented actions of the participants. Using the observation form also enabled the researcher to complete Yin's first phase of analysis, which was compiling the data (2015). The data from the observations was organized and sorted. The researcher then implemented Yin's second phase of analysis, which was dissembling the data (2015). During this phase of analysis, the researcher

applied codes to these notations, similar to the coding process in the analysis of the AUP form and the interviews. As previously stated, coding allowed the researcher to delve into the collected data and extract definitive interpretations (Locke et al., 2020). More specifically, the researcher used descriptive coding, which encapsulated the data (Saldana, 2011). The researcher then progressed to Yin's third phase of analysis, which was reassembling (2015). During this phase, the researcher rearranged the data and make various arrays so that commonalities could be discovered (Yin, 2018). The reoccurring data was then be organized into three central themes.

## Data Synthesis

After the data was collected and analyzed, it was integrated and assimilated into cohesive findings. Data synthesis refers to the dissection of the data so that it can be merged, allowing for plausible outcomes to emerge (Barth & Thomas, 2012). As a guide to synthesize the data, the researcher utilized Yin's method of interpreting, which unites the three methods of data analysis (2015). The researcher categorized the entire data into smaller units so that connections were illustrated (Saldana, 2011). The presented relationships amongst the data were established in accordance with the research questions for the case study (Yin, 2015). More precisely, the discovered connections from the data synthesis were based on the purpose of the study, which is to determine how secondary students approach digital citizenship.

### Trustworthiness

For the research study to be dependable, it must be trustworthy. The purpose of the research is to expand the knowledge base for the selected research topic. To ensure that the completed study is trustworthy, the data was triangulated (McGloin, 2008). Data that is triangulated is reiterated from various collected data methods. There are three components of trustworthiness in a research study. First, the study must be credible and accurate. The study

must also have credibility and confirmability, which refer to the validity of the study. Lastly, the study must have transferability so that it can be used in other settings (McGloin, 2008).

**Credibility**

The credibility of a study refers to its ability to report truthful and honest findings. Two methods to achieve this include having peers review the study (McGloin, 2008). Having peers assess the study will ensure that its components are accurate. Another method used to provide credibility to the study is to triangulate the data collection. A triangulated study consists of multiple methods of data collection (Creswell & Poth, 2018; McGloin, 2008; Yin, 2008). There were three methods of data collection for this study that sought to discover how secondary students approach digital citizenship.

**Transferability**

The transferability of a research study involves its external validity, which is how the results of the study can be generalized (Rolfe, 2006; Yin, 2018). For a research study to have transferability, the results will apply to other situations and scenarios. To support the generalization of the results, the methodology will be described in detail (Rolfe, 2006). Two methods to achieve transferability are purposive sampling and multiple types of data collection (Cypress, 2017). For this case study, the researcher used purposive sampling and multiple methods of data collection. The participants were chosen because they represenedt students who are familiar with ethically using technology. The researcher selected three methods of data collection to provide in-depth knowledge from the participants.

**Dependability and Confirmability**

The dependability and confirmability of a study refer to it as being meaningful and the findings being consistent. To maintain the consistency of the study, the researcher used an audit

trail, which conveys the specific components of the research process (see Appendix G). An audit trail is a "…. record of how a qualitative study was carried out and how conclusions were arrived at by researchers," (Carcary, 2020, p. 167). Consisting of documentation of data collection, an audit trail ensures accuracy within the study (McGloin, 2008). An audit trail increases the clarity of the research and the inferences that were made by the researcher. Dependability and confirmability also refer to the reliability of the study (Rolfe, 2006). A study that possesses reliability is a genuine and truthful account of the topic being presented and the conclusions that are discovered. Using multiple methods of data collection increases the reliability of the study (Yin, 2018). The repetition of themes and concepts from the data analysis provides for a dependable study. A "thick description" also ensures the dependability and the confirmability of the study (Creswell & Poth, 2018, p. 336).

**Ethical Considerations**

Many steps were implemented to ensure that the study was ethical and properly conducted. Ethical considerations were utilized throughout the entire research process (Creswell & Poth, 2018). Completion of the IRB was needed before data can be collected (Creswell & Poth, 2018). For the students to participate, their parents provided permission by signing a consent form (Creswell & Poth, 2018). The students also gave their assent to participate. In addition, the purpose of the study was explained to the participants and their needs were respected (Creswell & Poth, 2018). The school also gave permission for the study to occur. To protect the confidentiality of the school and the participants, pseudonyms were given (Creswell & Poth, 2018). The data will be kept for 10 years and will then be destroyed.

**Summary**

The purpose of the research study is to determine how secondary students approach digital citizenship. A single case study was conducted by the researcher because it allowed the researcher to obtain personal reflections from the participants, who were selected using purposive sampling. The participants were selected because they were familiar with ethically using technology at school. To execute the study, the researcher conducted three methods of data collection, which included an analysis of the school's AUP, semi-structured interviews, and direct observations. To analyze the collected data, the researcher used memoing and coding, which allowed the researcher to organize the data into three common themes. To ensure that the study was trustworthy, the collected data was triangulated and reviewed by peers and participants. The researcher also used an audit trail to ensure that the study was dependable. The confidentiality of the study was maintained by giving the school and the participants pseudonyms. In addition, all the collected data will be kept securely and then destroyed after 10 years.

# CHAPTER FOUR: FINDINGS

## Overview

The purpose of this case study is to determine how secondary students in a rural environment perceive digital citizenship. The results of the data analysis of the primary source, semi-structured interviews, and observations will be discussed in the following. After detailing each participant in the case study, the themes generated from the data analysis will be illustrated. Three themes pertaining to the topic of the case study became evident after the collected was examined. These themes will be presented and substantiated with the collected data, including direct quotes from the participants. Following the display of the themes, answers to the posed researched questions will be given. Similar to the support provided for the themes, the answers to the research questions will consist of the collected data.

## Participants

For this study, 18 students participated. Nine of these were male and nine were female. All participants were between the ages of 13-15, with 10 participants being age 15, six being age 14, and two being age 13. Two of the participants are in eighth grade and 16 are freshmen. Of the 18 participants, 16 are Caucasian and two are of mixed-race. Each student participant has a signed AUP on file and was also competent in using technology. Table 1 represents characteristics of the student participants. In addition, 10 teachers were interviewed. Of these, four were men and six were women. The teachers have between three and 36 years of teaching experience and represent a diverse field of teaching. Each teacher is also familiar and experienced with incorporating technology within their individual curriculums. Table 2 represents these attributes for the teacher participants.

**Table 1**

*Student Participants*

| Name | Age | Grade | AUP Signed | Tech Competency |
|---|---|---|---|---|
| Ann | 14 | 9 | Yes | Yes |
| Avery | 15 | 9 | Yes | Yes |
| Kayla | 14 | 9 | Yes | Yes |
| Martin | 15 | 9 | Yes | Yes |
| John | 14 | 9 | Yes | Yes |
| Grant | 15 | 9 | Yes | Yes |
| Kali | 14 | 9 | Yes | Yes |
| Evan | 14 | 9 | Yes | Yes |
| Edwin | 13 | 9 | Yes | Yes |
| Christina | 15 | 9 | Yes | Yes |
| Audrey | 15 | 9 | Yes | Yes |
| Gary | 15 | 9 | Yes | Yes |
| Beth | 13 | 8 | Yes | Yes |
| Jason | 14 | 9 | Yes | Yes |
| Stuart | 15 | 9 | Yes | Yes |
| Chris | 14 | 8 | Yes | Yes |

**Table 2**

*Teacher Participants*

| Name | Years Experience | Subject Taught | Technology Incorporation |
|---|---|---|---|
| Sean | 10 | English | Yes |
| Kelly | 36 | PE/ Health | Yes |
| Melissa | 22 | Computer Science | Yes |
| Jane | 3 | Science | Yes |
| Colin | 4 | Science | Yes |
| Patty | 9 | CTE | Yes |
| Larry | 30 | Social Studies | Yes |
| Cassie | 6 | Spanish | Yes |
| Richard | 17 | Social Studies | Yes |
| Angie | 10 | Special Education | Yes |

**Ann**

Ann is 14 years old and is in ninth grade at J.S. High School. She has been a lifelong resident of the school district. She is the second oldest child in her household. Ann and her siblings are being raised by her father, who works as a nurse. She is very comfortable with using technology at school and at home.

**Avery**

Avery is 15 years old and is in ninth grade at J.S. High School. Her academic achievements have placed her in honors classes. Additionally, Avery's aptitude for math has placed her in a 10$^{th}$ grade math class. She has always resided in the school district. Avery is the

middle child in her family. Both of her parents are employed as professionals. She is skilled at using technology in nearly all aspects of her life.

**Kayla**

Kayla is 14 years old and is in ninth grade at J.S. High School. She is a quiet and serious student and emits a reserved personality in the classroom. Technology plays a large role in her life and has for several years. Kayla is competent with using technology for academic and nonacademic purposes.

**Martin**

Martin is 15 years old and is a gifted student in the ninth grade at J.S. High School. He is a life-long resident of the school district. His academic achievements have placed him in honors classes, as well as a $10^{th}$ grade math class. He is the only child of two professional parents. He is on the football team and hopes to become a software engineer. Martin is very skilled at using technology in all aspects of his life.

**John**

John is 14 years old and is in the ninth grade at J.S. High School. He has always resided within the school district. John is being raised by both of his parents and is the middle child in his family. He is a quiet and respectful student who plans on working as a landscaper. John also enjoys playing sports for the school as well as for local organizations. He is familiar with using technology, but it does not dominate his life.

**Grant**

Grant is 15 years old and is in the ninth grade at J.S. High School. He is a lifelong resident of the school district. Grant is an only child, and his parents are employed as professionals. His mother is an elementary principal, and his father is a high school history

teacher in another district. Grant is in the band at school and is very skilled with using various forms of technology.

**Kali**

Kali is 14 years old and is in the ninth grade at J.S. High School. She is on the volleyball for the school. Kali is an outgoing student. She is competent with using technology, which she primarily uses to communicate and check her grades for school.

**Evan**

Evan is 14 years old and is in the ninth grade at J.S. High School where he is a member of the Future Farmers of America. He has been a lifelong resident of the school district. Evan is a polite and helpful student. He is comfortable with using technology. He uses his phone to play games and for social media.

**Edwin**

Edwin is 13 years and due to his high academic achievement, he has been placed in ninth grade courses. He is involved in various athletic groups and has attended schools within the district from an early age. Edwin's parents are teachers. Although he is fluent with technology, he prefers to play sports.

**Christina**

Christina is 15 years old and is a ninth-grade student. She has always attended school within the district. She comes from a large family where she has three older siblings. Christina plays volleyball and basketball for the school. She is a sociable student and is proficient with using technology.

**Audrey**

Audrey is 15 years old and is in the ninth grade. She has attended schools within the district for the past several years. Audrey is an only child and is raised by her mother, who works as a professional employee. She is a friendly and cheerful student who enjoys helping her peers. Audrey is adept at using various modes of technology.

**Gary**

Gary is 15 years old and is a ninth-grade student. He is enrolled in honors classes and is currently taking a 10$^{th}$ grade math class. Gary is subdued at school. He enjoys playing numerous sports for the school. He has been in the school district since he was a young student. Although he is skilled with using technology, he mostly uses it for playing games and checking sports scores.

**Beth**

Beth is 13 years old and is in the eighth grade. She is enrolled in honors classes. Beth is an energetic student. She is classified as mixed race and is the youngest of five siblings. Her parents are employed as professionals. Beth is quite proficient at using technology in all aspects of her life.

**Jason**

Jason is 14 years old and is a ninth-grade student. He does not enjoy school and prefers to learn hands-on. He is the youngest sibling in his family. Jason has always attended school within the district. He primarily uses technology for school assignments and a few specific social media apps.

**Stuart**

Stuart is 15 years old and is in the ninth grade. Due to his high academic achievement, he is enrolled in honors classes. His parents are divorced, and he is the youngest sibling in his family. Stuart's parents are employed as professional workers. He has always attended school within the district. Stuart enjoys playing basketball for the school. He is quite skillful with using technology and it plays a large role in his life.

**Chris**

Chris is 14 years old and is an eighth-grade student. He is a mannerly student. Chris is being raised by his mother and comes from a large family, where he has three brothers. He plays football for the school and enjoys working on his farm. He is accomplished with his use of technology for academic and nonacademic purposes. Chris uses technology to be apprised of the news and to communicate with friends and family.

**Sarah**

Sarah is 15 years old and is a ninth-grade student. She is enrolled in honors classes. Sarah is a mature and respectful student. She is also helpful to her peers. Sarah is being raised by her mother, who is a professional employee. She plays on the softball team for the school. Sarah is proficient with using technology, especially her cellphone. She uses various Social Media Apps and also plays games.

**Jo**

Jo is 15 years old and is a ninth-grade student. She is outgoing and sociable with teachers and peers. Jo is of mixed race and is being raised by her grandparents, who are retired teachers. She is a cheerleader for the school. Jo is skilled at using various modes of technology. She particularly uses social media.

**Sean**

Sean has been a secondary teacher for almost 10 years. He is an upbeat and flexible individual. He incorporates technology into his curriculum in various ways and is aware of the dangers it can cause. Sean frequently discusses new trends in technology with his students, such as ChatGPT. He encourages his students to consider their actions while using technology. Sean has had training in digital citizenship as part of his master's degree.

**Kelly**

Kelly has been a teacher for 36 years and has seen many changes pertaining to the use of technology in the classroom and outside of the classroom. Her students are very familiar with using various modes of technology. As a teacher, she is cognizant of the risks associated with the misuse of technology. Kelly has had very little training on digital citizenship.

**Melissa**

Melissa has been an educator for 22 years. Being a computer science teacher, she has witnessed many new developments with technology and how students use it. Melissa is very familiar with digital citizenship. Providing instruction on digital citizenship is a critical element within her curriculum. She is mindful of the risks associated with using technology.

**Jane**

Jane has been a teacher for three years. Her students range in ages from 15-18 years old. As a young teacher, she is very fluent in using technology and utilizes it within her classroom to enhance student learning. Jane has had training on digital citizenship and is aware of the possible dangers associated with the inappropriate use of technology. She considers digital citizenship to be a crucial concept for all students to attain. Jane believes that her students need more education on the concept of digital citizenship.

**Colin**

Colin has been a secondary educator for four years. He is very adept at using technology and uses it frequently during his instruction. He has had very little training on digital citizenship and favors additional training for students so they can have a foundation for using technology safely. Colin understands the dangers that students may experience if they use technology inappropriately.

**Patty**

Patty has been a teacher for nine years. Her students are ages 15-18. She is comfortable with using technology and encompasses it in her teaching methods. Although Patty has had no formal training on digital citizenship, she openly discusses the ramifications of inappropriate technology use with her students. She is compelled to teach her students the importance of using technology responsibly.

**Larry**

Larry has been an educator for 30 years and has worked in various capacities within secondary schools. With his vast experience, he has observed the role of technology in education evolve to become a consistent and essential practice. Larry and his students are apprised with using technology and favors an increase in training on digital citizenship for teachers and students.

**Cassie**

Cassie has been a teacher for six years. She has been at J.S. High School for three years. Her students are ages 13-18. She and her students are very familiar with using technology. As a result, Cassie involves technology-based lessons frequently within her instructional methods. She

has been educated on digital citizenship and relays the importance of responsible technology use to her students.

**Richard**

Richard has been a secondary educator for 17 years. He and his students are very comfortable with using technology. Richard has not received training on digital citizenship and is supportive of his students learning digital citizenship to emphasize the responsible use of technology. The majority of his students are seniors, and he believes it is imperative for them to learn digital citizenship as they become productive adults in society. Richard utilizes multiple opportunities to illustrate the importance of appropriate use of technology with his students.

**Angie**

Angie has been a secondary teacher for the past 10 years. Her students are ages 16-18 and are fluent users of technology. She uses technology in her class to increase student attainment of skills. Angie has received little training on digital citizenship and favors the instruction of digital citizenship as necessary so that adolescents will learn the importance of using technology responsibly.

**Results**

A thorough analysis of the data collected from the primary source analysis, semi-structured interviews, and observations revealed several substantial outcomes, which were reviewed to discover similarities and connections. A detailed review of the data produced three themes that pertain to the purpose and implementation of digital citizenship. These themes will be conveyed in detail with articulation from the collected data. In addition, the data analysis yielded answers to the research questions that were designed to drive the case study. The responses to the questions will be presented in the form of accounts from the data collection.

**Theme Development**

To complete the analysis, data was examined from the primary source analysis of the AUP, semi-structured interviews with 18 adolescent students and 10 teachers, and observations of the student's using technology in a classroom. The AUP, consisting of eight stipulations, was reviewed to determine the expectations for students to follow while using technology in school. Codes were assigned to pieces of data to provide brief descriptions of the collected data. The recorded interviews were transcribed and read three times before having codes allocated for important information. Three observations occurred for this case study, and each had a form to be completed for the duration. The data collected on these forms was read and reread before identifying codes to allow for a description. The generated codes were then examined and noted for repeated concepts. After this process, 32 codes were derived from the data collected from the analysis of the AUP, the 28 semi-structured interviews, and the three observations. Connections and similarities were created amongst the 32 codes (see Table 1). Detailed analysis of the 32 codes was conducted, probing for commonalities and relationships. Three themes pertaining to the elemental use digital citizenship amongst adolescents in school were discovered amongst the codes. These recognized themes are the influence of personal principles, the depiction of digital citizenship, and the acquiring of digital citizenship. The following section presents quotations from the responses in the semi-structured interviews that corroborate each identified theme.

Table 3

*Codes and Themes*

| Codes | Occurrence | Themes |
|---|---|---|
| 1. Doing the Right Thing | 14 | Influence of Personal Principles |
| 2. Guidance for Right Thing | 11 | |

| | | |
|---|---|---|
| 3. Knowing Right from Wrong | 15 | |
| 4. Prevention of Bad Activities | 16 | |
| 5. May Commit Bad Decisions | 10 | |
| 6. Determines Action | 10 | |
| 7. Influences Future Use | 15 | |
| 8. Stay Out of Trouble | 5 | |
| 9. Important | 5 | |
| 10. Aware of Repercussions | 8 | |
| 11. Avoid Bad Sites | 17 | Depiction of Digital Citizenship |
| 12. Responsible Use | 15 | |
| 13. No Cheating | 9 | |
| 14. Using Approved Sites | 8 | |
| 15. Avoid Random Sites | 5 | |
| 16. Use Internet Correctly | 5 | |
| 17. Be Safe Online | 5 | |
| 18. Technology Will Increase | 15 | Acquiring Digital Citizenship |
| 19. Relevance Not Addressed | 13 | |
| 20. Technology is Everywhere | 11 | |
| 21. No Instruction | 12 | |
| 22. Not Conveyed | 11 | |
| 23. Teachers Monitor | 7 | |
| 24. Learned Previously | 5 | |

| | |
|---|---|
| 25. Needs to be Taught Early | 5 |
| 26. Relayed by Teachers | 8 |
| 27. Assemblies Repeated | 5 |
| 28. Relayed by Parents | 5 |
| 29. Show Consequences | 8 |
| 30. Recognize Warnings | 5 |
| 31. Comprehend Risks | 13 |
| 32. Learn Empathy | 5 |

***Influence of Personal Principles***

Each individual that utilizes a mode of technology is unique because he or she is comprised of various ideals that govern his or her conduct. The application of digital citizenship is contingent upon one's ingrained ethics and morals and direct one to know the right action to take. For instance, Jason stated in his interview that his personal ethics "…help me to be a better person" and "guide my behavior." Ann stated in her interview, "if a person has good ethics, they'll use the Internet responsibly. If they have bad ethics, then they would be trying to go on illegal websites and send personal information to people online." Audrey also spoke of how an individual's sense of ethics influences his or her actions. She stated, "You can really tell about their ethics from their actions. If they can figure out what's wrong, they can try to fix their bad behavior." Chris stated, "If you have good morals, you'll do good stuff on the Internet. If you have bad morals, you'll do bad stuff on the Internet, like cyberbullying." Likewise, Christina stated that the ethics of an individual "help to make good decisions while using the Internet."

It was also found that the ethics of an individual are relevant to practicing digital citizenship. According to the AUP, students pledge to "use appropriate language and behavior when using the network." When agreeing to this statement, students are deemed to engage in honorable behavior when using the Internet at school. Further, in pertaining to one's ethics, Gary stated that ethics are important "so they don't do anything wrong" and instead "do the right thing, like don't search up things you shouldn't." Similarly, Beth claimed that a sense of ethics is necessary for implementing digital citizenship. She stated:

> It's going to influence everybody alot, especially since people don't know what's going to happen on the Internet, especially since people are really weird these days. You're going to know what's going to be good for you and what's not good for you, especially since people have these warnings on their phones and stuff before they get on something.

Regarding the relevance of an individual's ethics being important to his or her execution of digital citizenship, Grant stated, "If kids don't know the difference between right and wrong, they will look up really wild things, especially younger kids." Patty expressed that the ethics and morals of a student contributes to the implementation of digital citizenship. She stated, "I personally think that this relates to honesty and integrity as well as their values and belief systems." Additionally, Sarah claimed that an individual's ethics contribute to his or her practice of digital citizenship. She stated, "I think that it helps them. If they know that it's wrong to start with, then they wouldn't do it on the Internet because they already know that it's wrong." Martin also voiced that ethics are significant when implementing digital citizenship. He stated, "It helps guide you on the right things instead of just clicking on the wrong things."

Many of the participants conveyed how digital citizenship and their ethics will impact their future use of technology. Sarah responded that digital citizenship is "going to let me know

how to use technology correctly, like how to look up stuff and help me to teach the younger generation to use it." Evan stated, "It will keep me from getting scammed when I'm older or getting me in a lot of trouble when I'm older." Similarly, Kali stated, "It will help me realize that I need to do to use technology safely." John also shared how digital citizenship and his ethics will influence his future use of technology. He stated, "It would definitely help a lot so I would know not to get on anything bad or create anything else bad." Stuart voiced that digital citizenship is "going to help me make better choices on the Internet." The responses of these participants assert that digital citizenship and their ethics will shape their continued use of technology.

***Depiction of Digital Citizenship***

The data indicated that the participants characterized aspects of digital citizenship in similar ways. More specifically, the application of digital citizenship related to the conscientious operation of the Internet by using reliable and trustworthy websites. For instance, Martin states that practicing digital citizenship means a person "doesn't get on weird websites and uses common sense." For Kayla, digital citizenship "means to not get on bad websites to not a get a virus or anything." Likewise, John explained that digital citizenship "means don't get on bad websites and don't fall into scammers." Edwin claimed that digital citizenship also includes to "avoid certain sites, like Wikipedia." Ann also shares the necessity to avoid random websites. She stated that students "should know that getting on random websites is not a good idea. There's all kinds of random websites, and you can get a virus or hackers can track you. There's just so much that can go wrong."

It is a common principle that refraining from using questionable websites is at the heart of implementing digital citizenship. To accomplish this, many students only utilize approved

websites. For instance, Beth stated, “At school, I stay on websites that I’m asked to stay on and I’m always on websites that I need to be on. I don’t get on anything else.” Similarly, Stuart voiced that digital citizenship “means don’t go to bad sites and don’t cyberbully. Use only approved websites.”

Many of the participants shared that digital citizenship is defined by using the Internet appropriately. This premise is reflected in the AUP, in which students agree to “not use the network to send or receive any illegal or inappropriate materials.” Students are expected to use technology lawfully. Several participants uphold this sentiment. For instance, Avery expressed that, “It’s important to use it responsibly because then your information won’t get out.” Jane responded, “Each individual that uses technology and the Internet has the responsibility to use it appropriately.” Angie stated, “It is important to be able to navigate digital environments safely and responsibly.” Echoing these assertations, Richard conveyed, “Digital citizenship seems to require respectful and responsible behavior.” Colin referred to digital citizenship as the “common sense aspects of proper tech use.” Kayla conveyed that she uses technology appropriately in that she “doesn’t use it to cheat.” Similarly, Stuart uses technology appropriately because he “doesn’t copy and paste from a website.”

Using technology safely and correctly was also a common thread amongst the participants. Audrey conveyed that digital citizenship means “don’t do stuff that I know I’m not supposed to and keep myself safe on social media.” Jason described digital citizenship to mean “I’m doing good stuff and not talking bad about people, like social bullying.” Likewise, Chris stated that digital citizenship means “don’t cyberbully and don’t add people you don’t know.” Jo explained that digital citizenship “means being safe on the Internet and not doing anything bad.”

### *Acquiring Digital Citizenship*

Developing the skills necessary to practice digital citizenship is pertinent for all members of society. The need to master digital citizenship has increased in response to the growing role of technology in society. Avery stated, "The use of technology increases every single day, so we're just going to use it more." Beth agrees about the growing role of technology for the future. She stated, "Technology is going to play a big role in my future, especially since I'm so young. I feel like the older I get, there's going to be more technology coming around and technology is going to be big when I'm older." Sarah also echoes the same belief about the future of technology. She stated, "I think that technology will play a big part in my future. By the time I'm older, a lot of stuff will be developed." However, some of the participants are leery of the future role of technology. Jo stated that technology will play "a big role. It will be more powerful. Some of it is kind of scary." Likewise, Grant is also skeptical about the future role of technology. He stated, "It replaces more and more stuff, and it keeps getting more dangerous. It's a complicated role."

Despite an identified critical need for the education of digital citizenship, many participants expressed that instruction has not been provided. Regarding the instruction of digital citizenship, Martin stated that he "hasn't ever" received any. Kayla agreed about the lack of instruction. She stated, "I haven't learned about that." Several participants reflect the absence of learning about digital citizenship. For instance, Avery, Grant, Jason, Audrey, Stuart, Christina, and John each stated that they had never been taught about digital citizenship. On the other hand, several participants stated that they had received training on digital citizenship. Evan stated, "The only education about the Internet I've had has been from the cops that come to the school and tell you about it. It was back when I was in elementary school." Chris also stated that he learned about it in elementary school. Kali voiced that she learned about digital citizenship "like

in sixth grade." Sarah stated, "I had a class in fifth grade. We played games and talked about what was right and wrong." Jo stated that although instruction was given, it was not beneficial. She stated that it was given "sometimes at the beginning of the year, we'll watch videos, but nobody pays attention to them." Ann shared that she has also learned about digital citizenship. She stated, "I've received a little bit of it, and I do believe that we're taught about it as little kids, but not as much as we get older."

The participants disagreed on how the importance of digital citizenship was being recognized. Some participants expressed that digital citizenship was not being acknowledged to them. Evan stated that the importance of digital citizenship was not being conveyed to him. Martin agreed that digital citizenship is not being recognized and stated, "It isn't at all." Avery also echoed this notion about the lack of acknowledgement in stating, "It's not." Audrey shares this position. Regarding how digital citizenship is being conveyed, she stated, "Not really. We watched some videos when I was younger, but there hasn't been much since." Jo also expressed a similar concern about how digital citizenship is portrayed. She stated, "Maybe here and there, but it's not at the top of the school's worries. It seems like they could care less." On the other hand, several participants voiced that their teachers and/ or parents depict the importance of digital citizenship. For instance, Kali, Edwin, and Chris shared that their teachers relay digital citizenship to them. Beth stated, "It's taught to me by my parents. They always make sure that something's okay and teach me to not get on certain sites." Likewise, Ann stated, "My parents do, but other people may not be the same." Sarah and John agree that their teachers and parents recognize the importance of digital citizenship to them. Sarah stated, "Our teachers and parents. Basically, every adult will tell you." John voiced, "Parents and teachers tell us not to use bad sites to look stuff up."

The data highlighted various ideas on how digital citizenship should best be taught for students. Kali, Ann, Sarah, Evan, and Edwin agreed that it should be taught to young children. Kali stated, “Prepare the little kids before they get older.” Ann stated, “I think that for younger kids, it should be taught to them more because they’re still learning, and they need to get it into their heads.” Sarah stated, “I think the tech people should teach us about it. Not a class every day, but like once every three weeks. The class should be about what to do and what not to do, especially when you’re younger. They really need to know.” Evan stated, “I think in elementary school they should have at least a class or two showing them examples of what could happen if they aren’t taught properly.” Edwin stated, “It should be taught at a young age so you can use it as you get older.” Martin, Stuart, and Chris expressed that repeated school-wide assemblies would be effective in the teaching of digital citizenship. Martin stated, “An assembly and have rewards for practicing safety on the Internet.” Several participants shared that the learning of digital citizenship is effective when students are shown the consequences. For instance, Melissa stated, “Real life scenarios of consequences and accountability for misdeeds would be beneficial for instruction.” Sean agreed and stated that “some first-person anecdotes of how good or bad digital citizenship practices affect someone,” would be beneficial. Likewise, Audrey stated, “I think you should talk more about it and the bad stuff that could happen and really let it set into someone’s mind because otherwise, they’ll just think it’s a joke but it’s really serious.” Gary voiced that learning about digital citizenship from a person who suffered consequences is constructive. He stated, “Have someone who did bad things on the Internet tell us what happened to them.”

Learning to recognize and heed warnings on Internet websites is one necessary element of digital citizenship that could make the practice of it more worthwhile. For instance, Gary

stated, “Learn the warnings for using the Internet from the websites.” Beth stated, “Usually now before you get on a website, it will ask you if you’re sure because they know there’s going to be something bad. They should always read that and know that if it’s not going to be good, it’s really not going to be good for you. So, they need to know the warning.” John agreed about the warning symbol on websites. He stated, “Some websites have a thing on the screen, and it will show a lock button on it or some other letter on it and usually the lock means it’s safe. But if it doesn’t have a lock, it probably isn’t safe.” Sarah also expressed a similar notion about being alert to warnings. She stated, “You need to be observant. It will tell you if something bas is about to pop up.” Adolescents can avoid being on inappropriate websites by learning to pay attention to the warnings that are given.

The collected data identified that displaying empathy is an area of need for learning and practicing digital citizenship. Sean stated, “I think it comes down to empathy. They lack these skills where they lack empathy. This is something that they just have to learn as they grow up.” Angie agrees with this assertion. She stated, “Students lack impulse control and empathy online. It seems that they don’t realize they are talking to or about a real person.” Colin also agrees. He stated, “Empathy and the feeling of a person being behind the screen is an area in which students lack.”

**Outlier Data and Findings**

After the collected data was analyzed, three outlier findings were revealed. These discoveries deviate from the revealed themes and the research questions. The identified outliers are an influence from parents, a desire to learn to practice digital citizenship kinesthetically, and providing a reward for those that implement good digital citizenship.

***Outlier Finding #1***

The first recognized outlier was exhibited by Avery. She indicated that many students are influenced by the adults in their lives when it comes to practicing digital citizenship in accordance with their ethics. Avery stated, "It mostly depends on how they've been influenced. If adults around them are using it irresponsibly, then they will too." Children and adolescents learn to use the Internet by observing the online actions of their parents. Children also tend to portray morals that are similar to their parents or other figures of authority that have reared them. The negligent behavior of authoritative figures contributes to the online demeanor of youth, which are vulnerable and pliant.

***Outlier Finding #2***

The second finding of outlier data was demonstrated by Jason. When asked how he thought that digital citizenship could best be taught to adolescents, he replied, "I would like to be shown." This data is considered to be an outlier because the majority of the participants did not elaborate on a particular learning method. Instead, they disclosed that they would like the school to teach them using a presentation.

***Outlier Finding #3***

The third identified outlier was that students should receive an incentive for practicing good digital citizenship. This outlier was introduced by Martin, who stated that adolescents would be more likely to practice digital citizenship if they were given a reward. He stated, "An assembly and have rewards for practicing safety on the Internet." His notion varies from most of the data brought forth by other participants because they tended to favor punishment for those who do not practice good digital citizenship.

## Research Question Responses

The core of the research study is the research questions that navigate the direction of the inquiry. This case study was conducted to provide answers to the central research question and three sub questions. The following segment will provide answers to these questions by using collected data from the AUP, the semi-structured interviews, and the observations.

### Central Research Question

How do rural students perceive digital citizenship in a secondary learning environment in southern West Virginia? The purpose of this question was to discover how adolescent students view the appropriate use of technology. The data for this question fluctuates from being relevant to inconsequential. Several participants expressed that digital citizenship is regarded as common practice. For instance, Evan stated, "I don't really think about it. I think about what I'm supposed to be doing on the Internet. I know the difference between right and wrong." Edwin agrees with this notion about the perception of digital citizenship amongst adolescents. He stated, "No, we already know what's right and wrong." John also agrees that digital citizenship is regarded as common sense. He stated, "That rarely comes up in a conversation. Usually, it's just common sense for most people. Other people, they don't know that. It's just not talked about." Likewise, Gary voiced that it is necessary to for adolescents to implement digital citizenship. He stated, "My friends just know to use the Internet the right way. It's important." Grant also shared this point of view about the perception of digital citizenship amongst his peers. He stated, "We don't really talk about it. I feel like me and my friends know not to use stupid stuff."

Several participants conveyed that although the practice of digital citizenship is important, many adolescents decide to disregard it. For instance, Jane stated, "I feel that most students understand their responsibilities and take that role as a technology user seriously.

However, there are always exceptions." Kelly shares this standpoint. She stated, "Students are aware of inappropriate sites, but often choose to ignore them." Audrey voiced that some students do not care about the consequences of discounting the implementation of digital citizenship. She stated, "I think that I need to do what's right when it comes to the Internet because I don't want to get kidnapped or anything like that, but others think it will be okay. There are some who want to stay safe when using the Internet, but there's others that just don't care." Sarah also reiterated that adolescents choose to neglect the practice of digital citizenship. She stated, "If someone gets in trouble, we look at them and think 'really? Why?' Some do it for attention and like to make teachers mad." Jo also agrees that some students choose to disregard digital citizenship to seek attention. She stated, "Some kids do bad stuff for attention." Similarly, Kali and Melissa agree that many adolescents ignore digital citizenship because of the repercussions that ensue. Kali stated, "Some are afraid that we will get our laptops taken away, but some of us just don't care. They're not worried about teachers catching them because students are better at technology that teachers." Melissa voiced, "They make decisions based on getting caught and the severity of punishments." Sean reiterated this notion of the lack of punishment. He stated, "They tend to do what they can get away with, especially if no one is looking." The observations conducted support this. While the observations were being conducted, many students chose to ignore the stipulations of digital citizenship because no redirection or consequence occurred.

However, many participants noted that some adolescents do not consider digital citizenship to be important. Angie stated, "I think students struggle with digital citizenship. They have constant access to the Internet and social media." Sean agrees with this statement. He stated, "It's a little hit-or-miss. I'm often shocked by the number of students who see no problem with recording others without consent. Students use AI (Artificial Intelligence) to cheat on

assignments. But I also hear often hear students express caution about that they post online." Richard voiced that the implementation of digital citizenship is trivial for adolescent students. He stated, "Our students aren't competent at all regarding digital citizenship." Cassie agrees with this point of view. She stated, "I'm not quite sure if they know how to practice digital citizenship." Beth agrees that students to not perceive digital citizenship to be relevant. She stated, "Honestly, no and that's the sad thing." Similarly, Avery, Christina, Ann, Martin, Kayla, Jason, Stuart, and Chris shared that digital citizenship is not important to adolescents. Avery stated, "Nobody really talks about it." Christina voiced that although digital citizenship is important, it is "not addressed," by her adolescent classmates.

**Sub-Question One**

How do secondary students relate their ethics as they acquire the skills encompassed in digital citizenship? The intent of this question is to determine the role of an adolescents' ethics as he or she attains the skills needed to practice digital citizenship. Several participants expressed that the role of an individuals' ethics is important for digital citizenship because they influence the actions of the individual. For instance, Avery stated, "Yes, I think it's important. Most people don't know the value of their actions, especially on the Internet." Martin agrees with this idea. He stated, "Ethics determine what you do on the Internet, so if you don't have really good ethics or have bad morals, you'd go on bad sites. It helps guide you on the right things instead of just clocking on the wrong things." Audrey, Jason, and Beth also agreed that an individual's ethics will determine his or actions. Audrey stated, "You can really tell from their actions." Jason stated, "It influences then as they use the Internet. If they have good ethics, they won't do anything bad." Beth stated, "It's going to influence everybody a lot." Christina voiced that good ethics impact an adolescent. She stated, "My parents have taught me to use good ethics. It helps

me to make good decisions in life and while using the Internet." Likewise, Kayla expressed how her ethics influence her actions. She stated, "If I act ethically, I'll use the Internet in a good way." Jane expressed that there was a correlation between an adolescents' ethics and his or her acquisition of digital citizenship. She stated, "Their actions and morals affect how seriously the students take the responsibility that comes with digital citizenship." Sean also agreed on the role of an adolescents' ethics as he or she masters digital citizenship. He stated, "A person's morals and ethics will guide what they do both off – and online."

The data also indicated a relationship between an adolescent knowing right from wrong and his or her acquisition of digital citizenship. Ann stated, "If you don't know what's right and wrong, you're pretty much in trouble because you're going to do things that are wrong and right, but the wrong may overpower the right." Edwin agreed about the need to know right from wrong. He stated, "Some people think the right thing could be wrong. They need to know right from wrong." Chris also agreed on how knowing right from wrong influences learning digital citizenship. He stated, "…I've been taught right from wrong and that helps." Sarah also substantiates this thought. She stated, "I think that it helps them. If they know that it's wrong to start with, then you wouldn't do it on the Internet because you already know that it's wrong." Similarly, John voiced a correlation between an adolescents' ethics and digital citizenship. He stated, "It could help them to know not to get on bad stuff and help them out with that." Additionally, Gary expressed that the ethics of an adolescent are important when acquiring digital citizenship. He stated that one's ethics mean "They don't do anything wrong."

**Sub-Question Two**

How do secondary students apply their morals when practicing digital citizenship for academic and nonacademic purposes? The purpose of this question was to ascertain how

adolescents enforce their morals when exercising digital school at school and at home. Several participants conveyed that their morals allow them to consider their actions as the use digital citizenship. Audrey stated, “My sense of right and wrong tells me how to use the Internet, I don’t go to drug sites or add people I don’t know. I’ve got it memorized in my brain.” Avery agreed with this notion. She stated, “Before you go and look at any website or anything, you should always think if it’s the right thing to do, just in general.” Beth also agreed that the morals of an adolescent compel him or her as they use digital citizenship. She stated, “You honestly need to pay attention to what’s happening and if you know something’s not going to be good for you, you need to trust your gut and know it’s not going to be good for you. If you feel like it’s not going to be good for, then it probably isn’t good for you.” Gary agreed with this belief about how morals impact digital citizenship. He stated, “So you do the right thing. Don’t search up things you shouldn’t.” Grant also agreed. He stated, “If you know that something is wrong, you just shouldn’t do it. Don’t cyberbully because it’s a huge crime.”

A number of participants asserted that the morals of adolescents impact their behavior as they use technology in various modes. For instance, Martin stated, “If you have bad morals, then you’re going to do bad thigs. Then if you’re at school, you’ll be on games the whole time and use noncredible websites for research purposes.” Chris agreed with this sentiment. He stated, “If you have good morals, you’ll do good stuff on the Internet. If you have bad morals, you’ll do bad stuff on the Internet, like cyberbullying.” Jo also agreed on the correlation between the morals of an adolescent and their behavior while using technology. She stated, “There is a definite relationship between someone’s morals and the way they use the Internet. A good person will do good things.” Jason also agreed with this and voiced how his morals influence his actions online. He stated, “I have good morals. I only look up good stuff.” Similarly, John stated that his morals

"help keep me off bad websites." However, Richard is skeptical of the relationship between the morals of an adolescent and his or her resulting online behavior. He stated, "Ethics and morals could play a large role in the application of digital citizenship but isn't necessarily required."

Several participants asserted that many adolescent students exercise good morals as they practice digital citizenship while many choose the opposite. Larry stated:

> A student that has a good moral compass will most likely do the right things online. However, it is much easier to get led astray and do irreparable harm to one's self or others even with an okay moral foundation because temptation and emotion can flow directly onto a screen for all to see. For those with a wrong moral compass, there is no end to the depth of depravity they can go.

Melissa agreed with this notion. She stated, "Some students bring their own personal bad behaviors into play and neglect the statues of the AUP. Other follow the contract." Colin expressed that despite the morals of adolescents, most know how to behave appropriately online. He stated, "I feel as though student morals and online respect have declined, but not significantly enough to show one true cause. Most understand what should and should not be done online."

**Sub-Question Three**

How do secondary students characterize digital citizenship in a society that increasingly utilizes technology? The purpose of this question is to determine how secondary students describe and explain digital citizenship as the role of technology continues to expand. As the need for digital citizenship grows, it is imperative that adolescents are able to portray it properly. Numerous participants articulated that digital citizenship refers to using appropriate websites on the Internet. For instance, Evan described digital citizenship as avoiding risky websites. He stated, "Don't use a bunch of random sites. Just don't see any website and click on it because it

looks interesting. Don't trust it." Avery agreed with staying away from uncertain websites. She stated, "Only going to websites we're supposed to and thinking about using websites before clicking on it." Martin also agrees with avoiding unreliable websites. He stated, "Don't get on weird websites and use common sense." John also voiced that digital citizenship involves bypassing unsafe websites. He stated, "Don't get on bad websites at either place and just stay to what I know is safe." Kayla agrees with using only familiar websites. She stated, "It means to not get on bad websites to not get a virus or anything. Don't click on any weird things, like a weird site or ad." Jason further reiterated that digital citizenship means to use only credible websites and apps. He stated, "I stick with the sites and apps that I know, and don't use anything bad." Stuart also echoed this depiction of digital citizenship. He stated, "It means don't go to bad sites and don't cyberbully. Use only approved websites." Similarly, Jo voiced that digital citizenship is conveyed as using the Internet carefully. She stated, "It means being safe on the Internet and not doing anything bad. I don't cyberbully."

However, several of the participants disagree about how adolescent students characterize digital citizenship. Many teachers expressed that although most adolescent students understand the premise of digital citizenship, many struggle to depict it correctly. For instance, Melissa stated, "They know not to put personal information on the web, to not cyberbully, and to use respect when communicating online. But students no longer 'study'. Most students know some way to cheat or get answers without doing the work." Kelly expressed that adolescent students seem to be conflicted as they interpret digital citizenship. She stated, "Most students use it for social media so many of them have no idea how it should be used correctly. They need more education on the do's and don'ts of technology use." Larry agrees that many adolescents struggle with how they construe digital citizenship. He stated, "It is something the teacher requires, but

not strictly followed at times. This usually will come back to bite the person that disregards the pitfalls of posting, sending, opening, and sharing anything and everything with anyone and everyone." Similarly, Sean and Richard voiced that adolescent students seem not to characterize digital citizenship as an important issue. Both stated that adolescents do not consider it much and represent it incorrectly.

## Summary

The objective of this case study was to discover how secondary students in a rural school approach digital citizenship. Three modes of data collection were implemented. First, the AUP form of the school was analyzed. Secondly, 28 semi-structed interviews for were completed. Lastly, three observations of adolescent students using technology in a classroom were conducted. The data from the three resources was analyzed and coded. The initial codes were further evaluated, searching for similarities. This process yielded 32 codes, which were then arrayed into three themes: the impact of personal principles, the depiction of digital citizenship, and the acquisition of digital citizenship. Statements from the AUP, semi-structured interviews, and the observations were used as backing for the three themes. Responses to the four posed research questions were then also provided with accounts from the participants.

# CHAPTER FIVE: CONCLUSION

## Overview

The purpose of this intrinsic case study was to discover how secondary students in a rural learning environment perceive digital citizenship. Three methods of data collection were utilized for this case study: an analysis of the AUP as a primary source, 28 semi-structured interviews, and three observations of the student's using technology in a classroom setting. The following selections will present the findings of the case study by providing answers to the posed research questions. A discussion of the findings and how they correlate to the reviewed literature and Kohlberg's theory of moral development will be offered. Following the discussion, the theoretical, practical, and empirical implications will be presented. The chosen delimitations of the study will be clarified next. The limitations of the study will then be described. The chapter concludes with recommendations for future research.

## Discussion

The case study produced many results as to how secondary students approach digital citizenship. The subsequent section will provide a clarified perception of the findings of the case study. It depicts an interpretation of the findings, implications for practice, theoretical and empirical implications, and limitations and delimitations. The section concludes with recommendations for future research.

### Summary of Thematic Findings

Three themes were illustrated from the data analysis. The first theme was the influence of person principles. Referring to how one's sense of ethics impacts his or her actions, this theme is supported by several segments of collected data. The majority of the participants shared that their ethics do influence their practice of digital citizenship. They expressed that if an individual has

good ethics, then he or she is most likely to use technology in a responsible manner. Akin to this notion is that if an individual has poor ethics, then he or she is more likely to abuse technology, such as by cyberbullying or committing other online crimes. The majority of participants expressed that their sense of ethics will influence their future use of technology as well. Additionally encompassed within this theme is that if adolescents know right from wrong, then they are more likely to exercise digital citizenship. The second theme identified was the depiction of digital citizenship, which refers to how adolescent students interpret digital citizenship. Most of the student participants characterize digital citizenship as using safe and credible websites while avoiding those that are deemed as risky. They also describe digital citizenship as refraining from cheating and social bullying. The third theme noted was how students acquire digital citizenship, which refers to the instruction of digital citizenship. Most of the participants agreed that it is important to learn digital citizenship so they can continue to use technology responsibly as they become older, and technology evolves. Many of the student participants expressed that it is imperative for digital citizenship instruction to occur with younger children. Many participants also displayed a concern for needing additional instruction for digital citizenship and would like the school to make it a priority. Several of the student participants stated that they learned about digital citizenship from their parents.

**Interpretation of Findings**

The following section entails a depiction and explanation of the findings discovered from the case study. The first interpretation presented is the need for an increased recognition of digital citizenship at school, including an education for teachers. The second interpretation is a need for punishments and consequences for the misuse of technology. An increased amount of

moral education for adolescent students is described in the third interpretation. The fourth interpretation explains that more monitoring is needed for students.

***Interpretation #1***

The topic of digital citizenship is imperative for students of all ages to practice. For digital citizenship to be effective for current students, it needs to be addressed frequently at all levels of schooling. This notion aligns with data from the interviews of the participants and the literature reviews. Many of the student participant expressed that the subject of digital citizenship is rarely focused on in school. Understanding the significance of digital citizenship becomes more worthwhile to students the more it is presented to students (Adorjan & Ricciardelli, 2019). Placing an increased emphasis on the topic of digital citizenship augments the attainment of digital citizenship for students. Learning to practice digital citizenship consistently will embed the necessary skills and knowledge used in the application of digital citizenship. Frequent instruction also promotes the persistent practice of digital citizenship as students utilize technology in their future. Many teachers assume that adolescent students are equipped with the skills to practice digital citizenship, however many students have not been adequately educated about digital citizenship. Frequent instruction addresses this unfortunate circumstance.

***Interpretation #2***

Another method to have students practice digital citizenship is for consequences of irresponsible technology use to be administered. The data from the interviews with students and teachers indicated that the ramifications for technology abuse are not stringent enough to avoid future infractions of technology abuse. Several students stated that one punishment to deter irresponsible technology use is to confiscate the student's laptop. This is reiterated in the AUP; however, a specific time frame is not stated. The AUP states that additional disciplinary actions

may be imposed, but those are not explained. If rigid consequences and punishments are disclosed to students, the instances of students using technology irresponsibly are likely to decrease.

***Interpretation #3***

The findings of the case study indicate a relationship between one's morals and their practice of digital citizenship. Many of the student participants stated that if an individual has upstanding morals, then he or she is likely to use technology appropriately. This sentiment is reflected in the literature review. According to Casa-Todd (2018) and Huffman et al. (2019), students depend on their morals when using technology. Thus, an increase in moral and character education can promote the acquisition and execution of digital citizenship. In addition, initiating this instruction at an early age makes it more likely that older students will utilize it.

***Interpretation #4***

For students to be competent with digital citizenship, teachers need to monitor the online behavior of their students. Several of the student interviews expressed that some of their teachers were unaware of instances of inappropriate use of technology in their classrooms. Many of these instances occur because students, as digital natives, are more educated about technology use than teachers (Kesharwani, 2020; Liebenberg et al., 2018; Kinci & Starch, 2021). However, training teachers on methods to monitor student use of technology can help deter students from using technology inappropriately. If students realize their online actions are being supervised, they are more likely to practice digital citizenship correctly.

**Implications for Policy or Practice**

The purpose of the case study was to determine how adolescent students approach digital citizenship. The findings of it can influence the policies of technology use for school systems, as

well as laws at the state and local levels. The findings can also influence how adolescents continue to practice using technology. Table 4 depicts the findings and implications of the case study.

Table 4

*Findings and Implications*

| Findings | Implications |
|---|---|
| Many students do not value digital citizenship | Students need to understand the repercussions for inappropriate use of technology |
| Ethics determine one's actions and behavior | Learning to employ good ethics and morals yield appropriate use of technology |
| Digital citizenship is rarely discussed | Effective digital citizenship requires frequent instruction |
| Digital citizenship is mostly interpreted as using credible websites while avoiding risky websites | Students need to learn additional potential online dangers |
| Most students apply good morals when using technology | Increased monitoring can reduce immoral actions that lead to inappropriate use of technology |

### *Implications for Policy*

The findings of the case study suggest several implications for policy. Reading the research would also aid educational officials who create policies for the inclusion and practice of technology. For instance, superintendents of school districts would be cognizant of the views of the adolescent students and could instill updated regulations to represent student interest. The findings suggest that frequent instruction of digital citizenship is beneficial for students. Educational institutions, local school boards, and state educational boards could create a policy

to have digital citizenship instruction persist throughout the academic year. Another implication for policy is for schools to create more rigid consequences for inappropriate use of technology. These consequences should be created to deter future offenses of technology misuse. A third implication for policy is to require teachers to be trained on digital citizenship, which would also include how to properly monitor the online behavior of students. This policy would be effective for state boards of education to establish.

### *Implications for Practice*

The findings suggest that it would be beneficial for students to receive character education to increase their use of upstanding morals. Receiving this instruction can help promote appropriate decision-making skills when using technology. The findings also suggest that it would be beneficial for students to learn about the dangers of inappropriate technology use from authority figures, such as attorneys and police officers. Making students aware of the potential dangers of inappropriate technology use could promote the use of digital citizenship. The research would benefit all educators as they continue to incorporate technology in their curriculum. Learning the risks of using technology is vital for teachers who are charged with preparing their students to be successful in the future. Technology is going to continue to progress, and teachers and administrators need to adequately develop students who are able to use technology responsibly in society. In addition, the research also benefits secondary students and their parents. They can learn about the importance of attaining and practicing digital citizenship to prevent harm to themselves and others.

## Empirical and Theoretical Implications

The following section will explain how the results of the case study relate to previous research pertaining to digital citizenship. Differences and possible additions are presented. In

addition, the results of the case study will also be correlated with Kohlberg's stages of moral development, which is the theoretical framework for the study. Areas of contrasting data are discussed.

### *Empirical Implications*

The findings in the case study pertain to previous empirical research in several ways. For instance, the case study discovered that secondary students approach digital citizenship in conflicting manners. Some consider it to be a practice of using technology appropriately, in accordance with their sense of right and wrong. Similarly, Kara (2018) posited that students think that technology should be used responsibly. The case study also found that many students tend to ignore the practice of digital citizenship. Empirical research indicates that there has been in increase in inappropriate online behavior from students (Dedebali & Dasdemir, 2019; Dunaway & Macharia, 2021; Sari et al., 2020). Several participants from the case study expressed that adolescent students disregard guidelines that are comprised in digital citizenship by visiting inappropriate websites. Echoing this finding, Moon (2018) discovered that students struggle with attaining and implementing the skills needed to use technology appropriately. In addition, the case study found that there is a need for students to receive an education in digital citizenship because many students consider it to be irrelevant. Research also reflects this growing need for education on the appropriate use of technology (Pedersen et al., 2018).

The case study also found that students consider that ethics of an individual to be important as these influence the behavior of the individual. Similarly, research has found that students who have good ethics are less likely to be persuaded by others in using technology irresponsibly (Richardson & Milovidov, 2019). The case study also discovered that students need to behave in accordance with positive ethics so that misbehaviors will be prevented. Research

corroborates this notion of learning to elicit responsible behavior. Curran and Ribble (2017) asserted that teaching students digital responsibility promotes appropriate online behavior.

The research study also found that applying moral behavior prevents most students from committing hazardous actions while using technology. Current empirical literature correlates that student use their morals to dictate their online actions because students rely on their existing morals to follow the guidelines of using technology (Casa-Todd, 2018; Huffman et al., 2019). Varlan and Tomozei (2018) expressed that the morals of an adolescent affect their use of technology. A decisive relationship between the morals of an adolescent and his or her online behavior also exists (Mata et al., 2019).

It is important to consider the views of adolescents about their approach to digital citizenship. According to Ata and Yildirim (2019), knowing what students deem to be important is necessary when creating regulations and practices for the instruction of digital citizenship. The research suggests that digital citizenship instruction should be given frequently. It should also be delivered in a method in which students will find interesting, which was indicated by expressed flaws in the current method of instruction. It would be advantageous for school officials and administrators to provide digital citizenship instruction in a manner that would be worthwhile for adolescent students. The findings also indicate that an increased monitoring of students while using technology. Students are less likely to commit infractions if they know they are being observed, suggesting that less inappropriate would occur. In addition, the research findings suggest that it is imperative for the relevance of digital citizenship to be conveyed to teachers, parents, and students. The actions of adolescents are impacted by teachers and parents (Martin et al., 2021). Learning the relevance of it will promote the use appropriate use of technology, especially if schools and parents work together for the benefit of the students.

The case study produced two findings that were not addressed in the review of empirical literature. First, this case study found that students need to learn that their inappropriate online actions have repercussions. Many students do not value utilizing digital citizenship because they have not faced any consequences for doing so. The AUP for the school did not state specific consequences or punishments for inappropriate use of technology. Secondly, the case study, indicated by student participants and researcher observations, found that lack of teacher supervision while students utilized technology permitted student misbehavior.

### *Theoretical Implications*

Kohlberg's stages of moral development provided the theoretical framework for the research study. This theory illustrates how an individual develops his or her morals and how those impact their capabilities of moral reasoning (Wisea et al., 2019). Three similarities were found between the findings of the case study and existing literature on Kohlberg's stages of moral development. First, the case study found that adolescents are influenced from peer pressure in an effort to conform, which explains why they behave inappropriately while using technology. This behavior is indicative of the conventional stage of development in which the exhibited moral behavior of adolescents is done in a desire to fit in with peers (Kohlberg & Hersh, 1977). The case study also found that the participants perceive digital citizenship to be using the correctly, relying on their sense of right and wrong. This sentiment is reflected in Kohlberg's conventional stage of moral development, in which morality focuses on that society regards as appropriate behavior (Kohlberg & Hersh, 1977). Lastly, a similarity was discovered in how students obey or disobey teachers, who represent a figure of authority. In Kohlberg's conventional level of moral reasoning, individuals follow the guidelines of authority figures

(Kohlberg & Hersh, 1977). Many of the student participants expressed that little direction on digital citizenship was provided by teachers.

However, the findings of the case study differed in moral development of adolescents in the conventional stage of development. While Kohlberg's stages of moral development state that adolescents are in the conventional stage, the case study findings indicated that many adolescents are still in the preconventional stage. According to Kohlberg and Hersh (1977), the preconventional stage of development is characterized by young children behaving in accordance with punishment. The case study found that adolescents need punishment for inappropriate online behavior. Repercussions for misbehavior could decrease the number of offences was also discovered in the findings of the case study.

The case study found that most adolescent students rely on their ethics and morals when using technology. However, many participants noted that some adolescents choose not to implement digital citizenship for various reasons. The research indicated that one reason adolescents do not comply with digital citizenship is that they do not have to face consequences for using technology inappropriately. This finding implies that many adolescents need to develop their moral behavior based on punishments received for an infraction. While Kohlberg's stages of moral development claim that this pertains to young children, adolescents could also benefit from it. For instance, it would benefit school administrators to introduce worthwhile repercussions to prevent further abuses of technology. In addition, according to Kohlberg's conventional stage of development, adolescents adhere to authority figures (Kohlberg & Hersh, 1977). This indicates that adolescent students would benefit from learning about legal ramifications for inappropriate technology use from police officers and local prosecutors. Rewarding good behavior for technology use was also indicated by a participant. The research

findings also suggest a need for education on the significance of using ethics to guide behavior. It would benefit adolescents if school administrators, counselors, teachers, and parents provided an education on the importance of using good ethics.

## Limitations and Delimitations

The following section will explain the limitations and delimitations of the research study. The presented limitations are areas of the study that were not able to be controlled by the researcher. On the other hand, the delimitations presented are the chosen boundaries for the study, such as the age of the participants.

### *Limitations*

There are several limitations to the research study. One is that the student participants were between the ages of 13-15. Although these students represent the view of adolescents, using an older age group could have produced differing answers. Older students tend to be more mature and perhaps this would have elicited answers that reflect more responsibility. Additionally, older students are more knowledgeable and more experienced with using technology. This may lead to older students making better and more informed decisions when being online. Another limiting factor to the research is the lack of certified teachers in the school. Having little to no educational training could impair these teachers. For instance, uncertified teachers may not be competent with instructional methods that incorporate technology in their classrooms. Without experience of understanding adolescent students, uncertified teachers may assume that their students can safely navigate technology, thereby not monitoring their online behavior. The geographical location of the research study is also a limitation. Taking place in a rural area, many students do not have the luxury of having Internet access at their homes. The lack of Internet availability generates individuals who lack necessary skills to use technology

appropriately. Students who live in rural areas tend to not only have increased access to the Internet, but also an increased knowledge in how to manipulate it. The timing of the research study was also a limitation. The study occurred in the last month of the school term. The students were anxiously awaiting their summer break and their concentration during the interviews and observations was scarce at times. A final limitation is that the study only included participants who enjoyed and appreciate using technology. The findings would have differed if the study had included the views of adolescents who feel animosity about using technology.

***Delimitations***

Several delimitations were instituted to conduct the research study. First, the student participants were to be between the ages of 13-15. This circumstance was established to gather data from adolescents. These students are on the verge of becoming adults and are capable of making decisions when using technology based on their personal ethics and morals. Adolescents are also seeking how to form their identities and assert authority in their lives (Symons et al., 2017; Wang & Xing, 2018). It is this formation of their identity that impacts their online behavior. In addition, adolescents are also forging their moral identity (Helwig, 2017). Ensuring that they have upright morals will promote the appropriate use of technology as they continue to progress through life. Students with a solid moral foundation are well-aware of the consequences of inappropriate technology use are less likely to commit delinquent actions (Cuadrado-Gordillo & Fernandez-Antelo, 2019; Richardson & Milovidov, 2019). Secondly, the student participants were required to have the AUP from the school. In signing this form, the students are acknowledging they distinguish appropriate and inappropriate online behavior while using the laptop supplied by the school (Robinson & McMeney, 2020; Sauers & Richardson, 2019). Finally, the student participants were required to be competent with using technology because

incompetent users are unaware of how to navigate technology aptly. Understanding how to operate technology is vital because it provides a foundation for appropriate use of the Internet. The teacher participants also were required to be an experienced educator of at least three years because new teachers have little to no knowledge of how to instill and monitor technology use in their classrooms. They were also required to be skilled with utilizing technology so that they also can identify technology abuse. A case study was implemented because it allowed the researcher to study the participants closely, permitting intimate knowledge to be gained (Creswell & Poth, 2018; Rashid et al., 2019; Yin, 2018). For this reason, conducting a case study best allowed first-hand information to be conveyed from the participants and was the most effective research method to properly answer the posed research questions.

## Recommendations for Future Research

There are several recommendations for future research. It would be beneficial to include older students who are nearing high school graduation. Not only would these students be more mature in their behavior choices, but they would also be more considerate of their impending future. Older students are on the verge of becoming autonomous and being members of society. Therefore, they would be more serious and understanding of the significance of practicing digital citizenship. Further research, in the form of a descriptive phenomenological study, could also be implemented in an urban area with a larger population because education and funding tend to increase in larger areas that have a higher tax base. Research on how these students perceive digital citizenship could generate differing results as these students have different guidelines to follow for appropriate Internet use. A descriptive phenomenological study could provide data as to the impetus for their varying approach to digital citizenship. Further research using a case study could provide insight on the education methods of moral and character education in

relation to the practicing of digital citizenship in secondary school. Lastly, a descriptive phenomenological study could be implemented to determine what consequences and repercussions are successful in preventing technology abuse in school. A descriptive phenomenological study could provide insight as to the types of consequences that are beneficial to preventing future infractions when using technology.

## Summary

The purpose of conducting the research study was to determine how students approach digital citizenship in a secondary learning environment. To fully understand the adolescents, a case study was implemented. The findings of the case study produced several outcomes and implications (see Table 2). The results indicated that while most students know how to use reliable websites and avoid risky websites, many students do not value the practice of digital citizenship. The results also revealed that if an adolescent has good morals and ethics, he or she is more likely to use technology in an appropriate manner. For those who do not use technology appropriately, the findings suggest that students learn repercussions and face consequences. Additionally, the results of the case study indicated that many adolescents do not value digital citizenship, which should be presented frequently. It is imperative for students to practice digital citizenship as adolescents so that they will be prepared to continue to use technology appropriately as they enter adulthood.

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# APPENDIX A

IRB Approval

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

May 1, 2023

Jill Lilly
Rick Bragg

Re: IRB Approval - IRB-FY22-23-1061 IMPLEMENTING APPROPRIATE USE OF TECHNOLOGY: A CASE STUDY ON HOW RURAL SECONDARY STUDENTS APPROACH DIGITAL CITIZENSHIP

Dear Jill Lilly, Rick Bragg,

We are pleased to inform you that your study has been approved by the Liberty University Institutional Review Board (IRB). This approval is extended to you for one year from the following date: May 1, 2023. If you need to make changes to the methodology as it pertains to human subjects, you must submit a modification to the IRB. Modifications can be completed through your Cayuse IRB account.

Your study falls under the expedited review category (45 CFR 46.110), which is applicable to specific, minimal risk studies and minor changes to approved studies for the following reason(s):

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 stamped consent form(s) and final versions of your study documents can be found under the Attachments tab within the Submission Details section of your study on Cayuse IRB. Your stamped consent form(s) should be copied and used to gain the consent of your research participants. If you plan to provide your consent information electronically, the contents of the attached consent document(s) should be made available without alteration.

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

project.

Sincerely,

**G. Michele Baker, PhD, CIP**
*Administrative Chair*
**Research Ethics Office**

# APPENDIX B

Observation Protocol

Location: Date: Start time: End time:

| Description of Observed Behavior (Application of Digital Citizenship) | Reflection |
|---|---|
| | |
| | |
| | |
| | |

## APPENDIX C

Primary Source Document: AUP Form

**J.S. County Schools Technology Network**
**Acceptable Use Policy**
**Student Agreement**

| | |
|---|---|
| Student: | Grade: |
| WVEIS: | School: |

I agree to follow the rules for using the instructional computer network in J.S. County Schools. I understand that:

- Computers at school are to be used for educational purposes only.
- The use of the computer network is a privilege, not a right, and I will use appropriate language and behavior when using this network.
- I will not use the network to send or receive any illegal or inappropriate materials.
- I will not give my password to anyone else; I will not use anyone else's account or move, change or delete anyone else's work.
- I will only use the Internet for school purposes and only with a teacher in the room.
- I will not give out personal information about me or others (such as name, address, or telephone number) on the Internet.
- I will not change any computer settings or install programs on school computers.
- If I do not follow the rules, I will not be allowed to use the computer network for a period of time and may face additional school disciplinary action.

_____ _____
Student Signature/ Date

**A parent or guardian must read and sign:**

I, _____, parent/guardian, have read and understand the contract, which my child has signed in order to use the J.S. County Schools Instructional Network. I have discussed this contract with my child to help them understand it. I fully agree with the contents of the contract and recognize that my child must abide by it.

_____ _____
Guardian Signature/ Date

**A teacher must read and sign:**

As a sponsoring teacher, I have read the above information, discussed it with the student, and agree to promote this agreement with the student. I will not be responsible for the student's use of the network if he/she has not followed the rules established in the above contract. As a sponsoring teacher, I will expect every student to abide by the rules at all times.

Teacher's name _____ (Please Print)

Teacher Signature _____ Date ___

## APPENDIX D

Parent/ Guardian Consent Form

**Liberty University**

**Department of Education**

**Qualitative Study Participant Assent Form**

**Study Title:** Secondary Student Approach to Digital Citizenship: A Case Study

**Researcher:** Jill A. Lilly, a doctoral candidate at Liberty University in Education

**Purpose of the Study**
The purpose of this study is to investigate and determine how secondary students perceive digital citizenship. You have been chosen to participate in this study because you are a secondary student who employs the use of technology in various aspects of life, including academic and nonacademic realms. Your personal experiences and reflections from using technology will be conveyed.

**Procedures**
There are three methods of research for this study. I will first examine the signed Acceptable User Policy (AUP) that was acknowledged and signed by the student and parent. The AUP indicates appropriate and inappropriate behavior while using technology. Secondly, I will conduct an interview in which I ask you open-ended questions pertaining to your experiences as a student that utilizes technology. These interviews will be recorded so that the information collected can be verified. Finally, I will conduct an observation in a classroom setting that utilizes technology and the application of digital citizenship. In the observation, I will be looking for evidence of student use of digital citizenship in accordance with the signed AUP.

**Confidentiality**
All data that is collected will remain secure and confidential. The school will have a pseudonym and pseudonyms will be used for all participants. The records and data will not be shared and will be destroyed after the study is published.

**Benefits**
Although no compensation will be given for participation, there are additional benefits. Being able to voice personal perceptions about the approach to digital citizenship will help to provide a quality education for other students in the future. In addition, your contribution will pave the way for innovative teaching and learning strategies that promote digital citizenship.

**Risks**

The safety of the participants is high priority. There are no known risks to participating in this study. All participants will be treated in a professional and respectful manner.

**Right to Withdraw**

Should you as the participant feel uncomfortable at any point, you may withdraw from the study. Communicate this decision to withdraw in a written statement. After this, any and all data collected will be destroyed.

**Communication**

If questions or concerns arise, please contact me. My phone number is [redacted]. My email address is [redacted]. I am more than willing to discuss specific details pertaining to your contribution to this study.

**Statement of Consent**

By signing this form, I _____ (name of student) agree to participate in a qualitative study about the benefits of academic tracking conducted by Jill A. Lilly. I have read the terms of the study and understand the procedures, methods of participation, and the right to withdraw.

_____ _____

Student signature Date

_____ _____

Parent signature Date

**APPENDIX E**
Site Approval Form

**Site Approval for Research**

Jill Lilly, a doctoral student at Liberty University, is completing a dissertation entitled "Implementing Appropriate Use of Technology: A Case on How Secondary Students Approach Digital Citizenship." Jill Lilly will serve as the principal researcher and will use at least 20 students as participants to complete her dissertation research. The objective of the research inquiry is to ascertain how secondary students perceive the concept of digital citizenship. The specific procedures will be explained to parents and/ or guardians of the participants. Consent will be obtained from parents and/ or guardians, as well as from the students. The procedures of the research study are as follows:

- The researcher will read and analyze the Acceptable Use Policy of the school.
- Each student will be interviewed by the researcher.
- The researcher will observe the students in classroom as they utilize and apply skills that are encompassed in digital citizenship.

The research will be conducted ethically. All obtained information will be kept confidential. The students and the high school will be given pseudonyms to maintain privacy. The students will be kept from harm and treated respectfully. In addition, the researcher will remain objective throughout the process and will report genuine results.

In signing this document, the administration at _____ School agrees to allow Jill Lilly to conduct research using the school grounds and students enrolled in the school. The contact information for the school is _____. Questions or concerns can be addressed using Jill Lilly's email [redacted].

_____ _____
Administrator at _____ High School Date

_____ _____
Jill Lilly, Doctoral candidate/ Researcher Date

**APPENDIX F**

Email Recruitment for Participation

Dear Student,

My name is Jill Lilly, and I am currently a high school teacher. I am also a doctoral candidate in the Education Department at Liberty University. As part of my doctoral dissertation, I am implanting a case study to determine how secondary students perceive digital citizenship, which pertains to the responsible and ethical use of technology. I am enlisting middle school and high school students who are proficient with using technology.

Participation in the study is voluntary and participation will involve two components:

1. Students will be interviewed about their technology use and approach to digital citizenship.
2. Students will be observed in a classroom setting in which technology is utilized.

There are no consequences for not choosing to participate, nor are there consequences for deciding to withdraw from the study. Participants will be protected. All information will be kept confidential and stored in a secure location.

Your participation in this study is greatly valued. If you are interested in participating in the case study, please respond to this email. If you have further questions, please contact me at [redacted] or email me at [redacted]

Sincerely,

Jill Lilly

# APPENDIX G
## Audit Trail

| Task | Date of Completion |
|---|---|
| Site Approval | April 6, 2023 |
| IRB Approval | May 1, 2023 |
| Recruitment Email | May 2, 2023 |
| AUP Document Analysis | May 5-8, 2023 |
| Semi-Structured Interviews | May 9-19, 2023 |
| Observations | May 22-26, 2023 |
| Transcriptions of Interviews | May 27- June 4, 2023 |
| Data Analysis and Coding | June 5-15, 2023 |
| Chapter 4 | June 19- July 12, 2023 |
| Interpretation of Data | July 13- 20, 2023 |
| Chapter 5 | July 21- October 4, 2023 |