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Veteran Educators' Perceptions of the Internet's Impact on Learning and Social Development

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Abstract

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Matthew V. Glowiak

MS, Walden University, 2010

BS, University of Illinois, 2005

Dissertation Submitted in Partial Fulfillment

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Abstract

In a time where some 2.4 billion Internet users exist worldwide, children are increasingly impacted by the Internet's influence, both directly and indirectly. With technology now playing a significant role in childhood learning and social development, many unforeseen shifts are occurring that will ultimately impact lifespan development. Although researchers have provided mixed results concerning the impact of the Internet on learning and social development, the body of evidence indicates that veteran K-8 educators who are comfortable and experienced with the Internet view it more favorably. This grounded theory study systematically generated the *multisystem technological engagement theory* (MSTET) to explain the impact of the Internet on childhood learning and social development. Semistructured interviews were conducted with 14 self-identified veteran K-8 educators. Analysis of the data was conducted using a 3-tiered method of coding that was verified through the process of triangulation and member-checking. Results of this study indicate that the veteran K-8 educators perceived the Internet's impact as positive, given a specific set of conditions: experience and comfort with the Internet, collaboration with parents, a healthy balance between face-to-face and online social interactions, boundaries, and maximization of benefits from available information and resources. These findings may enhance social change initiatives by providing an evidence basis for both targeted instruction and school counseling practice that facilitates healthy K-8 learning and social development in the Internet Age.

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Dedication

First and foremost, I dedicate this dissertation to my family for their continued love and support throughout, prior to, and after this extensive academic experience. I could not have done it without you all. To my wife, Megan, thank you for standing by my side throughout this adventure. You always ask whether I somehow included you in my writing of homework assignments and articles, and now here I am dedicating the pinnacle of my academic career to you. You are an amazing wife, and I love you. To my parents, Dave and Sherry, you have always given me all you could along with your undying support. Mandy ... Ha! There are so many funny things going through my head right now! Grandma and Grandpa, I made it! Your first grandchild is a doctor! To all my aunts, uncles, and cousins, I thank you for your support and hope to have inspired you to reach for your dreams as well. Each and every one of you is amazing!

Next, I have to give special thanks to my dissertation committee. Drs. Reicherzer and Haddock, I could not have completed such an intense task as this dissertation without your guidance and support. Every step of the way, you were swift, honest, and insightful in response, which kept everything moving along. Beyond your work on my dissertation committee, you two have provided mentorship throughout my doctoral experience.

To my dissertation committee and others whom I have regarded as mentors along the way, namely Drs. David Capuzzi and Victoria White Kress, it is because of you that I have developed the confidence, knowledge, and skill to take on any task no matter how big. I cannot thank you all enough for that. And to my friends with whom I have spent very limited time over my graduate years, thank you for still being here. I am back!

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My primary acknowledgement goes out to my dissertation committee. Dr. Reicherzer, you have been an absolutely amazing chair. Beyond that, you have become one of the most influential people in my life. You believed in me as a master's student and offered me my first doctoral publication opportunity. That article helped me attain goals that were at one time dreams throughout my doctoral experience. It is an honor to have met you, and I hope to continue our work together. Dr. Haddock, your support with content has been sincerely appreciated. You were the first professor I had in the doctoral program to acknowledge my work. When you offered me an opportunity to contribute in your textbook chapter, it was admittedly surreal. Both of you have been there for and with me since day one, and it is only fitting that we conclude my doctoral experience together. I cannot thank the two of you enough.

Second, I would like to thank the veteran K-8 educators who participated in this study. Although I cannot thank you by name, as your identities have been kept anonymous, my hope is that your statements inspire other educators and stakeholders to maximize their ability to facilitate K-8 learning and social development in the Internet Age and beyond. Your time toward and support for this study are sincerely appreciated. Without you this dissertation truly would not exist.

Finally, I would like to thank my wife, family members, friends, peers, colleagues, and everyone else who has inspired, supported, and believed in me. Without your support, I could have never made it through the day-to-day. I, too, have always stood by your side and am excited to see what lies ahead.

Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction to the Study

Introduction

The Internet has propelled the technological revolution into places previously not possible. With that has come an array of new influences that have never before affected society. Though many are minor, some are so significant that they may alter the lives of individuals and entire populations alike. As such, this technological revolution is also a revolution for all humankind—even those who are not directly impacted. This study explores the impact of the Internet on K-8 learning and social development through the lens of veteran K-8 educators.

Current research has revealed mixed reviews concerning whether the Internet is a positive or negative influence on childhood social and learning development. Perhaps it is both. Arguments for each side bring up relevant points; however, both sides reveal a common theme in that individual and environmental factors weigh upon the capacity of the Internet to become more or less impactful or a positive or negative influence. Therefore, exploring veteran educators' perceptions of the Internet's impact on K-8 learning and social development brings with it the potential to significantly advance and adapt teaching methods and the online environment to meet children's needs. Given this new advantage, society may witness significant changes to learning and social development. Such changes may include but are not limited to intellectual development, advanced cognition, social skills, and overall qualities of life.

Given the significance learning and social development have in psychological wellbeing, this topic is one that has implications for most everyone living in modern society. Through K-8 educators' perceptions, this study offers a look at what is happening

in today's classroom: how children are learning, what is working, and wherein the concerns lie. With the data and subsequent interpretation offered in this dissertation, counselors, educators, researchers, administrators, parents, and other stakeholders may continue to improve upon the Internet, its applications, and the way in which young children incorporate their reality into virtual reality. A preventative effort that is adapted to learning and social skills in childhood may help to spare many from experiencing mental illness in adulthood. This may prove especially true with stress-induced and environment-specific disorders. As such, this study leverages a better understanding of the Internet in addressing social and learning developmental needs and concerns for children.

This chapter is a preview of the content that lies ahead. Chapter 1 briefly identifies and describes the study's main theories, concepts, and components. By the end of the chapter, readers will have a general idea as to the framework, purpose, scope, and significance of this study—all of which are described in further detail later.

Background

Related Literature

Current research has provided mixed results regarding the Internet's impact on childhood social and learning development. While there are many studies that serve to advocate on behalf of the Internet's influence (Burnett & Wilkinson, 2005; Cook, Rule, & Mariger, 2003; Hsi, 2007; Johnson, 2010; Loewen, 2006; Papanis, Giavrimis, & Papani, 2010; Vasquez & Serianni, 2012), there are others that indicate a variety of concerns (Gross, 2004; Kraut et al., 1998; McKenna & Bargh, 2000; Patchin & Hinduja, 2007; Purcell, Buchanan, & Friedrich, 2013; Smith et al., 2008; Turow, 1999; Vasquez &

Serianni, 2012; Xu, 2007). In sum, research suggests that the influence of the Internet greatly relies on the individuals who use, govern, and develop it. This is not to say, though, that others who do not use the Internet are not impacted by it—because they are. Like the general environment people have always lived in, the virtual environment is the product of countless interactions. Consequently, there are ideal environments in which optimal learning and social development occur. In either case, the environment one is exposed to during childhood may have implications that last into or throughout adulthood (Bandura, 1977; Erikson, 1968; Piaget, 1936; Vygotsky, 1978).

Despite the number of contemporary studies available that explore the impact of the Internet on childhood development, none have addressed the topic through the lens of veteran K-8 educators who have taught children since well before the Internet became a global phenomenon. This unique perspective offers eyewitness and expert testimony as to how children learn and socially engage in the Internet Age as opposed to a time when more traditional learning strategies were used. Bridging this gap, then, takes both the positive and negative implications into consideration to inform best teaching practices.

Given the trajectory at which the Internet's influence has impacted society, it is important to embrace it and acknowledge the reality that it is likely here to stay (Moloney & Oakley, 2010). As explained through contemporary ecological system theory, whether or not children directly use the Internet, it does impact their environment (Johnson & Puplampu, 2008). Given that a vast majority of human learning and social development occurs during childhood and adolescence (Bandura, 1977; Erikson, 1968; Piaget, 1936; Vygotsky, 1978), an influence as significant as the Internet must be explored further. Though the rewards of this technology are proving plentiful, there are concerns that must

be addressed (Gross, 2004; Kraut et al., 1998; McKenna & Bargh, 2000; Patchin & Hinduja, 2007; Purcell, Buchanan, & Friedrich, 2013; Smith et al., 2008; Turow, 1999; Vasquez & Serianni, 2012; Xu, 2007).

Given the Internet's extensive global influence, significant concerns could result in setbacks for future generations. For instance, humans could become so reliant on the Internet that they begin losing some of the basic knowledge and skills that people take for granted today. Take mathematics, for instance ... to become proficient without using a computer or calculator, one must continually practice. Given the efficiency of technology, it is common for people to use it without actually learning how to do the math. Losing these technologies may make it impossible for people to solve more complex equations. In another example, if people are not aware of a particular answer to something, they may look it up online without giving it any real thought. The answer is known for a minute but never committed to long-term memory because it was never fully processed through short-term memory. The same holds true for procedural memory. Should the day come when technology is ever catastrophically wiped out, humans may ultimately struggle. Therefore, it is important to continually evaluate and assess current strategies while using only those having evidence-based support.

Problem Statement

The Internet is a gateway for storing, sharing, and developing information in ways that have begun to revolutionize the way people learn and develop. Current studies have resulted in promising recommendations that include the following: individualized guidelines for best practices in specific teaching situations (Hastie, Chen, & Kuo, 2007), how to attain the best balance of face-to-face versus online instruction (Li & Wang,

2008), ways to improve parental involvement/supervision (Seo, Chun, & Jwa, 2011), and how minimally used technologies may be exploited for maximum benefits (Young Children, 2008). Although current research supports the efficacy of online learning with adult populations (Moloney & Oakley, 2010), a gap exists in that no studies have qualitatively identified the perceptions of veteran teachers working with children who have grown up with the Internet.

Wrought with concern, some researchers have gone so far as conclude that the push for technology-centric education in some school districts is premature because technology's use toward teaching at a level equal to or better than traditional methods is currently met with minimal support (Gorski, 2004). In another study, Mentzer, Cryan, and Teclehaimanot (2007) expressed concern over the potential for students to lack motivation in learning when the learning experience involves children teaching themselves in a cyber environment to a greater extent than it involves educators actually facilitating their learning. Additionally, a lack of real-life interactions leaves children unprepared for a host of social situations they may face moving into adulthood (Paul & Elder, 2007). As such, some type of balance between traditional and contemporary strategies may best facilitate learning and social development. Within the context of this contemporary topic warranting and receiving plenty of researchers' attention, this study will fill a gap by using the perceptions of 20+-year veteran teachers to explore the Internet's impact over a continuum of time rather than one particular snapshot in the here-and-now or there-and-then.

A worldwide survey revealed that there were a total of 2,405,518,376 Internet users as of June 30, 2012 **(**Internet World Stats, 2013). With over 7.1 billion people in the

world population (U.S. Census Bureau, 2013), there is no denying that this research problem is current and relevant. In terms of significance, the impact of the Internet on learning and social development follows a strikingly similar progression to that described in classic counseling literature. Social cognitive theory (SCT), for instance, stresses how the materials and methods through which children learn significantly impact their development (Bandura, Ross, & Ross, 1961). Given the amount of bad resources and false information available online, children are at risk of learning inaccurate information or being exposed to explicit content (Xu, 2007). The impact of this influence varies by age because cognitive ability cannot exceed physical development (Piaget, 1936). Though younger children may be more intelligent and knowledgeable than older children, they are still limited by biology. Vygotsky (1978) explained cognitive development further by claiming that a child raised and held in isolation would not develop within what is considered "normal" development. Taking it to the extreme, then, a child who learns and socializes in only a bad and inappropriate environment may demonstrate severe impairment moving into adulthood (Watson, 1930). Here, the child does not successfully complete social and academic milestones, causing the child to enter adolescence with minimal basic life skills (Erikson, 1968). In sum, a failure to address various concerns now may allow detrimental practices to become more paramount not only in current times, but also moving into the future (Moloney & Oakley, 2010).

Previous Research Findings

In a closely related study, Papanis et al. (2010) explored students' opinions regarding the impact of the Internet on education. Given that *information and communication technologies* (ICT)—such as the Internet—serve as effective cognitive

tools for teaching and learning (Charp, 1998), it was determined that the Internet has to provide at least some type of informal learning. This means that general searches across the web using Google, Yahoo, Bing, Ask, YouTube, Wikipedia, Vimeo, and so on all provide at least some minimal learning—whether accurate or inaccurate—when explored. The levels of creativity and flexibility influenced by this virtual environment closely resemble those endorsed by the classic theorists Bandura (1977), Erikson (1968), Piaget (1936), and Vygotsky (1978). In another study, Johnson (2010) explored the *techno-subsystem,* a newer concept that represents an addition to the layers within Bronfenbrenner's (1977) ecological system theory (Johnson & Puplampu, 2008). Of importance is the concept that interactions within a microsystem at least minimally resonate into the mesosystem, exosystem, macrosystem, and chronosystem of a child's environment (Johnson & Puplampu, 2008). Though an influence further out may prove minimal, its impact still exists. As such, children from less affluent neighborhoods or in third world countries are still impacted by the Internet as a result of its impact on other children across the world.

Other studies that have explored educators' perceptions have found that their knowledge of and comfort with using the Internet also have a significant impact on children's experience (Lin, 2008; Mundy, Kupczynski, & Kee, 2012; Wood, Mueller, Willoughby, Specht, & Deyoung, 2005). The general trend, then, is that as educators become more comfortable with technology, they become better able to integrate it into the classroom. With competence being an integral factor in the success or failure of the Internet's application toward development, Mundy, Kupczynski, and Kee (2012) conducted a study finding that as teachers became more technologically savvy, they

began infusing more of what they learned into the classroom. This direct impact on students is one that appears quite favorable. Further, Lin's (2008) study exploring teacher beliefs about using technology in the mathematics classroom revealed that teachers who participated in specific technology workshops were able to significantly enrich their students' learning experiences. In sum, current literature supports the notion that a combination of appropriate methods in concert with the Internet's abilities may enhance students' abilities to heights previously unknown (Burnett & Wilkinson, 2005; Cook, Rule, & Mariger, 2003; Hsi, 2007; Johnson, 2010; Loewen, 2006; Papanis, Giavrimis, & Papani, 2010; Vasquez & Serianni, 2012). Unfortunately, the same may occur in the opposite direction should the Internet be used in a way that significantly impairs learning and social development.

Addressing this gap is meaningful because it affords a unique perspective into how education changed before, during, and after the inception of the Internet. Educators' perceptions may offer insight concerning how the best qualities of contemporary strategies may be blended with the best of traditional ones to create the most ideal environment for advanced learning and social development. Because societal demands and technological growth are both dynamic phenomena, what is ideal will inevitably continue to change over time. Consequently, this study is not the end-all answer but provides a breadth of information relevant to contemporary experiences and technological abilities. To this end, additional studies will be needed in the future.

Purpose of the Study

The purpose of this qualitative grounded theory study was to develop an informational theory that was constructed through the perceptions of veteran K-8

educators having taught K-8 for a period of 20 or more years. By focusing on these perceptions, the data acquired may inform researchers, school counselors, educators, parents, and other stakeholders as they develop and implement better methods, approaches, and strategies for use in K-8 instruction moving into the future. Therefore, the ultimate goal of this study was to provide an evidence base built upon the perceptions of K-8 educators who taught prior to, during, and after the Internet Age.

The Internet has given humans the ability to transmit extensive information in real time through the click of a button or tap of the finger. With a world of knowledge now available in the palm of one's hand, today's generations are given an advantage had by no others in history. The *Flynn effect* (Flynn, 2009) has been used to address the significant and sustained increase in the IQ scores of developed nations that has been observed since around the 1930s. One decade after another, normalized IQ scores have continued to increase by an average of 3 points, indicating an increase of intelligence over time. Flynn (2009) shed light on the ways in which IQ tests have failed to acknowledge the differences in the ways that different populations think. Consequently, claims that humans have become increasingly intelligent one decade to the next since around 1930 are controversial. Given the seemingly limitless adaptability of contemporary and proposed future Internet applications, it will prove interesting to witness whether the human brain truly does possess the power to (a) evolve in noticeable statistical increments one decade after the next and (b) accelerate its development through the use of adaptive technologies. Before answering this question, though, it is important to first figure out the strategies through which technology use is best adapted toward learning and social development.

Research Question

Central Question

How do veteran K-8 educators experience children's learning and social development in the Internet Age?

Theoretical and Conceptual Framework

Theoretical Foundation

Albert Bandura's (1977) social cognitive learning theory (SCT), Jean Piaget's (1936) theory of cognitive development, Lev Vygotsky's (1978) social development theory, and Erik Erikson's (1968) eight stages of development are the four core theories upon which this study was built. Though developed prior to the Internet's societal influence, most of the basic principles inherent in these theories are still applicable today. Because all of these theories follow the basic progression of childhood development in the context of an interactive environment, whether that environment is real or virtual is irrelevant. That is, either environment has an impact on the child, which will ultimately impact the same learning and social development explored in this study.

Within Bandura's (1986) SCT, individuals are seen as "self-organizing, proactive, and self-regulating" (Pajares, 2002, p. 116), indicating that learning occurs either directly through life experience or vicariously through observation (Fireman & Kose, 2002). This self-system of learning, then, is facilitated through (a) vicarious reinforcement, (b) symbolic activities, (c) forethought activity, (d) self-regulatory capabilities, (e) self-reflecting capability, (f) self-efficacy, and (g) self-reinforcement (Malone, 2002). In sum, whenever somebody actively does or observes something, a learning opportunity exists.

Piaget's (1936) theory of cognitive development posits that development takes

place in sequential order for everyone regardless of ethnicity, gender, environment, and so forth. There are four stages of cognitive development: (a) sensorimotor, (b) preoperational, (c) concrete operational, and (d) formal operational. The development of appropriate Internet applications, then, must take age into consideration.

Vygotsky (1978) proposed that children primarily develop cognition and understanding through social interactions. Further, social development theory posits that due to progressive physical development, younger children are incapable of learning particular concepts until their brains are capable of doing so. Environmental constructs working within cognitive development constructs, then, suggest how to create optimal learning and social environments.

Erikson's (1968) eight stages of psychosocial development span a lifetime; each represents a basic conflict and life event whereby individuals either succeed or fail. Though degrees of success or failure and consequences vary, the results may have a lasting impact on individuals. Failure delays development and makes it increasingly difficult for individuals to function within society, whereas mastery at each stage brings with it a host of life advantages.

Relating Theory to the Study Approach and Research Question

Like anyone else, K-8 children are exposed to numerous factors that influence their environment. In sum, the works of Bandura (1977), Piaget (1936), Vygotsky (1978), and Erikson (1968) have revealed that learning and social development (a) occur in a progressive manner, (b) are influenced directly through experience, (c) are influenced vicariously through indirect experiences, and (d) involve a series of interactions between person and the environment. Therefore, anything that comes between children and their

natural progression of development—such as the Internet—may have significant, lasting implications (Paul & Elder, 2007; Polat, Adiguzel, & Akgun, 2012; Vasquez & Serianni, 2012; Young Children, 2008). Educators' perceptions, then, will vary along the lines of how well the Internet does or does not foster and facilitate development as explained by the aforementioned theorists.

Conceptual Framework

The exchange of information has become faster, more elaborate, and in higher demand due to technological advancements allowing the Internet to become faster, more efficient, more affordable, and accessible via more devices. Consequently, the Internet's influence is spread all over and impacts learning and social development. It is only logical, then, that measures be taken to exploit the advantages given to humankind by a technology that is likely not going away (Moloney & Oakley, 2010).

Any single factor or combination of factors working with or against one another creates two completely different outcomes in terms of learning and social development (Bandura, 1977; Erikson, 1968; Piaget, 1936; Vygotsky, 1978). Strategies that approach contemporary environments within the parameters of the classic theorists reveal that the principles of development still hold true; however, enhancements facilitated through technology may maximize success and enhance potential along each step of the way. As such, the conceptual framework in this study is a product of traditional development and the outcomes revealed in present research.

This conceptual framework is logical in that it not only follows the evidence-based principles derived through classic research, but also follows the general concept that nurturing environments produce more positive outcomes than harmful environments.

If Internet applications and the facilitation of them are structured in such a way that each aspect of natural learning is enhanced, it is logical that society may continue to make progress. The educators' perceptions contained in this study highlight many of these points. Chapter 2 provides a more thorough explanation of these connections.

Because educators are vital in children's learning and social development, their perceptions from classroom experience are—in effect—the result of whether components inherent in the framework are functional, dysfunctional, present, or lacking. The interview questions contained in this study's instrument were intended to offer an accurate depiction of how the Internet has, in fact, impacted K-8 children. Each question was designed to elicit information that would be helpful in understanding this impact within the general, traditional concepts of development as manifested in today's typical classroom with veteran educators.

Nature of the Study

This study built its own theory from the ground up, independent of everything else studied. Grounded theory, as explained by Glaser and Strauss (1967), seeks "to assure that the emergence of categories will not be contaminated by concepts more suited to different areas" (p. 37). Further, its rigorous approach toward exploring scholarly inquiry is one that has demonstrated itself as an extremely effective research strategy (Patton, 2002). It is enhanced (as will be demonstrated in this work) through meticulous attention to credibility, transferability, dependability, confirmability, and intercoder reliability.

The key concept central to this study involves educators' perceptions being valued as those of professionals. Having taught for a minimum of 20 years, the educators in this

study were experienced and had been eyewitnesses to trends in learning and social development before, during, and after the advent of the Internet. Focusing through the lens of educators who observe students daily helps in building an evidence basis for targeted learning- and social development-focused activities among those who work with children and adolescents. The principles of the traditional theories (Bandura, 1977; Erikson, 1968; Piaget, 1936; Vygotsky, 1978) seem to imply that the rapid trajectory at which the Internet continues to infiltrate the household environment (Internet World Stats, 2013) indicates an increase in the influence it has over learning and social development. With society already being at a point where there is likely no turning back from the Internet's influence (Moloney & Oakley, 2010), studies like this one are a necessity to explore and inform best practices.

The Methodology in Brief

In order to acquire the most authentic, meaningful representation of the data, this study used the grounded approach (Glaser & Strauss, 1967)—an approach that truly captures the essence of an experience. Participants in this study were 14 veteran educators who had taught for a total of 20 or more years. *Veteran educators*, as defined in this study, included those who had taken leave during their tenure. Each educator participated in a structured, open-ended qualitative interview. Interviews occurred either face-to-face or via teleconference. Due to distance, the face-to-face interviews were reserved for those educators residing in Chicago and suburbs within a 60-mile radius. Teleconferences were for those participants from further distances and optional for those who preferred a phone interview. Each interview was audio recorded. Data analysis entailed a combination of a hand-coded pawning strategy, triangulation, NVivo 10

analysis, and review with a highly competent dissertation committee.

Definitions

Bandura's (1977) social cognitive learning theory: Theory indicating that an individual's knowledge is in part a direct result of that individual's environment.

Bronfenbrenner's (1979) five environmental systems: (a) microsystem, (b) mesosystem, (c) exosystem, (d) macrosystem, and (e) chronosystem.

Culture: A dynamic system of explicit and implicit rules based upon a group's common attitudes, behaviors, beliefs, norms, and values. Though relatively stable, these rules are subject to differentiation by individual and across generations.

Erikson's (1968) eight stages of development: Stages of development in which children and adolescents are faced with specific conflicts in the following order: (a) trust vs. mistrust, (b) autonomy vs. shame/doubt, (c) initiative vs. guilt, (d) industry vs. inferiority, (e) identity vs. role confusion, (f) intimacy vs. isolation, (g) generativity vs. stagnation, and (h) ego identity vs. despair.

Grounded theory: Research approach that connects induction and deduction through (a) constant comparative method, (b) research site comparison, (c) theoretical sampling, and (d) testing emergent concepts against further fieldwork.

Internet: An international computer network providing communication services across six categories: (a) users; (b) shared global services and operations; (c) education and capacity building; (d) local, national, regional, and global policy development; (e) open standards development; and f) naming and addressing with freely accessible processes for policy development.

Internet Age: The time period beginning in the 1990s when Internet service

became more readily available in the home and, as a result, began significantly influencing behavior and cognitions.

Piaget's (1936) four stages of cognitive development: (a) sensorimotor, (b) preoperational, (c) concrete operational, and (d) formal operational.

Vygotsky's (1978) zone of proximal development (ZPD): All of the tasks that a child is not developmentally able to perform alone but may learn with the guidance and assistance of a more knowledgeable other (MKO), which does not necessarily need to be a living human being.

Definition of Terms With Multiple Meanings

Educator: An individual who teaches, guides, evaluates, and supports others with the objective of assisting in the forward progression of learning and social development.

Evaluation: An assessment of student progress in a variety of core areas (e.g., student performance, behavior, social skills, etc.).

K-8 students: Children in kindergarten through eighth grade who are generally ages 5 through 14 and undergoing the most significant and rapid developmental changes.

More knowledgeable other (MKO): An individual or artificial intelligence (AI) who is more knowledgeable or skilled in respect to a particular idea, process, or task and provides direct or vicarious instruction through teaching and/or demonstration.

Socioeconomic status: Sociological and economic status in relation to others based on occupation, income, and education.

Stakeholder: Individual or group who has a vested interest in the perceptions of veteran K-8 educators on the impact of the Internet on K-8 learning and social development.

Triangulation: Data analysis interpretation based on the comparison of multiple peer-reviewed resources, evidence-based methods, and input by the dissertation methodologist.

Veteran: Educator who has 20+ years of K-8 teaching experience before, during, and after the advent of the Internet.

Vicarious learning: Secondary learning achieved through observation of another's experience.

Vicarious reinforcement: Secondary reinforcement achieved through observation of another's experience.

Assumptions

A major assumption within this study is the idea that the Internet will continue to develop and grow as its influence over society increases. Based on the most current trajectory, it appears that this is true. A worldwide survey conducted in 2000 and then again in 2012 revealed a 566.4% growth in Internet use from an approximate 361,000 users to over 2.4 billion (Internet World Stats, 2013). With more individuals using, becoming invested in, and being influenced by the Internet, it seems extremely likely that this could happen. This may prove presumptuous, however, as this assumption is built upon trends that have only been around for a relatively short period of time. Another assumption is in relying on the veteran educator's perception as one that is professional in nature. After 20 years, an educator has acquired a significant amount of experience, which should increase competence and ability to perform at a higher standard than, say, the average rookie educator who has no or very limited experience. Regarding aspects of learning and social development, this study has ensured that any statements made are

backed by peer-reviewed literature and evidence-based research.

The assumption creates a necessity for further research, exploration, and development. As research has already demonstrated, the Internet does in fact have an impact on learning and social development (Burnett & Wilkinson, 2005; Cook, Rule, & Mariger, 2003; Gross, 2004; Hsi, 2007; Johnson, 2010; Kraut et al., 1998; Loewen, 2006; McKenna & Bargh, 2000; Patchin & Hinduja, 2007; Purcell, Buchanan, & Friedrich, 2013; Smith et al., 2008; Turow, 1999; Vasquez & Serianni, 2012; Vasquez & Serianni, 2012; Xu, 2007). Given the significant impact that vicarious learning has on learning and social development (Bandura, 1986; Vygotsky, 1978), the time children spend online provides at least some minimal informal learning (Papanis et al., 2010). Depending on the child's personal use of and association with others who use the Internet, the amount of informal learning may span from minimal to significant. Such learning may prove positive, negative, or neutral. The need for strategies already exists for those directly using the Internet; however, those indirectly influenced and who are likely to use it in the future may also benefit through knowledge of best practices.

Scope and Delimitations

The research problem was addressed in a way that offered the most comprehensive, professional evaluation of the phenomenon. It explored the problem from a wide lens that helps narrow down commonalities, differences, and best and worst practices. Open-ended interview questions allowing freedom within the individual participants' responses were used to capture the true essence of their experiences. Given the longevity of their experience, veteran educators offer a unique perspective on learning and social development that others—including the children's parents—cannot. This

perspective, then, may serve as the impetus for stakeholders to begin developing, creating, and refining best practices.

Outside of participants meeting the requirement of having taught K-8 students for at least 20 years, there were no other boundaries. The participants varied in gender, ethnicity, religion, socioeconomic status, and other demographics. Upon completion of the analysis, this variation helped demonstrate themes specific to veteran educators in general, rather than any other specific factor. A general exploration of educator perceptions of student learning and social development serves as a springboard for more specific studies that may occur later. Though not for the purpose of comparison, this study was intended to build a rich theory by recruiting educators from an array of schools. Because this study did not compare upper to lower SES schools, student demographic groups, or other means of learning, follow-up studies with a theoretical foundation built upon critical theory, social justice theory, social movement theory, social activism theory, and others may prove valuable for allowing a critique of disparities that occur in regard to knowledge access.

Having written through each component of the dissertation, I describe this study detail for detail. Through its use of thick description, this study specifies the components necessary to recreate its findings. The key element is the use of veteran teachers. Because the interview questions are general, open-ended, noninvasive, and cover the range of an experience, they may easily be administered with other participants in different settings. Further, significant ethical concerns were accounted for and minimized.

Limitations

There are some limitations to this study. The first was that educators rather than

students were interviewed. Though data coming straight from students would have been more direct, using the professional observations of teachers who had been in the field for over 20 years proved more beneficial in providing a longitudinal understanding of how learning and social development have changed (as young children are not necessarily aware of this phenomenon and how they are being impacted).

Another potential limitation was the use of just 14 teachers. Although 14 is a credible number for the study (Glaser & Strauss, 1967), larger numbers that suggest significance generally make the results more appealing. Along this same point, there may also be an argument that despite the educators' multicultural diversity, they still lack enough diversity due to their proximal location. If the schools are more similar than different, then the study is not relevant for wider ranges of the population (Patton, 2002). Though this study involved interviews with remote via teleconference, it is still reflective of a relatively small number of perceptions.

A final limitation might have involved the use of the interview as the qualitative method of inquiry. It was somewhat risky, assuming that the veteran educators were able to provide expert quality analyses. Factors that might have compromised the quality of their responses included but were not limited to not feeling passionate enough about teaching to notice these changes; not being aware of professional teaching theories, principles, and methods; not keeping up-to-date on current technology; not knowing how to use the Internet oneself; and not staying current on the latest news and popular trends.

The American Counseling Association (ACA) *Code of Ethics* (2005) requires researchers to account for and take every reasonable precaution to avoid bias (ACA, 2005, G.4.a.). As a doctoral student at Walden University, I am biased toward the

positive influences of the Internet. That is, I would not have continued my education at a distance learning university if I did not think it was possible to earn a good education online. Because of this, extra caution had to be taken in the development of interview questions so that they did not influence educators to respond more favorably than they would have otherwise. The questions created for this study were intentionally open ended and used language that did not indicate any favoritism in a particular direction.

Measures to Address Limitations

Given the ease and format in which this study was conducted, there was no limit to how many veteran educators could participate. Despite limited resources and reaching saturation at 14 participants, this study proved capable of meeting its various intended purposes. Beyond creating a list of interview questions that remove bias, it was imperative that I did not act, vocalize, or present myself in any way that might affect participant responses. Doing this would have invalidated the authenticity sought after in the participant responses. Further, purposively recruiting participants in the Chicagoland region and through referral provided differences by way of resources, location, culture, and demographics to strengthen the notion of this study serving as a general exploration of the educators' perceptions. It also strengthened the effort of this study in developing a rich theory.

Delimitations

There were several delimitations to this study. First, in exploring how veteran K-8 educators experienced children’s learning and social development in the Internet Age, this study did not specifically explore a plethora of other related problems that could have been selected. Another worthwhile question, for instance, might entail a comparison of

mental illness amongst populations that vary in Internet use. Second, this study did not review any literature promoting the efficacy of Internet use with adult populations. Though several statements were made on the topic, it is not directly related to this production of grounded theory—as adults have already progressed through the developmental stages experienced by K-8 students. By the same token, the study did not review any literature on early childhood or infant populations. Third, having a population parameter of educators having taught 20 or more years excluded those having taught anything less. Consequently, there was a loss of valuable insight that might have been useful. Additional explorations using these, alternative, or more specific population parameters may prove fruitful in future research. Further, the educators were not assessed for technological literacy, as that was not within the scope of the study.

Significance

By analyzing the experienced educators' responses, I hope to provide a better understanding of the positive and negative experiences of this phenomenon. With that, future researchers may create and refine techniques that help people maximize their learning and social potential. Above all, my hope is that this spotlight on the topic will raise awareness of the fact that children require proper instruction and guidance when it comes to their Internet use. Success here may ultimately minimize a variety of psychopathologies as individuals move into adulthood. Failures, however, may lead toward regression of basic learning and social skills (Seo, Chun, & Jwa, 2011). This study is a preventative measure against such failure.

The K-8 age group is particularly important because younger generations are the ones that will continue to use, enhance, and pass on their knowledge (Santrock, 2007).

With the analysis of the experienced educators' responses, this study provides a clearer understanding of the positive and negative experiences of this phenomenon. Consequently, future researchers and stakeholders may create and refine strategies that maximize the benefits of the Internet's impact on learning and social development. Given that today's children are the leaders of tomorrow, it is important that best practices are understood and refined. The positive social change implications of this study, then, are in the betterment of human abilities worldwide.

Summary

This study serves as an exploration of the impact of the Internet on K-8 learning and social development through the perceptions of 14 veteran educators. The grounded theory used in this study was rigorous and allowed for the most authentic and meaningful collection, analysis, and interpretation of the data. Positive social change may be facilitated through the knowledge and insight gained through these perceptions, allowing for a move toward best practices regarding the Internet's use in relation to learning and social development.

This chapter serves as a preview of the content lying ahead. Here, many of the main theories, concepts, and components have been provided in brief detail in order to give an overview of the study. Chapter 2 contains a detailed account of the theoretical and conceptual framework through a blend of classic and contemporary research.

Chapter 2: Literature Review

Problem Statement and Purpose of the Study

The Internet is a gateway for storing, sharing, and developing information in ways that have begun to revolutionize the way people learn and develop. Current studies have resulted in promising recommendations that include individualized guidelines for best practices in specific teaching situations (Hastie, Chen, & Kuo, 2007), how to attain the best balance of face-to-face versus online instruction (Li & Wang, 2008), ways to improve parental involvement/supervision (Seo, Chun, & Jwa, 2011), and how minimally used technologies may be exploited for maximum benefits (Young Children, 2008). Although current research supports the efficacy of online learning with adult populations (Moloney & Oakley, 2010), a gap exists in that no studies have qualitatively identified the perceptions of veteran teachers working with children who have grown up with the Internet.

Wrought with concern, some researchers have gone so far as conclude that the push for technology-centric education in some school districts is premature because technology's use toward teaching at a level equal to or better than traditional methods is currently met with minimal support (Gorski, 2004). Another study by Mentzer, Cryan, and Teclehaimanot (2007) expressed concern with the potential for students to lack motivation in learning when the learning experience involves children teaching themselves in a cyber environment to a greater extent than it involves teachers actually facilitating their learning. Additionally, a lack of real-life interactions leaves children unprepared for a host of social situations they may face moving into adulthood (Paul & Elder, 2007). As such, some type of balance between traditional and contemporary

strategies may best facilitate learning and social development. In the literature on this contemporary topic warranting and receiving plenty of researchers' attention, this study fills a gap by using the perceptions of 20+-year veteran teachers to explore the Internet's impact over a continuum of time rather than one particular snapshot in the here-and-now or there-and-then.

The purpose of this grounded theory research was to use qualitative interviewing to explore the perceptions of veteran K-8 educators regarding the Internet's impact on childhood learning and development. With the data acquired from this study, future researchers, school counselors, educators, parents, and other stakeholders may develop and implement better methods, approaches, and strategies concerning the instruction provided to Grade K-8 children. This includes any teaching, parental guidance, counseling, supervision, or other influence selected to benefit learning and social development.

Because the Internet's impact on society is a relatively newer phenomenon that really reached higher levels after the turn of the century, there are mixed reviews concerning whether it is good or bad for healthy learning and social development. As such, educators, parents, students, and others must learn how to adapt to it and use it toward their advantage. With knowledge of best practices understood through classic theories, current research, and teachers' perspectives, Internet applications may take learning and social development to new heights previously inconceivable. This study is one that helps to serve that purpose by exploring educators' perceptions of how K-8 students experience learning and social development in the Internet Age.

Chapter 2 of this dissertation serves as the literature review, which fulfills

multiple purposes. First and foremost, in this chapter, I aim to provide a comprehensive and exhaustive review of the work that has already been produced on this topic. This is done by providing a theoretical base of the current work proposed in addition to demonstrating how it fits within previously conducted research. Though a study regarding the impact of the Internet on K-8 education and social development is a relatively new concept, the basic principles of learning and socialization have remained relatively intact since they were originally explored by classic theorists including but not limited to Bandura, Piaget, Vygotsky, and Erikson. As such, this chapter delves into an amalgamation of current studies regarding the Internet phenomenon as well as traditional theories from classic literature. Finally, the chapter evidences the study's significance while leading toward newfound knowledge.

The construction of the chapter itself involves multiple categories and subcategories. Major categories within the chapter include (a) an introduction, (b) a description of the literature search strategy, (c) a discussion of the theoretical foundation, (d) a breakdown of the theoretical framework, (e) a literature review related to key variables and concepts, and (f) a summary with conclusions. Subcategories within the major headers allow for further depth and direction throughout the progression of the chapter.

Literature Search Strategy

The content for this literature review was carefully selected using two primary search engines and a number of library databases. Due to its capacity, speed, and versatility with search queries, Google proved to be an invaluable resource. With a general search, most anything queried resulted in a minimum of several scholarly,

professional, or government websites. Though some biased and unreliable websites would result from each query, only those that adhered to the standards set forth by the scholar-practitioner model were used. When it came to locating those articles in peer-reviewed journals, Google Scholar proved appropriate. The second search engine used was EBSCOhost, provided through the Walden University library. Despite Google's ability as a search engine, a vast majority of the peer-reviewed articles cited were retrieved through one of EBSCOhost's many databases. Though Google Scholar was generally able to locate the same articles as EBSCOhost, most of the host websites accessible through Google Scholar charged some type of fee, which could be quite expensive. Additionally, EBSCOhost's wider selection of search parameters made it easier to narrow down specific searches. Library databases used through EBSCOhost include Academic Search Complete; Education Research Complete; ERIC; Health and Psychological Instruments; Library, Information Science & Technology Abstracts; Mental Measurements Yearbook, PsycARTICLES, PsycBOOKS, PsycEXTRA, PsycINFO, SocINDEX with Full Text, Teacher Reference Center, and PsycTESTS.

Though numerous trial-and-error searches were conducted to obtain the content analyzed for this review, there were a number of key search terms and combinations that yielded better results than others. Key search terms included *learning theories, contemporary teaching styles*, *behavior theories*, *social development*, *social skills*, *classroom instruction*, *cyberbullying*, *experiential learning*, *pros of online learning*, *cons of online learning*, *culture*, *time spent online*, *Internet use statistics*, *worldwide Internet use*, *Internet addiction*, *online communication*, *future technology*, *teaching online*, *lifespan development*, *traditional learning*, *teachers' perceptions of the impact of the*

Internet, *Albert Bandura's social cognitive learning theory (SCT)*, *Jean Piaget's theory of cognitive development*, *Lev Vygotsky's social development theory*, and *Erik Erikson's eight stages of development.* Combination searches included *Internet and education*, *education and social development*, *cognitive development and education*, *cognitive development and social development*, *technology and K-8 education*, *brick-and-mortar versus virtual classrooms*, *Internet and third world countries*, *Internet and children with disabilities*, *teachers versus artificial intelligence*, *culture and development*, and *teachers and artificial intelligence.*

For general searches conducted using Google, there were no specific parameters selected; however, with Google Scholar and EBSCOhost, specific parameters were selected. Despite the diversity found in key terms, primarily the same parameters were selected across the board. Criteria for information related to the Internet and current use included published date 2003-present, English, scholarly (peer-reviewed) journals, and full text. Selecting a date range of only the past 10 years ensured that this dissertation is up to date with the most recent, cutting-edge material. With a topic that is contingent upon the latest technology—a rapidly changing entity—previously conducted studies, written articles, and other materials run the risk of being out of date before they are even published. All of the material used in this study has accounted for this phenomenon. In other cases, especially in the area of citing original theoretical concepts, the published date was extended to well prior to 2003. Doing this ensured that the theories and concepts developed by the classic researchers were kept in their true form. Beyond concerns of timeliness are those of quality. Any review is only as good as the materials used to write it. Therefore, Google searches were conducted using the most scrutiny. Google Scholar

and the EBSCOhost library databases using my specific search parameters primarily yielded the desired results with minimal need for filtering. Other materials used came from scholarly journals, professional counseling newsletters, textbooks, and government pamphlets. All were highly reliable. I received all of these as a member of a professional organization or because they were textbooks for my course material here at Walden University.

Though the specifics of the study conducted here are unique, the topic itself is anything but. Each day, people are elaborating upon or creating some type of new technology to improve productivity and efficiency. With computing technology, the Internet, and the World Wide Web being central to much of this technology, its various applications—notwithstanding learning and social development—continue to remain at the forefront of popular media and scientific research. In the grand scheme of research, this is relatively rare, as most topics with more research and literature are ones that have continued to develop over many decades or even centuries. Given the newness of this topic, it is likely that plenty more studies will follow.

Theoretical Foundation

Theories Pertinent to This Study

Because the root exploration of this study resides in the process of learning and social development within a specific context, the theories pertinent to this study are those that best explain the principles of learning and social development. Despite this study's contemporary nature, the basic concepts of learning and social development were developed by some of the field's classic theorists. Over time, these theories have proven themselves logical, empirically sound, comprehensive, and capable of modification

toward cultural specificity (Creswell, 2009). Exploration through the lens of each evidence-based theory, therefore, contributes toward a better understanding of the factors that best contribute toward ideal development. As such, Bandura's (1977) SCT, Piaget's (1936) theory of cognitive development, Vygotsky's (1978) social development theory, and Erikson's (1968) eight stages of development are four core theories upon which many of the basic principles inherent in even the most contemporary theories, ideas, applications, and measures are built. The sections that follow go into further depth regarding the origin, major theoretical propositions, rationale for the selection, and relationship to the study of each theory.

Origin of SCT. After Bandura's (1986) publication of *Social Foundations of Thought and Action: A Social Cognitive Theory*, SCT became a mainstream theory within the mental health professions. It is through this lens whereby people are viewed as "self-organizing, proactive, and self-regulating rather than reactive and shaped by external events" (Pajares, 2002, p. 116). Response patterns to particular stimuli are learned either directly through life experience or vicariously through observation (Fireman & Kose, 2002). As such, one's self-system in learning results from a combination of experiences that facilitate (a) vicarious reinforcement, (b) symbolic activities, (c) forethought activity, (d) self-regulatory capabilities, (e) self-reflecting capability, (f) self-efficacy, and (g) self-reinforcement (Malone, 2002). In other words, whenever somebody actively does something or actively observes someone else doing something, some type of learning generally occurs. Learning and development along these lines have the most significant impact in childhood and adolescence (Santrock, 2007). Because of this, regular and meaningful interactions are especially important.

Major theoretical propositions of SCT. In summary, SCT posits that an individual's knowledge is in part a direct result of that individual's environment (Bandura, 1977). This has both positive and negative implications dependent upon the environment. For instance, should an individual learn accurate information in a way that is meaningful and fully processed—for example, from an expert instructor—the individual has an increased chance of learning that particular concept. In contrast, attempting to learn from a website littered with inaccurate information may prove detrimental to the learning process. Though people vary in their degree of socialization, humans live within and respond to one or more layers of environmental systems. Less living in total isolation, human beings associate with one another in at least some minimal context. According to Bronfenbrenner (1979), there are five environmental systems by which individuals are influenced: *microsystem* (setting in which the individual lives), *mesosystem* (connections between contexts), *exosystem* (experiences in one social setting affecting a more immediate one), *macrosystem* (culture in which the individual lives), and *chronosystem* (patterning of environmental events and transitions throughout life).

When one understands how these social systems work with and within one another, individual lifespan development may begin to make more sense. According to this theory, an individual's environment and social systems ultimately influence behavior in a reciprocal fashion. Regardless of whether the individual anticipates a positive or negative response, it is the actual response that facilitates or discourages the behavior (Bandura, 1977). In other words, desired responses increase a particular behavior, whereas undesired responses minimize or eradicate it. It is within this self-system that one's socioeconomic status, familial structure, community, school, and other social

factors influence one's aspirations, beliefs, emotions, standards, and ability to self-regulate behaviors (Pajares, 2002). According to Bandura (1986), the premise of SCT resides in "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (p. 391). If the environment is nurturing, these beliefs elicit motivation, well-being, and accomplishment to the extent that people act upon the environment with the expectation of receiving a positive response. When the environment is turbulent, however, expectations may become extremely low, thus provoking a vicious cycle of negative self-image and poor performance. Robert Merton's (1948) self-fulfilling prophecy describes “a false definition of the situation evoking a new behavior which makes the originally false conception come true” (Merton, 1968, p. 477). For a young child, this could manifest itself as "once a failure, always a failure" type thinking.

Previous application of SCT in research and literature. The principles of SCT were demonstrated by a series of experiments that queried whether social behaviors could be acquired through imitation. The *Bobo doll experiments*—originally conducted by Bandura, Ross, and Ross (1961)—tested 36 boys and 36 girls (aged 3 to 6 years old) from the Stanford University Nursery School. Also involved in the experiment were two adults (one male and one female) who acted as role models for this children's observation. Pretest assessment involved an observation of the 72 children in their natural environment (the nursery). Interrater reliability here had a very high correlation (r = 0.89). The researchers specifically assessed the children for aggressive behavior, which was rated along four 5-point rating scales. Each child's level of aggression was then used to determine group assignment. Mixed-gender groups were broken down into three sets

of 24 participants: (a) those who witnessed an adult role model behaving aggressively toward the Bobo doll, (b) those who witnessed an adult role model behaving in nonaggressively toward the Bobo doll, and (c) those who were used as a control group and not exposed to any role model at all. Children from each group, then, were individually tested through three stages.

Stage 1: Modeling stage.

1. Children individually entered the experimental room with an adult model. In the corner of the room was a mallet, tinker toy set, and 5' inflatable doll.
2. In the aggressive condition, the model was physically and verbally aggressive. He or she would hit the doll with the mallet, flip it up in the air, kick it around the room, and yell out loud (i.e., "Pow!").
3. In the nonaggressive condition, the model did nothing.
4. After 10 minutes of observation, the experimenter brought the child into another playroom.

Stage 2: Aggression arousal.

1. The child was introduced to a variety of attractive toys in the new playroom.
2. The experimenter told the child that these were the experimenter's best toys that were being reserved for the other children.

Stage 3: Test for delayed imitation.

1. The selection in the room was a mix of aggressive (i.e., mallet, dart guns) and nonaggressive (i.e., crayons, tea set) toys.
2. Through a one-way mirror, the experimenter spent the next 20 minutes observing the child's behavior at every 5-second interval (240 total responses).

> Both behaviors that did and did not imitate the adult role model were also noted. (Bandura, Ross, & Ross, 1961)

The researchers measured across several factors to assess for aggression. These factors included: (a) physical aggression (i.e., hitting, punching, kicking); (b) verbal aggression (i.e. imitated or nonimitated aggressive language); (c) amount of times the mallet was used aggressively on objects aside from the doll; and (d) mode of aggression shown by subject. Statistical significance was found to support the hypothesis that children exposed to the aggressive model were more likely to imitate such behaviors (McLeod, 2011). According to Bandura, Ross, and Ross (1961), "Male subjects, for example, exhibited more physical ($t = 2.07$, $p < .05$) and verbal imitative aggression ($t = 2.51$, $p < .05$), more non-imitative aggression ($t = 3.15$, $p < .025$), and engaged in significantly more aggressive gun play ($t = 2.12$, $p < .05$) following exposure to the aggressive male model than the female subjects" (p. 8). Though verbal aggression toward the doll was the same for boys and girls alike (based off the aggressive model), boys were three times more likely to replicate modeled aggressive behavior ($t = 2.50$, $p < .01$). Children who were shown the non-aggressive or no model at all minimally participated in any of the imitated behaviors. " Subjects in the nonaggressive condition engaged in significantly more nonaggressive play with dolls than either subjects in the aggressive group ($t = 2.67$, $p < .02$), or in the control group ($t = 2.57$, $p < .02$)" (Bandura, Ross, & Ross, 1963, p. 9).

Conclusions from the data support Bandura's notion of SCT. As such, the child's learning environment is a critical factor in learning and social development. In 1963, a similar experiment was conducted but used a video instead of live models to demonstrate aggressive behaviors. Though there was still a positive correlation between aggressive

modeling and aggressive imitating, the results were not as significant.

Rationale for the selection of SCT. Because SCT posits that previous successes and failures are predictors for current and future thoughts and behaviors (Bandura, Ross, & Ross, 1961; Bandura, Ross, & Ross, 1963), childhood and adolescent learning and social development is greatly impacted by the materials and method in which they learn. As such, there are many important questions to consider. Is the individual or artificial intelligence (AI) teaching one that is knowledgeable of the subject being taught? Does this individual or AI teach in a fashion that is comprehensible to students? Does this individual or AI cater to individual needs such as those required by diverse individuals or those with disabilities? Is the information being taught accurate and based upon the latest, cutting edge information? Does the learning format encourage and motivate students to learn? If the answer to any of these questions is no, then there are some serious considerations to be made. Because there is a cost associated with technology, socioeconomic status is a factor of concern. Consequently, a school system and community with a wealth of the most cutting-edge resources will likely produce higher grades from its students than a system and community lacking such resources. While some schools are fortunate enough to have elaborate libraries, multiple computer labs with the latest technology, and multimedia setups in every classroom, other schools lack even the most up-to-date textbooks and curricula. More elaborate technology tends to attract more attention, thus motivating children more while resources that are out-of-date or obsolete make learning less exciting (Bain & Ross, 1999; Kulik in Schacter, 1999; Mann, Shakeshaft, Becker, & Kottkamp, 1998). Further, the accuracy or inaccuracy of the information learned is also significant; research has continuously demonstrated that

inaccurate information, if learned before the truth, may prove extremely difficult to relearn (Brookfield, 1986).

Individual intrinsic factors playing into the environment are also significant. Personality is an example of this. After exploring an initially expansive list of potential personality traits, leading personality researchers were able to synthesize everything down to the big five factors of personality (Goldberg, 1981; McCrae & Costa, 1987; Norman, 1967; Smith, 1967). The major traits, listed within the acronym OCEAN (openness, conscientiousness, extraversion, agreeableness, neuroticism), may be broken down into more specified traits (Costa & McCrae, 1992). In the classroom there are generally those that are humble, those that recognize their abilities at face value, those that have over-inflated self-perceptions, and those who are riddled with self-doubt. While humility and the ability to recognize at face value are positive, self-doubting thoughts may prove extremely damaging as explained by the self-fulfilling prophecy (Merton, 1948). Because these perspectives differ person-to-person, success and failure is also interpreted differently.

Relating SCT to this study. Relating SCT to the Research Question (RQ1), "How do veteran K-8 educators experience children's learning and social development in the Internet Age?" may be done in any one of a number of ways. First, the Internet provides the right type of responses and opportunities for social learning to occur. That is, the same principles of vicarious reinforcement, symbolic activities, forethought activity, self-regulatory capabilities, self-reflecting capability, self-efficacy, and self-reinforcement that all exist within the real world also exist within virtual reality. Despite the relate age of Bandura's (1977) original conclusions, the Internet finds itself within the

appropriate boundaries of what is deemed a learning environment. Second, any of these responses to an individual's input will generally elicit some type of response. As in the real world, the environment and individual are constantly in play with one another. Third, the many levels of an ecosystem, as defined by Bronfenbrenner (1979), are structured within the Internet. Through careful observation and analysis of who is using the Internet within what capacity, Jean-Malbuisson (2010) of the Internet society found six categories: (a) users; (b) shared global services and operations; (c) education and capacity building; (d) local, national, regional, and global policy development; (e) open standards development; and (f) naming and addressing with freely accessible processes for policy development. As each of these forces act with and against one another a specific environment is formed, which ultimately affects an individual's learning and social development.

Origin of the theory of cognitive development. Whereas Bandura's (1977) work primarily explored individual learning within the environmental context, Piaget's (1936) theory of cognitive development focused on cognitive development in relation to physical development. That is, at younger ages, the brain is still developing and is only capable of so much cognition until a point of maturation. As such, Piaget's theory differs from Bandura (1977), Piaget (1936), Vygotsky (1978), and Erikson's (1968) in that it: (a) specifically focuses on childhood development, (b) is less focused on learning than on development, and (c) is built upon specific developmental stages.

Major theoretical propositions of the theory of cognitive development. From a developmental standpoint Piaget (1936) believed that children go through four stages of cognitive development: (a) sensorimotor, (b) preoperational, (c) concrete operational, and

(d) formal operational. Each stage represents a major milestone in cognitive development that is believed to take place in sequential order for every individual regardless of culture, gender, et cetera (Piaget, 1973). The sensorimotor stage is the first of four stages and takes place from birth to 2 years. Object permanence is a key feature of this stage. This is the stage during which infants acquire knowledge of the environment through their physical actions: touch, taste, smell, sight, and sound; however, this stage is believed to lack any formal logic (Piaget, 1945). Following the sensorimotor stage is the preoperational stage. This stage lasts from about 2 to 7 years of age and is where language development begins. At this stage children represent the world by way of words, images, and drawings. No longer is the child limited to simple physical actions as a means of discovering the world. Egocentrism is also a key feature of this stage. In other words, children in this stage are only capable of viewing the world through their own, egocentric lens. That is, putting oneself in the shoes of another is atypical. The concrete operational stage follows next and takes place around age 7, lasting until age 11 or so. During this stage children may perform concrete operations while logical reasoning begins to emerge over intuitive reasoning. The fourth and final stage is the formal operational stage. It begins somewhere between 11-15 years of age and lasts into and throughout adulthood. Here children are finally able to move beyond concrete thought and start thinking in abstracts. With this comes the ability to manipulate ideas in one's head.

As people go through life, their environments are constantly changing. Even in the same physical environment—such as one's home—the environment changes by who is home, what activity is taking place, and so forth. To most appropriately react to

each environment, people must constantly adapt (Piaget, 1936). For adults this is easier as more life experience generally leads toward more knowledge on how to deal with a wider variety of situations. With children, however, more experiences are novel and require on-the-spot learning. Naturally, the speed and level of comprehension at which one learns varies significantly. The consequence of this variation, then, is realized by what the individual actually learns or how others respond. According to Mayer (2005):

> ... Piaget believed that in the biological, psychological, and social realms, natural forces continually destabilize functioning systems, challenging various types of "wholes" and their parts to move into ever more complex forms of equilibrium. Under favorable conditions, this challenge is undertaken, resulting in a more adaptive and capable whole. (p. 364)

To achieve the level of "adaptive and capable whole" aforementioned, an individual requires a variety of tools. These adaptive mechanisms as: (a) schemes, (b) assimilation, (c) accommodation, (d) organization, and (e) equilibration. Schemas are the basic rules that people use to interpret information in the world. Assimilation entails building upon or adding new information to previous schemas. Through assimilation one may take previously learned information from one particular scenario and apply it toward something novel. Accommodation, on the other-hand, allows people to partially or completely adjust their schemas to adapt toward new situations or information. This is especially useful in cases where previous schemas do not work. Organization, then, is one's ability to store such information in a way that it is readily available as needed. Finally, equilibration is the way in which people maintain balance by creating new concepts. Each one of these mechanisms allows people to design a means of getting

through a particular situation. Typically, after each additional trial through any given scenario individuals become more efficient the next time around (Mace, 1932). Should the scenario present itself as something novel, an individual may use current knowledge and previous experience—from the most similar situations—to come up with the best approach. As years of life go by and people acquire more life experience, they become better equipped to handle the most seemingly complex of problems; hence the old adage that with age comes wisdom.

Previous application of the theory of cognitive development in research and literature. Of the researchers cited in this literature review, Piaget has by and large the most experiments. To demonstrate truth behind his theory, Piaget would create experiments where only specific age levels would have the cognition to understand. Conservation proved of vital importance in supporting his theory. It was his contention that if younger ages could not comprehend a particular cognitive level at an age younger than the milestone age, that his theory was accurate. To do this, Piaget tested the principles of conservation—meaning that despite a change in form an object still maintains the same amount of mass; it is preserved (Dewey, 2007). This is an ability that develops around the ages of 5 to 7 years old. Therefore, in order to understand conservation, the child must possess the ability to cognitively preserve something. As explained by Dewey (2007), "That 'something' is an awareness of quantity, mass, number, area, or some other abstract characteristic of reality" (paragraph 9).

Because learning happens at numerous angles, Piaget explored conservation through a wide variety of experiments. With conservation of mass, for instance, Piaget would show a small child two equal-sized balls of clay. Once the child was in agreement

that the two balls were the same size, she or he would roll one of the balls into an elongated shape. The result is that the child would think that the elongated mass had more clay in it. To demonstrate conservation of area, Piaget would use two equal amounts of blocks—one closely spaced and the other spread out. Children of nonconserving age would believe that the blocks spread out covered more area despite there being no difference. Piaget tested conservation of number by placing coins on a table. Using two sets of seven or eight coins matched into a second identical pattern, he would spread one of the rows apart (similar to the block experiment). In each case, children younger than the developmental milestone became confused and would believe that the more spread out row of coins had more in it (Piaget, 1936). It was with conservation of volume that Piaget conducted the infamous beaker test. The test begins with two short, wide beakers being filled with equal amounts of colored water. Once poured and the child agrees with the researcher that both beakers have an equal amount of water, the researcher pours the colored water from one beaker into a third, which is tall and slender. Children younger than age 6 lack the ability to properly assess liquid quantity.

One final example involves a geometrical experiment to test for conservation of area. In "cows on a farm" Piaget recreated a mini farmhouse using a green cardboard farmland, small model farmhouses, and a little wooden cow (Anderson, n.d.). The experiment began with two identical farmlands with a small model barn and wooden cow. Once the child agrees that each cow has an equal amount of space to graze, the researcher continues to place barns on each board. One side has tidy rows of barns while the other is in disorder. Children under the ages of 8 to 9 consistently believe that the chaotic farmland has less overall area. After numerous trials at this time, and to this day,

his theory would continue to be supported (Mayer, 2005).

Rationale for the selection of theory of cognitive development. Piaget's theory is one that continues to stand the test of time (Mayer, 2005). While technology has impacted a number of other theories that continue to be impacted to this day, the theory of cognitive development's roots in the physical directing the cognitive serve to strengthen its stance. Though various applications on the Internet may accelerate and ultimately improve cognitive function, there is a natural progression by which the brain develops and certain abilities begin functioning. Today it is not uncommon for young children to have immediate contact with at least some application of the Internet from birth, onward. When the contemporary 3-year olds toy of choice is a tablet computer and kindergarten students are practicing notes in computers instead of writing on paper, there is wonder as to how the Internet will impact one's development. As quoted by Kathe Jervis and Arthus Tobier (1988) in the words of Piaget, "The principle goal of education in the schools should be creating men and women who are capable of doing new things, not simply repeating what other generations have done." Given that technology is moving at rates exponentially faster than in previous centuries (Moore, 1965), it is logical to expect that human development will be impacted. The rationale for the selection of this theory, then, resides in addressing Internet application's appropriateness for age and how to make a positive, rather than negative, impact on development.

Relating theory of cognitive development to this study. To fully understand the impact of the Internet on K-8 learning and social development, counselors, educators, and other stakeholders must understand the foundations of cognitive development. A child's formative years are when knowledge and experience most significantly shape the

individual and ultimately mold one's personality (Santrock, 2007). Until more recently when the Internet went from a military project to a luxury item, to a household phenomenon, human beings were not exposed to such an elaborate technology. In fact, nothing even came close. With Piaget's (1934) cognitive development theory being universal in that it is applicable toward a vast majority of children, there are new questions to ask in regards to whether the Internet is the key to not only accelerating technology but also accelerating millions of years of human development. Perhaps the introduction of this new technology will have evolutionary effects on humankind. Setting aside any impact made by the Internet, Saniotis and Henneberg's (2011) synthesis on current research concluded that, "It is inevitable the human brain and human mind will continue to evolve in the future" (p. 3). Though it would appear logical to think that the Internet may not only cognitively impact future generations but also accelerate physical development, future and further research would need to be conducted to substantiate such a claim. If it does make an impact, but cognitive development still proceeds across the same direction, however, Piaget's theory may simply require updates in age expectancy rather than a complete revision. In either case, the theory of cognitive development is an integral component of learning and social development regardless of whether the environment is real life or web-based.

Origin of social development theory. Beyond the learning and social fundamentals developed by Bandura and Piaget, Vygotsky delved into childhood development even further but from another angle. Vygotsky’s (1978) social development theory revolves around the premise that children primarily develop cognition and understanding through social interactions (Santrock, 2007). There is also a physical

development dimension in that children are incapable of learning particular concepts until they acquire the brain capacity to do so. With that, Vygotsky's theory uses environmental constructs within cognitive development constructs to suggest how the two may work with one another to create an optimal environment for learning and social development. As explained by Vygotsky (1978), "learning is a necessary and universal aspect of the process of developing culturally organized, specifically human psychological function" (p. 90). Through his research, Vygotsky was able to add new contributions and considerations in learning and social development.

Major theoretical propositions of social development theory. In this theory, culture bares a heavy impact on the individual. Vygotsky's zone of proximal development (ZPD) encompasses "the range of tasks that are too difficult for a child to master alone but that can be learned with guidance and assistance of adults or more skilled children" (Santrock, 2007, p. 236). As children mature in their development, more difficult tasks become easier to achieve. Scaffolding, an important aspect of ZPD, involves the changing of the level of support provided by others in society. Wood, Bruner, and Ross (1976) defined scaffolding as "'Those elements of the task that are initially beyond the learner's capacity, thus permitting him to concentrate upon and complete only those elements that are within his range of competence'" (paragraph 5). The object of scaffolding is for the child to rely less and less on others until a particular task or idea is mastered independently.

Another important concept developed by Vygotsky is the more knowledgeable other (MKO). MKO is an individual who is more knowledgeable or skilled in respect to a particular idea, process, or task (Vygotsky, 1978). This individual may offer direct or

vicarious instruction through teaching and/or demonstration. The relationship may be extended like that of mentorship or apprenticeship, or there may be no relationship at all past the initial instruction. It is important to note, however, that this theory does not require the MKO to be a living person and is open to include all relevant variations of AI.

Vygotsky also believed that language played an important role on cognition. Its most critical roles in cognitive development involve the transmission of information by adults to children and being a very powerful tool of intellectual adaptation (Vygotsky, 1962). Because communication on some level is integral to most everything people do when at least one other person is involved, it makes sense that cognitive development is dependent upon it. It also makes sense that those who master a particular form of or topic in communication are more successful than others. Additionally, Vygotsky's theory posits that children who partake in private speech, or thinking aloud, will become more socially competent than the latter because this type of speech allows children to better guide themselves through their behaviors (Santrock, 2007). Through time this continues to reinforce one's learning and better commit it to memory.

Previous application of social development theory in research and literature. Vygotsky built his experiments upon the existence of two interdependent lines that interact with one another throughout human development (Wagoner, 2009). These cultural and natural lines feed into one another cyclically. Vygotsky (1978) believed that children extramentally develop higher psychological functioning through interactions with the environment. As the interactions are internalized over time, children develop the means by which they may function intramentally. Supporting his theory required Vygotsky to capture the structure of this relationship at various stages of child

development. To do this, he created experiments in which an external mediator would help a child perform some type of task. Because the external mediator need not be human, he used variety of items such as an abacus, card, an image, and a rope. Thus the external mediator served as the cultural line while the natural line was simply represented by an unmediated experimental situation (Vygotsky & Luria, 1994).

In a classic experiment guided by Vygotsky, Leontiev tested memory by having children memorize word lists. To test whether an external mediator would aid in their recall, Leontiev provided the children with picture cards. There were three experimental conditions created for memorizing the word lists: (a) a standard memory task, (b) another task whereby the experimenter paired the picture cards with the words, and (c) a third task where the children created their own pairings. The first time they conducted the experiment, Vygotsky and Leontiev merely compared recall scores for the children in each of the three conditions. Upon further scrutiny Vygotsky began to consider the microgenetic process—the actual way in which the cards were used to aid memory (Bakhurst, 1990). He adjusted his second experiment to explore how children would use a neutral, external mediator (picture cards) to perform on a task that was knowingly outside their range of competence. Though the experimenter would child the children toward a selection, it was ultimately the child's decision to determine how to—if even—use any of the external mediators (van der Veer, & Valsiner, 1991). As explained by Wagoner (2009), "Unlike the maximum control of contemporary experiments, which must create easily quantifiable data for statistical comparison, the method of double stimulation profits from the participant’s construction of novelty, the active creation of new means to solve a problem" (p. 103).

The results were significant. Though it would make sense for the children to use the picture cards that most directly linked to the words in the list, they actually created extremely unique and elaborate associations. In one instance a child used a picture of a crab to remember the word "theater" (Vygotsky, 1987). The child explained this association in the following manner: "The crab is looking at the stones on the bottom, it is beautiful, it is a theater" (Vygotsky, 1987, p. 181). What was found, then, was more of a narrative than associative bond, which violated the principles of associate psychology at the time (Wagoner, 2009). This caused Vygotsky, once again, to seek an even deeper explanation. To do this Vygotsky has to experimentally isolated three components of the children's association process. The first component involves that child's use of a sign in the act of memorization. "The child does use the picture card to help them remember but the process is not yet integrated with the operations of imagining, thinking, abstracting, etc." (Wagoner, 2009, p. 103). Because of this, the children may create elaborate, indirect associations to help with recall. The second component involves the child's unaided ability to design its own unique association. In some of the more absurd associations where children failed to recall it was evident that they did not realize that one item may be used to memorize another. "The third component", then, "is the child's ability to select and direct the mass of emerging images toward the target word, which is placed at the center of the child's attention, as if marked by an X" (Wagoner, 2009, p. 104). Without this ability, a child's recall might never lead toward the target word. Vygotsky demonstrated that the three components may exist in isolation and that the developmental spectrum of cognition gradually integrates instrumental action, imagination, and attention.

Rationale for the selection of social development theory. Vygotsky's (1978) theory and experiments demonstrate how a child's cognitions develop through exchanges with external forces. Because of this, a child raised and held in isolation would not develop along the lines of what is considered "normal" development. Thoughts, their processes, and subsequent behaviors are all influenced by everything within a child's experience. Consequently, this cultural influence weighs on development heavier than nature. How would a child know how to speak without hearing the words of others? How would a child be able to think properly when there are no words to formulate thoughts? Though the child may learn basic behaviors through trial-and-error, the progression of development as we know it would become suspended. As explained by Sinicki (2013), "Children brought up in captivity or isolation will normally exhibit a complete lack of social skills learned through enculturation and these can include other basic skills too – such as the ability to use the toilet or even to walk upright" (Paragraph 3). With knowledge of the significant relationship between the environment and development it makes sense that today's accelerated technologies will have a significant impact on learning and socialization. Additionally, the concept of the MKO is open enough to include influences of the Internet.

Relating social development theory to this study. The Internet's virtual environment is one that fits within the parameters of Vygotsky's (1987) theory and concept of the MKO. The idea that the MKO need not be a living person allows AI to fill that role. Today there are a countless number of programs, applications, and websites that utilize AI to teach individuals how to do something. In some instances, the AI provides facts and bits of information. Others may use more of an experiential approach that

provides procedural knowledge. In these instances, the AI technology acts like that of a coach. This type of interaction is especially useful when specific, meaningful feedback is provided. With programs that are more in-depth and ongoing, continued feedback will help the child strengthen strengths while weaknesses are addressed (Harris & Ramos, 2009). Two types of feedback used in the traditional teaching format that may be replicated into the virtual learning environment are formative and summative assessment.

According to Baroudi (2007), formative assessment is the result of a division of practices that entails: (a) classroom questioning, (b) feedback, (c) sharing criteria with learners, (d) student peer- and self-assessment, and (e) subsequent instruction. This combination allows children to not only process information on a deeper, more critical level but also relate the information to their personal experience in a way that both enables comprehension and commitment to memory (Harris & Ramos, 2009). Whereas formative assessment occurs continuously throughout a particular duration of time (e.g., weekly, monthly, quarterly), summative assessment covers larger periods of time and serves as the overall summary of the student's performance (e.g. a final exam or letter grade). Because summative assessment examines performance on a large block of time at the end of instruction (Craft, 2008), its strength is that it is the best means of determining whether or not someone comprehends what was learned throughout the course. Therefore, the principles of Vygotsky's (1978) theory are applicable toward this study.

Origin of the eight stages of development. Despite Sigmund Freud's name being synonymous with the origins of psychology and many brilliant ideas, it also raises questions and controversy. Basic principles of Freudian theory distinguished between self-preservative drives (i.e. breathing, eating, drinking, excreting) and species-

preservative drives (i.e. sexuality). Further, he contested that social constraints force human beings to balance out their animalistic and innate pleasure-seeking impulses. One of the primary motivators within this concept of pleasure seeking is that of sexual desires, or libido. With that he developed the five psychosexual stages (i.e. oral stage, anal stage, phallic stage, latency stage, genital stage), one of his more controversial theories. One of his students, Erik Erikson, modified these psychosexual stages into eight psychosocial stages—a representation of development that still holds true in many respects today (Erikson, 1968).

Major theoretical propositions of the eight stages of development. The eight psychosocial stages span a lifetime and are geared more toward learning and social development than sexual drives and urges. As such, they are more comprehensive and interactive with the entirety of one's environment. Erikson's stages and some important details are provided in Table 1.

Table 1

Erikson's Eight Stages of Development

Period	Basic conflict	Important event	Summary
Infancy (birth to 18 months)	Trust vs. mistrust	Feeding	Children develop a sense of trust when caregivers provide reliability, care, and affection. A lack of this will lead to mistrust.
Early childhood (2 to 3 years)	Autonomy vs. shame and doubt	Toilet training	Children need to develop a sense of personal control over physical skills and a sense of independence. Success leads to feelings of autonomy, failure results in feelings of shame and doubt.
Preschool (3 to 5 years)	Initiative vs. guilt	Exploration	Children need to begin asserting control and power over the environment. Success in this stage leads to a sense of purpose. Children who try to exert too much power experience disapproval, resulting in a sense of guilt.
School age (6 to 11 years)	Industry vs. inferiority	School	Children need to cope with new social and academic demands. Success leads to a sense of competence, while failure results in feelings of inferiority.
Adolescence (12 to 18 years)	Identity vs. role confusion	Social relationships	Teens need to develop a sense of self and personal identity. Success leads to an ability to stay true to yourself, while failure leads to role confusion and a weak sense of self.
Young adulthood (19 to 40 years)	Intimacy vs. isolation	Relationships	Young adults need to form intimate, loving relationships with other people. Success leads to strong relationships, while failure results in loneliness and isolation.
Middle adulthood (40 to 65 years)	Generativity vs. stagnation	Work and parenthood	Adults need to create or nurture things that will outlast them, often by having children or creating a positive change that benefits other people. Success leads to feelings of usefulness and accomplishment, while failure results in shallow involvement in the world.
Maturity (65 to death)	Ego integrity vs. despair	Reflection on life	Older adults need to look back on life and feel a sense of fulfillment. Success at this stage leads to feelings of wisdom, while failure results in regret, bitterness, and despair.

Note. From "Erikson's Theory of Psychosocial Development," by Pennsylvania State University, n.d., retrieved from http://info.psu.edu.sa/psu/maths/Erikson's%20Theory%20of%20Psychosocial%20Development%20(2).pdf

As indicated in the chart, each stage represents another basic conflict and life event whereby the individual will either succeed or fail. As understood from the psychosocial model, the "progression—from trust to autonomy, initiative, industry, identity, intimacy, generativity, and integrity—was conceived as the sequential reorganization of ego and character structures. Each phase was the potential root of later health and pathology" (Erikson Institute, 2013). While the degrees of success or failure and the consequences of each vary, the results may have a substantial impact on the individual. Failure or getting stuck within a particular stage delays development and makes it increasingly difficult for the individual to function within what is culturally considered to be the normal parameters of a or society (Erikson, 1968). For example, within the conflict of industry versus inferiority perpetual failures in attempt to successfully meet social and academic challenges will cause the child to enter adolescence without many basic life skills needed to: exhibit appropriate behavior in social settings, build meaningful relationships, achieve academic success, acquire critical thinking skills, develop marketable employment skills, et cetera. Should the child then go through adolescence without the proper support and guidance needed to address these challenges, a myriad of even more severe issues is likely to continue into young adulthood, middle adulthood, and maturity (Sharf, 2008).

Previous application of the eight stages of development in research and literature. Erikson's primary research method was the case study. Though earlier in his career he and Freud would primarily study individuals with some variation of psychopathology, his focus changed to ways in which the normal self was able to function successfully (Gilgun, 1994). Doing this was unique at the time and served as a

baseline for normal development, which would continue to be studies moving forward. Because Erikson thought enough to create comprehensive case study analyses, his collected data became enough to support a comprehensive lifespan model of psychological development (Sharf, 2008). Two of Erikson's earlier case studies studied the tribal child-rearing practices of South Dakota's Sioux Indians and Northern California's Yurok tribe. Using the psychoanalytic model, Erikson questioned and observed the various anthropological, economic, historical, religious, and individual components at play within the environment. What he came to find is that these individuals lacked a clear self-image or self-identity due to their alienation from cultural traditions. Consequently, the identity crisis was developed.

Another strategy Erikson used in his research involved play therapy, which he referred to as play construction. In these studies, he would have boys and girls create a scene for an imaginary movie. The experimental situation included toy cars, dolls, guns, jewelry, animals, building blocks, soldiers, et cetera. He came to find that boys were more likely to play with guns and cars while the girls preferred jewelry and dolls. When the children were asked to build structures with the blocks the boys created towers while the girls created low enclosures. Subsequently, the children's play in the imaginary movie supported the concept of gender stereotyping, which is still supported today (Vogel-Scibilia, 2009).

Rationale for the selection of the eight stages of development. Erikson's (1968) eight stages of development demonstrate how an individual develops from early childhood through late adulthood. As with the other theories, environmental factors are of utmost importance. Erikson's research and eight stages of development have come to

demonstrate the following:

- Children develop within the context of society's expectations, prohibitions, and prejudices.
- Personality is shaped over one's entire lifespan.
- Children may benefit from an education based on self-knowledge and a complex worldview that strongly disagreed with "immediate diagnoses of health of sickness, judgments of goodness or badness, or advice on 'how to'" (Erikson Institute, 2013, final paragraph).

As the term *World Wide Web* indicates, the Internet is a collection of websites comprised by individuals across the globe. Unlike previous centuries during which information from one side of the world might take days, weeks, or months—if ever—to get to the other side, today's information is shared in minutes or even seconds (Ofcom, 2012). Consequently, children are exposed to a much wider cultural spectrum than previous generations that were more-or-less confined to knowledge of and experience with merely their local culture. With society's expectations, prohibitions, and prejudices brought forth on a global scale rather than local one, children are exposed to an exponentially larger number of influences than ever before. Given Erikson's assumption that personality is shaped over one's entire lifespan, the Internet has become an influence that may impact users (to varying degrees) across a lifetime. This is especially true for individuals born early in the 21st century. Finally, by using a wellness instead of pathological model, researchers, counselors, educators, and other stakeholders have developed a foundation with principle components to help shape this new virtual environment into something conducive of advanced learning and social development.

Relating the eight stages of development to this study. Because the Internet provides such an intricate interweaving of information and experiences, Erikson's (1968) comprehensive analysis of human development allows for an exploration of the Internet's impact across a diverse range of areas including but not limited to that of anthropological, economic, historical, religious, and individual components. Such a heavy influence on culture, which continues to change, touches upon some critical factors of development. Then there are demographics, which are primarily comprised of areas that an individual did not choose. These characteristics are well defined using Hays' (2008) ADDRESSING framework, which includes (a) age and generational influences, (b) developmental disabilities, (c) disabilities acquired later in life, (d) religion and spiritual orientation, (e) sexual orientation, and (f) national origin. Culture itself, on the other hand, is more open-ended. In terms of defining culture, Matsumoto and Juang (2004) define it as:

> the dynamic system of rules, explicit and implicit, established by groups in order to ensure their survival, involving attitudes, values, beliefs, norms, and behaviors, shared by a group but harbored differently by each specific unit within the group, communicated across generations, relatively stable but with the potential to change across time. (p. 10)

Of important note is that there is no biological component of culture, which means that culture extends beyond that of race or demographics (Sue & Sue, 2008). In other words, there is no physical boundary that forces an individual to act and live in a certain way. As such, the Internet with its growing influence combined with a society that continues to change at faster rates extends the limits of Erikson's principles to an extent that society could potentially take the direction of making humans more intellectual and social than

ever before.

Conceptual Framework

Defining the Phenomenon

Despite current research supporting the efficacy of online learning with adult populations (Moloney & Oakley, 2010), there are studies to support the notion of concern with the Internet's applicability toward the learning development of children (McPheeters, 2010). Some of these notable areas include but are not limited to: distractors available on the Internet, large quantities of nonscholarly resources, difficulty establishing experiential learning opportunities, and a lack of guidance to facilitate critical thinking (Paul & Elder, 2007). Even with these limitations, however, there is a world of potential waiting at our fingertips. With further progress, it is likely that the Internet will continue to take learning to an even higher level than it already has.

With the Internet comes a large number of available distractions for children that may include but are not limited to: fun web sites, chatrooms, Instant Messenger, games, shopping, et cetera (Xu, 2007). The Center for a Digital Future at the University of Southern California revealed that the average adolescent spends about 15 hours per week online, while 87% of them acknowledge daily usage (Strom, Strom, Wing, & Beckert, 2009). In order to make the Internet a medium comparable to or superior than traditional means of learning, Van Wormer and Davis (2003) asserted that there must be better guidance when it comes to the facilitation of children's Internet use. Though parental controls are available for parents to control and monitor their children's Internet use, this is not a practice exercised in every household. With full access to the World Wide Web, children are able to access mature and inappropriate content. With general online access,

younger children may easily become distracted from focusing on important tasks such as homework. Cooper and Valentine (2001) explained this as a consequence of younger children having less effective study habits than their older peers. Xu (2007) further demonstrated this principle by surveying 194 Grade 5-6 middle school students. The study concluded that, "These explanations imply that there is a critical need to examine the relationships among homework management, academic achievement, and time spent on homework at different developmental stages, while controlling for other relevant variables" (Xu, 2007, p. 187). The importance of developmental stages, then, demonstrates the necessity for age appropriate Internet use.

Although there were some concerns with students reviewing explicit material, absorbing bad information, or partaking in an array of antisocial activities on the Web; data from Year 6 students participating in Burnett and Wilkinson's (2005) case study revealed that more students than not do use the Internet in an appropriate manner. An important consideration for educators who are looking at child learning and development is the degree to which available software should be used to restrict certain content from children without curbing their potential for creativity. Restrictions may make it difficult for children to access some of the important information they need to effectively learn or work. They may then become frustrated and disinterested. Further research may continue to reveal the most effective strategies that balance risk and an expansive learning environment.

Like most anything, too much use may lead toward abuse or dependence. The Internet is no exception. Internet addiction is a relatively new phenomenon whereby children lose touch with their primary lives and responsibilities to constantly engage in

various activities online (Seo, Chun, & Jwa, 2011). In a study predicated upon the principles of the Internet Addiction Scale for Young Children (IASYC) and the Socio-Emotional Development Scale (SEDS), Seo, Chun, and Jwa (2011) revealed that when parents and teachers do not monitor and encourage appropriate Internet use that children may become addicted—a condition that leads toward negative learning and social outcomes. "Since internet addiction is resistant to treatment and entails significant risks, there is an urgent need to establish a computer addiction prevention program so that children can recognise [*sic*] the possible dysfunctions which may develop due to habitual computer use" (Seo, Chun, & Jwa, 2011, p. 261). By pinpointing and minimizing habitual use that leads toward addiction, mental health professionals, educators, caregivers, and other stakeholders may continue to focus on bringing out the best ways for children to learn and socially develop in the digital age.

Synthesizing the Works of Bandura, Piaget, Vygotsky, and Erikson

With K-8 education beginning as early as Age 4 children are exposed to numerous factors that influence their environment. In addition to the social and cognitive theories previously discussed, there are specific physical milestones during which certain thoughts and behaviors are possible while others are not. Much of this is simply due to what one's body is capable of at each age moving through adolescence. Though it is ideal to provide an educationally rich environment that encourages advanced learning and potentially earlier developmental stages, it is also important to work within the limits of what is a natural progression of development (Santrock, 2007). Because these milestones are based off specific age group characteristics, K-8 teachers must consider instructional approaches that work within these parameters. Anything that comes between the child

and this natural progression has an impact on the developmental process (Paul & Elder, 2007; Polat, Adiguzel, & Akgun, 2012; Vasquez & Serianni, 2012; Young Children, 2008). With a focus on the Internet, this study explores that impact on K-8 education.

Literature Review Related to Key Variables and/or Concepts

Studies Related to the Constructs of Interest and Chosen Methodology and Methods That Are Consistent With the Scope of the Study

By this point a fair amount of surveys have been conducted that have examined a relatively broad variety of areas. Regardless, it is important to note that in a constantly changing society with even faster changing technology that yesterday's news may already be outdated. Therefore, when reviewing surveys and statistics it is extremely important to ensure that the data is as up-to-date and relevant as possible. For instance, Internet World Stats (2013) data accounted for 360,985,492 Internet users worldwide on December 31, 2000 while the latest data on June 30, 2012 revealed a total number of 2,405,518,376 users. With a total growth of 566.4% from 2000 to 2012 it is evident that some major change has occurred in just one decade. In some specific regions, like Africa, the growth was even more significant—topping out at 3,606.7%. Clearly, there is a significant change in data from 2000 to 2013, which is why the topic requires the latest information.

Perceptions are another factor that have continued to change. Earlier research, for instance, "provided widely publicized, though preliminary empirical support for the public's apprehensions" (Gross, 2004, p. 635). In 1999 a survey of over 1,000 U.S. parents revealed that nearly 66% were concerned regarding the Internet's impact on the social impact of youth (Turow, 1999). Participants, as explained by Turow (1999), feared that too much time spent online might cause children to socially withdraw from one

another. The HomeNet study (Kraut et al., 1998) revealed that over a 2-year span a small but significant decrease was noted in well-being and local social network size. At the time Kraut et al. (1998) explained this phenomenon as having occurred due to children opting to forgo strong relationships with local friends for weaker ones with strangers on the web. As explained by Gross (2004), "This assumption was critical to the popular conception of the Internet's depressing and isolating impact on youth, but may be outdated... As more youth log on to the Internet, we can expect that more of their friends do too" (p. 635).

Considering these earlier statistically significant findings that revealed concern over child Internet use (Gross, 2004; Kraut et al., 1998; Turow, 1999), current statistics are quite astonishing. The following facts and figures from the 2013 ICT report revealed:

- 6.8 billion mobile phone subscriptions worldwide
- 2.7 billion people worldwide are online
- 750 million households are connected to the Internet
- 82% drop in the cost of broadband Internet between 2008-2012

(ITU, 2013)

Further, 802 children (ages 12-17) and their parents reported in Madden, Lenhart, Duggan, Cortesi, and Gasser's (2013) survey that 93% of teens have access to a computer at home while 78% have a mobile phone (47% have smartphones). With so many children online, it appears that data from the late 90s tells a different story that it does today. A quantitative project by Hart Research Associates (2012) revealed that parental restrictions for child Internet use do not appear to be met with nearly as much concern as at one time expressed. Participants (n =511) included 13-to-17-year old children who

used the Internet alongside 500 of their parents. Concerning parental monitoring of Internet use, the children concluded that their parents monitored their use significantly less than their parents had claimed.

- 11% of teens say their parents monitor their Internet use very closely.
- 28% of teens say their parents monitor their Internet use somewhat closely.
- 31% of parents claim that they monitor their child's usage very closely.
- 53% of parents claim that they monitor their child's usage fairly closely.

  Hart Research Associates (2012)

Though reasons could differ for why these perceptions are different, the reality is that the Internet is now something that is impacting the children of today and in all likelihood tomorrow as well.

With parents on board for home Internet use, it also becomes important to explore where today's teacher stands. In a mixed methods non-probability sample of 2,462 middle and high school teachers, Purcell, Buchanan, and Friedrich's (2013) data analysis revealed an optimistic outlook in the Internet's favor. Participants were all U.S. citizens that taught Advanced Placement (AP; n = 1,750) and National Writing Project (NWP; n = 712) classes. General trends that reveal a shift in the favor of the Internet include:
96% agreed (including 52% who strongly agree) that digital technologies "allow students to share their work with a wider and more varied audience" (Purcell, Buchanan, & Friedrich, 2013, p. 2)

- 79% agree (23% strongly agree) that these tools "encourage greater collaboration among students" (Purcell, Buchanan, & Friedrich, 2013, p. 2).
- 78% agree (26% strongly agree) that digital technologies "encourage student

creativity and personal expression" (Purcell, Buchanan, & Friedrich, 2013, p. 2).

- 50% say today's digital technologies make it easier for them to shape or improve student learning (Purcell, Buchanan, & Friedrich, 2013, p. 5).

Conversely, their data also revealed negative characteristics including:

- 68% say that digital tools make students more likely—as opposed to less likely or having no impact—to take shortcuts and not put effort into their writing.
- 46% say these tools make students more likely to "write too fast and be careless."
- Yet, while 40% say today's digital technologies make students more likely to "use poor spelling and grammar" another 38% say they make students less likely to do this.

(Purcell, Buchanan, & Friedrich, 2013, p. 2)

With data primarily pointing toward that of the Internet proving beneficial, students, and teachers have begun using it to their benefit to gather additional exposure and feedback as follows:

- 52% of AP and NWP teachers say they or their students use interactive whiteboards in their classes.
- 40% have students share their work on wikis, websites or blogs.
- 36% have students edit or revise their own work and 29% have students edit others' work using collaborative web-based tools such as Google Docs.

(Purcell, Buchanan, & Friedrich, 2013, p. 6)

As the major learning and social developmental theories attest, exchanges with credible persons in ideal environments may significantly improve learning and social outcomes (Bandura, 1977; Erikson, 1968; Piaget, 1936; Vygotsky, 1978).

Aside from surveys, researchers have taken a variety of other approaches to study the Internet and its impact on various individuals. These strategies include but are not limited to: case studies, interviews, live observations, and self-reports. Though some studies have done a good job of defending their data, others have not.

Ways Researchers in the Discipline Have Approached the Problem

As more research is available, studies become more elaborate and specific. Initial studies were often case-based (Turkle, 1995). Although case studies are extremely comprehensive, they cannot cover as much ground as those strategies that reach larger and more diverse numbers of participants. Given that 34.3% of the world population (78.6% of North Americans) utilizes the Internet (Internet World Stats, 2013), analyzing such a vast community requires a wider focus. Another approach involved qualitative interviews, which allowed participants to make their own causal claims (Visser, Krosnick, Lavrakas, & 2000). Unfortunately, if the researcher is not extremely careful with the line of questioning, this approach may prove troublesome due to potential subjectivity and bias (Gross, 2004). The survey approach, as previously discussed, was and is a common approach in attempt to reach a wider participant pool. The issue here, which is the opposite of the case study, is that surveys generally remove the participant's ability to respond freely (Patton, 2002). Additionally, if the survey does not appropriately measure what it intends to measure, the participants' responses may prove completely

inaccurate. Of utmost importance is that whatever research method is chosen must prove empirically sound as derived through scientific principle.

Justification of the Rationale for Selection of the Concepts

The literature review of Papanis, Giavrimis, and Papani's (2010) quantitative study provided a relatively thorough overview of various current and possible ways that the Internet may maximize learning potential. According to their article the ability to actively explore the virtual environment is a primary benefit of this technology. Through the Internet, children "are successfully involved in the learning process, since the virtual reality requires the use of students' cognitive, social, intellectual and emotional abilities" (Papanis, Giavrimis, & Papani, 2010, p. 56). Of important note is that multiple reinforcements assist in the retention of acquired information. The need to actively search, read, review, and process information is active rather than passive (Lieberman, Bates, & So, 2009; Resnick, 1998; Resnick et al., 1998).

If the Internet truly is an interactive environment whereby children must actively engage in some type of exploration, it should theoretically be possible for them to explore their own identity. Gross (2004) posed this exact question in what was a highly detailed and elaborate case study:

> If, as Erikson (1963) theorized, the critical developmental task of adolescence is to explore and resolve the crisis of identity, might not the Internet, with its anonymity and cluelessness, provide adolescents with an ideal setting in which to explore their identity? (p. 635)

After one journalist's (Sweeney, 1999) claim that "'the Internet's greatest asset to teendom' may be 'access, and the confidence to slip and out [*sic*] of personalities, the

ability to try on identities, the adolescent equivalent of playing dress-up in the attic'" (Gross, 2004, p. 635), further studies exploring this area of development had been developed. At this time, empirical research had already found evidence regarding role experimentation and identity play due to anonymity and a lack of geographic constraints (McKenna & Bargh, 2000). Considering that Turow's (1999) research revealed concern about depression and social isolation, earlier research (like some of today's) was not met without conflict.

In another study, Loewen (2006) utilized an embedded, multi-case study design with two boys and two girls that ranged from 7 to 11 years old. The results demonstrated "that children who display exceptional levels of intellectual performance in one or more domains do not violate the neo-Piagetian belief that children experience age-related changes in their level of conceptual thought" (Loewen, 2006, p. 178). In other words, children may use the Internet to advance their knowledge and skills in a domain-specific way but do not develop any faster in terms of Piaget's stages. This means that the developmental milestones (i.e., sensorimotor, preoperational, concrete operational, and formal operational) occur in order regardless of any content or procedural knowledge held by the child. Therefore, there must also be enough structure in social development to guide the child through the stages that nature intended.

Burnett and Wilkinson's (2005) small-scale case study of six 6-year old children explored the way in which children typically use the Internet outside of school. They found that a minimally restricted environment that correlates with age and maturity level is the best way to encourage children to

1. use the Internet in purposeful ways;

2. recognise [*sic*] that texts change and continue to change;
3. obtain some critical perspective on the texts they encounter and recognise [*sic*] some features of the Internet as marketplace;
4. adopt a problem-solving attitude to finding and reading web-based texts;
5. draw from both visual and verbal elements in making meaning.

(Burnett & Wilkinson, 2005, p. 164)

Consequently, these children do appear to be as creative as those of previous generations. The difference, however, is that this creativity stems from and is applicable toward the virtual environment (Van Wormer & Davis, 2003). To make this experience most meaningful, then, this applicability will need to be assimilated into real life practice.

Creativity is yet another benefit of experiential learning, which may be encouraged with the appropriate virtual environment. According to Lieberman, Bates, and So (2009) who conducted a literature review of creativity and learning "Well-designed computer programs that are open-ended and offer the user some control over learning activities, and provide opportunities for creative choices or imaginative expression, can facilitate children's creative approaches to learning and can increase interest and engagement" (p. 275). A child's imagination is an important part of development (Santrock, 2007). Professor Paul Harris of Harvard's Graduate School of Education explains the importance of imagination in his book entitled: *The Work of the Imagination*. The message of his book is:

> "Suppose we think of pretend play and fantasy as something that's quite characteristic of young children—it makes them playful and endearing but doesn't really contribute to their later cognitive development and by adulthood it

> has in some sense disappeared. I tried to argue that this is wrong," Harris said. "Human beings have a gift for fantasy, which shows itself at a very early age and then continues to make all sorts of contributions to our intellectual and emotional life throughout the lifespan." (Harris, 2002, para, 3)

As the child passes from one age to the next, the imagination tends to change. This makes sense given that life experiences and acquired knowledge redefine one's conception of reality. That is, the more one learns the less likely one's imagination is to touch into the area of the complete and utterly impossible. For this young age, however, Ruth Wilson (1994) explains how:

> ... environmental education in early childhood includes the development of a sense of wonder; appreciation for the beauty and mystery of the natural world; opportunities to experience the joy of closeness to nature; and respect for other creatures. It also includes the development of problem-solving skills and the development of interest and appreciation in the world around us. (NAAEE, 2012, p. 2)

Imagination is important because it allows the child to actively explore endless ways in which something might work (Vygotsky, 1978). As such, children who utilize their imagination more often as children are generally those who become more creative later in life (Csikszentmihalyi, 1996). Though the idea might be completely off base or impossible, the child practices deeper level thinking. Having conducted over 30 years of creativity research and drawing on 100 interviews with exceptional individuals, Csikszentmihalyi (1996) concluded that there are three elements that interact for the emergence of creativity: (a) a culture with a symbolic set of rules, (b) an individual who

brings something novel into that domain, and (c) an acceptance of the innovation by others. At present the Internet does facilitate the type of environment to facilitate the emergence of creativity along each of these three factors. Further, Csikszentmihalyi (1996) explained how individuals generally take onto a creative task over a course of five steps:

- *Preparation* - becoming immersed in problematic issues that are interesting and arouses curiosity.
- *Incubation* - ideas churn around below the threshold of consciousness.
- *Insight* - the "Aha!" moment when the puzzle starts to fall together.
- *Evaluation* - deciding if the insight is valuable and worth pursuing.
- *Elaboration* - translating the insight into its final work.

(p. 79)

Because of the Internet's interactive features, individuals may use it to work through each step of this process. With further refinement in creative processes conducted via the Internet, improved technology, and a growing number of people using the Internet, people may have the opportunity to be more creative than ever thought possible.

What Is Known, What Is Controversial, and What Remains to Be Studied

What is known is that when the virtual environment fits within the parameters of what is an ideal learning environment, as described by the classic theorists (Bandura, 1977; Erikson, 1968; Piaget, 1936; Vygotsky, 1978), positive results become more likely. Hsi (2007) conducted a vignette featuring a 12-year-old boy and 13-year-old girl that demonstrate typical Internet use as concluded through current research. Upon analysis, the author discussed how appropriate use leads toward digital fluency—a means by

which children: (a) "build on their own skills and knowledge", (b) "take on different identities and multiple roles", (c) "voluntarily spend time on a set of technology-based skills", (d) co-construct "a social reality" while "establishing norms for participation", (e) "take ownership of media creations and online expression", and (f) "work on complex problems that require distributed teams to solve" (Hsi, 2007, p. 1513-1514). What this means is that children are able to pickup on, establish, and follow appropriate boundaries and social interaction skills that contribute toward a functional online society. Additionally, this helps children overcome traditional learning and cultural barriers that impede potential.

What is controversial is the boundaries at which humanity may contain the World Wide Web. As technology continues to develop further it is becoming apparent that it is beginning to exceed mankind's ability to successfully manage it (Van Wormer & Davis, 2003). All too often on the television—whether a talk show, the news, or anything else—there is some report of an individual or organization using the Internet in a lucrative way. On a more advanced level, computer hackers are constantly trying to break into government websites containing confidential information, steal people's identities, or figure out user passwords.

Cyberbullying. In terms of childhood learning and social development, cyberbullying has become a major issue. Cyberbulling goes well beyond blatantly making fun of or threatening someone; it also includes (a) spreading personal information, (b) pretending to be another individual, (c) distributing embarrassing pictures or video clips, and (d) just about any other action intended to harm another person (Smith et al., 2008). In any case, the result is a negative experience for the victim

that may contribute toward various psychological disturbances (McKenna, 2007). Negative feelings lead anywhere from slight irritation to high anxiety to suicidal ideation with full-blown psychological disorders ranging from generalized anxiety to major depression. Therefore, the social component of the Internet's impact on K-8th graders has a significant impact on one's social development that, in turn, may significantly affect learning development as well.

Harassment that leads individuals to feelings of severe humiliation, degradation, and suicidal ideation, although generally occurring in extreme cases, is exemplary of the type of traumatic devastation that may be inflicted by Internet bullies. Even worse for victims is that in most cases they are also the victims of harassment in the traditional school setting as well (Smith et al., 2008). Juvonen and Gross's (2008) web-based survey of 1,450 12-to-17-year old children found that of the 72% of participants (n = 1,700) reported at least one incident of Internet bullying over the past year, 85% concurrently experienced bullying at school. It is important to note that despite this high percentage of concurrent harassment that Internet bullying does occur in much less frequency than traditional methods of bullying. Smith et al. (2008) conducted a study using surveys with two groups of 11-to-16-year old children: (a) n = 92 students from 14 schools supplemented by focus groups; and (b) n = 533 more students of the same age from five schools "to assess the generalisability [*sic*] of findings from the first study, and investigate relationships of cyberbullying to general internet use" (p. 376). They found a relationship indicating that most occurrences of Internet harassment were much more likely to take place outside of the classroom setting—at home—rather than while at school or during after-school activities. Consequently, it would appear as though bullying

tactics online supplement the perpetrator's desire to perpetually harass victims even when they are not physically present. Hinduja and Patchin's (2007) online survey of 1,388 Internet-using adolescents concluded, however, that victims of online bullying at home may seek retaliation against the bully the next time they meet at school. Now a cycle of violence is created whereby the bully and victim continue attacking one another.

Bullying tactics come in varying degrees of severity and are experienced by the victims differently. Studies interested in pinpointing the most common mediums for harassment found differing results. For instance, Reeckman and Cannard's (2009) survey research revealed that of the $n = 53$ of $N = 91$ participants that admitted to being victims of cyberbullying, $n = 39$ had their incidents occur via instant messenger. In another study, Katzer, Fetchenhauer, and Belschak's (2009) study of 1,700 students from German secondary schools had found that most incidents of Internet bullying occur inside online chatrooms. Although any form of bullying generally upsets the victim to some degree, some forms are just more inhumane than others. In terms of frequency of occurrences, less severe tactics are generally the ones that occur most often (Hinduja & Patchin, 2007). Looking at traditional methods of bullying, students will call each other names much more often than initiating physical acts of violence such as punching and kicking. By exploring the frequency of bulling in Internet chatrooms, the victims of such bullying, and the determinants of victimization; Katzer, Fetchenhauer, and Cannard's (2009) also found that most participants did not rate their experience of victimization as one that was severe. Smith et al. (2008), however, revealed that the most severe forms of Internet bullying involved sending hurtful video clips or photographs—a form of bullying that is less likely to occur the than lighter forms of harassment.

With the rise of the Internet has come corresponding legislation that combats cyberbullying and other anti-social use. Less than a decade ago, only the more extreme cases were punishable by law. Although Internet bullying was not necessarily illegal at that time, there were legal solutions available that will protect victims of Internet bullying—namely by way of the act of harassment itself (Gillespie, 2006). One notable example is the adult perpetrator in the case of 13-year-old Megan Meier's suicide. In this case the bully was indicted by a federal grand jury on one count of conspiracy and three counts of unauthorized use of a computer (O'Neil, 2007). Currently, 49 states across the country (less Montana) have bullying laws and policies, and 20 of them have already been amended to address cyberbullying (Hinduja & Patchin, 2014). Although these laws and policies vary by state, 11 key components have been identified that notably included:

1. Specification of Prohibited Content
2. Enumeration of Specific Characteristics
3. Development and Implementation of Local Educational Agency (LEA) Policies
4. Components of LEA Policies
5. Review of Local Policies
6. Communication Plan
7. Training and Preventative Education
8. Transparency and Monitoring
9. Statement of Rights to Other Legal Recourse

(StopBullying.gov, 2014)

These components identify and define specific acts of cyberbullying as well as how to appropriately address them. Beyond the 20 states with current laws and policies, Hinduja and Patchin (2014) identified three more in the proposal stage. As society moves further into the Internet Age, more states will continue to adopt laws and policies while the laws and policies themselves continue to become more detailed and adapt to the virtual environment. There still remains work to be done.

Beyond laws and policies, other ways to prevent becoming a victim have been identified. One of these ways is by educating youth about cyberbullying. According to Gillespie (2006), "Educating adolescents could take two formats: helping victims to understand the dangers and how to take simple steps to minimise [*sic*] any threat and educating those who believe that cyber-bullying is harmless" (p. 135). One common strategy to avoid becoming a victim, as used by participants in the study conducted by Smith et al. (2008), was merely blocking the attacker. Although this cannot prevent extreme attacks such as video clips or photographs being distributed via cellular device, it prevents common attacks occurring via instant messenger or in chatrooms. The more students know about cyberbullying, the more informed decisions they may make toward becoming a victim, assailant, or individual who appropriately utilizes the Internet.

Critical thinking. The role of the Internet and the development of critical thinking is yet another controversial topic. Despite evidence suggesting that the Internet improves critical thinking, as described earlier in the discussion of Burnett and Wilkinson's (2005) study of year six children, there are circumstances where the opposite is true (Thomas, 2011). Critical thinking is a skill that generally develops in late

adolescence into early adulthood (Brookfield, 1986). Because it requires an advanced level of cognition, the more fully developed brain of an adult is required to perform these more complex analyses (Santrock, 2007). Unfortunately, recent studies have revealed that many adults struggle with critical thinking skills stemming from either: (a) having not been taught how to think critically, or (b) simply not possessing the capacity for higher level processing (Palmer, 2007).

In a study conducted by Paul, Elder, and Bartell (1997) 89% of educators claimed that critical thinking skills were important to teach; however, only 9% of these same educators actually taught it (Thomas, 2011). Perhaps even more alarming is that only 19% could even define what critical thinking was! Even though critical thinking is an adult capacity, the ability to do so begins in early childhood and develops through age 18. To develop this ability, however, children must be exposed to the right stimuli. If they are merely replicating the information they find in a search engine into a paper for class, they are not learning. Perhaps a fact or two could be learned but the deepest understanding of a particular something becomes unlikely to achieve. Therefore, children who do not engage in appropriate behaviors online increase their likeliness of placing themselves at-risk.

Technologically deficient populations. The Internet's impact on technologically deficient populations warrants further study. Although Internet access has become much more prevalent throughout the United States and various parts of the world, there are still many areas where it has minimal to no existence. Even still, socioeconomic factors create a digital divide between have and have not's on both the individual and group level. For instance, one significant difference between rural and more populated regions is an

accumulation of resources. In general, larger populations are able to amass more income, manpower, and assets. Further, resources are confined to a general area for accessible to large numbers of people. Rural populations, however, are just the opposite. They tend to lack numbers in each of these core areas. Resources are more spread out and sparse, making access more difficult.

In an analysis of Information Communication Technology (ICT) in rural India, Nayak and Kalyankar (2010) explored the impact of e-learning technology in one of the poorest regions of the world. The question was whether these technologies could help improve the learning and social development of children that were otherwise unfamiliar with the Internet. The results were favorable and positive developments were found in the areas of: (a) user-centric learning, (b) accessibility, (c) collaborative learning, (d) tools for innovation, (e) flexible study, (f) just-in-time learning, (g) adaptability, (h) cost effectiveness, and (i) easy management and administration (Nayak & Kalyankar, 2010). Though still expensive, establishing e-learning communities is less expensive than building entire schools and institutions. Some type of learning environment is better than none when the consequence is a continued cycle of uneducated children that go into adulthood without the proper knowledge and skills needed to produce a flourishing environment. To help educate more rural and third world countries, then, it may prove worthwhile to help provide and setup access to some of the technologies that countries like the United States are now starting to take for granted. Despite any good intentions, this is a major undertaking that requires significant resources, manpower, and time. In regions where electricity is not even available, any effort would literally have to start from industrialization.

Review and Synthesis of Studies Related to the Research Question

The research contained in this dissertation is the product of one central question:

Central question. How do veteran K-8 educators experience children's learning and social development in the Internet Age?

Papanis et al. (2010) posed a similar question in their study. Specifically, their research aimed toward "recording students' opinions about the impact of the Internet on education, at studying the various ways in which it affects informal learning and at identifying the aspects of education which are based on the Internet use" (Papanis et al., 2010, p. 56). Their study was built upon the premise that ICT, such as the Internet, serve as effective cognitive tools for teaching and learning—primarily due to their active and creative learning environment (Charp, 1998). According to Catledge and Pitkow (1995) there are three primary reasons that people navigate the Internet: (a) simply to browse, (b) an interest of discovering random information, and (c) an agenda to systematically find very specific information. As such, these specific types of learning (Calvani & Rotta, 1999) provide "knowledge that is either independent or part of a cognitive schema" (Papanis et al., 2010, p. 56). Their conclusion based upon the literature, then, was that the Internet has to provide at least some type of informal learning. As explained by Papanis, Giavrimis, and Papani (2010), the Internet

> ... is based on communication tools, such as the electronic-mail, the chatrooms, the forums and tools for accessing the information, such as browsers, websites and data bases. The communicative effectiveness of information sources, the possibilities for navigation and searching of information, the observation and discussion with no time limits, explain why the Internet can have special teaching

> functions and qualities. It combines technology with a plethora and variety of sources, virtual experiences, work and leisure, social relations, which encourage the learners to be more creative and flexible (Heo et al., 2007; Livingstone, 2003). (p. 56)

The level of creativity and flexibility facilitated by this virtual environment is similar to the types recommended by Bandura (1977), Piaget (1936), Vygotsky (1978), and Erikson (1968). Additionally, Papanis et al. (2010) explained how it is that:

> Through the Internet there is access to a virtual reality, which can substantially alter the way learning is achieved. Learners are not passive receivers of information, but active explorers of it. They are successfully involved in the learning process, since the virtual reality requires the use of students' cognitive, social, intellectual and emotional abilities (Raptis & Rapti, 2002). The Internet, therefore, through simulated environments, virtual worlds, collaborative networking environments and experiential groups, permits the combination of a variety of learning methods, such as the systematic, the independent, the collaborative, the lifelong, the distance, and the open, online learning. (p. 56)

Taking all of these factors into account, then, the Internet appears to expand the boundaries of counseling's classical theories rather than contradict their principles. Of the 390 students (n = 160 males; n = 230 females) that participated in the Papanis et al. (2010) improvised questionnaire, 50% found that the Internet held a significant role in learning. These roles ere defined within the categories of: (a) academic performance, (b) research skills, (c) motivation to learn, (d) cognition, (e) critical thinking and self-esteem, (f) teaching methods, and (g) meeting needs and interests. Depending on the question

asked, somewhere between 13% and 38% of the students were indifferent regarding about the views being expressed (Papanis et al., 2010). Though student opinions differ to some extent, the evidence is clear that there are students who benefit from the Internet.

In another study using a similar approach, Johnson (2010) explored the concept of the *techno-subsystem* (Johnson & Puplampu, 2008). This newer concept is one that attempts to add an additional layer within Bronfenbrenner's (1977) ecological system theory. The *techno-subsystem* is "a dimension of the microsystem which includes child interactions with both human (e.g., communicator) and nonhuman (e.g., hardware) elements of information, communication, and recreation digital technologies" (Johnson, 2010, p. 34). Consequently, interactions with the Internet ultimately affect the child's microsystem. Based off the principles of the classis theorists (Bandura, 1977; Erikson, 1968; Piaget, 1936; Vygotsky, 1978), this makes sense. As Johnson (2010) explains further:

> ... the proposed ecological *techno-microsystem* constitutes departure from two-dimensional representation of environmental influences on child development. Instead, child social, emotional, cognitive, and physical development are conceptualized as the consequence of ongoing reciprocal and spiraling interactions between child characteristics (i.e., bio-ecology) and use of communication, information, and recreation technologies (i.e., techno-subsystem) across home, school, and community environments (i.e., microsystem). (p. 34)

Because interactions within a microsystem at least minimally resonate into the mesosystem, exosystem, macrosystem, and chronosystem; even children who do not use the Internet are impacted by its influence (Johnson & Puplampu, 2008). This influence

may range from minimal to significant but still exists.

Johnson's (2010) study involved questionnaire responses from 91 western Canadian Grade 3-6 children along with their parents and classroom teachers. The children varied in age from 8-to-10 years old (n = 37 males, n = 54 females) and were in grades 3 through 6 (n = 21, n = 22, n = 17, n = 31 respectively). Regarding parent participants, 87.5% were of the traditional mother/father unit, 10% classified themselves blended, and the last 2.5% were of the single-parent type. Parents were asked to complete the children's consent and demographic forms while both the teachers and parents responded to four questionnaire items—one for each component of cognitive, emotional, physical, and social development for each child. Though parents and teachers both completed a four-item questionnaire, Johnson (2010) used varied wording for the two groups as appropriate. As such, because the teachers had substantially more questionnaires to complete theirs had fewer but more technical terminology. With a validated instrument from an earlier study (Johnson & Buck, 2009), Johnson (2010) had the children rate their Internet use across 15 scale items using a four-point likert scale (1 = never or hardly ever, 2 = once or twice a month, 3 = once or twice a week, 4 = every day or almost every day). The results, as explained by Johnson (2010) revealed a mix of predicted and unpredicted outcomes:

> For the current sample of children, various uses of the Internet at home and school were positively related to teacher evaluation of cognitive development. In contrast, teacher reports of child emotional and physical development were unrelated to any type of child reported online behavior (e.g., instant messaging at home). As visiting websites and emailing at home and school increased, teacher

> evaluation of children's general ability tended to increase. Children who reported using the Internet at home were rated by teachers as having more friends than children who did not report using the Internet at home. The ecological techno-microsystem is further validated; aspects of development (i.e. social and cognitive) are differentially affected by various patterns of online behavior during childhood. Some uses of the Internet (i.e., email and visiting websites) across some contexts (i.e., home and school) were associated with child cognitive ability as determined by classroom teachers. (p. 40)

By having this extended environment with access to significantly more information and people than in the traditional environment, appropriate Internet use at home and school may improve learning and social development.

Other studies that have explored teacher's perceptions have come to find that the most significant benefits of Internet use are a direct result of teacher's knowledge of and comfort level using such technology (Lin, 2008; Mundy, Kupczynski, & Kee, 2012; Wood et al., 2005). With the participation of 54 elementary and secondary school teachers, Wood, Mueller, Willoughby, Specht, and Deyoung (2005) examined the supports and barriers to computer integration. Their mixed studies approach, using focus-group discussions and a survey, indicated that as teachers became more comfortable with their use of technology they became more apt to integrate this technology into the classroom. Though one might expect that consistent use of this technology would increase the teachers' comfort levels, comfort was more so related to the ability to actually integrate this rapidly changing technology into multiple facets of the classroom and students' environments. Therefore, "'time' was identified as a persistent barrier by

teachers in terms of fitting in curriculum, planning lessons, troubleshooting computer glitches, and teacher training and development" (Wood et al., 2005, p. 202). Additionally, "The rapidity of change and the flexibility needed to plan around such a dynamic system increase workload, vigilance and frustration to a level not experienced in other lesson preparations" (Wood et al., 2005, p. 202). Now, rather than focus on curricula and student needs themselves, teachers are faced with the additional tasks of learning this technology.

Because competence with this technology is an integral factor in the success or failure of its use, Mundy, Kupczynski, and Kee (2012) conducted a study that explored the impact of technology training on teacher proficiency. Data was collected using a two-part survey based on those responses from teachers who participated in TeachUp!—a technology empowerment program implemented by Digital Opportunity Trust USA, Inc. (DOT USA). This program facilitates teacher instruction through a year of formal training and coaching in addition to ongoing one-on-one mentoring and follow-up assistance as needed. Participants included teachers from 250 K-8 public schools in the Mississippi and New Orleans having identified their students as being "high need." As teachers participating in TeachUp! became more technologically savvy they began infusing more of what they learned into the classroom, which had a direct impact on students. According to Mundy, Kupczynski, and Kee (2012), "The increase in the use of technology in the classrooms has resulted in growth in student engagement, excitement, acceleration of learning, and proficiency with computer technology over the year, as perceived by teaching professionals" (p. 6). Therefore, administrators may want to consider adding such technology-based training to teacher preparation.

Lin's (2008) study explored a similar concept to Mundy, Kupczynski, and Kee

(2012) but consisted of in-depth interviews that focused more specifically on teacher beliefs about using technology in the mathematics classroom. Once again, teachers who participated in the workshops were able to enrich the learning experiences for their students. As explained by Lin (2008):

> The interviews showed that most of the students in the experimental group felt comfortable using web-based resources in teaching elementary school mathematics. It was also found through the interviews that all students agreed that the workshops helped them become more confident in using computers to teach mathematics. (p. 135)

In this case only 18 hours of instruction over a 6-week duration created a significant impact on teacher perceptions and subsequent student success. With very few teachers in Lin's (2008) study having extensive experience with web-based technology and instruction, the results provide a promising outlook on the future of education.

Almekhlafi and Almeqdadi (2010) examined the impact of teachers' perceptions by using a mixed study analysis comprised of focus-group interviews and a questionnaire. Participants included 100 Grade 6-9 teachers (male, $n = 60$; female, $n = 40$) from two schools in the Al-Ain (Abu Dhabi) educational zone. Teachers within this study rated high in their self-perception in terms of integrating this technology into the classroom despite having to deal with some frustrations related to the technology (e.g., lack of funding, negative attitudes by other parents or teachers, technical issues, or a lack of formal training on the technology). The data revealed that although male and female teachers shared a lot in common, the female teachers had "more experience, familiarity, and knowledge of technology resources and applications" (Almekhlafi & Almeqdadi,

2010, p. 172) while the males thought their integration of technology into the classroom warranted some type of reward or merit. Synthesizing male and female teachers self-perceptions in combination with perceived strengths and weaknesses inherent with the use of technology in the classroom, Almekhlafi and Almeqdadi (2010) have found that the following may improve technology integration:

1. Enhance teachers' technology integration abilities and skills by delivering workshops about effective technology integration.
2. Provide teachers with state-of-the-art technology including hardware and software.
3. Provide teachers with incentives and awards for outstanding technology integration in their classrooms.
4. Provide teachers with some release time so that they can plan effectively for technology integration in teaching and learning.
5. Explore the use of technology in classrooms covering all school levels, including public and private schools.
6. Investigate the effect of technology integration on students' achievement and attitude.
7. Investigate technology integration in relationship to curriculum goals and outcomes.

   (p. 173)

As such, maximizing the Internet's potential in education requires teacher competence and an expansive collaborative effort on behalf of all stakeholders.

Summary and Conclusions

Summary of Major Themes in the Literature

Although current research supports the efficacy of online learning with adult populations (Moloney & Oakley, 2010) and children alike (Burnett & Wilkinson, 2005; Cook, Rule, & Mariger, 2003; Hsi, 2007; Johnson, 2010; Loewen, 2006; Papanis et al., 2010; Vasquez & Serianni, 2012), there is also evidence of how inappropriate use could lead toward devastating outcomes (Gross, 2004; Kraut et al., 1998; McKenna & Bargh, 2000; Patchin & Hinduja, 2007; Purcell, Buchanan, & Friedrich, 2013; Smith et al., 2008; Turow, 1999; Vasquez & Serianni, 2012; Xu, 2007). Further, the virtual environment created by the Internet is one that includes the same ideal components as described by classic learning and development theories (Bandura, 1977; Erikson, 1968; Piaget, 1936; Vygotsky, 1978). To summarize current literature, then, it appears that the effectiveness or detriment of the Internet's capabilities truly depend on those individuals who use, develop, and govern it. That is, the Internet itself does not create a good or bad environment—people do.

In the face of education the Internet allows children to explore an interactive environment, search millions of websites at the click of a button, create elaborate projects, and receive individualized instruction that exceeds what is available at most public and even private institutions. From a social standpoint, communication has been advanced and accelerated to a point whereby children may communicate with one or more individuals almost instantaneously—significantly reducing the lag time between correspondents. In short, the combination of such phenomena equates to exponentially more educational resources and communication opportunities per individual. Cognitively

this means more opportunities to learn (Marshall, 2000), psychosocially this means more opportunities to sharpen social skills (Johnson & Puplampu, 2008), and physically this could mean an acceleration of evolutionary brain development (Saniotis & Henneberg, 2011).

Both the Papanis et al. (2010) and Johnson (2010) articles utilize a similar methodology to this study while exploring the impact of the Internet on childhood learning and social development. Based off data it appears that the Internet does indeed have a place in advancing learning and social development while the most ideal virtual environments nurture this progress further (Burnett & Wilkinson, 2005; Cook, Rule, & Mariger, 2003; Hsi, 2007; Loewen, 2006; Vasquez & Serianni, 2012). The studies of teachers' perceptions conducted by Lin (2008), Mundy et al. (2012), and Wood, et al. (2005) demonstrate a direct relationship between teacher competence and comfort and their quality of technology integration. Further, the students demonstrate improvements across various domains of the learning experience. In addition to teacher competence there must also be an expansive collaborative effort and strategic planning in place (Almekhlafi & Almeqdadi, 2010). Therefore, research is a critical component in maximizing the positive impact that the Internet may have over learning and social development.

What Is Well Known vs. Not Well Known in the Discipline

One thing that is for certain is the fact that worldwide Internet use has continued to skyrocket over the past decade (Internet World Stats, 2013). With that growth has come a change in perception since earlier studies were conducted (Gross, 2004; Kraut et al., 1998; Turow, 1999). Given current evidence demonstrating efficacy in the education

and social development of traditional students (Burnett & Wilkinson, 2005; Cook, Rule, & Mariger, 2003; Hsi, 2007; Johnson, 2010; Loewen, 2006; Papanis et al., 2010; Vasquez & Serianni, 2012), there is question as to whether this technology may help break barriers for students with various disabilities. Though studies in the area of media use and assisting children with disabilities is somewhat novel, researchers have already begun to reveal positive results.

Using The *Paragraph Writing Strategy* (Schumaker & Lyena, 1993) Kaffar (2006) investigated the effectiveness of online instruction for students with and without disabilities. Three online formats were used: (a) PowerPoint, (b) streaming video, and (c) other multimedia. What was found was that both students with and without disabilities significantly improved their writing ability in relation to where they had originally tested. In particular, the PowerPoint media proved particularly helpful for students with disabilities. The implication here is that students, including those with disabilities, may make marked improvements when the environment is geared toward their specific needs as learners (Vasquez & Serianni, 2012). Further, online media may also assist adults and professionals in their attempts to educate children with disabilities.

In their study, Cook, Rule, and Mariger (2003) attempted to apply the principles of early interventions for children with special needs toward user-friendly website designs (SPIES for Parents). Fifty participants (the children's parents) were recruited via email as to ensure that they were practical Internet users. Thirty-three of the $N = 50$ parents participated in the study by actively using the *SPIES for Parents* website and completing online evaluations of the site that addressed both the site itself and its helpfulness given their purpose using it. 67.9% of participants found the videos helpful

and 61.7% stated they learned from them. 88.9% found the text helpful. 71.6% stated that the videos and text combined were enough to help them help their children. "The evaluation illustrated that parents found an Internet-based curriculum to be practical, accessible, and appropriate" (Cook, Rule, & Mariger, 2003, p. 25). Therefore, an Internet site designed to provide parents with procedural guidance could compliment attempts toward direct early intervention services.

How This Study Fills in the Gap/Connecting the Gap

A gap exists in that no studies have identified the experiences of veteran teachers who have taught well before the Internet became a substantial impact up through this point. With evidence being split in terms of the Internet's positive or negative impact, some researchers have gone as far as conclude that the push for technology-centric education in some school districts is premature considering that technology's use toward teaching at a level equal to or better than traditional methods is met with minimal support at this time (Gorski, 2004). With that consideration in mind, this study will fill in the gaps by pitting current technology against traditional teaching methods and principles of learning and social development (Bandura, 1977; Erikson, 1968; Piaget, 1936; Vygotsky, 1978).

As explored in this literature review, most studies examine this impact through how it relates to the here-and-now or seek perceptions predicting future outcomes. Though this journey through older to more recent literature has continued to provide more support leaning in favor of the Internet's efficacy (Burnett & Wilkinson, 2005; Cook, Rule, & Mariger, 2003; Hsi, 2007; Johnson, 2010; Loewen, 2006; Papanis et al., 2010; Vasquez & Serianni, 2012) exploring the Internet's impact over a continuum of

time rather than one particular snapshot will connect the gap by comparing teacher's perceptions from a point before the Internet was even a thought in education to now—a point where the Internet has accumulated 2.4 billion users (Internet World Stats, 2013) and growing.

Chapter 3: Research Method

Introduction

Purpose of the Study

The purpose of this research was to use qualitative interviewing to generate a theory about how veteran K-8 educators regard the Internet's impact on childhood learning and social development. With the data acquired from this study, future researchers, school counselors, educators, parents, and other stakeholders may develop and implement better methods, approaches, and strategies used in the instruction provided to Grade K-8 children. This includes any teaching, parental guidance, counseling, supervision, or other influence selected to benefit learning and social development.

This chapter provides the research method in full detail. Areas covered include the overall research design, instruments or measures used, sampling strategy, sample, location of sample, diversity of sample, method of data collection, ethical considerations, and method of analysis. By the end of Chapter 3, readers should have a clear understanding of how this study was put together.

Research Design and Rationale

Research Question

Central Question. How do veteran K-8 educators experience children's learning and social development in the Internet Age?

Central Concept of the Study

At the core of this study is the central concept that the Internet does in fact have an impact on K-8 learning and social development. As previously cited by Johnson

(2010), such development is "conceptualized as the consequence of ongoing reciprocal and spiraling interactions between child characteristics (i.e., bio-ecology) and use of communication, information, and recreation technologies (i.e., techno-subsystem) across home, school, and community environments (i.e., microsystem)" (p. 34). With current evidence-based research producing mixed reviews regarding the efficacy of the Internet's impact, this study examines veteran educators' perceptions in order to better understand how the overall impact (in either direction) manifests itself within the typical classroom setting.

Because *Human Growth and Development* is a core Council for Accreditation of Counseling and Related Educational Programs (CACREP) Standard (2009) and there are program-specific standards for school counseling that include the use of evidence-based practice in school counseling settings and other programs, this study aims to provide an evidence base to inform better methods of promoting successful learning and social development. That is, this study incorporates educators' perceptions within current standards to inform how contemporary technology may best facilitate learning and social development processes. As classic literature suggests (Bandura, 1977; Erikson, 1968; Piaget, 1936; Vygotsky, 1978), learning and social development tie into well-being. Holding this as true, success in learning and social development may reduce stress and other factors leading toward certain types of pathology. If successful, the theory developed in this study may ultimately lead toward preventative efforts to minimize the number of adults impacted by mental illness, as well as to more evidence-based teaching and skill development methods in schools. Further, as the Internet's impact becomes even more encompassing over these processes, it is likely that CACREP will develop

standards specific to Internet use for such counseling and related educational programs.

Identify the Research Tradition

This study used grounded theory to examine how educators experience student learning and social development. According to Glaser and Strauss (1967), "In discovering theory, one generates conceptual categories or their properties from evidence, then the evidence from which the category emerged is used to illustrate the concept" (p. 23). Evidence, or data, in this case consists of the teachers' perceptions. The grounded theory approach "emphasizes steps and procedures for connecting induction and deduction through the constant comparative method, comparing research sites, doing theoretical sampling, and testing emergent concepts with additional fieldwork" (Creswell, 2002, p. 125). As such, grounded theory uses an extremely rigorous approach in analysis. A step-by-step model for grounded theory includes (a) research initiation, (b) data selection, (c) data collection, (d) data analysis, synthesis and theory generation, and (e) research publication. It is especially in the area of "constant comparison between emergent theory (codes and constructs) and new data" (Gasson, n.d., p. 80) where rigorous analysis is witnessed—an analysis that closely resembles empirical quantitative analysis.

Rationale for the Chosen Tradition

Given the amount of research in each direction stressing the negative and positive consequences of the Internet's impact, it was purposeful to create a study that built its own theory from the ground up—one independent of everything else that had already been studied. As explained by Glaser and Strauss (1967), "An effective strategy is, at first, literally to ignore the literature of theory and fact on the area under study, in order to assure that the emergence of categories will not be contaminated by concepts more suited

to different areas" (p. 37). The emphasis on child development as a focus through the lens of educators, who observe students daily, was useful in building an evidence basis for targeted learning- and social development-focused activities among school counselors and those counselors who work with children and adolescents. Here, rigorous analysis using these steps and procedures allowed for the most accurate and meaningful interpretation of the data. In the words of Glaser and Strauss (1967),

> When the researcher is convinced that his analytic framework form a systematic substantive theory, that is it s [*sic*] reasonably accurate statement of the matters studied, and that it is couched in a form that others going into the same field could use—then he can publish his results with confidence. (p. 113)

In sum, the rationale for this chosen tradition was for the final result to prove high enough quality to make a positive social impact.

Role of the Researcher

Definition and Explanation of Researcher Role

My role as the researcher was that of a participant to the extent that I conducted the live interviews. Using a blend of face-to-face interviews and teleconferencing, I not only gathered a full, raw description of the participants' experiences through their own words, but also (during live interviews) observed nonverbal cues, environmental factors, and how the educators interacted with the environment. Specific to the application of grounded theory, Glaser (1978) described the role of the researcher as one who demonstrates a type of "theoretical sensitivity"; that is, one who is cognizant of any subtleties present in the data. Strauss and Corbin (1990) identified four effective strategies for enhancing theoretical sensitivity: (a) basic questioning of the data, (b)

analysis of multiple meanings and assumptions, (c) making use of novel or nontraditional analysis techniques where appropriate, and (d) probing for any absolutes. Using these strategies in analysis significantly increases the likelihood of gathering the most accurate, meaningful interpretation of the data.

Researcher-Participant Relationships, Managing Researcher Biases, and Other Ethical Issues as Applicable

In order to ensure a lack of bias on behalf of the participants and myself, I selected participants with whom I had no personal relationships. This was important, as it minimized the likelihood for participants to adjust their responses based off their beliefs of what I presumably might or might not have wanted them to say. Further, this eliminated a potential limitation and the perception of tainted participant credibility.

Although counselors are trained to minimize any biases that occur by way of inaccurate assumptions or personal beliefs and values, the reality is that bias almost always exists in at least some minimal fashion. Because bias may easily distort or misrepresent data, researchers have an ethical obligation to account for this and take every reasonable precaution to avoid it (ACA, 2005, G.4.a.). As a doctoral student at Walden University, I had a clear bias in my opinion of the Internet having a positive impact on graduate education, or else I would not have invested in and moved forward with my program. Because of this, it was imperative that my research question was not skewed in a direction that favored the Internet's impact. Further, it was imperative that I did not act, vocalize, or present myself in any way that would have affected participant responses. The type of bias that I hold as a Walden student, however, is not the type or severity of negative bias that may significantly impact the study or harm participants (i.e.,

racism, sexism, ageism, etc.).

This study was designed with the intention of minimizing and eliminating as many potential ethical issues as possible. The line of questioning was noninvasive, there were no minor or at-risk populations involved, and participant rights of confidentiality were easily upheld. Fortunately, no ethical issues arose, as this study was conducted in accordance to the ACA *Code of Ethics* (2005) and guidelines provided by Walden's Institutional Review Board (IRB).

Methodology

Procedures for Recruitment, Participation, and Data Collection

Identification of the population. This study used veteran K-8 educators as participants. The status of *veteran* applied to educators who had taught K-8 students for a total of 20 or more years. This meant that participants were not disqualified for having taken leave for sabbatical, starting a family, or any other reason. Educators interviewed in the face-to-face setting were those located within the Chicago metropolitan area and surrounding suburbs. Those interviewed using teleconferencing spanned locations across the United States. Aside from these criteria, the teachers differed in age, gender, ethnicity, and any other demographic, allowing for a breadth of cultural variation behind the responses.

There are several reasons why veteran K-8 educators were selected for this study. First, educators do not pose the same limitations as students. With adults, there is not the concern of requesting outside approval for consent. Given their ages, as well, children may not possess the level of insight sought in this study. That is, children may not possess the level of cognition and life experience to identify how the Internet impacts

their development. Second, the sample was homogenous. Although the educators varied across multicultural factors, they were homogenous in that they were all childhood educators. Further, they were the people most directly involved with the children's educational process. Even though parents may technically be around their children more than their teachers, teachers generally spend more time with the hands-on components of learning. Finally, veteran educators are (or should be) experts in education. Given their knowledge, educators have informed experiences of student performance. To best gauge teacher perceptions concerning the Internet Age versus the time prior to its conception, then, it was important to use those who had been involved in education for some time prior to widespread Internet use. To best do this, the study specifically included teachers who had been in education for 20 or more years. Having taught before, during, and after the widespread use of the Internet, these teachers had valuable insight as to its impact on K-8 learning and social development.

Sampling Strategy, Participant Selection Criteria, Number of Participants, and the Rationale

This study used a purposive sampling strategy. Purposive sampling seeks those with the most knowledge, insight, and experience with the topic of inquiry. With the aforementioned criteria already identified, it made sense to select a sampling strategy that matched the characteristics necessary to answer my research question. This strategy allowed for a predetermined sample size that was representative of the population at large as well as within the sample itself. More specifically, theoretical sampling required sensitivity to the degree that collected data, not preconceived notions or understanding of previously existing theory, guided this research's direction. As such, the data provided an

appropriate sample based off the extent of saturation and desired level of theory generation (Glaser & Strauss, 1967).

There were two criteria upon which participant selection was based: (a) working as a K-8 educator and (b) having taught for 20 or more years. Participants were then broken down into two interview settings: face-to-face and teleconference. Participants selected for the face-to-face setting taught within the Chicago metropolitan area and surrounding suburbs. Those selected for the teleconferencing interviews were in other states across the country.

Current estimates indicate that there are approximately 3 million K-8 teachers across the United States (U.S. Bureau of Labor, 2011). To make this study valid yet manageable, a sample of 15 educators was initially sought. Due to saturation, 14 educators were interviewed. Although there are significantly more than 15 teachers teaching at various institutions throughout the world, the selection process made it possible to acquire rich, meaningful data. As explained by Glaser and Strauss (1967), this is done through the process of saturation—a process that occurs when

1. "No new or relevant data seem to emerge regarding a category,
2. The category is well developed in terms of its properties and dimensions demonstrating variation, and
3. The relationships among categories are well established and validated" (Strauss & Corbin, 1998, p. 212)

The manageable sample size of 14 educators allowed me to extend an ample amount of energy toward data collection and analysis. At the same time, it was also large enough to catch any inconsistencies that would otherwise compromise results.

Participant Recruitment Procedures

The gathering of participants occurred across a series of steps that included (a) locating the most appropriate sites where potential participants might be recruited, (b) gaining access to potential participants at those sites, and (c) establishing rapport (Creswell, 2007). Participants were selected from within the Chicagoland region and through participant referral. To account for diversity within the sample, participants were purposively selected from a variety of schools within the Chicago metropolitan area as well as through recommendation by existing participants and others aware of the study. With both the Chicagoland region and other locations across the country containing a breadth in demographics, those chosen varied in background, experience, resources, students, administrative policies, and educational practices. As such, recruitment emails were sent to administrators of schools in Chicago and its surrounding communities, peers, colleagues, family, and friends who might have known a potential participant.

Because the majority of K-8 students are instructed in the traditional classroom setting, recruitment emails for the live setting were sent directly to the Chicagoland schools. The sites selected were elementary and middle schools that taught K-8 students with the initial point of contact being the administrators. This sampling of Chicagoland schools was composed of a mix of those who varied by resources (e.g., monetary, technology, number of educators), location (e.g., urban, suburban, rural), culture, and demographics. Once schools meeting these criteria were purposefully selected via Google search, emails were sent. Although unsuccessful, recruitment from the Walden Research Pool was conducted via web posting. In each case, a summary of the study, participant criteria, why the study was beneficial, confidentiality, participant protection, a brief

biography, my contact information, and contact information for the Walden University IRB were provided. Where the two differed, however, was that the email provided the rationale and procedures for face-to-face, onsite interviews, whereas the posting did so for teleconferences. Further, the emails requested that the administrators pass them to teachers who potentially met the criteria. At this point, interested teachers could contact me to set up an interview.

Follow-Up Plan if Recruitment Resulted in Too Few Participants

If the initial recruitment procedure had not produced 15 participants or reached saturation, I would have continued searching until that number was reached. Each week, as schools did not respond, a note was made, and the appropriate number of additional schools were randomly chosen and emailed. Peers, colleagues, coworkers, friends, and family members were also emailed. The first five participants were selected within April and May, the first two months of data collection. It was not until July into August that the final nine were selected. During the month of June, I did not recruit any participants. A major contributor to this was that many school staff and faculty were not checking their email while out for summer vacation. After the 14th participant, saturation was achieved.

Saturation and Sample Size

Without any particular statistical analysis to determine sample size in qualitative research, researchers must rely on the concept of saturation. After a particular point in data collection, recurring commonalities tend to arise. Saturation is the point at which no new or relevant information emerges from the data (Glaser & Strauss, 1967). That is, data collection is at a point where it is rich, meaningful, and leaves no further gaps warranting exploration. In this case, the sample size of 14 was one that reached saturation because it

covered a wide enough demographic to spot any inconsistencies, had there been any present within the sample (Strauss & Corbin, 1998). Because the experiences of the 14 participants were similar—especially having come from diverse participants across the country—the evidence suggested that the data were consistent with the general population.

Instrumentation

Data collection instruments and sources. The 14 teachers who participated in this study were asked to complete an interview either face to face or via teleconference. The interview questions in this study were researcher produced. Each interview adhered to the same structure and progression of open-ended questions. After I went through informed consent and explained rights to confidentiality behind the transcriptions and audio recordings, the interviews began. In keeping with the purpose of this perspectives inquiry, the following questions were presented to elicit significant changing themes, trends, and experiences of K-8 education over the past 20 years:

1. How would you describe any formal technology training and personal experience with the Internet?
2. Please share with me your experience in using the Internet as a tool for teaching and learning.
3. How has the quality of education in your classroom changed over the past 20 years?
4. How have the students' attitudes toward learning changed?
5. In what ways have your teaching approaches and methods changed?
6. How have you, as an educator, kept up with these changes over the past 20 or

more years?

7. How do you perceive the Internet's impact on individual student learning development?
8. How do you perceive the Internet's impact on individual student social development?
9. How do you perceive the Internet's impact on a societal level?
10. How do you perceive the Internet's overall impact moving into the future?
11. Do you have any additional comments, questions, or concerns?

Following the nature of qualitative inquiry, I would restate or summarize information and then question the participant to determine accuracy—a form of member-checking. Once the questions were complete, they were free to add any additional insights they saw fit. This was the purpose to question 11. Follow-up interviews with the participants were not necessary, as the initial data provided the clear, grounded theory desired.

Recording the data. All interviews were audio recorded as to best maintain the data's integrity. This eliminates question as to the participants' exact wording. Audio from the teleconferences were recorded via digital audio recorder and saved as MP3 files on my MacBook Pro. Notes were also kept, as necessary, to record anything that was of further value.

Frequency and duration of data collection events. Participants in this study were asked to complete a single interview that lasted approximately 30 minutes dependent upon what each educator was willing to offer in terms of perspective. It was only natural that some participants had more to say than others. Because it was not the intention of this study to lead participants in any particular direction, leading questions

were not asked. Further, no suggestive statements were made. Subsequently, each participant's perspective came from his or her own exact thoughts and verbiage.

Participant exit of the study/follow-up procedure. Upon completion of the interview process participants were thanked for their participation and provided with transcriptions of their interviews and a debriefing form. Sending thank you notes demonstrated appreciation for their time and responses. The transcriptions served as a means of member-checking, whereby the participants had the opportunity to confirm their statements and provide any follow-up comments or questions. The debriefing form also thanked them for their participation in addition to supply them with a brief summary of the study's purpose, researcher contact information, and contact information for the Walden University IRB should psychological distress occur. This form abides by standard debriefing documentation and receives IRB approval prior to distribution.

A much shorter, one-to-two-page article was also written for the participants and others. The article was written in layman's terms as to be understood by the general audience member. This way the central meaning may reach as many people as possible. Every participant was emailed this summary as well as the completed dissertation via email. Beyond being posted in the Walden library, I intend to write smaller articles for publications in various magazines as I also send the short summary to individuals I know in my professional network. Continuing to disseminate this information to as many people as possible will allow for this study to have a maximum impact.

Sufficiency of data collection instruments. With grounded theory there is more freedom than in quantitative analysis to establish sufficiency using researcher-produced instrumentation. Glaser and Strauss (1967) suggest that researchers literally "ignore the

literature of theory and fact on the area under study" (p. 37) because open questions asked by the researcher allow for a natural flow of extremely rich, meaningful data without having to be forced and interpreted through restricted instrumentation. In response to grounded theory approaches Denzin and Lincoln (2005) commented, "All research is interpretive; it is guided by the researcher's set of beliefs and feelings about the world and how it should be understood and studied" (p. 22). As such, the data collection instrument used here was designed to replay the exact conversation word-for-word. No words, the primary units of data collected, were lost. Further, the analysis components of the grounded theory approach were rigorous to the extent that the final interpretation is equally as valuable to any other research approach. Therefore, sufficiency was established for this data collection instrument.

Data Analysis Plan

Everything from the classic theories to the participants selected is connected throughout this study. All of the questions asked throughout the interview specifically feed into the central question: "How do veteran K-8 educators experience children's learning and social development in the Internet Age?"

Raw data for this study is in the form of audio (.mp3) files and notes written during the interviews. The visual representation during live interviews made it possible to notate additional commonalities and differences before the rigorous analysis of the participants' words is even coded. For the purposes of this study, spoken language in audio format was first transcribed into written text. I transcribed the data myself using Dragon Dictate for Mac, which is described further in the following section. As explained by Saldaña (2009), "A code in qualitative inquiry is most often a word or short phrase

that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data" (p. 3). The process began with pre-coding, which entailed highlighting key words and phrases that stood out during the initial review. As the process was repeated multiple more times in further depth, pawning revealed elaborate patterns by way of similarities, differences, frequency, sequences, correspondence, and causation (Saldaña, 2009). These codes were then reviewed with my dissertation research methodologist, Dr. Reicherzer, prior to the final interpretation.

Software used for analysis. Most computers include basic tools to assist with qualitative data entry, coding, and subsequent analysis. Miles and Huberman (1994) refer to these as "'generic' programs" (p. 311), which include (a) word processors, (b) word retrievers, (c) text base managers, (d) code-and-retrieve programs, (e) theory builders, and (f) conceptual network builders. Each transcription was initially conducted using Dragon Dictate for Mac and Microsoft Word 2011. Dragon Dictate for Mac was used to transcribe the spoken-word audio files into text files for manual and software analysis. With this software, headphones, and a microphone; extremely accurate transcriptions were created. Because Dragon Dictate for Mac only recognizes one pre-programmed voice per audio recording, the parroting strategy made it possible to listen to the audio recording of an interview (through headphones) while speaking into a microphone word-for-word what was being said. Like a parrot, I had to repeat what each participant said. This strategy was helpful in creating a rough draft but was revised in Microsoft Word 2011. Here punctuation and formatting were added while content was revised. Researcher coding with this software required manually reviewing each file and highlighting the most meaningful information. Microsoft Word 2011 also assisted to some extent when

specific words are searched using the "control + f" word find.

NVivo 10 was used in this study to facilitate the collection, organization, and analysis of data across many approaches. It did this by allowing me to upload written texts (e.g., transcriptions) and audio files. Upon creation of the transcriptions, NVivo 10 utilized a word analyzer to count and analyze particular words and their synonyms. Once complete, the program then created detailed reports and diagrams. Particularly beneficial to this study was the ability to upload audio files directly into the program. Recorded audio files from the live interviews were uploaded as to not disrupt the integrity of the data.

This study utilized a combination of hand analysis, software analysis with NVivo 10, and review with my dissertation committee to allow for a comprehensive, diverse, and proficient data analysis. The initial analysis was conducted by hand with a more comprehensive review then conducted through NVivo 10. The results were then compared with current research (triangulation) for further substantiation. Once complete, my extremely competent research methodologist critically reviewed the analysis.

Treatment of discrepant cases. In every study there is a chance for discrepant cases to arise. Discrepant cases are those that completely deviate from the norm to an extent that they are also rare in the population. During the coding process when similarities, differences, frequency, sequences, correspondence, and causation are revealed; these discrepant cases do not fit any of these categories. As such, discrepant cases should be explored further against current literature and then carefully noted in the data interpretation. This study did not produce any such cases.

Issues of Trustworthiness

There are several ways in which this study established trustworthiness. For one, it utilized rigorous methods of research preparation, appropriate interview questions, detailed transcriptions of the interviews, evidence-based coding strategies in conjunction, and a final composite that adheres to professional writing guidelines—all of which followed the highest standards using only evidence-based strategies. Further, NVivo 10 and Dragon Dictate for Mac are high quality programs that have been rigorously developed and refined. This study utilized triangulation, the "combination of multiple observers, theories, methods, and data sources" (Patton, 2002, p. 555) to compare against the work of other credible professionals in peer-reviewed literature. For additional guidance the dissertation methodologist and I worked closely through all necessary revisions. At this point a clear theory was developed. Further, the participants were sent copies of the transcriptions to confirm credibility of the data. Upon conclusion of the study referential adequacy was achieved through archiving the raw data for subsequent analysis, interpretation, and verification of initial findings and conclusions.

Transferability refers to the ability for one study to be replicated with the same approximate validity across different people, settings, and times (Campbell & Stanley, 1963). This study utilized thick description, specifying the minimum elements necessary to recreate these findings. As defined by Denzin (1989), "A thick description... does more than record what a person is doing. It goes beyond mere fact and surface appearances. It presents detail, context, emotion, and the webs of social relationships that join persons to one another" (p. 83). Here, veteran K-8 educators having taught K-8 students for 20 or more years presented a very specific group that may be replicated across differing

variants. Further, this study kept general demographics open as to allow for maximum transferability across any type of individual so long as the participant meets the aforementioned criteria.

This study utilized triangulation and audit trail to ensure dependability. As explained previously, triangulation in this study entailed data analysis interpretation based on multiple sources, methods, investigators, and theories. Because the information found in this study closely resembles what was previously found in peer-reviewed research, there is a significant likelihood that it resembles that of the general population. Second, having strong documentation of the study step-by-step also increases dependability. Audit trails—used here—are the records that include (a) raw data; documentation of process and products of data reduction, (b) analysis, and synthesis; methodological process notes; (c) reflexive notes; and (d) instrument development. This detailed account allows others to confirm that this study is truly dependable.

As mentioned previously, notes were taken as necessary to capture any important factors residing outside of the participants' spoken words. Further, notes were taken throughout the entire research process—from the inception of the inquiry through the summaries and conclusions. Therefore, the reflexive journal (personal notes) detailed my logic—or lack thereof—throughout each step of the dissertation process.

Intercoder reliability is the degree of agreement between or among raters. In this case intercoders included my committee methodologist, Dr. Reicherzer, and myself. Dr. Reicherzer possesses a doctoral degree and is a proficient researcher. She helped ensure that the coding was created in line with the objectives of the study and met evidence-based standards of scientific inquiry. Whenever more elaboration was needed or a point

got off track, it was noted and revised as necessary.

Ethical Procedures

In this study, access to data was gained through participant interviews. The initial email sent to school administration served as the recruitment tool, which briefly described the agreement to gain access to participant data. Because the recruitment materials and process were nonevasive and did not require any exchange of confidential information, there were minimal ethical concerns to consider. Once qualifying teachers declared their interest to participate they were emailed the informed consent (see Appendix A), which served as this agreement. All participants electronically consented by responding, "I consent," prior to engaging in the interview.

The treatment of human participants was in accordance with the American Counseling Association *Code of Ethics* (2005), which states: "Counselors plan, design, conduct, and report research in a manner that is consistent with pertinent ethical principles, federal and state laws, host institutional regulations, and scientific standards governing research with human research participants" (G.1.a.). Because the educators were under no obligation to participate in my study, it was also important to establish a high level of rapport. This not only demonstrated appreciation for the participants' time and effort but also enhanced their image of me as a professional. Doing this may was achieved through consistent preparation, respectful treatment, punctuality, adhering to school policies, and being honest about my intentions. I was also responsive to the needs of the educators and addressed them as necessary.

There were some scheduling conflicts throughout the data collection process. Conflicts were simply handled by patiently taking the time to schedule times that work

best for everybody. If a participant had to cancel for any reason, a cordial reschedule opportunity was provided. Aside from scheduling conflicts, there were no other issues or disagreements with the participants.

Participants' data in this study was and is still kept confidential. Aside from the informed consent and emails exchanged, there is no direct tie between the participant and any information collected. Names were never written on transcriptions, recordings, or any of the details reported in the final composition. Rather, alias names were used to protect their identity.

Because the raw data in this study came from the words of participants, the recording, storing, and reporting of this data was protected accordingly. MP3 audio data were and are still kept secure by encryption software and password-protected filing. Further, the audio files were removed from the digital audio recording device. During the interviews themselves, the only two individuals present were the participant and myself—keeping all responses confidential. Once analyzed and interpreted selected anonymous data was shared in the final write-up of the dissertation as appropriate. In this case the data is available to anyone who reads it. As required by the Walden University IRB, the complete data is being stored for a period of 5 years before being disposed of as appropriate. Aside from myself, the only other individuals with access to the complete data include my dissertation committee and the Walden University IRB.

This study has carefully thought through potential ethical issues and has been designed in such a way as to eliminate potential conflicts of interest, power differentials, use of incentives, health risks, and concerns involving vulnerable populations. Having strategized in a way that eliminated many of these ethical concerns from the start greatly

reduced the risk of problems occurring throughout the data collection process.

Summary

Using a grounded theory approach to inquiry, this study sought to create its own interpretation of the impact of the Internet on K-8 development. With the perspectives drawn from teacher interviews, further knowledge was acquired in terms of the positives, negatives, and potentials regarding the Internet's impact to ultimately enhance the facilitation of child learning and social development. Of utmost importance is that this study met that objective using the evidence-based methods and logical conceptualizations previously described.

Chapter 4: Results

Introduction

The purpose of this qualitative grounded theory study was to develop an informational theory that was constructed through the perceptions of veteran K-8 educators having taught Grades K-8 for a period of 20 or more years. By focusing on these perceptions, the data acquired may inform researchers, school counselors, educators, parents, and other stakeholders to help them develop and implement better methods, approaches, and strategies for use in K-8 instruction moving into the future. Therefore, the ultimate goal of this study was to provide an evidence base that was built upon the perceptions of K-8 educators who taught at a time prior to, during, and post conception of the Internet Age.

The central research question for this study was the following: How do veteran K-8 educators experience children's learning and social development in the Internet Age? As such, interview questions (please see Appendix B) posed of participants included those that gauged changes in learning and social development across a continuum of time—a continuum that newer teachers have not been around to experience.

This chapter primarily focuses on the data collection and analysis processes as well as presents the results of this research study. First, details regarding the research participants' demographics and methods used to collect data are provided. Second, strategies employed to ensure the trustworthiness of the study are described. Third is an overview of the analysis phase, which transitions into the discussion of results. Finally, Chapter 4 concludes with a summary of the research findings that address the central research question.

Demographics

There were a total of $N = 14$ veteran K-8 educators who participated in this study. All of the veteran educators fell within the criteria for this study, which meant that they had taught Grades K-8 for a total of 20 or more years. The participants were composed of $n = 10$ female and $n = 4$ male veteran educators. To maintain the anonymity of participants, each veteran educator was provided a participant number. As such, the veteran educators are referenced in this study by aliases, as to maintain participant anonymity. Table 2 illustrates the demographics of the veteran educators who participated in the study.

Table 2

Veteran Educators' Demographics

Participant	Grades taught	Subjects/ administrative role	Years teaching	Location
1. Dorothy	6	Math, Science, Assistant dean, District admin	35 years	Illinois
2. Samantha	K-12	Gifted & Talented Program	49 years	Texas
3. Lisa	7-8	English, Speech, Social studies, Librarian, Applied tech	38 years	Illinois
4. Thelma	4, 6–8	All classroom subjects	23 years	Illinois
5. Lenny	8	Social studies	33 years	S. Carolina
6. Robert	6–8	Physical education	20 years	Illinois
7. Brenda	K–1	All classroom subjects	23 years	New Mexico
8. Pamela	6–8	Language arts, Clerical aide	34 years	Illinois
9. Minnie	6, 7	Language arts, Social studies	22 years	Illinois
10. Karen	K, 2-4, 6	Math, Language arts, Learning and language disabilities classroom, Research room, Special education, Child study team coordinator	20 years	New Jersey
11. Dennis	8	Reading, Language arts, Science, Social studies	41 years	Illinois
12. Randy	3–12	All classroom subjects, Music, Dean, Asst. principal, Principal, Admin	33 years	Illinois
13. Sarah	2, 3	All classroom subjects	28 years	Illinois
14. Hannah	1, 2	All classroom subjects, Music, Physical education	26 years	California, Texas

Data Collection

The data collection method used in this study consisted of a qualitative interview composed of 10 open-ended questions. Interviews were held either face to face at a location convenient to the participant or over the phone. Two of the 14 interviews were conducted in person—one at a local café, and the other at the participant's residence. The interviews lasted anywhere from 14:46 to 43:47 minutes, with an average interview lasting approximately 30 minutes. Interviews focused on the veteran K-8 educators' perceptions of the Internet's impact on K-8 learning and social development. Using a digital audio recorder, I recorded the interviews and transcribed them by hand with the assistance of Dragon Dictate for Mac.

Although the original sample size proposed for this qualitative study was 15, the data reached saturation between Participants 12 and 14. During the data collection process, there were multiple themes that were repeated. The patterns bore similarity, even with my effort to diversify my sample and reach participants outside of my home state of Illinois. Perceptions surrounding the Internet's role in children's intellectual and social development varied from positive to negative as well as neutral. The data analysis section of this chapter describes this process in further detail, but first, the following section details the procedures used for ensuring trustworthiness of this study.

Evidence of Trustworthiness

Multiple measures were employed to ensure the trustworthiness of this study. First, prior to the study being conducted, the proposal underwent a rigorous dissertation committee and IRB review. This process ensured that the theoretical foundation and research methodology upon which the study was built were sound. Upon successfully

meeting the IRB's standards of quality and completing an oral defense in the company of a highly competent and research proficient dissertation committee, I was able to begin the study. This measure of trustworthiness set the foundation for others to follow.

Second, to maintain the integrity of spoken word as data, transferability was a measure taken into the utmost consideration. Measures used to ensure transferability included a combination of: audio recording, transcription, and NVivo 10 for Mac. Each interview was audio recorded using an Olympus VN-8000PC digital audio recorder. I transcribed the audio files by hand with the assistance of Dragon Dictate for Mac. Upon their completion, the transcriptions were uploaded into NVivo 10 for Mac, whereby nodes based off significant themes were created and analyzed across the coding stripes. This strategy assisted with organizing and further exploring the major recurring themes among the interviews.

Third, audit trails were used to provide the most accurate representation of the data. The primary audit trails used in this study included (a) raw data, (b) reflexive notes, and (c) methodological process notes. As previously explained, the integrity of raw data was maintained through use of a digital audio recorder and transcribing the spoken words to text. Reflexive notes were those taken throughout the entire research process from start to finish. Emails with my dissertation committee, edited drafts with track changes, and personal notes fulfilled the purpose of a reflexive journal. Methodological notes recorded in a similar fashion helped me achieve increasing efficiency in terms of recruitment, note-taking, and interviewing. These notes were particularly helpful with improving participant recruitment and engaging participants during the interviews.

Fourth, triangulation took place across two dimensions, the first of which was

against the peer-reviewed literature upon which the study was built. By critically reviewing the data against the peer-reviewed literature, I was able to determine whether the information found in this study closely resembled what had been previously found in the extensive peer-reviewed research and that of the general population. With the results across participants holding fairly consistent and in line with the traditional and contemporary peer-reviewed research, they appeared to meet the standards of research quality. The second dimension of triangulation was in collaboration with my dissertation methodologist. Throughout the process, we continued to collaborate and extract the most significant meaning from the data. Further, attaining high intercoder reliability helped ensure that the coding created was in line with the objectives of the study and met evidence-based standards of scientific inquiry.

The fifth dimension entailed member-checking. Each participant was emailed to confirm accuracy of his or her transcript. Of the 14 participants, nine responded: Brenda, Karen, Dennis, Hannah, Lisa, Pamela, Samantha, Randy, and Thelma. Beyond several technical errors, such as typos, the participants confirmed the transcripts' accuracy. Several of the participants reacted to the number of interjectors (e.g., umm, you know, like, etc.) that were in the original transcripts. No additional thoughts were provided.

Data Analysis

To best delineate the most significant themes present in the data, three primary layers of coding were used: open, axial, and selective. Together, these coding strategies allowed for the simple, raw data to fully develop into a substantiated evidence base for the grounded theory sought after in this study. Once each interview was transcribed, the coding process began. The most basic level of coding in this case, open coding, entailed

reading through each transcription line by line, highlighting, notating, and assigning a descriptive adjective to seemingly significant words, phrases, sentences, paragraphs, et cetera. After transcribing my first five interviews, I began the open coding process. In this round, I identified 46 codes (see Appendix E for complete list of codes), which wound up reoccurring throughout the duration of the interviews. The 46 codes were then arranged and categorized by content area. From these 46 codes, categories and subcategories were created. By combining similar categories and eliminating those with minimal responses, seven categories and 33 subcategories remained (see Appendix F).

The next step entailed selective coding. I rearranged the seven categories into four larger categories and further defined the larger categories with subcategories to form the emerging theory (see Appendix G for selective coding). The four main categories that described the central phenomenon were *teacher experience and comfort level*, *boundaries*, *social factors*, and *the evolving classroom*. Figure 1 illustrates how the veteran educators' perceptions of the Internet's impact on K-8 learning and social development are impacted by these categories.

Results

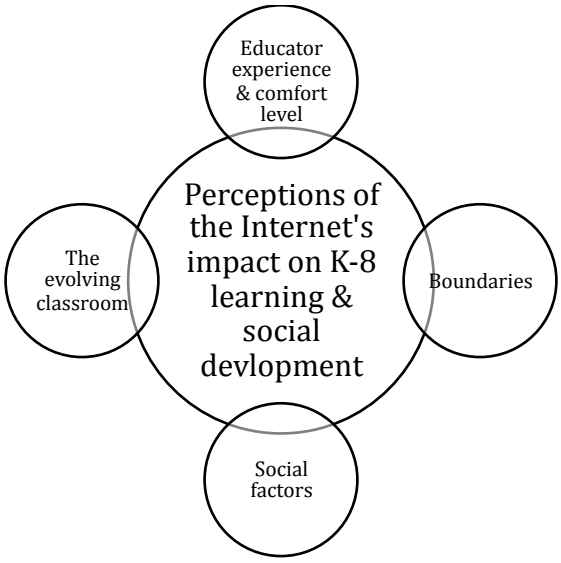

Figure 1. Central phenomenon and four main categories.

It is important to note that the upcoming participant statements have been edited to remove nonlexical conversational sounds. The actual content of each statement, however, has not been modified.

Participant Biographies

During the interviews, each participant provided some basic information about his or her background with and primary use of the Internet and its applications. This section provides some of that information.

Dorothy

Dorothy has taught sixth graders in Illinois for the past 35 years. Her role as an educator has varied throughout the years as she has taught math and science courses. Further, she has served as assistant dean and district administrator. Today, she primarily uses the Internet for her role as administrator. As she explained,

Right now I use it more for ... Like I have to give an induction speech for National

> Junior Honor Society next week at [name of school]. So, I go online and look up induction speeches to get pull, and you know? Take different ideas from different things ... So, I'm still using it quite a bit.

Although Dorothy believes that the Internet has great potential to assist in learning and social development, concerns were expressed in that current practices are far from ideal and warrant refinement. Per Dorothy,

> Because in education the pendulum swings all the time ... I mean, I taught for 35 years. You'd see some concept come in like open concept. When I first started teaching it was the open classroom, so there were no walls. Well, that's where [name of town] started out. And then they found out that that's not such a good idea, so the pendulum swings a different way. You know, I'm hoping this swing that they're going to see, that maybe it's not a good idea that we don't practice—you know—what you learn that day and do something about it. I don't care if you practice on a computer, but at least do something. Reinforce what you learned that day.

Based off previous experience, Dorothy believes that appropriate change may come with time and a deeper understanding of learning and social development in the Internet Age.

Samantha

Samantha was the most experienced of the participants. With 49 years of experience, she had 8 more years than the second most experienced participant. Throughout her tenure, she had taught K-12 students in the gifted and talented program. Having taught at a military base in Texas, Samantha was privileged in that she was

continually privy to the most cutting-edge technology. Her responses were primarily positive throughout. As Samantha discussed,

> Every, every advancement then that came into the classroom was just like icing on the cake. You'd get so excited because it makes your job as a teacher easier, and it because children … As they became more tuned into TV and that kind of thing. Well, I could use, for instance, *Sesame Street*. I'm teaching children to read, and all the things that came on TV, PBS you could—we could—let them watch those kinds of things. As we eventually got TVs in each of our rooms. And they were wonderful. And then they came out with the big records that you can play, and they could listen to. And you could project on the overhead the slides and different things like that the children could look at. Then it's like … OK, first you had to have the TV, and if you had a TV in your room you were really, you know, uptown. Then you got to have … The next step was to have the LCD screen on your… When you finally got the computers—the state—then you got an LCD screen you could put on your overhead, and it would project from the computer; the little computer thing, and I am talking about the little … I don't know, they were just digitized little things. So, every… I just think back and am just blown away from where we came.

Despite beginning her teaching experience during a period where technology and its use were minimal, she maintained one of the most positive and engaging attitudes throughout.

Lisa

Lisa taught Grades 7-8 in Illinois for 38 years. Her role as an educator varied, as

not only did she teach English, Speech, and Social Studies; she also served as the school librarian and applied tech. As such, she offered a more detailed account regarding the technical aspects of the Internet, applied searches, and information contained in the World Wide Web. In an account of her history in teaching and Internet use she explained,

> When computers started and the Internet started … Let's see, my son would have been in eighth-grade, so we got a computer. It ran at like 25 MHz, and we immediately connected to the Internet. And I was one of the first that said to him … You know, this was before Google, and I said to him, "All I got to do is like www.Campbell Soup, and you got there," and so, I think I was self-trained for a long time. And then as things progressed I think mostly I was self-trained until I got to the point that I was one of the tech leaders at the school, and at that point I was getting classes like in how to edit video. I had … I'm trying to think of all the things … I wished at one point that I kept track of all the word processing programs I have had to learn because of all the different changes and stuff. Because the very first one did not even have underlining or italics. So, as an English teacher the word processing was at that elementary level. The Internet was at an equally elementary level, and then I'm not sure exactly how this came about … At what point as a teacher, you know, I would use the Internet for them to look up pictures in my classes. Like if we were doing a Renaissance, we would do a sing cane and I would have them go to the Internet for that because their book didn't have enough on it. But then I became even more technologically driven when I became the applied tech teacher. I became librarian, so I knew how to use the Internet, and I would teach the children at one point what Google does.

> I teach Boolean search, which Google does now. And to this day I still don't use Google, I always use advanced Google. And to a certain extent I created my own Boolean searches.

Knowledgeable of exactly how powerful of a tool the Internet is, Lisa stressed caution throughout the interview. As optimistic as she was that the Internet could be a great tool for learning and social development, she also found the risk factors to be more devastating than any of the other participants.

Thelma

Thelma is an Illinois grade school teacher with 23 years experience. In her tenure she taught Grades 4 and 6-8. Thelma had a very positive attitude about the Internet and technology use in the classroom; however, "having just got an iPhone last month" before her interview, she acknowledges learning most everything about the Internet from her students and son. In some cases what she learned was simply by circumstance. As she described,

> I also have an 11-year-old who talks about Minecraft all the time, which I think is … If they tie it into a lot of things they've learned with me. It's a science lesson. They're like, "Wait, wait! Could I use bedrock to do this?" They all went home and went to the next level of Minecraft because of something they learned in science.

She is now a believer that some common games that children play as well as TV shows they watch (e.g., the Simpsons) may positively impact their learning experience if done correctly.

Lenny

Lenny is an 8th grade Social Studies teacher from South Carolina. With 33 years experience, he has witnessed a lot of changes in education. His position on the Internet is a positive one in that it makes it easier for him "to make connections" in terms of using visuals to further educate students on a particular person, place, thing, or event in history. A major focus for him has been ensuring that his students meet the South Carolina state standards. As he explained,

> We use the computer mostly to supplement my teaching. We have state standards that take the guess work out what to teach, and now I know to teach, and all kids pretty much get the same type of teaching. The key to taking the state test, which again, I have to teach the entire course with strong comprehension, know to make sure kids are well-prepared for the test. Within that time period I've also become national board-certified. So, it forced me to bend my teaching preparations—my method of teaching—trying to incorporate rigor and engagement and equity within all of my lessons.

With years of teaching experience and continued access to modern technology, he believes he now has the resources to "teach the whole child through a set of skills."

Robert

Robert is a Physical Education (P.E.) teacher for Grades 6-8 students in Illinois. He explained how he spent most of his 20 years in education trying to avoid using the Internet and such technology at any and all costs. Although he is not necessarily opposed to technology or its use in education, he personally has no interest in learning it. As such, he offers a relatively unique perspective in respect to the other participants. Beyond his

view on technology, which will be explained in further detail later, he also reported the most lax approach toward engaging students. At one point Robert explained,

> I didn't come into teaching until I made a couple career changes, and I was in my 40s when I finally changed over to education. So, I don't know that I really changed too much. Maybe I became a little more lax than I needed to be. So, sometimes I didn't have the control that I should have had being such a veteran teacher at the end. Because like, you know, kids are kids and are going to do what they're going to do. If I try to put up walls and keep them from doing it, they're just going to run their heads into it. So, I just have to get out of their way sometimes, and, "Oh well!" I wouldn't have let the kid do that or say that 20 years ago, but now I'm pretty more relaxed. And then it's in their culture, it's in everyday life. They hear all this kind of stuff at home. You know? So, for me to come down to them and say, "You can't say that. You can't do that here." As long as there is no bone sticking out or blood all over the floor, you know, it was "no harm no foul." You know?

Although some of the other participants might have some disagreements with Robert's style, it appears that his attitude was received quite well by his students.

Brenda

Brenda has taught Grades K-1 in New Mexico for 23 years, primarily having taught kindergarten. Her stance was split down the middle. Although she could see many intellectual benefits with the Internet, she held some serious reservations along other domains. As an early childhood teacher, she provided a unique perspective on how student engagement has drastically changed in children as early as kindergarten. Per

Brenda,

> The computer turns the page. It highlights each word as it reads it to them. So, they're not as involved as learners. They … They're like … If it takes effort to do work on their part, it takes a lot more encouragement. Whereas if you throw something electronic in front of them, they're entertained and they're engaged. So, that's changed. They're like, "Well, gee I wanted… I don't want a book. I want an iPad, but do you have an iPhone I can use?" "No, you're going to have to turn the page on this one, sweetie." "Can't I just use my finger to draw?" "No, you're going to have to hold the pencil, sweetie." And so, things like… You know, whereas before they came, you know, with an understanding of crayons, and markers, and pencils. And we had kids now coming that—just—they're just not used to paper and pencil. They're used to taking a finger and drawing on it—on the screen.

As she continues to describe throughout this section, the result has been a loss in some fine motor skills, which were commonplace in previous cohorts.

Pamela

Pamela taught Grades 6-8 Language Arts for a total of 34 years. She and Dorothy actually taught at the same middle school in Illinois for a fair part of their tenure. What makes her perspective unique is that upon retiring in 2004 she took a job as one of the district's clerical aides. Much of her more recent experience with the Internet has been as a clerical aide supporting the teachers. She described,

> So, I've been outside of the classroom. I have observed things, and I—you know—have input from what teachers have told me and kind of what … I did

> testing and that type of thing. So, I have most current experience in that—from that viewpoint but not necessarily from the actual classroom viewpoint.

Her perceptions regarding the Internet are mixed. Although she recognizes the many benefits of this technology, she is very skeptical of how it is used and the direction along which education is moving.

Minnie

Minnie reported now being in her 22nd year of teaching. She taught seventh grade every year less one where she taught a sixth/seventh grade split. Over the duration of her tenure she has experienced much change. She explained:

> The first eight years I taught both social studies and language arts. And for the first part—like during the social 21 years—the curriculum has changed from early civilization to geography. And now I'm still teaching social studies, and it is US history up to the Civil War.

Beyond the actual context and content of history taught, however, she has also noted a significant change in what administrators consider learning. Per Minnie,

> And so a lot of it has changed. And one of the directors once said to me when we were talking about writing tests is, "Well, if they could Google it," you know, "it doesn't need to be tested," which I don't necessarily agree with because there's just things that you need to learn.

Consequently, she is one who recognizes the benefits of the Internet but—like Pamela—worries that the purpose of its use in education might be usurped by ulterior motives.

Karen

Off-and-on, Karen has worked as a New Jersey educator for 20 years. Her diverse

experience across grades, subjects, populations, and roles provided another very unique perspective. Her experience as described in her own words,

> I taught kindergarten for two years. I taught third grade general education for—oh goodness—for four, five years. And I've taught special education self-contained classroom. It was called the learning and language disabilities classroom. I taught that for a year. That was made up of kids with autism and downs syndrome and then just specific types of learning disabilities. I've taught research room for number of years, and then I did in two different capacities pull out so that they could come into my class out of the general ed. for either math or language arts or both. But I've also done a team teaching model where I replaced their materials in the classroom. So, I did that two different ways, and for a number of years I did that. What grade levels? Fourth, third, second … My student teaching going way back was in sixth grade and was in second grade, and I've taught special education summer school for—I think I did that for three summers... I am not teaching this year. This year is my first year… Well, this past year I guess I should say, my role is—I call it like pseudo-administration—where I am the coordinator of our child study team. So, I'm not teaching, but I am involved in their programming from our preschool to our eighth graders.

Her perspectives were primarily grounded in that of special education. Karen's take on Internet use with learning and social development was particularly positive, as she has already begun utilizing the latest software that adapts to the special needs of her students. Witnessing firsthand how the Internet has positively impacted special populations, she is a firm believer that it boasts the same potential with general classroom students.

Dennis

Over the past 41 years, Dennis is another teacher with an acquired diverse experience. He has taught Reading, Language Arts, Science, and Social Studies. Experience relevant to this study is the 24 years he spent teaching eighth grade at three different middle schools within the same Illinois school district. After teaching eighth grade he taught high school for another 17 years, retired, and then moved on to teach autistic children. Dennis acknowledged the benefits of the Internet in learning and social development but cautions that due to the speed at which people move in this contemporary Internet Age, among other factors, that students may struggle to actually absorb the material. He suggested,

> If we can kind of meet in the middle and kind of slowdown what we're trying to teach these kids and give them time to absorb what they should know instead of going onto a new objective everyday because the state says they need to know this today, it's very difficult.

His belief is that by reaching a middle point that the Internet's benefits might become maximized without necessarily compromising fundamental learning and social developmental processes.

Randy

Randy is another participant who served multiple roles as teacher and administrator. His 33 years experience as an educator in Illinois is so diverse that it is best told in his own words,

> So, I graduated in 1974 in music education, and I was a music teacher for grades… I started out grades six through 12 in a little town called [name of town]. Taught

there for a year. There was a reduction in force, got canned, and came to a school district named [name of district]. [Name of district] at the time was a 45-15, so we were a year-round school system. And I started teaching first through third … I lied! Third through fifth grade … Third through fifth grade … And taught there for three years. And by the time that three years was over, I was teaching first through fifth grade. Then, a middle school opened up called [name of school] Middle School, and I became dean there for three years. At that time I got my master's degree in administration. I was trying to get an assistant principal's job and happened to be the bridesmaid and never the bride. So, I had an opportunity to go into business. So, I left education for five years and went into business marketing and sales and had to tell you I hated every minute of it. And had an opportunity … I was at a golf outing in [name of town] and came across a principle of [name of town] High School X, and one of the jobs I have been turned down to—down for—was the assistant principal of [name of town] High School ... Well, as fate would have it I got a call a week later from him saying that his AP resigned and if I were really interested he would be interested in talking to me. So, one thing led to another, and I became the AP of [name of town] High School. I was there for three years. Then I became the principal at [name of school] Middle School for three years. Then, the principle of [name of middle school] for 13 years. And then I opened up [name of school] Middle School, which was the old [name of town] High School and was there for seven years ... I also taught at the university level. I taught at [name of university] for almost close to 20 years—both graduate and

> undergraduate. People… In fact, last spring was the last of the first semester I haven't taught in all those years because their enrollment has sharply declined, unfortunately. I think they actually let some of the full-time professors go last year, so things are a little tight. So, yeah … So, I taught everything—first through graduate school. Never taught kindergarten. And I've been an administrator at the [name of school] High School specifically, but this year I subbed at the early childhood, as the director, and I also subbed as assistant principal at an elementary school. So, I've got experience right across the board.

Of all the participants in this study, Randy held the strongest views in favor of the Internet's use in learning and social development. In fact, part of his role as an educator and administrator is to encourage its use. Throughout the interview he continued to provide one analogy after another to demonstrate how the Internet is nothing more than a tool, which may be used by others for something great or something awful. At one point in time Randy was principal at the same middle that Dorothy and Pamela taught.

Sarah

Sarah is currently in her 28th year as an Illinois grade school teacher. With the exception of four years where she taught third grade, the rest were spent teaching second (including now). Her perceptions regarding the Internet are mixed dependent upon the context in which it is used. For instance, she believes that current applications in the classroom may benefit students while social media websites, et cetera outside of the classroom may prove problematic. Regarding students and social media websites she explained,

> I really encourage my parents not to have them go on Facebook or anything until

> they're older. However, I've had backlash to that. You know, parents are like ... I never ... I always say that the parents bring it up. You know? I don't just announce that, but if they say—you know, "This... My little girl and this other little girl are kind of fighting because of something they said on their texting, or their Internet, or whatever they go on to each other," and I always—I often say, "Well, I'm sorry that happened. I would take your daughter off immediately. There is just no reason for her to have a Facebook account at seven years old." They just can't do it correctly yet. You know? But most parents get offended because it's a parental decision. They want their kid to have a Facebook account, that's their decision not mine.

With adults, however, she has a different take on social media. She explained,

> I think as adults some of the social stuff ... Again, just be careful that you're using it correctly—that you're not hurting anyone's feelings or whatever. But I think it's great to be able to go on Facebook and talk to some people that I hadn't talked to since college. I mean, it's fun—it's wonderful! Get recipes, you know? Or if you don't know how to do something. Like the other day I got this garlic press, but I didn't know how to use it. So, you just go and look up how to use a garlic press, and—you know—there were 50 different demonstrations of it.

Sarah's accounts throughout her interview continued to demonstrate how there must be some boundaries and collaboration in place for the Internet to serve as more beneficial than problematic in learning and social development.

Hannah

Hannah, this study's final participant, retired two years ago. She taught first graders

in California for four years before moving to Texas. There she taught first grade for another four years in one district and then transferred to a military base where she taught second grade for her final 22 years. Subjects taught included: Reading, Math, Social Studies, Science, Language Arts, Music, and P.E. Hannah and Samantha were colleagues at the military base in Texas. Aside from teaching a wide range of subjects, Hannah worked with a range of students and families who were military dependent to those who varied from middle to lower-middle class. She explained,

> So, the students that I taught there were military dependent, and in California the school that I taught there was middle, lower-middle class and families that were receiving assistance of some sort. So, that was the demographic that I served there.

Of the classroom teachers participating in this study, her reported experience with the Internet was among the least. As such, her perceptions were positive or negative dependent upon context.

Teacher Experience and Comfort Level

Formal Training and Personal Experience

As indicated by all 14 participants, some formal training makes a significant difference by way of their knowledge and comfort level with the Internet and its subsequent applications. Of the 14 participants, only four had stated that they had not received adequate training through the school, district, community, or otherwise. Although the format and content covered in training differed from participant to participant, there are many similarities worthwhile to note.

Eight of the 14 participants reported at least some minimal amount of training. Brenda and Randy explained how their schools would bring others in to train on very specific, individualized topics. As explained by Brenda,

> I've never touched an iPad in my life, and they're saying, "Okay, we have to teach the kids with these iPads," and I don't even know how to turn it on. So, I played with it for a couple of weeks and realized that I wasn't going to grasp the meat of it quickly. So, I did call … We were able to call our district representative to come in, and it was a 45-minute shot on, "Here, this is how you use an iPad."
>
> But, you know, this just barely touches the surface of what you could do ...

Randy's experience was similar but went on to describe the experience as a compilation of many specific, individual sessions. He stated,

> So, then the course of my tenure has … I guess I've had many trainings on: how do you, what programs are available to kids, how to do searches—you know—how to use YouTube, how to use videos, and also the dangers of the Internet ...

Rather than receive a general training over what the Internet is, how it works, and helpful tips for conducting searches; these participants' trainings were very specific and based on need.

Karen and Hannah described their experiences as containing specific in-house trainings and collaboration with other teachers. Rather than solely rely on anyone outside of the institution to train, these schools had some level of an on-staff information and technology (IT) person. As explained by Karen,

> Okay, I wouldn't say I've had any formal training in terms of like taking a class at any level, but we've had in-house training where we've had our IT person give some demonstrations on the SMART Board and the interactive boards that

> we have in our classroom.

Hannah reported as similar experience as,

> We had a lot of in-services during the summer and throughout the school year. And we had a technology instruct... Well, I don't know how you call it what the exact position was, but it was a teacher who was certified to teach technology... The teachers were required to take Intel at some point, and so that was after school for like three hours at a time like twice a week for a semester, and it was held on campus.

Beyond training that is offered through the school, district, or at educational conferences; Dennis reported receiving additional training through the township. As explained:

> The only training I have for the Internet, I took courses from school that were offered. I took one course through [name of town] and then the rest through school. They kept offering different types of classes.

Dorothy and Lenny reported an additional layer of training, which included attending conferences and short presentations provided by specialists:

> Mostly through conferences or the CEUs/CPDUs that the teachers have to take... Anything that is brought in new, like the SMART Board and everything; that's all done for the teachers... They've brought in people who are specialists, and they take the teachers out of the classroom and have a day with them.

This combination provides a relatively well-rounded training experience, which keeps teachers up to date with the latest information. Lenny explained an even more comprehensive experience with the addition of regular team meetings as:

> I used to go to a lot of conferences ... Our district and school provide these services for us throughout the year. We have weekly meetings with our instructional coach and sometimes district personnel to talk about what's going on. This allows for collaboration with other teachers. We are our own teams, so we have team meetings all the time.

A further layer, which was unique to those teachers from more affluent schools, entailed actually being sent off campus for more intensive training. Samantha described this experience as,

> When I was teaching in a little town south of San Antonio in the 70s and early 80s they sent me to Atlanta, Georgia to IBM for training then and helped them setup a lab on the campus—the elementary campus.

Of important note is that Samantha and Hannah taught at the same affluent military base academy at slightly different times. Although Samantha had this experience, Hannah started at a later time and did not. Both, however, described their training as comprehensive.

The remaining six of the 14 participants stated that they receive no formal Internet training from the school, district, or otherwise and were primarily self-taught. Lisa, Thelma, Robert, Pamela, Minnie, and Sarah described their experiences as follows:

Lisa:

> I think I was self-trained for a long time. And then as things progressed I think mostly I was self-trained until I got to the point that I was one of the tech leaders at the school, and at that point I was getting classes like in how to edit video.

Thelma:

> Everything I've done is learned on my own and from my son. So, nothing formal ... I've never gone to a class number. I've never tried to take a training. Anything! It's all what I've learned as I've gone along.

Robert:

> Everything that I know how to do I've just sort of either been told by family members or kind of hunt-and-peck; that sort of thing ... I really haven't had any formal training on the Internet at all. So, I'm very limited as to what I can do ...

Pamela:

> Now, in the last 10 years my formal technology training has been—formal that is—has been limited basically because aides are, again, considered support staff ... We did we train somewhat on like a scanning technology for testing that the district just put into practice about two years ago, but that's been about it.

Minnie:

> Personal training actually for using the Internet itself, I've had very little. It's all been more or less myself playing around with it. The school librarian has given us sites that we could check out—the recommended sites, but there has been really no formal training on using just the Internet.

Sarah:

> In using the Internet with my classroom. It's really been up to me to figure that out for myself. Basically, the way I've learned how to use the Internet with my classroom is through trial-and-error and through other teachers teaching me. You know, how to bring something up to show the kids ... Or then there was lots of

research on my own—finding websites that go along with the curriculum.

Lisa, Thelma, Robert, Minnie, and Karen all described their self-trainings as a type of "trial-and-error" self-exploratory approach. Pamela's experience was unique in that this teacher primarily taught during the years prior to the utilization of the Internet in the classroom and had an "outside-in" experience as a teacher's aide. As such, any training was more so aimed toward assisting teachers than learning how to teach students.

Teacher Attitudes

Rather than directly ask the participants to gauge their attitudes regarding their perceptions of the impact of the Internet on K-8 learning and social development, this component was assessed as a product of statements made throughout the interview. Attitudes were generally consistent. The majority of participant attitudes (n = 10) were positive, but they cautioned that improper use may result in potentially devastating consequences. Two of the teachers took more of a negative stance while two others were positive. In the first example, Randy utilized metaphor to describe how the Internet's effectiveness or lack thereof is essentially no more than a bi-product of the person using it. As explained:

> I think—you know—in the very early days, obviously we were very fearful of the Internet versus seeing what it could do in the right hands. You know? In the right hands… So, was like the caveman with fire. You know? It could have been a great tool, or in the hands of somebody bad it could have been very disruptive. So, you know… It's a resource, and it's in the hands of a craftsman. And it's determined on how the craftsman uses that tool whether or not it's effective or

> not. The tool is only as effective as the craftsman that's using it.

Minnie provided a similar assessment, stating that the Internet's success or failure is in the hands of the teacher and student:

> Some kids make improvements, some don't, and it depends on the student. Yes, the Internet can provide extra, but there needs to be the teacher to facilitate it ...

Karen acknowledged how one of the Internet's greatest strengths is also one of the most significant areas of caution. With an explosion in the accessibility of information comes a need for boundaries. Karen stated,

> I think it's wonderful and also scary at the same time. Like I said, the accessibility to information and for purpose—you know—giving kids a lot of purpose for what they're learning socially and academically but also it poses a lot of—you know—accessibility to things they are not yet ready to learn and they're not yet ready to talk about ... So, I think if monitored and taught how to use appropriately, I think—yeah—it's a wonderful tool.

Pamela shared a similar sentiment but highlighted the concern that despite the accessibility of a plethora of knowledge, students struggle with its proper utilization due to a lack of critical thinking capacity. As explained,

> I think it's amazing! I mean I use it. I'm on it all the time. And I just … I love the fact that you can look up just about anything. You get a myriad of viewpoints. I think the one main thing that has to be taught, and it's hard to teach this, is the critical thinking because I think … And again, searching up various resources and comparing data … Because you just can't go on an Internet site and check out one or two pieces of information and say this is the way it is. That's very dangerous.

Sarah had a similar take but expressed concern with students using the Internet more as a toy than a learning medium. She stated,

> So, I think that the Internet and the various websites they can go to are phenomenal and can really help the kids learn more than without it, but you just have to be careful as a teacher that they are using it to learn and not just as a toy. You have to be a little careful.

Lisa and Lenny saw many advantages to the Internet but were also very concerned with those individuals who use it as a tool to hurt other people. As explained by Lisa:

> Oh, I think it's like anything … There's very, very good from the Internet; and there's very, very bad. And it's like anything else; you know. Evil exists in this world, and if evil can find a tool, it'll use it.

Further, connecting with others online may also lead to criminal activity. Lenny explained this perception as,

> I think that to me there's some real good things because it brings the world closer to each other ... We share knowledge, I think that is real good. But then again some young people using it for other reasons to get in touch with people, which can lead to criminal activities. So, there's good and bad things about the Internet.

Hannah's perception was in line with those whose were positive, although there was not the urgency to proceed with caution:

> Well, I definitely had started to use more technology and those things online, but ... And I think it might have just made me a better teacher and just had more tools. And I was able to engage the kids a bit more ... And in one sense be able to

track their learning ...

Although Lisa, Lenny, Pamela, Minnie, Randy, Sarah, and Hannah had varied levels of formal training from minimal to comprehensive and in some cases were self-trained, the critical factor is that each teacher continued to work and grow with the Internet.

Robert and Brenda each provided negative perceptions of the Internet. The similar factor for both participants was that beyond receiving minimal to no training neither one made an effort to familiarize themselves with the Internet. Robert's attitude was one in which the Internet was seen as a burden and utilized minimally. As explained,

> Like I said, I kept it to a minimum whatever I absolutely I had to do. I did it right before it was due. I didn't keep up with grades on the computer, which was dumped all at the last minute so the grades could be computed on the computer and then generated to a report of some type. But I was always the last one.

Brenda's perception was in line with believing that the Internet is extremely dangerous, especially for this age group. As described,

> The Internet is just dangerous out there. There's a lot of different factors, and I just … That's a tough one. It scares me. So, I'll just leave it at that.

It appears in these cases that a lack of training and personal experience leads toward higher levels of discomfort. Although both of these teachers have ha some experience with the Internet, it was not enough to push them toward seeing all of the positives and adapting its applications to work within the classroom.

To summarize, the teachers who were more open to experiencing the Internet were also the ones who held more favorable attitudes. In the case of this dissertation the favorable attitudes included 12 of the 14 total participants. Concerns held by the mostly

positive participants did match some of the same shared by those with negative attitudes.

Age

As teachers who have taught K-8 for a total of 20 or more years, these participants underwent their studies and began teaching during a time where the Internet was not prevalent. As such, several participants mentioned age as a factor. Some of the participants expressed beliefs that different age groups experience the Internet differently. Lisa described this divide quite well in the statement:

> So, I think older people like me... I saw divide very, very much in its two categories: those that were willing to work with it, and those that were absolutely against it and would not use the computer room or computer lab at all. And I thought that that was inappropriate.

As demonstrated in the following statements, those teachers on the accepting end of the spectrum have learned to capitalize on technology's offerings and work with their students to make the most of them. Those on the resistant end of this divide, however, allow personal factors to interfere with their use of this technology—ultimately negatively impacting the learning experiences of their students.

Samantha and Dennis are on the accepting end of the spectrum. Although they each described how some students are more knowledgeable about technology than they are, simply because they have been raised with it, they came to embrace it as a collaborative learning experience. As described by Samantha,

> It’s like a hoot for me because my students actually knew a lot more about all of it than I did, and if I had a question as to training I would just ask one of my

> students to help me ...

Dennis also relied on the assistance of students but acknowledged the personal difficulties, due to the generational gap. As explained,

> It's been difficult, for me personally. Your [Matt, the researcher] generation has grown up with the computer and those type of things. So, a lot of things come very easily to you. My generation—you know—all of a sudden here we have computers, and we are expected to use them. So, you know, they had to provide and spend a lot of money on training ... And I will be honest that my students have helped me a lot in learning about how to use a computer.

This statement serves as an example of how students may help teach their teachers—further enhancing collaboration and experiential learning in the classroom.

Although there is much for teachers to learn from their students, they may also learn from one another. Karen described how some of the elder teachers were initially fearful to embrace the Internet, believing that they might compromise the class through their misuse. After collaborating with the younger teachers, however, they came to grow more confident and comfortable. As explained by Karen,

> Some of my older teachers were really having a hard time. They were afraid to just click on anything. So, I've been using my younger teacher to almost turnkey what she knows to educate the other teachers and do some little turnkey mini lessons ... I find that once they stop getting worried that they're going to hit the wrong thing, you know, and that the machine's not going to explode that it's more comfortable.

There are also cases where teachers are completely unwilling to adapt. Robert, who reported having the least experience with the Internet, explained how the coming and going of trends over the years has led toward apathy:

> As new things came around I said, “You know, these are all things that we probably did 40 or 50 years ago, and it's all going to come back again.” So, I'm just gonna keep doing what I'm doing, and—you know—I'm not going to go with that trend, and I’m not going to go with that trend. I'm going to go right down the middle and not be swayed back and forth because eventually everything is going to come back to the middle anyway.

Although the participant's age contributed toward living through more trend cycles, it appears that relying too much on these past trends, rather than age itself, impacted willingness to utilize the Internet.

Thelma provided an account whereby younger teachers were more uncomfortable using the Internet than the older ones. As described,

> I was just advanced. I am doing Excel and things like that. And I’m like, “It’s old now.” So, she still writes everything out on paper, and she’s 15 years younger than me!

This example further calls into question, then, whether age range itself is a determinant of one's willingness to embrace modern technology. It is a clear contradiction to the idea that age itself is the core variable. Randy, who has been in education for 33 years, had the following to say:

> Here’s a tool that kids want to use, and we’re—because of our age, because of whatever it is—we’re fearful of that tool? Get a grip! You know? Learn

> how to use it! Learn how to make it an advantage. You know, I often say that some people, "I would have hated to have been around when they created the watch. You guys would still be using the sundial." You know? It's like, "Come on!"

Although it appears that Randy proposes age as a primary component of teacher reluctance, this is not the case. The message is that an unwilling attitude, not age itself, hinders progress. Any teacher at any age may equally utilize it.

Boundaries

In the previous section, ten statements of teachers perceiving the Internet as positive but voicing concerns were provided. The general theme throughout the interviews was that boundaries are needed to maximize the benefits of Internet use on learning and social development while minimizing the negatives. This section will explore boundaries in further detail.

Need for Boundaries

If misused, the Internet may prove threatening toward learning and social development. Further, it may also compromise other domains of wellness. Participants in this study described a variety of concerns that warrant consideration.

Dorothy describes an account of how cell phone misuse may serve as a distraction while attempting to provide instruction:

> When I left three years ago the kids were allowed to, as soon as school got out, get on their phones as much as they wanted to, but you had that kid who always had to keep it underneath the desk because you can see the glow—you know—

> glowing under the book bag. Like I'm not going to see that glow coming from your book bag.

Here the student crosses a boundary by both not paying attention to the teacher and creating a distraction. Learning and instruction both become compromised. Thus, that student and others are negatively impacted consequent to them and the teacher being distracted.

Boundaries are not always about preventing students from intentionally doing the wrong thing; in fact, they may also assist in guiding those students who are attempting to do the right thing. Pamela commented,

> Unless kids know all the ramifications of the Internet and social media they can do an innocent thing in their mind, but it can be very … The types of consequences could be far-reaching.

In some cases the students may inadvertently cross boundaries without intending to do so. For instance, Lisa shared an account of students attempting to access an appropriate website but being directed elsewhere:

> For example, when we first started on the Internet if you typed "weather" wrong. They typed it in, like if I go to weather.com because they were going to look up something … If you type in W-H-E-T-H-E-R it was a porn site, and they didn't have the firewalls, you know.

Here the students attempted to follow the teacher's instructions but were directed to a porn website, which contains explicit material that may adversely impact their Internet experience. Dennis expressed concern regarding how curious students might even stumble upon these sites:

> The pornography is rampant. Kids can find anything they want. So, I think that once they realize the importance of the tool and how to generate its importance and its usage… I think that we're heading for trouble. Kids know too much about too many things at such an early age. Kids are missing childhood.

This concern is particularly noteworthy, as seeing nude photos and learning about sex at an early age may ultimately lead toward earlier sexual experiences, resulting in teen pregnancy, sexual assault, et cetera.

Thelma's account is a general statement of how unaware students are learning inappropriate information, believing whatever they see without scrutiny, and posting self-incriminating information. As described,

> Yeah, sometimes they are learning a little too much. They believe anything on the Internet. They're also … I think it's a very dangerous place for them to be sometimes. They post things they regret posting. They read things that they probably shouldn't be reading, for sure.

Thelma describes the Internet as "a very dangerous place for them to be sometimes" because posting self-incriminating information, learning inappropriate information, and believing everything as true are all ways in which students may impose self-harm.

Robert, Samantha, Karen, and Randy piggyback off Thelma's statement by explaining how now public information extends well beyond the classroom. Robert stated:

> A lot of these kids are getting into trouble with all the social media stuff. They're putting stuff out there they don't want anybody to see 10 years from now, but guess what … Once you put it on the computer, it's out in cyberspace and

> anybody who could figure out a way to go capture it is going to capture it.

Samantha's take on placing personal information online is that some things are simply better left unsaid:

> And so, but society in general—you know—almost thinks too much about everything that's going on. Some things are just best left unsaid, and we don't practice that. Everyone doesn't need to know everything you think.

Beyond concerns that students may be posting incriminating information about themselves, Karen elaborated upon how information posted about others may prove damaging as public knowledge:

> I just keep coming up with the word "accessibility" because it's so easy to write something about somebody and then it gets back to them, but not just them—it gets back to everybody. So, having the kids understand the impact of how what you put out there goes to everybody.

Randy continues with the "accessible" theme by explaining,

> So, it's quicker, and it obviously has a much wider and broader audience. So, the social development … It's much more readily available to them. It's much more accessible to them. It's much more devastating to them I think than it was back in the day prior because of the number of people it can hit so quickly.

Once this information becomes public knowledge, anyone may use it to act against the subject of the information. The consequences may range from minimal to extensive, receive the attention by few to many, and have short- or long-lasting implications.

Lisa went on to provide a more detailed example of how other students may utilize the Internet to purposefully engage in anti-social activities. As explained,

> When I taught honors the game was always to see if they could steal a test or cheat ... So, on the Internet I think the same thing happens, only the dangers are far worse ... Much larger scale when you decide to post on the high school that a girl has slept with guys or that a guy is really dressing like a girl in the locker room or some like that ... The whole thing just came up just recently. A kid died.

In these examples a tool that may be used to send rapid, mass communications serves as a medium to deploy an attack on oneself or a fellow student. As more people become aware, more people may become involved.

As these actions continue they enact a more significant influence over the student—impacting thoughts and behaviors. If the influence is particularly negative, then the student progress in learning and social development may become negatively impacted. Dorothy described how students sometimes mimic the anti-social behavior they witness online:

> In some cases, like some of things going on in the media that maybe we shouldn't even know about because it gets mimicked, like the stuff going on in schools—the shootings, the knives, and stuff. And because it's on the Internet, it's everywhere.

As such, the general consensus is that boundaries must be developed and implemented to prevent and intervene such issues.

Bad Information

Unfortunately, not every piece of information posted online is accurate. Because there is no authority that checks for and insists upon accurate information being posted, bad information is posted online quite often. When bad information is read, there is always a chance that the individual will accept it as true, work with it, and perhaps even

hold onto the belief. As Thelma stated in the previous section, some students "believe anything on the Internet." Minnie and Lisa held the same sentiment. As explained by Minnie,

> You know that lovely commercial, you know, if it's on the Internet it must be right? And I think that that is an issue at times, you know, especially if the kids are given research. You know, they just blatantly believe what's on the Internet.

Lisa explained further,

> There's this false perception that what is on the Internet is true, it has expanded the amount of misinformation in our society I think by leaps and bounds. I really do, and that's really sad ... A good example is Wikipedia. I would tell the young teachers, "Yeah, Wikipedia is great, but check it out beforehand." And they wouldn't believe me.

Although Wikipedia may prove helpful in a variety of situations, it is an open online forum where anybody may post anything. Assuming that everything posted there is accurate is foolhardy. Lisa continued on to state,

> And so this one young teacher was going to look up Sinclair Lewis because he was teaching at that time and okay … And I don't know if I should say this on your interview, but somebody for some reason had a sniff with Sinclair Lewis and redone the whole biography and said he slept with his mother and—you know—all kinds of things.

In this case many of the students who would have reviewed the information likely would have believed it because the teacher reinforced it as accurate. Therefore, it is critical that students and teachers alike are critical of online resources, especially with open forums

like Wikipedia.

There are also cases where information might not necessarily be inaccurate but intentionally only provides one side of a story as to skew perception. Throughout time TV news programs, newspapers, magazines, and other media have been suspect of doing this. Again, because there is no accuracy measure for posting online, one-sided information is prevalent across the World Wide Web. Pamela describes this in the statement,

> Okay, well again, if you're not given the big picture, the effects of being given tainted information or one-sided information are profound. As far as effect on the world and how people perceive what's going on with the individuals that area. So, the influence of social media is very important, but again it can be abused depending upon what—you know—vantage point is being shown or propagated through social media.

On the other end of the spectrum, however, having both sides of the story may help inform a good decision. Brenda explained,

> A little bit of knowledge, in my opinion, is dangerous; but if you have the whole picture, if you get the whole scheme of it, then it's a good thing. And now we're able to do that as opposed to where before we got the headline, and whatever the media wanted to give to us.

In sum, if students and teachers are knowledgeable and willing to explore good information from both sides, then instances of believing inaccurate information are minimized.

Teacher Influence

Teachers constantly influence students as they instruct, guide, and model information and behaviors. Consequently, teachers have a responsibility to ensure that the classroom and school affords students every opportunity to learn and develop properly. Karen suggested that the teachers must help students develop the ability to search the Internet independently. As stated,

> I think, again, there's so much accessibility to all sorts of information, and sometimes too much. We're teaching kids how to monitor themselves and asking questions, different questions than we used to ask.

That is, teachers must remain cognizant of what their students are doing on the Internet and continue to ask the questions that help gauge whether the students are engaging in appropriate use. Karen continued,

> You might have to adjust some of your lessons but address topics where you might have had to talk to kids about what happened on the playground at recess time. Then, I might have to talk to kids about what happened last night via texting. And that effects their time spent in the classroom.

Lisa takes this beyond asking questions to actually incorporating instruction into the lesson plan:

> So, overall I think the Internet really raised the quality of education provided the teacher was on top of it, had the lesson plan. "You must do this." If they didn't do that then the kids just went wherever they went, but if the teacher was on top of it then the kids were focused and they could do a lot more.

According to Lisa, intentional guidance appears to keep students focused. If this focus increases productivity, as suggested, it may even increase the amount of information students learn.

With instruction it is important to instruct in a way that students still find the Internet exciting and remain motivated. Success with instruction, however, is dependent upon the teacher establishing and maintaining rapport with the students. Dennis shared the following concern:

> The one thing that does bother me is that the Internet is taking away any type of interpersonal relationships with kids and teachers. They are isolated many times looking things up, whereas libraries used to be where kids would go—you know—and gather and talk with friends and librarians, and nowadays libraries are becoming less and less of an area for kids to use.

If these opportunities for interpersonal relationships are fewer and further between, then teachers must adopt a style that allows them to exact their influence. Samantha explained the importance of not becoming tyrannical in the classroom:

> So, part of our job as educators is to keep them moving in the right direction. You can't just turn them loose and let him go totally on their own like they do at home now. It's something else, but when they're with me it's—kind of monitor it without, you know, being a slave driver.

Consequently, being a "slave driver," or tyrannical, may inspire a loss of interest.

In sum, the mission of helping students learn and grow embodies the teacher's role. Here in the Internet Age this goes beyond textbooks, assignments, tests, and the

playground but to how they interact with and respond to the Internet. The participants in this study have demonstrated the teacher's influence as significant toward development.

Parental Influence

Though the teachers' influence does extend beyond the classroom, they are not present 24/7. In fact, majority of the students' hours are spent outside of the school. As such, the impact of parental influence is significant. Karen explained how there are two primary categories in which parents may help monitor the students:

> Well, monitoring a couple things: monitoring how much time they're spending and monitoring what they're spending it on. You know, you definitely have to be on top of that.

In the case of those parents who monitor their children in these areas, Dorothy believes good things may come of the Internet. For those who do not, however, their children may struggle. As explained,

> I think as a parent, if someone who limits what these kids are doing on a computer, then it's good for them. But if there are no limitations, then there is problems ... It's just like I think the violence that's going on in this deeper trend social media. You know, it's coming from the games these kids are playing. It's coming from the TV the parents allow them to watch or movies they allow them to go to.

Each of these areas described by Dorothy are ones that parents may limit, should they desire.

Many educators in this study were concerned, though, that many parents are not

doing their part. Beliefs around the cause of this phenomena differed, but all of the outcomes were similar. Minnie believes that some parents are not doing their part because of a difference in overall point-of-view:

> Education used to be: a teacher knew what they were doing, and the teacher was an authority, and the kids need to be paying closer attention to teachers. So, the fall for a kid not doing well from a parent's point-of-view, you know, was the kid: "What are you doing wrong?" Now, it's been turned to look at the teacher and say, "What are you doing wrong?"

The point-of-view that everything depends on the teacher weakens the amount of positive reinforcement provided within the microsystem. If parents are not doing their part, then over half of the student's experience is in an unsupportive environment. Brenda contends that some parents have simply become reliant on the Internet acting as an electronic babysitter:

> One of the things that has changed, that I've seen change more recently is—with the introduction of technology accessible to the general public—parents are using a lot more electronic babysitters.

Under each mentality, the parents did not do their part to contribute as positive influences.

Beyond explain where parents fail to properly monitor their children, Samantha and Robert went on to describe possible consequences of such negligence. According to Samantha:

> I can see that child that's in there and does nothing but sit on the computer. If we allow them to do that and they're allowed to do that at home, they have zero

> social skills with people, and they can't—they don't—they're not able to communicate with people like they need to be able to.

That is, failure to encourage regular face to face interactions may ultimately lead toward communication difficulties and social dysfunction. Robert continues onward to describe how such failures may even contribute toward physical complications:

> The kids are on the computer as much as they want to the detriment of their own health. They're not eating properly. They are not getting enough sleep... So, at some point in time I think there has to be a limit as to how much time the kids are allowed to stay on the Internet …

In this case the consequences come full cycle. Bad nutrition and a lack of sleep make it difficult to concentrate in the classroom. Children may continually find themselves hungry, nauseous, weak, tired, inattentive, and so on. Difficulties concentrating in the classroom may compromise learning and social development.

Parent-Teacher Influence

As demonstrated in the two previous sections, the teacher and parental influence both weigh significantly over how the Internet is experienced. Half of the teachers in this study specifically commented on this relationship—indicating that a collaborative combination leads towards optimal results while a disjointed one fosters impairment. Karen believes that this relationship begins with the teachers. As described,

> I think as long as the adults in these kids lives monitor what's going on and really teach how to use the Internet appropriately, I think it's going to be a great tool on all different levels from the teacher planning, collaborating—you know—making sure they're addressing all their student needs, assessing, collecting data, to the

> kids being able to have access to information, tutorials ...

Taking the idea that collaboration begins with the teachers even further, Pamela explained how some parents are not knowledgeable of contemporary issues and ramifications consequent of the Internet:

> Because I think that parents are probably not even aware of all the issues and all the ramifications. And so I think that the school … Schools need to be, and kids need to be subjected to that information. And it needs to be … How should I say? The consequences of misusing social media really need to be stressed to the kids what the consequences are because they can be far-reaching and detrimental for the rest of their lives.

By making an effort to educate parents on the Internet's impact, there is an increased likelihood that teachers and parents may work together to positively influence the students.

This collaboration may help parents and teachers prevent small issues from becoming full-blown complications. Samantha provided the example:

> It's an individual thing, and a lot of it comes to that communication between teachers, parents, and child. And when you see a child that's just getting so isolated because of their work and focus only on the computer, that's when you need the help of parents and enlist them.

Here, open communication might save the student from social isolation and further complications. In another example, Dennis explains how collaboration may be realized through censorship efforts. If teachers and parents are on the same page, then proper use is positively influenced throughout the microsystem. Failure, though, leads to imbalance.

According to Dennis:

> Again, I think it all depends upon how it's used, and I think it depends upon the censorship of parents and the censorship of schools. If it's used correctly, then the Internet's a great device, but so many kids will abuse it. And I know that there are blocks at school, but there are not a lot of blocks at home.

A combination of blocks at home and school, once again, reinforces a positive environment for appropriate Internet exploration.

Sometimes students may use the Internet to place a wedge between the teacher-parent working alliance. Dorothy described a situation in which students immediately text their parents, while in school, about something their teacher did to upset them:

> And, you know, in between classes kids are texting their parents that they're pissed at a teacher. You know? And text.. I mean, I can't even tell you how this group of kids … Their parents going, "I got a text today from Joe—you know—during third-period." It's like, "Really? How is that a social function?"

When this happens it becomes difficult for the teacher and parent to collaborate. Frustration and disinterest may result if problems continue and go unresolved. Therefore, Dorothy discourages such behavior.

On another positive note, the Internet allows teachers and parents to interact virtually. Minnie and Randy shared common sentiments. As explained by Minnie,

> But it does create a great dialogue between parents and the teacher as well as being able to logon and find information within the school website. And parents can now look at their kids' grades at any given time. So, those are some pluses.

Knowing more about the school while having access to the students' grades allows parents to keep atop their children. If grades are suffering due to too much time spent online or using the Internet inappropriately, then some changes might prove necessary. Randy continued with this concept by stating,

> Now it's great also for communication to the families. So, with the use of technology now we're able to get to parents 24/7 with immediate data ... Well, now it's, you know, actual time they can click on and see if you turned in your homework assignment today.

Beyond having access to the information, the fact that it is "24/7 with immediate data" allows parents to adjust their approaches specific to their children's needs. The implications for this information may prove a major leap forward in terms of parents' abilities to assist in their child's education and healthy development.

Social Factors

Communicating Through the Internet

With the Internet have come a variety of new ways in which people may communicate. Not only has this communication connected more people, it has also sped it up substantially. Lisa recalled how students used to hand-write pen pal letters:

> The Internet allowed you—allowed schools to interconnect. You know? Like you used to have to write pen pal letters … So, you could setup like with kids studying the same… It was kind of cool, too.

Now rather than spend as long writing and waiting days or weeks for a response, the response is more instantaneous—allowing the students to engage in deeper, more meaningful conversations. Samantha perceives this phenomenon as a lack of distance

amongst people:

> They Skype, and it's like there is nothing—no distance anymore between people. They're … They are very much connected from where we were before.

Through Skype, people may video chat or conference with others who have the program on their computers, smart phones, tablets, et cetera. Even better, the cost is free. Because of this, pen pals may extend beyond emails to face-to-face interactions through cyberspace.

Pamela took a positive take on communicating through the Internet, describing multiple positive outcomes:

> But just being able to keep up and acquaint yourself with old friends or make new friends… Just kind of gather perspectives and information from people. So it's … I mean, again, I just think that it enlarges one's world so you do not … People I think feel less isolated, and/or they have the ability to feel less isolated with the Internet and with social media. Again, if it's used appropriately …

Socially, people do have the opportunity to meet new individuals while keeping in touch with old ones. Due to accessibility, regular interactions with these individuals have become more convenient and practical. Further, those who struggle to interact in live, face-to-face situations might function better online. Because people harbor a variety of reasons they struggle to socialize with others, sometimes the situation is much different online.

Traditional Face-to-Face Communication

Eight of the participants in this study expressed concern that the Internet has compromised students' abilities to interact face-to-face at a functional level. Participants

who held positive attitudes about the Internet when utilized properly provided seven of the following eight statements (Robert is the exception). The interview questions asked in this study did not provide any positive perception in terms of Internet use leading toward improved face-to-face communication.

Because face-to-face interactions have been the traditional standard (aside from traditional letter writing), many of its components (e.g., nonverbal cues, emotions, etc.) are viewed as the fundamentals of communication. Robert described how the Internet Age has compromised these fundamentals through a loss of the emotional and reactionary components:

> You don't really hear the emotion or see the reaction of a person when you ask them something. So, I think the kids are missing out in part of their social development, but maybe it's more than offset by the knowledge that they learn off the Internet, the speed with everything.

In other words, if students do not have continued practice observing and taking note of people's emotional and non-verbal behavioral reactions, they may not improve to the point of efficiency. Thus, they miss "out in part of their social development." An important point made, however, is that perhaps "it's more than offset by the knowledge that they learn off the Internet..." Robert went on to elaborate:

> Well, as long as they stay on the Internet they can be as social as they want, but once they get to that face-to-face they are not very good at reading body language, facial clues. Sometimes the social interaction is very awkward at times when they're face-to-face, but on the Internet—boy—they can do this and that because they got a mask on. It's like going to a masquerade party. You can behave

> a little bit differently than you would if you didn't have a mask on.

This perception appears to suggest that online communication, although different than face-to-face, may require different components. As such, someone who communicates better online than in person may still function as necessary. Having the electronic medium as a barrier, though, does allow for students to act differently than they might in person—for the better or worse.

Brenda, Samantha, and Dorothy suggested that the Internet has led toward a preference for indirect communication, thus compromising traditional skillsets. Brenda discussed how oral language has suffered consequent to students being more entertained through electronic devices than by one another. As explained:

> There's not as much interactive development with other children where they're talking with other children or talking with adults and those kind of things. They are self-entertained through the electronic device. So, oral language development, I think, has suffered as a result of that.

Samantha elaborated on this concept by suggesting that the students may not actually even care enough to put forth the necessary efforts that direct communication requires:

> The problem is they are engaged into machines and not always trying—tuned into people—to the real people involved. They're very focused on attending to a screen, and they sometimes need to be taught how to listen and interact with a human being.

As more students become unwilling to put forth the effort to communicate face-to-face, teachers are tasked with the additional work of motivating the students to care. This may

prove increasing difficult, though. Dorothy demonstrated further how society is steering toward a point where people can realistically function without face-to-face communication. As explained,

> I think we're going to have a society that doesn't know how to communicate verbally. They won't have to. They could text and email, and they prefer to do that because they prefer not to talk to somebody face-to-face. There are some kids who don't even know how to talk face-to-face. They don't know that eye contact is a major thing, and I think it's going to have a big social impact eventually.

Although the statement that society may ultimately not "know how to communicate verbally" may be an exaggeration, this has become a general concern by some. Hannah also acknowledged a perception that students are losing the ability to speak to one another:

> Again, I just feel like they've become more and more introverted. They don't know how to just talk to each other anymore.

These statements may call into question, then, whether communication has suffered as a result of the Internet or if it has just shifted to a new context. For instance, if someone learns to master online communication and can create relationships as well as anyone else could face-to-face, then the concept of introversion might require further consideration.

Thelma, Lenny, and Dennis noted how language utilized online has transferred into the classroom and real life interactions. Thelma shared how students have grown accustomed to incorporating online lingo into their everyday conversation:

> They don't talk to each other. And how they text and send letters, Facebook messages, to each other is how they write to me now. I'm a writing teacher. If I

> see the letter “u” way too much. So, things like that … And “r u” with those two letters. So, socially I think it’s making them much less social. They’re much more introverted. They can text each other and be 5 feet away from each other. So, I think it has impacted them negatively more than positively socially.

Lenny shared a similar sentiment in the statement:

> Even when they to talk to each other sometimes they tend to act like they’re talking to somebody online. You don’t have that, like a lot of time, those face-to-face interactions. I'm not sure they know how to pick up on body language because they're so used to not seeing body language by, you know, collaborating on the computer. So, I think it takes away some of their social skills by using the Internet so much.

With online communication becoming commonplace in everyday language and writing, Dennis added to Thelma and Lenny's concerns by making note of how writing and test scores have gone down:

> I think that more and more kids are—especially with English—kids aren’t writing … They don’t know how to write anymore because everything is used—you know—with symbols on like texting on the computer, and so forth, and … So, kids—and it has been proven in their tests—that kids don’t know how to write a sentence, how to write good paragraphs.

Although it is typical for students, and people in general, to vary their communication dependent upon the context and their immediate environment, Dennis's example demonstrates how the line separating online language and scholarly writing has been

blurred. The general theme of these participants' statements, then, seems to indicate the need for some balance whereby students may function as necessary in both traditional face-to-face settings as well as online while maintaining good grades.

Risk Factors

With students having instant accessibility to chat with whomever they want online (if no boundaries are set), there are concerns that the individuals and groups they speak with might place them at risk. Dorothy identified sex texting as one of these risks:

> I think there's some bad things going on like in a lot of the schools with the sex texting and that type of thing that's going on right now, and its right real hard to catch.

Again, such conversations may lead toward earlier sexual experiences and the consequences that come along with it. Further, sex texting on school grounds may lead toward higher instances of students missing class to engage in sexual activity.

Lisa expressed concern with students becoming involved in high-risk social groups online. For instance, there are groups online where students discuss cutting themselves and the emotions involved:

> So, like the example that I gave you of cutting … A lot of people think that's a personal choice. There are a lot of groups who cut together. So, now they can talk about it on Facebook with one another. That's not good. This is not a good thing.

Although Lisa's statement about cutting being a personal choice or not is debatable, the reality is that exposing students to a group like this could increase incidents of cutting and potentially lead toward more suicides when inexperienced cutters take the action too far.

The Internet is a resource packed with information built by and shared amongst people. It is through this exchange that people learn. Some exchanges of information, though, compromise the integrity of learning. As explained by Minnie:

> It's definitely changed the way kids do things including to the point of a new way to cheat. Like plagiarism … I know that the kids—I think it was it was Instagram—they were doing their homework for people's assignments through Instagram and whatever it is taking pictures, so … And sending homework to people that way.

Although students have always found ways to cheat, the Internet has given rise to newer, more advanced strategies. To combat this, many schools now utilize programs such as TurnItIn and others to minimize these offenses.

Cyberbullying

The issue of cyberbullying is one that has grown rapidly and negatively affects numerous students worldwide. The potentially devastating consequences may range anywhere from slight irritation to suicide. What makes this form of harassment particularly disconcerting is that finding an escape is particularly challenging for many victims. In the words of Randy,

> Socially, emotionally it's just like anything else. They don't realize the potential of damnation with improper use of it—either as a person receiving it or giving it. You know, they think it's a joke. They think it's funny; it's not all that serious. Then, they realize how serious it is ... In the wrong hands it can be very devastating.

As such, it is vital that students become familiar with how devastating the consequences

may become before they begin harming one another.

Minnie and Sarah described how social media websites have led toward an increase in cyberbullying. Comments posted online may ultimately be brought into the classroom, making an at-home issue an in-school issue. As described by Minnie,

> It also causes some problems, like with bullying, that—you know—could be a huge issue in that respect. You know … Bullying over Facebook, bullying over other social media … You're hearing more and more about that, and there's been issues within that school.

These issues, however, appear to be starting at younger and younger ages. Sarah described how cyberbullying may start as young as second or third grade when children begin saying mean things to one another:

> And the first thing I think of would be the Facebook and Instagram and things like that ... Now I'm speaking as a second and third grade teacher—these children are too young, and they should not be doing that because they'll say things ... You always write things that you cannot say. So, they might write things like, "You're stupid!"

With cyberbullying occurring at such young ages, best practice might entail preventative efforts that inform students on the harms of such behaviors as young as kindergarten. If children are aware of how they might hurt other children online, there is a chance that they will think twice before posting mean comments like, "You're stupid!"

Although social media sites may lead toward cases of cyberbullying, they may also assist teachers in preventing fights and other bullying behaviors before they occur. Dorothy explained,

> We had an incident where a kid, you know ... There was a group that was going to beat up somebody. They were doing it over the media, and that's how they got caught. So, you know, the teacher was looking over the back of the kid, could read, the kid got caught before he could decide to do any harm.

By monitoring social media, teachers (and parents alike) may intervene as necessary. Though the example provided by Dorothy was more so incidental than the teacher proactively seeking information, a strategic plan around this concern may facilitate improvements.

The Evolving Classroom

One consistent theme across all 14 participant responses was that of change. Although the teachers' veteran experiences varied from 20-49 years, each one was able to note some significant changes having occurred throughout their experience. This section will highlight some of these key changes along with their implications and possible solutions.

The Traditional Classroom

Throughout time, classrooms have adjusted with available technology. For instance, centuries ago schools were a single room building that read by candlelight on cloudy days. Today, some classrooms have multiple high-definition (HD) televisions, BluRay players, iPads, SMART Boards, and the list continues. Somewhere between these points is a time where the participants witnessed rapid change. With that change came adaptation. Samantha, Minnie, Brenda, and Sarah each provided observations on how classroom technology itself has progress through the last 20 or more years.

With 49 years experience, the most of any teacher in this study, Samantha was

able to note many changes:

> I started teaching in 1965, and you can imagine what I have seen change ... You had to learn to operate that overhead projector, and you had to know how to operate that filmstrip projector, and that 8mm projector ... And you can get a tape-recorder, and you could record lessons, and you could put tunes on little headphones from the tape-player, and they could—you could—have those little kiddos working over here ... When we finally started launching rockets into outer space we would all share this one TV and watch the, you know, the splashdown or the blastoff or whatever that kind of thing.

Samantha recalls adapting to incorporate the new technology in the classroom as it came about. In this experience the technology went from still images to beyond seeing rockets launched into outer space. Minnie, who started 22 years ago, shared a similar sentiment:

> When I first started I don't think we had a single computer in the building. And everything—like your grades would be averaged, you know—you would do all that by hand. We used the mimeograph purple lovely dittos, but we then got a single computer for the building for quite some time. Oh, I take that back. We had the DOS computers where all you could do was type, but we didn't have Internet at all. And then we got the one computer with dial-up Internet, and slowly we got a lab.

Although Minnie started 22 years ago and did not have computers in the classroom, Sarah, who started teaching 28 years ago, did have computers but no Internet:

> So, it used to be where we had computers, but we didn't have the Internet, though, for a long time. So, you just had to buy your programs, you know, and stick them

> in there for the kids. So, the Internet is much easier where you could just, you know, have them go to a website and use it.

Minnie and Sarah demonstrate how, although there was a 6-year gap between when each teacher started, availability of resources allowed for one teacher to start integrating technology into the classroom much earlier. Brenda started 23 years ago and shared a similar experience to Minnie:

> When I first started teaching we didn't have computers in the classroom, and like I said, there was a lot of time spent looking for images and looking for information to present to children. And, you know, I'd like to think that it was the best it could be at that time without those resources ... One of the things that's really beneficial, whether you're doing small-group or large-group, you don't have to rely on, "Can everybody see the book?" when you're passing the book around. You have an iPad, and you know, the kids could just see on the iPad very quick and easy and/or you could just use the overhead projector.

Although Minnie also had a later start than Sarah, the classroom eventually progressed to the point of students having iPads. Beyond the statements provided by Samantha, Minnie, Brenda, and Sarah; all of the participants experienced rapidly changing technology in a very short period of time.

Student Attitudes

With changes in technology have come changes in student attitudes. The participants in this study provided mixed statements. Some students seem to utilize the Internet as a tool to assist their education while others use it as a means of doing all the work. For those participants concerned that students' attitudes have changed for the

worse, the principle of motivation serves as an underlying factor. According to Brenda,

> If it takes effort to do work on their part, it takes a lot more encouragement; whereas, if you throw something electronic in front of them, they're entertained and they're engaged. So, that's changed.

Dorothy and Samantha articulated how the Internet removes some of this work, allowing students to get by without necessarily doing the work on their own. According to Dorothy,

> One of the things I see is that kids don't feel the need to know to spell because there's spell check. There is no more cursive writing ... Everything is electronic, so cursive writing is not taught anymore in elementary schools. So, there's a lot of things … In language arts you learned subject-verb … You learn through your writing supposedly as to what those are and how that subject-verb agreement. And all you have to do is watch these people talk and realize it's not working to well.

If computer technology and the Internet does the work for students, then it appears that there is little motivation to actually do the work. Samantha articulated this further:

> We had this discussion the other day at lunch. Because I am one of the older teachers we were talking, and they were talking about the children not memorizing their—for instance—just basic assets that you need to know. Your multiplication tables … You need to know all of that. And then I said you know what I'm seeing is that children have all this at their fingertips now, so they don't think they need to memorize anything ... They need that old-fashioned memorization because got to have in life, and we don't do that anymore because

> it's too easy to just get on the computer and find it.

Again, there is little incentive to memorize facts if in everyday life someone could just pull a smartphone out of the pocket and find any answer on Google. This leads toward apathy in learning, as students no longer need some of the traditional lessons taught in school to help guide them through life. Robert brought this apathy to light even further in commenting:

> So, I'm sure technology has got for some kids is really good. For other kids they'll ... They are still taking shortcuts ... And it's like, "If I pass the test with a C or D, good enough, and we'll just move onto the next one."

If a C or D is enough to pass the class and the lessons being taught do not have any real impact on everyday life, then the incentive to do well might continue to shift even further to those students who are academically competitive rather than encourage the mentality of learning the most one possibly can.

Not all attitudes change for the worse, however. In fact, Thelma, Sarah, Hannah, and Karen described how the Internet has actually improved attitudes and increased motivation to learn. According to Thelma the Internet facilitates engaged learning:

> Definitely more engaged learning. Technology has definitely helped. They love it, so they're more enthusiastic about anything they are doing because … And the best part is they know they're smarter than I am about it. So, they love showing me, "Oh wait! You can do this, or you do that." So, they like to become the teachers, and they are able to do it because I'm not so good at it.

In Thelma's case the students became more engaged learners by having the opportunity to teach the technology they understand so naturally. Process thinking from the teaching end

further enhances comprehension. Videos may also facilitate engagement and deeper understanding. As explained by Sarah,

> Now as far as the Internet goes, that has—that has made them even more excited about learning I would have to say because it just deepens their understanding, like the story on glass blowing. They didn't even know ... I'm halfway through the story with them, and I thought, "I bet they don't know what I'm really talking about." You know? So, and I asked them, and they didn't! And we were able just to solve that problem right away, and then they go excited about it.

Increased engagement may also lead toward empowerment. Hannah shared,

> And the parents were sharing things that, you know, how pleased they were at, you know, the projects that they were working on and everything. So, that was—you know—an example of the power of using the technology and how the kids felt empowered and felt like they were creating something. And at the same time you could see that they were learning something, some skills, as well as knowledge and just enjoying the learning process.

In this case technology allowed the students to express themselves creatively, again using their natural abilities.

Karen described how the Internet may also engage and inspire the creativity of children with disabilities:

> Roald Dahl is a big author that I would use in my third grade class. And so I would go and I would find biographies. I would find books about him so to immerse my kids in learning about him and his writing style first. So, they would get excited about it that way, but now I could do it—you know—using technology

> and the books. So, I don't know if the technology has necessarily enhanced the attitude. Maybe for my—as I'm thinking about it out loud—maybe for my special ed. kids it has more so than my gen. ed. kids because the special ed. kids often—not all the time, but often—are harder to motivate. So, I can use technology as motivators more often.

In this case the Internet reached a special population in a similar fashion to that of any other. Given the challenges that special education teachers face in providing instruction, the Internet may prove a helpful resource.

Developing Student Attention

Beyond attitude is the impact that the Internet has on student attention. Four of the 14 participants made comments specific to attention. The perceptions were mixed. Some believed that it enhanced attention while others found it distracting.

Robert, Hannah, Dorothy, and Brenda each commented on how the Internet has compromised attention. In a general statement, Robert commented:

> But I think it makes it hard on teachers because unless you're out there putting up a circus every day and trying to entertain them, they're bored to tears.

Hannah continued this thought further with the statement,

> I think their attitudes—that they have to be entertained. And to you having to challenge you have to entertain them ... I suppose it's more like using the word engaging. But it's not a given that kids are expected to just learn, unfortunately.

When the students are not entertained they might not engage themselves in the learning process to the extent necessary to absorb the material. Dorothy described this as resulting from the constant need for action:

> One side is that I think because of the Internet because of everything kids have, they expect everything to be action, and you know like they don't think they should have to sit and take notes and pay attention. Everything has to be action figure or, you know, brought to them because that's what they're used to.

Brenda took the idea that students constantly need action even further by describing the instant self-gratification facilitated through the Internet:

> You always have kids who have trouble waiting their turn, but you know, I think the Internet or the Internet games or electronic device games kind of reinforces that, that their turn is right now all the time. So, they don't have to be patient.

So, when children become accustomed to everything being action and occurring right now, they may lose their focus. Further, patience is not reinforced as a necessary trait because it is not necessarily required to succeed at various tasks online.

On the other hand, Samantha and Brenda told cases in which the Internet enhanced attention. Samantha described having to adjust personal teaching style to engage the students further:

> Not too far after reality TV took over that I was on stage all day. If I wanted to get their attention, and I wanted them to remember, I had to find out ways to engage them just like the commercials engage them. You know, that's a myth about a teacher sitting at a desk in front of the classroom. You better be on your feet and with those kids or you're going to not have those kids learning in your classroom ... My trick is to be as interesting as the Internet.

By being "as interesting as the Internet" Samantha was able to facilitate and maintain engagement regardless of what technology was doing outside and inside of the

classroom. This is an extremely important consideration that enhances the idea that the Internet is a tool that is as good or bad at the individual using it. Although Brenda's earlier statement described how the Internet may compromise attention, certain interactive programs may actually enhance it:

> They're able to sustain their attention longer because, like in some of the interactive books, they—you know—after they read or it's been read to them they can—you know—tap on the illustration and it reacts. You know, like if they tap on the flower and bee flies out or something like that. So, the kids have a longer engagement.

That is, if the program includes elements whereby students are actively participating in some type of process, then attention is maintained and learning may occur.

Access to Information

The Internet has significantly increased the accessibility of information. As demonstrated in previous statements, some students have access to better resources than others. Dependent upon socioeconomic status, children may receive a completely different experience. Minnie articulated this point further in the statement,

> Not all kids in our district, or at least in our building, have the ability to have a home computer. I do have kids that will email me questions, or I will have a dialogue with parents via email ... I do know other teachers that have dialogue with the kids and expect homework or responses via the Internet ... Instead of having a textbook, the kids are issued—you know—a notebook, or a tablet, or an iPad, or whatever, and that is on there. I know some teachers are, you know, will do some kind of quizzes online and things like that. So, there is a whole

> opportunity out there whether or not it all depends on the resources of district has, and not all classrooms have it either.

Although there is a dichotomy between the "haves and have-nots" in terms of who does or does not have access to certain technology, the Internet itself affords opportunities to some students who might have otherwise gone without. As explained by Randy,

> The other thing about technology is “the great equalizer ...” It’s a great equalizer of resources, availability, et cetera. Imagine that kid who lived in urban Chicago—you know—west side of Madison Street that—you know—has never taken a field trip anywhere. He’s never seen anything other than the west side of Chicago. With technology you can go on virtual—you know—field trips or whatever. They can at least see and “experience” something outside of that, and they get their imaginations going. They have resources that may have never been available to them because they didn’t have a library in their school let alone the neighborhood.

Lisa expressed the same thought in the statement,

> So, the kids ... whose parents, you know, just did not really take them places they could actually … “Wow! This is really what it looks like in Alaska ..." And that was more powerful than even a movie or anything like that that you would show them.

In this respect, then, it appears that the Internet may bridge the gap somewhat in respect to allowing those students who are typically 'have-nots" to engage in at least some type of virtual experience.

Regardless of socioeconomic status, increased access to information has allowed teachers to answer questions that they might have otherwise been unprepared to answer.

As explained by Karen,

> You just have more accessibility to things. So, you know, because kids have questions … Kids always have questions many questions. So yeah, I don't always have all the answers, and I really tell them I don't have all the answers. So, now we can go together to Google something and find the answers.

This is particularly beneficial in that students may now continue to learn even when are not knowledgeable about or prepared to answer a particular question.

Resourceful Websites for the Classroom

Eight of the participants in the study identified resourceful websites that they have used in lesson planning and online instruction. These websites vary in content from information, to videos, to timers and interactive programs. Dependent upon the needs of the class determines the usefulness of the website.

Sarah and Samantha have both utilized the NASA website in their classrooms. Sarah's perception is that

> ... NASA seems to have a wonderful website and section for kids. So, we went on NASA for kids, and—you know—for essentially the whole group, and they were able to see the space station in action.

In addition to the NASA website, Samantha utilized Astronomy.com:

> And then I might introduce the lesson that the video on SMART Board from NASA or where Astronomy.com or one of those other wonderful websites that I find ... So, I just go searching, and I get websites. And when the children get ready to do their independent research during the suggested websites that I know are safe for them and appropriate for their age level.

Sarah and Samantha used these websites to engage their students through a series of information, videos, pictures, and interactive programs.

Another website mentioned by multiple participants was YouTube. Minnie and Sarah both shared positive experiences. Per Minnie:

> I have found some very valuable sites, and it is very time-consuming to try and find what is useful. I will hit YouTube for short video clips for my students as a way to introduce material or to reinforce material. Our focus has changed to using a lot of primary sources, and I will go and search those.

Sarah went on to provide a very specific example in which a YouTube video assisted in teaching second-graders how and when to call 9-1-1:

> One of the things that we teach the kids in second grade—well, since preschool—is how to call 9-1-1. When to call 9-1-1 ... Safety and things like that. Well, there is this adorable YouTube video of a little girl—five years old—calling 9-1-1 because she was home alone with her father, and he was having a heart attack... I have that to show to the kids when they're practicing and learning about—you know—how to call. And I just think that it really helps the kids understand that yes, this really does happen, first of all. You really might need to call 9-1-1 some day, and if this little girl can do it, you can do it.

For many younger students, dialing 9-1-1 may be scary. Children are typically taught that they can get into a lot of trouble for calling 9-1-1 unless in the event of an emergency. During an actual emergency the child could easily become overwhelmed. Seeing a step-by-step enactment of what to do further reinforces when students should actually call.

In another example of useful websites, Karen shared how Timer.com and Flickr

have proven useful with special education:

> There so much that we do use it for. We even use it for in some of our special ed classes, yoga or like what we call brain breaks. So, we've used the Internet that way because you can find different videos or activities to … Or things as simple as timers. I think it's like Timer.com. You know, tell the kids, "You have so much time to complete this activity," and put the timer up on the computer. I've used the Internet to help reluctant writers. There was Flickr … They used to have this website where we could use pictures to build stories.

As explained in an earlier section, the additional interactive element provided by these websites helps keep the students engaged.

Lesson Planning

Eight of the 14 teachers provided some detail in respect to Internet use and lesson planning. In most cases the teachers found it helpful. As a math teacher and science, Dorothy was particularly impressed by the amount of free math material available:

> I always figured that right at the end when I was teaching, because there's a lot of online things for like math lesson plans or how creative ideas how to teach something because a lot of it's free.

As a history teacher, Lenny reported using a lot of images:

> To me the most important thing of as far as teaching history is to have an image there for the kids focus on while talking to them about—while they're writing notes. So, it's a good image provider. And I like to also use period music. I can locate music to support what I'm talking about in the classroom.

Thelma and Brenda have each found specific websites that aid in lesson planning. As

shared by Thelma,

> I use: “Ed Helper;” “Read, Write, Think;” “ReadWorks.org” because I am a reading language arts teacher. So, these are all things I get introduced to because the beauty of it is teachers will post ideas, and you can share them and use them. So, it is completely beneficial to everything I do. So, searching all the time for new ideas.

Brenda described a similar website where teachers may collaborate:

> There is a site called “Teachers Pay Teachers,” which … It provides a wealth of resources, which is really nice, and am learning now that we don’t really have to … You don’t have to hunt and peck and dig through to try to find what you want. You just Google it on the Internet, and there is more information than you could ever imagine.

Depending on the course being taught, teacher's preference, student needs, and so on; the most appropriate selection of websites and resources will vary.

Although responses were generally positive, some educators' perceptions of utilizing the Internet for lesson planning differed. For instance, Minnie used the Internet more for lesson planning than with engaging students in the classroom:

> I really do find a lot of things that I can use in my classroom. I don't really use it per se during an actual lesson. I might find the material. Let me rephrase that. I might buy the material, but for me to go online in class and be using the actual Internet… The only time I truly do that is if I am showing a short video clip.

Randy described becoming overwhelmed due to the Internet providing so many choices that narrowing down is a challenge:

> Here's something else that I think happened too. It's not so much what you want to teach; it's what not to teach. And the reason I say that is because the Internet and technology—what it's done is it's given us many more choices, a plethora of things from which to choose; and now it becomes harder to narrow your focus because there are so many things from which to choose.

In this case Randy spends more time lesson planning due to the sheer volume of information available. Karen, however, spends the additional time making backup plans in case certain websites do not work:

> So, the hard part there is just making sure the websites are up-to-date or giving the kids almost like a little library or log of websites that they can go to and just making sure they're up-to-date ... A lot of times like you'll have this website, and then—you know—if you're preparing for—say—next month when I'm studying that plan, so then you go to it and the site's down for working on it or—you know—something like that. So, you always have to have plan B and C, you know, not just one. You have to have a little library of them.

When a website is down, the planned lesson may become undeliverable. Having this backup plan may prevent a broken lesson or extended downtime where the students become distracted and disengage. Both cases disrupt the learning and social development processes.

Advanced Conceptualization

Several teachers commented on how contemporary programs featuring an interactive component have allowed for advanced conceptualization. For instance, Dorothy shared this perception from a math standpoint:

> So, one of the things that I taught a lot at the end was how to take a statistics, and the kids took statistics in classes to how many kids, let's say had brown hair, black hair, blonde hair. Take it and put that information in, highlight it, change it to a bar graph, line graph, circle graph; and they could. So they could put it on a spreadsheet, highlighted that, and then do the XY and Y-axis ... They could do a title, they could do everything right on there and print it off.

Again, this technology allows students to engage in a similar fashion to traditional learning methods. Karen described this interaction through a manipulation of space:

> I like to have my kids get up and move around and really manipulate the space. So, having the technology around the room they can come up and they can use the Whiteboard to say for doing shape sorting for the younger kids. They can manipulate it that way and then they can also—you know—really touch tangible pieces on tables and they can go to paper-and-pencil. So, I think that it's added a different and additional … Element ... You want to reach all their senses when you're teaching.

As revealed through the traditional learning and social development theories, Karen's statement exemplifies the concept that reaching additional senses enhances learning potential. Sarah provided an additional example of this:

> With third grade last year, and the second this year, there was a book on the story--a fiction story about glass blowing. It never really showed glass blowing. I asked the kids, "Do you know what they mean by glass blowing?" Haha! They really didn't; you know? It's hard to explain to them that glass was actually a liquid at one point, and—you know—that's kind of going over their heads. So, we

> just sat down and put up glass blowing on the screen and found wonderful websites, and they really got interested in glass blowing.

Although in this case the students did not actually touch the glass, they advanced conceptualization by becoming eyewitness to the process of glassblowing. Now instead of imagining what the process looks like in their heads, they have a visual to go with it.

Advanced conceptualization may also become realized through the types of assignments assigned. Lisa, Karen, and Randy provided excellent examples of how the Internet has contributed toward advanced assignments that were at one time not possible. Lisa shared:

> I could give you a good example of a young woman, and she did a lesson plan where she wanted people know all the major patriots—not just George Washington. And she'd give them each one. And it was … They had to go out on the Internet, and they got one day to go out on the Internet. But they also had to use a book, and then they had to come up with the five slides of the five most important things you needed to know about that person.

In a similar example Karen shared,

> Where in the past when I taught about the Ellis Island—you know—we talked about immigration in third grade, and we'd read books, and we would tell stories about immigrants. We would look at pictures that we got from books in the library, but now I'm able to get on the Internet and pull up some live feed on a man's memories of the first time he passed the Statue of Liberty. So, the kids get to hear his voice as they're looking at the live pictures of the Statue of Liberty or

> Ellis Island. So, it can make a definitely a lot more real-life connection.

Randy continued as follows:

> Imagine the impact on social studies teachers who could actually go into Northern Ireland via the Internet and read what their papers are saying about what's going on there or in wherever you want to pick. You know … Lorraine, or Saudi Arabia, or—you know—again, southeast Alabama.

In each case the students became more absorbed in the material than a traditional textbook chapter and worksheet might have offered, encouraging the level of engagement and motivation necessary for success.

SMART Board

Most of the participants acknowledged having a SMART Board in the classroom. Thelma demonstrated how SMART Board may make learning exciting:

> The SMART Board in my room it's tremendous for learning! And I did a summer school program with a bunch of students that never had seen that, and they were just—you know. It's summer school. They hate summer school, but they were all over it. They loved any time I turned on that SMART Board and just went crazy.

As with other Internet applications previous explored, however, one's experience with SMART Board also depends on the teacher. Minnie explained this well in the statement,

> The guy across the hall got a SMART Board the same time as I did, and his desks still has their backs to the SMART Board. And he has never turned it on. So, it depends on comfort level, too, for the individual teacher.

Therefore, SMART Board is only as helpful as the instructor using or not using it.

For those teachers who have embraced SMART Board, there was an

overwhelmingly positive response. All participants who actually used SMART Board agreed that this technology has heightened interaction in the classroom. Dorothy shared,

> So there's a lot of technology and stuff taken from the Internet and put onto programs where they can use the SMART Board. It's like for the kids it's manipulative also, so especially I'm thinking math. The kids can manipulate things. Like, let's say there's three different sizes of lines. All those make a triangle. And of course your two, your longest line, you know has to be. What is it? It's like two short lines, and it has some correlation to a longer line. So, the kids can manipulate it and move the lines around to see.

Karen elaborated on the concept of manipulation further by adding,

> So, when you project things up on the SMART Board you do it from your laptop. So, but it can also be … You could also use dry erase markers on it. So, let's say I'm doing a lesson with kindergartners just on sorting shapes. So, if you can get different apps up—you know—and interactive websites, the kids can—and let's say—project it on this Whiteboard, they're all different shapes and different tiles. I can have the kids like touch and drag the shapes …

This level of manipulation closely resembles what students using traditional pencil and paper might have drawn—removing the worry that students are not actually going through processes while interacting with the Internet.

The ability of SMART Board to allow students to manipulate space is crucial on multiple levels. With concern regarding how the Internet has compromised some of the most fundamental learning processes, Brenda stated,

> Early childhood, when I first started, it was very hands-on learning. And the

> children had finger paints and Play-Doh and Clay and blocks. And they would experiment with the world using these mediums, and now with the change of the common core, what the school districts are expecting the children to learn at such an early age—we've shifted from that. So, there's a lot of electronic devices, and it's a lot of paper and pencil. Where I used to use a lot of puzzles and manipulatives and games, sadly I think it's a disservice to the children that those things have gone away ... We used to have the kids playing with clay and Play-Doh, and in sand, and in those things, and developing those fine muscles. And now we have their index finger drawing across the screen.

Teachers like Karen also concerned about children developing fine muscles and physically interacting within a realistic environment may utilize applications that work with SMART Board:

> When I teach handwriting a lot of the times I have the kids—you know—draw the letters in the sand or put a piece of paper over a sandpaper or screen—an old window screen—so they can feel it. Now we also have an app for handwriting that projects it on this board so they can make real big letter S's up on the board, and they can aesthetically really feel the movement of the letters real big.

Although SMART Board is not the exact same as Play-Doh, clay, and blocks, the students do interact with materials in space, allowing them to physically and mentally process the interaction.

Adaptability

Adaptability was one of the features afforded by the Internet that received overwhelmingly positive comments. In the context of learning and social development,

adaptability entails the ability to adjust to individual student and full classroom needs. Because individuals have differing abilities that maximize or compromise their ability to learn, adapted approaches tend to work best toward maximizing learning potential across all ranges of abilities.

In a general statement, Randy explained the importance of utilizing the capabilities of the Internet to meet student needs:

> We've got to differentiate our instruction based on the talents and challenges that our kids bring us in that classroom. And again, technology helps us get there—to differentiate that instruction, especially if we have a lag situation. Then I can put you kids over here working on this, you kids are over here getting direct instruction, and you kids over here are getting some remedial help on the systems.

Once the students' ability is assessed, the technology may begin working. Lisa and Thelma each provided examples of how the Internet has provided innovative ways for teachers to meet the needs of their students. As shared by Lisa,

> I don't even know what they're called—an Internet provider that made sure that everything was on was not only saved, but at the middle school level you could pick their reading level. So, if somebody was doing a biography of Abraham Lincoln, and I knew that the poor child was only reading like at a third grade level, I could set it up so he really thought he was on the Internet, but he was on a filtered site.

In this case the teacher took action to manipulate the learning environment. Thelma's exampled demonstrates how the students may select their own materials to work independently:

> Now we just got Chromebooks for my students. And so I just found through our school system we have an endless library of online books they can use. So, they… We are just doing a project now with online books, and they all got to pick their own title. They all got to read at their own pace.

Each of these strategies are individualized and designed by the teachers, giving the teachers freedom to adjust as necessary.

Hannah, Pamela, Sarah, and Minnie each provided examples of how specific programs already in existence adapt to their students' needs. Hannah provided an example of how Internet-based programs may also adapt to meet the needs of various reading levels:

> Everybody could teach using what we were using then, which was called CSCOPE ... It even had parts for ... Those who were for those who were behind in remediation and also those who needed a little bit more of a challenge.

Pamela provided further detail in describing the program "Read 180":

> My last three years of teaching I did do “Read 180,” which was a totally technology-based program, and it was a computer-based program as far as the skill portion. Students worked independently in the program to develop reading skills and literature skills, but that was all independently based through the program. Then, another aspect of the program was hard like paperback book reading, and then small group teaching. And then I worked with students who were probably two-to-four levels below grade-level in reading.

Sarah discussed how YouTube programs incorporate video and music to help young students learn their multiplication tables:

> Some of the kids have trouble learning their math facts. Some people are every good at it, some aren't. Well, on YouTube—again—if you just put in "multiplication threes" there will be a bunch of websites, or the YouTube things, about multiplying by three. And mostly it's music. Well, a lot of kids can learn things better to music—to a beat—you know, than any other way.

Because students spend more time outside of the classroom than in it, certainly programs have been developed to work with the students in their home environment. As explained by Minnie,

> Odyssey is a program that the district has purchased to be used with students, and the students are put on it. It is Internet-based and they can access it from home, but these are for your really low readers that aren't making, you know, that—based on standards are below or in warning for reading. And so they go online, and they read through the stories, ask questions, and all that good stuff.

By using these programs and others, teachers may meet the needs of their students inside and outside of the classroom.

Internet Applications for Use With Students With Disabilities

It is important to note that Karen primarily worked with students with disabilities. In the case of this participant, the perception of the Internet's impact on learning and social development was particularly positive. In one statement Karen explained,

> As I was talking I thought of this one reading program that we just got at our middle school by Scholastic, and the idea of it is a reading program for older kids who are at a real low reading level. And that's always been a real challenge because—you know—you have six graders at a second grade reading level. It's

> really hard to find materials to practice reading that, and I could instruct them, but the practice is hard. There is nothing interesting. So, we found this program that has an interactive software piece to it, and I think it's a great example of how technology can really enhance our special ed. kids.

Again, regardless of ability, the Internet does appear to adapt as necessary.

Future Predictions

Although not every participant attempted to predict how the Internet would ultimately impact society moving into the future, the responses provided were, once again, positive. Within each of these predictions lies the critical factor of figuring out the most advantageous means of using the Internet while minimizing risk factors.

Thelma explained how the Internet is here but may continue to improve as humans learn more about how to use it:

> So, maybe it'll be a learning curve, and they'll figure out ways to use it more advantageous ... It definitely won't be going away. So, I … It's a matter of knowing how to use it effectively will definitely impact the jobs that will be available to alum, to students, to people.

Dorothy predicted that the Internet may remain a good tool so long as there is some balance:

> I think that they're going to realize that maybe it's not the be-all end-all that they thought it would be. I mean, it's a good tool—just like anything's good tool. But eventually kids get tired of it … I mean, they have to use it all the time. They use it all the time at school too. There has to be some kind of medium ...

Robert commented on how the Internet may lead toward a need for fewer teachers and

schools:

> I think one of the big things is teaching classes on the Internet. You're going to need fewer teachers. Maybe you'll need fewer schools. Maybe kids can even just stay home and just pick up a webcast of some professor teaching a class somewhere in the world, and that's your class for the day. I'm sure they do that now, but I think it's going to be more commonplace in the future, and I think it's going to eventually work its way down into public education, into the high schools, and possibly even to the grade schools.

Randy added,

> I really believe that we're going to see, as we already have, more blended instruction between the Internet and the institution. I think that the schoolhouse itself will crush under its own weight because people aren't going to continue to vote referendums after referendum after referendum to build multi-million billion dollar buildings.

Finally, Karen predicted that the Internet will continue to produce applications that further assist children with special needs:

> So, I could definitely see it offering a lot of good options for kids with special needs. I mean, I could talk you about using the computer as a communication device for kids who can't speak. You know, for kids with autism—you know—who were using technology to communicate has been pretty cool. Kids with cerebral palsy, that we've had—same thing. So, I think it's wonderful.

Given the current accessibility and capabilities of the Internet, it is not unrealistic to predict that each of these statements may prove true.

Summary

The results answer this study's central question: How do veteran K-8 educators experience children's learning and social development in the Internet Age? The teachers' perceptions indicate that with experience and comfort, collaboration, a healthy balance between face-to-face and online social interactions, boundaries, and maximized benefits of information and resources that the Internet may very well prove a valuable asset in learning and social development. Deviation from these best practices, however, may lead toward a number of consequences that range in type and severity. Chapter 5 further elaborates upon the data with its discussion, conclusions, and recommendations.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this qualitative grounded theory study was to develop an informational theory that was constructed through the perceptions of veteran K-8 educators having taught K-8 for a period of 20 or more years. With the data acquired from this study, future researchers, school counselors, educators, parents, and other stakeholders may develop and implement better methods, approaches, and strategies used in the instruction provided to students in Grades K-8. Despite all of the advantages afforded by the Internet, there are numerous risk factors that have already begun impacting the K-8 population as well as the rest of society. Although contemporary literature is saturated with research studies that explore the impact of the Internet on childhood learning and social development, there is little research that represents the perspectives of those educators who have taught prior to, during, and after the inception of the Internet. By hearing the perceptions of veteran K-8 educators, I was able to develop a framework for best practices in the Internet Age.

In this chapter, I discuss and interpret the research findings in relation to the teachers' interpretations and framework for best practices. I also present the limitations, recommendations, and implications of this study. Finally, Chapter 5 concludes with a summary of the research study and the need for positive social change regarding the Internet's impact on learning and social development.

Interpretation of the Findings

What I have termed the *multisystem technological engagement theory* (MSTET) was constructed from this grounded theory study. The theory evolved from the veteran

educators' perceptions, which provided a foundation for the ideal conditions upon which K-8 students may maximize learning and social development in the Internet age. This research study was grounded in Bandura's (1977), Piaget's (1936), Vygotsky's (1978), and Erikson's (1968) classic research on learning and social development theories in combination with current literature on how the Internet impacts the fundamental principles of these developmental processes (Paul & Elder, 2007; Polat, Adiguzel, & Akgun, 2012; Vasquez & Serianni, 2012). This study was also grounded upon the ecological *techno-microsystem* (Johnson, 2010; Johnson & Puplampu, 2008)—an adaptation of Bronfenbrenner's (1977) ecological system theory, which conceptualizes how direct and indirect interactions with the Internet at least minimally resonate into the mesosystem, exosystem, macrosystem, and chronosystem; even children who do not use the Internet are impacted by its influence. Upon analysis, an additional theory was included, engagement theory (Kearsley, 1997; Shneiderman, 1988; Shneiderman, 1994, 1998; Shneiderman, Alavi, Norman, & Borkowski, 1995), which will be discussed shortly.

Applicability of Learning and Social Development Theories on the Data

Responses from all 14 participants indicated agreement with the classic literature (Bandura, 1977; Erikson, 1968; Piaget, 1936; Vygotsky, 1978), in that the environment both directly and indirectly influences students. That is, students are constantly learning and having their thoughts, behavior, and knowledge reinforced by everything around them. Parents, teachers, administrators, coaches, peers, friends, foes, TV, movies, magazines, websites, church, available resources, unavailable resources, political leaders, and everything beyond and between all bear an influence—regardless of how minimal.

This goes beyond other people, encompassing the materials and method through which children learn (Bandura, Ross, & Ross, 1961). The participants in this study acknowledged this as they explained how availability or lack of resources as well as the curriculum built around the resources makes a significant difference. Each of these components contributes toward their self-system of learning facilitated through (a) vicarious reinforcement, (b) symbolic activities, (c) forethought activity, (d) self-regulatory capabilities, (e) self-reflecting capability, (f) self-efficacy, and (g) self-reinforcement (Malone, 2002). Every moment serves as an opportunity for learning, although the positive or negative direction this learning takes depends upon the influence acting upon the student. By having a better understanding of the various mechanisms acting on the students, it then becomes possible to create ideal conditions and strategies for learning and social development.

The participants in this study also demonstrated awareness of the developmental progression in which children learn—a progression that takes place across multiple dimensions. According to Piaget (1936), this progression takes place in sequential order for everyone regardless of ethnicity, gender, environment, et cetera. Here, the participants each described an experience in which they attempted to cater to the needs of their students both collectively and at an individual level. Vygotsky (1978) demonstrated how younger children are incapable of learning particular concepts until their brains develop the capacity to comprehend such information. Though the delivery of instruction varied teacher by teacher, the fundamentals were the same. A second grade teacher would not deliver sixth grade content, similar to how an eighth grade teacher significantly varies in instruction from a kindergarten teacher. Participant responses also indicated the

importance of addressing the basic conflicts and life events along each developmental stage as described by Erikson (1968). That is, their instruction was geared toward directly addressing these conflicts and guiding the students toward success. As such, environmental constructs working within these psychosocial constructs suggest how to create optimal learning and social environments.

Contemporary Systems Theory on Learning and Social Development

During the triangulation process, an additional theory that was not explored during the literature review process emerged. With the original thought to name this study's grounded theory *technological engagement theory*, engagement theory (Kearsley, 1997; Shneiderman, 1994; Shneiderman et al., 1995) emerged, which developed through Kearsley and Shneiderman's experiences teaching in electronic and distance education environments. As explained by Kearsley and Shneiderman (1999),

> The fundamental idea underlying engagement theory is that students must be meaningfully engaged in learning activities through interaction with others and worthwhile tasks. While in principle, such engagement could occur without the use of technology, we believe that technology can facilitate engagement in ways which are difficult to achieve otherwise. So engagement theory is intended to be a conceptual framework for technology-based learning and teaching. (para. 1)

Upon coding the data, 46 initial codes were created. These broke down into four primary categories: *teacher experience and comfort level*, *boundaries*, *social factors*, and *the evolving classroom*. The core of each category includes ways in which the Internet either engages or disengages students in respect to learning and social development. That is, the positive data derived from the study suggest positive engagement, while the negative data

suggest negative engagement. Kearsley and Shneiderman's (1999) concept of engagement entails the fundamental processes of creating, problem solving, reasoning, decision making, and evaluation. As such, this concept of engagement resembles that which those teachers in this study described as leading toward the most favorable results. MSTET also defines these characteristics for engagement but goes beyond teaching in electronic and distance education environments to the physical classroom and other pertinent ecological systems.

Regardless of whether his or her perception of the Internet's impact was positive or negative, each of the 14 participants described the interaction of multilayered systems working with and against one another. As illustrated in Figure 2, these primary systems include: (a) student and peers, (b) family and school, (c) interactions between family and school, (d) mass/social media, and (e) societal structure. The participants' responses indicate that when these systems work together in ideal fashion, students' learning and social environments become enriched, maximizing the opportunity for successful development. Positive consequences may include but are not limited to advanced learning and conceptualization, improved social/communication skills, heightened creativity, increased interconnectedness, et cetera. When these systems work against or negatively influence one another, however, the students' learning and social development may become compromised. In these cases, students may suffer academically, lack important social skills, lag in physical activity, become victims of cyberbullying, learn bad or inappropriate information, experience developmental delays, and acquire various mental health disorders. As such, MSTET seeks to explain the maximization of positive influences and minimization, or even or even eradication, of negative influences.

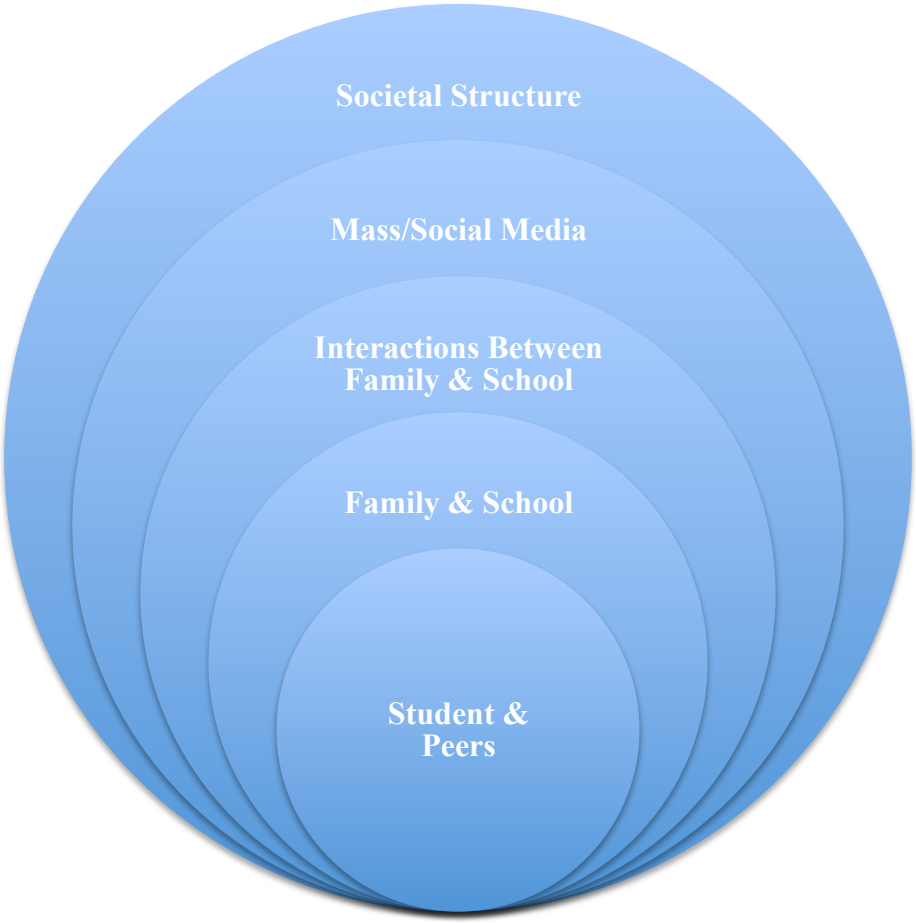

Figure 2. Primary systems of multisystem technological engagement theory (MSTET)

The base level of the system, student and peers, includes all of the interactions between the individual student and his or her peers. Individual attributes, social interactions, and so on are primary influencers. With family and school includes those influences experienced from parents, siblings, immediate family members, teachers, school administration, and other students (who are not necessarily peers). Interactions between family and school are all of those in which the two systems work with or against one another. Seven, or half, of the participants specifically spoke to the power of the parent-teacher influence. Contemporary technology allows parents and teachers to keep in constant, immediate communication but may also insert a wedge. Mass/social media

includes all media that both directly and indirectly influences students. For instance, more immediate might include social media websites including: *Facebook*, *Instagram*, *Twitter*, and *MySpace*. These are the websites students use to directly communicate with their immediate social circle as well as those outside of it. Four participants specifically commented on how improper use of these websites leads to problems. Popular magazine websites and other may not directly act on the student but influence indirectly by suggesting contemporary fads and trends that engage students. Even more indirect influencers here might include major news websites. Three participants specifically mentioned how the provision of one-sided or entirely false information is may prove particularly detrimental. The final system in this model, societal structure, includes the policies, procedures, laws, or lacks thereof that contribute toward the way the Internet is and may be utilized. This societal structure serves as the overarching system within which people use the Internet. For instance, this may include any national or international laws that restrict aspects of Internet usage. All 14 participants referred to this structure at one point or another throughout their interviews.

Maximizing the Benefits While Minimizing the Risks

The data revealed that for all 14 participants, formal training or lack thereof made a significant difference by way of their knowledge and comfort level with the Internet and its subsequent applications. In this study $n = 8$ of the $N = 14$ participants reported at least some minimal amount of training while the remaining $n = 6$ stated that they receive no formal Internet training from the school, district, or otherwise and were primarily self-taught through personal experience. Four of the $n = 6$ participants who were primarily self-taught engaged the Internet in their personal lives to the extent that they also became

comfortable using it. The *n* = 2 teachers who did not embrace it as much in their personal lives used the Internet substantially less. Of these two participants, the P.E. teacher who held the highest degree of mistrust toward the Internet used it the least of all 14 participants. Similar to the Mundy et al. (2012) study, this one also revealed that higher amounts of quality formal training led to higher knowledge and better application of Internet use in the classroom, ultimately increasing "growth in student engagement, excitement, acceleration of learning, and proficiency with computer technology" (p. 6).

It appears that the formal training and personal experience also impacted teacher attitudes. Overall, *n* = 12 of the total *N* = 14 participants held positive attitudes about the Internet's impact on learning and social development. Ten of the *n* = 12 participants holding positive attitudes cautioned that improper Internet use may result in potentially devastating consequences. The remaining *n* = 2 participants holding mostly negative attitudes toward the Internet were the ones who noted having the least training and personal experience. This compliments the earlier findings by Almekhlafi and Almeqdadi (2010) who found that "more experience, familiarity, and knowledge of technology resources and applications" (Almekhlafi & Almeqdadi, 2010, p. 172) had the tendency to lead toward more positive attitudes.

Teachers continually influence students as they instruct, guide, and model information and behaviors. As such, teachers' utilization of and attitude toward the Internet affects the students' experience across multiple levels. Students are directly impacted by the quality of information presented as well as their engagement with it. In the examples of advanced conceptualization provided by *n* = 5 participants, the teachers engaged the students through extremely advanced assignments that utilized a multi-

sensory approach (e.g., visual, auditory, tactile, taste, smell) for further reinforcement. Beyond direct instruction and engaging the students through assignments, the teachers also filled the role of Vygotsky's (1978) MKO, whereby vicarious learning and subsequent reinforcement occurs through continued interactions. This means that the teachers' expressed projected experience and attitudes toward the Internet—whether positive or negative—will have an impact on the students. It also means that teachers must be knowledgeable of the accuracy of information presented. Because the teacher serves as a knowledgeable individual, many students trust that what is being taught is accurate. Should incorrect or inappropriate knowledge be taught and reinforced, learning becomes compromised. Further, if bad information is learned before the truth it may prove extremely difficult to relearn (Brookfield, 1986), and the students may ignorantly hold onto that information up to the duration of their lives. Therefore, educators' formal training (or lack thereof), personal experience, and attitudes significantly impact the student experience.

Nine of the $N = 14$ participants spoke to the significant influence that parents and legal guardians have over the students' experiences. Similar to the teachers, parents and legal guardians may also directly and indirectly impact the experience. Their influence, however, is heavier in that students spend more time outside of school than in it. Outside of school these individuals are in regular contact with the students, provide for them, set rules, teach life lessons, provide guidance, et cetera. Because of their role as primary caretaker of the student, their decisions—whether good or lacking in judgment—oftentimes trump that of the teachers less in the event of extreme cases of abuse or neglect. Although many parents and legal guardians exercise good judgment, there are

also those who do not. In this study $n = 5$ participants were concerned that these individuals are not doing their part. For instance, despite available parental control options, many households do not use them. Despite their ability to create guidelines and restrictions around the Internet, these households do not limit time spent, content explored, or behavior conducted online. In some cases the students are staying up all night online looking up inappropriate content or bullying other children. These students then come to class the next day extremely exhausted or fighting with their peers. Beyond these direct influencers, parents and legal guardians also model behaviors that the students may adopt and learn vicariously (Fireman & Kose, 2002). Should the head of household be more interested in texting friends at the dinner table than engaging the child, then the child may follow suit. Should the head of household allow a second grader unlimited access to social media, then the child may learn incorrect or age inappropriate information and pickup on age inappropriate behaviors.

Because the Internet is a tool that—barring any technical difficulties—does what others instruct it to do, people have the ability to adapt the environment as they see fit. This means that people choose whether or not boundaries are set, maintained, and enforced. All of the participants indicated that if misused, the Internet might threaten learning and social development. All of the participants, regardless of perceptions, also indicated that there is potential for it to become a positive learning and social tool if used properly.

It is through understanding the strengths, weaknesses, opportunities, and threats posed by the Internet where best practices and boundaries become established. The

SWOT analysis contained in Table 3 provides a summary of these components as indicated through the participants' responses.

Table 3

SWOT Analysis

Strengths	Weaknesses	Opportunities	Threats
Mass quantity of information	Inaccurate information	Advanced conceptualization	Negative adaptation
Speed of communication	False information	Increased attention	Compromised conceptualization
Accessibility	Internet safety	Individualized learning integration	Decreased attention
Positive adaptation	Resources vary greatly along socioeconomic status	Parent-teacher collaboration	Compromised face-to-face communication
Good information	Cyberbullying	Social media websites	Social media websites
Lesson planning		Potential to serve as "the great equalizer"	Potential to develop mental health disorders
Resourceful websites		Hands-on/vicarious learning	Internet use with children with disabilities
SMART boards			Too much reliance on technology

By synthesizing the strengths, weaknesses, opportunities, and threats contained in the data, strategies for maximizing the benefits while minimizing the risks have been defined within MSTET as follows:

How teachers may maximize the benefits of the Internet.

1. Educate themselves on the Internet and subsequent technologies by engaging in intentional formal training and personal experience
2. Ensure that the students are exposed to age appropriate material
3. Keep up-to-date on and base lessons off the latest, most accurate information available.
4. Have a backup plan in case websites are down or technology becomes compromised
5. Seek to engage the students across multiple senses (i.e., visual, auditory, tactile, taste, smell)
6. Utilize the versatility of the Internet to adapt elaborate assignments that meet the needs of individual students as well as the collective whole
7. Be aware of the latest strengths, weaknesses, opportunities, and threats.
8. Discuss Internet safety protocol with the students
9. Hold students accountable for inappropriate behavior online.
10. Model a positive attitude, appropriate behavior, and best practices
11. Utilize a healthy mix of traditional and Internet-based teaching strategies

How parents may maximize the benefits of the Internet.

1. Ensure that the children are exposed to age appropriate material
2. Utilize parental control features offered by Internet service providers

3. Set time limits on Internet use.
4. Monitor child behavior online
5. Designate Internet-free times (e.g., during dinner, family game night, etc.)
6. Encourage physical and outdoor play
7. Keep up-to-date on the latest information
8. Discuss Internet safety protocol with the children
9. Hold children accountable for inappropriate behavior online.
10. Model appropriate attitudes, behaviors, and best practices

How parents and teachers may maximize the benefits of the Internet.

1. Collaborate with one another to deliver the same message
2. Communicate important information (e.g., grades, attendance, behavior)
3. Teachers may educate parents on Internet safety and potential threats
4. Parents may communicate student needs and concerns to the teachers

How administrators may maximize the benefits of the Internet.

1. Develop curriculum that utilizes the Internet as an experiential learning opportunity (e.g., hands-on multi-sensory approach)
2. Budget accordingly to access the best resources possible
3. Educate teachers on the most up-to-date information by holding in-services, attending conferences, reading articles, et cetera
4. Offer classes to parents, which inform them on best Internet use practices

Derived from classical learning and social development theories (Bandura, 1977; Erikson, 1968; Piaget, 1936; Vygotsky, 1978) in combination with traditional (Bronfenbrenner, 1977) and contemporary systems theories (Johnson, 2010; Johnson &

Puplampu, 2008; Kearsley, 1997; Shneiderman, 1994; Shneiderman et al., 1995) MSTET increases the likelihood for successful K-8 learning and social development within this contemporary Internet Age.

Limitations of the Study

There were several limitations in my study. First, the grounded research design and sample size were a limitation for my study. Despite evidence-based support advocating the efficacy of qualitative research as a credible means of inquiry, there are still biases held by some professionals supporting the notion that qualitative is less reliable and scientific than quantitative studies (Patton, 2002). This study utilized a sample of 14 veteran K-8 teachers whose experiences may not be reflective of others who may be experiencing the same phenomenon. Second, the geographical location presented another limitation. Although the participants taught in a total of seven different states, the use of just 14 teachers in this limited geographic region may limit applicability and validity toward others outside of these areas. My sample was primarily recruited by emailing administrators throughout the state of Illinois. Three of the $n = 5$ participants who taught outside of Illinois were recruited by those teacher participants who resided within the state. Third, I was unable to follow-up with all of my participants to employ member checking. Though I followed up via email with everyone, I only received responses from nine of the 14 participants to employ member-checking strategies. Fourth, there was no measure conducted to determine the SES of each individual school. Though the recommendations, implications, and conclusions drawn from the data have been generalized to fit the needs of most populations, there are always exceptions. Whereas these are the limitations, my research study provided an in-depth look at the experiences

of my participants and added to the body of literature that seeks to address strategies for maximizing the benefits of the Internet toward K-8 learning and social development.

Recommendations

According to the findings of my research study, there is need for further research in the area of administrative policy. Though not included in the Results section of this dissertation, $n = 4$ of the $N = 14$ participants (Dorothy, Pamela, Dennis, & Randy) specifically complained about how their districts have continued to compromise education by simplifying homework and tests to the extent that students are not learning. For instance, there is now a 90/10 policy in some districts where tests count as 90% of the students' grades while homework only accounts for 10%. The perceived impact is that students are not motivated to complete homework assignments. Further, some schools allow students to retake exams an unlimited amount of times until the desired grade is achieved. If the teacher reuses the same test for retake, the student is incentivized to more or less memorize the answers for that test rather than actually learn the content. Should the Internet continue to make answers that used to require deep thought readily available while study and practice are no longer encouraged, compounding negative implications for K-8 learning and social development could result.

What makes this study unique is the criteria that required the participants to have had at minimum 20 or more years of K-8 teaching experience. Although this study represents a relatively diverse sample, perceptions across varied populations would help to even more clearly identify the ways in which the Internet may best serve K-8 students. How do perceptions differ between groups of new teachers? Would teachers who taught 40 or more years have a difference in thought? What about those who teach different

subjects, such as English versus Social Studies teachers? How do teachers who have been raised in the Internet Age perceive traditional methods of instruction? The more information known about this impact, the better maximization of benefits may become.

Implications

The findings of my study have implications for social change that can lead toward advancements in learning and social development through best practices of Internet use. Should society appropriately utilize the Internet and its subsequent applications, current and future K-8 age groups may continue to use, enhance, and pass on their acquired knowledge. By analyzing the experienced teachers' responses, this study provides a better understanding of the positive and negative experiences of the Internet's impact. Consequently, future researchers and stakeholders may continue to create and refine strategies that maximize the benefits of the Internet's impact on learning and social development.

Five of the 14 participants provided responses to bonus question eleven: "Do you have any additional comments, questions, or concerns?" Table 4 shares some of the predicted implications provided by Thelma, Dorothy, Robert, Randy, and Karen.

Table 4

Participants' Predicted Implications

Participant's name	Predicted implications
Thelma	So, maybe it'll be a learning curve, and they'll figure out ways to use it more advantageous ... It definitely won't be going away. So, I … It's a matter of knowing how to use it effectively will definitely impact the jobs that will be available to alum, to students, to people.
Dorothy	I think that they're going to realize that maybe it's not the be-all end-all that they thought it would be. I mean, it's a good tool—just like anything's good tool. But eventually kids get tired of it … I mean, they have to use it all the time. They use it all the time at school too. There has to be some kind of medium ...
Robert	I think one of the big things is teaching classes on the Internet. You're going to need fewer teachers. Maybe you'll need fewer schools. Maybe kids can even just stay home and just pick up a webcast of some professor teaching a class somewhere in the world, and that's your class for the day. I'm sure they do that now, but I think it's going to be more commonplace in the future, and I think it's going to eventually work its way down into public education, into the high schools, and possibly even to the grade schools.
Randy	I really believe that we're going to see, as we already have, more blended instruction between the Internet and the institution. I think that the schoolhouse itself will crush under its own weight because people aren't going to continue to vote referendums after referendum after referendum to build multi-million billion dollar buildings.
Karen	So, I could definitely see it offering a lot of good options for kids with special needs. I mean ... I could talk you about using the computer as a communication device for kids who can't speak. You know, for kids with autism—you know—who were using technology to communicate has been pretty cool. Kids with cerebral palsy, that we've had—same thing. So, I think it's wonderful.

As evidenced by their statements, a wide variety of implications could result if technology and society continue to coincide at the same or more accelerated progression.

This study provides necessary information for researchers, school counselors, educators, parents, and other stakeholders to help develop and implement better methods, approaches, and strategies for use in K-8 instruction moving into the future. By noting

trends found in this study, researchers may develop additional studies that explore other specific aspects of the Internet's impact on student learning and social development using similar or varied populations. Knowledge of how students bully one another online may assist school counselors with teaching students useful coping strategies and skills that help mitigate and even eliminate the onset of anxiety, depression, and rage disorders—amongst others—due victimization experiences. This study has already demonstrated how with teachers these implications include individualized classroom instruction, advanced homework assignments, multi-sensory adaptability, assistance with lesson planning, et cetera. Especially promising is how the parents may now have a better understanding of what their children are doing online, guide their children toward educational websites, set necessary boundaries, and provide an additional line of communication with teachers. Other stakeholders may further refine and develop software, websites, toys, games, and other tools. Traditional brick-and-mortar schools may give way to elaborate online institutions, proving especially beneficial for those who homeschool their children. These children and others may continue to learn well outside of school hours. Time and further research will tell whether society has the ability to maximize the Internet's benefits while minimizing the weaknesses in its use with learning and social development.

Conclusion

This grounded study took an in-depth, raw exploration of veteran K-8 educators' perceptions of the Internet's impact on K-8 learning and social development. Though their statements reflected some positive and negative implications, proper utilization of the Internet received overwhelmingly favorable responses. Proper utilization defined

through their perceptions included: personal experience and comfort, collaboration, a healthy balance between face-to-face and online social interactions, boundaries, and maximized benefits of information and resources. By developing and utilizing strategies and technologies that follow MSTET's strategies for maximizing the benefits while minimizing the risks of the Internet's impact, future researchers, school counselors, educators, parents, and others may develop and implement better methods, approaches, and strategies used to facilitate healthy K-8 learning and social development.

References

Almekhlafi, A. G., & Almeqdadi, F. A. (2010). Teachers' perceptions of technology integration in the United Arab Emirates school classrooms. *Educational Technology & Society, 13*(1), 165–175.

American Counseling Association. (2005). *Code of ethics*. Alexandria, VA: Author.

Anderson, M. (n.d.). Discussion of Piagetian conservation experiments. Retrieved from http://web.cortland.edu/andersmd/piaget/a3.html

Bain, A.; & Ross, K. (1999). School reengineering and SAT-I performance: A case study. *International Journal of Education Reform, 9*(2), 148-153.

Bakhurst, D. (1990). Social memory in Soviet thought. In D. Middleton & D. Edwards (Eds.), *Collective remembering* (pp. 203–226). London, England Sage.

Balkin, R. (2011). ANOVA. Retrieved from http://web.me.com/rsbalkin/Site/Research_Methods_and_Statistics.html

Bandura, A. (1977). *Social learning* theory. New York, NY: General Learning Press.

Bandura, A. (1986). *Social foundations of thought and action*. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A., Ross, D., & Ross, S. A. (1961). Transmission of aggression through the imitation of aggressive models. *Journal of Abnormal and Social Psychology*, *63*(3), 575–582. doi:10.1037/h0045925

Bandura, A., Ross, D., & Ross, S. A. (1963). Imitation of film-mediated aggressive models. *Journal of Abnormal and Social Psychology, 66*(1): 3–11. doi: 10.1037/h004867

Baroudi, Z. M. (2007). Formative assessment: Definition, elements and role in

instructional practice. *Post-Script, 8*(1), 37–48.

Bronfenbrenner, U. (1979). *The ecology of human development*. Cambridge, MA: Harvard University Press.

Brookfield, S. D. (1986). *Understanding and facilitating adult learning*. San Francisco, CA: Jossey-Bass.

Burnett, C., & Wilkinson, J. (2005). Holy lemons! Learning from children's uses of the Internet in out-of-school contexts. *Literacy, 39*(3), 158-165. doi:10.1111/j. 1467-9345.2005.00416.x

Calvani, A., & Rotta, M. (1999). *Comunicazione e apprendimento in Internet*. Rome, Italy: Centro Studi Erickson.

Campbell, D. T., & Stanley, J. C. (1966). Experimental and quasi-experimental designs for research on teaching. In N. L. Gage (Ed.), *Handbook of research on teaching* (pp. 171-246). Chicago, IL: Rand McNally.

Catledge, L. D., & Pitkow, J. E. (1995). Characterizing browsing strategies in the World-Wide Web. *Computer Networks and ISDN Systems, 26*(6), 1065-1073.

Charp, S. (1998). Preparing the 21st century teacher. *Technological Horizons in Education Journal, 26*, 6–8.

Cook, R. S., Rule, S., & Mariger, H. (2003). Parents' evaluations of the usability of a web site on recommended practices. *Topics in Early Childhood Special Education, 23*(1), 19-27.

Cooper, H., & Valentine, J. C. (2001). Using research to answer practical questions about homework. *Educational Psychologist, 36*(3), 143–153.

Costa, P. T., Jr., & McCrae, R. R. (1992). Normal personality assessment in clinical practice: The NEO Personality Inventory. *Psychological Assessment, 4,* 5-13.

Council for Accreditation of Counseling and Related Educational Programs. (2009). Standards. Retrieved from http://www.cacrep.org/doc/2009%20Standards %20with%20cover.pdf.

Craft, H. (2008). Common sense and homework. *Principal, 88*(1), 62–63.

Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches* (2nd ed.). Thousand Oaks, CA: Sage.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: Sage.

Csikszentmihalyi, M. (1996). *Creativity: Flow and the psychology of discovery and invention.* New York, NY: HarperCollins.

Denzin, N. K. (1989). *Interpretive interactionism*. Newbury Park, CA: Sage.

Denzin, N. K., & Lincoln, Y. S. (2005). *The SAGE handbook of qualitative research* (3rd ed.). Thousand Oaks, CA: Sage.

Dewey, R. A. (2007). The conservation experiments. Retrieved from http://www. intropsych.com/ch10_development/conservation_experiments.html

Erikson, E. H. (1950). *Childhood and society.* New York, NY: Norton.

Erikson, E. H. (1958). *Young man Luther: A study in psychoanalysis and history*. New York, NY: Norton.

Erikson, E. H. (1964). *Insight and responsibility*. New York, NY: Norton.

Erikson, E. H. (1968). *Identity: Youth and crisis*. New York, NY: Norton.

Erikson, E. H. (1969). *Gandhi's truth: The origins of militant nonviolence*. New York,

NY: Norton.

Erikson Institute. (2013). Erikson's institute namesake. Retrieved from http://www.erikson.edu/about/history/erik-erikson/

Fireman, G., & Kose, G. (2002). The effect of self-observation on children's problem solving. *Journal of Genetic Psychology, 163*(4), 410-424.

Flynn, James R. (2009). *What is intelligence: Beyond the Flynn effect* (expanded paperback ed.). Cambridge, United Kingdom: Cambridge University Press.

Frankfort-Nachmias, C., & Nachmias, D. (2008). *Research methods in the social sciences* (7th ed.). New York, NY: Worth.

Gasson, S. (n.d.). Rigor in grounded theory research: An interpretive perspective on generating theory from qualitative field studies. Retrieved from http://dspace.library.drexel.edu/bitstream/1860/1985/1/2006175287.pdf

Gentry, J. W. (1990). *Guide to business gaming and experiential learning*. East Brunswick, NJ: Nichols/GP.

Gilgun, J. F. (l994). Erik Erikson died in May: Showed importance of case studies. *Qualitative Family Research, 8*(1), 11-12.

Gillespie, A. A. (2006). Cyber-bullying and harassment of teenagers: The legal response. *Journal of Social Welfare & Family Law*, *28*, 123-136.

Glaser, B. (1978). *Theoretical sensitivity*. Mill Valley, CA: Sociology Press.

Glaser, B. G., & Strauss, A. (1967). *The discovery of grounded theory: Strategies for qualitative research.* Chicago, IL: Aldine.

Goldberg, L. R. (1981). Language and individual differences: The search for universals in personality lexicons. In L. Wheeler (Ed.), *Review of Personality and Social*

Psychology, 2. Beverly Hills, CA: Sage.

Gorski, P. C. (2004). Multicultural education and progressive pedagogy in the online information age. *Multicultural Perspectives, 6*(4), 37-48.

Green, S. B., & Salkind, N. J. (2011). *Using SPSS for Windows and Macintosh: Analyzing and understanding data* (6th ed.). Upper Saddle River, NJ: Pearson.

Gross, E. F. (2004). Adolescent Internet use: What we expect, what teens report. *Applied Developmental Psychology, 25*, 633-649.

Halbur, D. A., & Halbur, K. V. (2011). *Developing your theoretical orientation in counseling and psychotherapy* (2nd ed.). Boston, MA: Pearson/Allyn and Bacon.

Harris, G. C., & Ramos, R. (2009). Assessment 101: Keys to having a successful evaluation. *Campus Activities Programming, 41*(7), 42–44.

Hart Research Associates. (2012). The online generation gap: Contrasting attitudes and behaviors of parents and teens. Retrieved from http://www.fosi.org/images/stories/research/hart-report-executive-summary-online.pdf

Hastie, M., Chen, N-S., & Kuo, Y-H. (2007). Instructional design for best practice in the synchronous cyber classroom. *Educational Technology & Society, 10*(4), 281-294.

Hays, P. A. (2008). *Addressing cultural complexities in practice.* (2nd ed.). Washington, DC: American Psychological Association.

Heo, G. M., Lee, R., & Park, Y. (2007). Learning experiences of adult bloggers as self-regulated learners. *Andragogy Today: International Journal of Adult & Continuing Education, 10*(1), 249-279.

Hinduja, S., & Patchin, J. W. (2007). Offline consequences of online victimization:

School violence and delinquency. *Journal of School Violence*, *6*, 89-112. doi:10.1300/J202v06n03_06

Hinduja, S., & Patchin, J. W. (2014). State cyberbullying laws: A brief review of state cyberbullying laws and policies. Retrieved from http://www.cyberbullying.us/Bullying_and_Cyberbullying_Laws.pdf

Hsi, S. (2007). Conceptualizing learning from the everyday activities of digital kids. *International Journal of Science Education, 29*(12), 1509-1529. doi: 10.1080/09500690701494076

Hud-Aleem, R., & Countryman, J. (2008). Biracial identity development and recommendations in therapy. *Psychiatry (Edgmont), 5*(11), 37-44.

International Telecommunication Union. (2013). The world in 2013: ICT facts and figures. Retrieved from http://www.itu.int/en/ITU-D/Statistics/Documents/facts/ICTFactsFigures2013.pdf

Internet World Stats. (2013). Usage and population statistics. Retrieved from http://www.internetworldstats.com/stats.htm

James, R. K. (2008). *Crisis intervention strategies* (6th ed.). Belmont, CA: Brooks/Cole.

Janesick, V. J. (2011). *"Stretching" exercises for qualitative researchers* (3rd ed.). Thousand Oaks, CA: Sage.

Jean-Malbuisson, G. (2010). The Internet ecosystem. *The Internet Society, 15*, 1-28.

Johnson, G. M. (2010). Internet use and child development: The techno-microsystem. *Australian Journal of Educational & Developmental Psychology, 10*, 32-43.

Johnson, G. M., & Buck, G. (2009). *Internet use during childhood: Gender differences in*

psychosocial and cognitive predictors. Paper presented at the Annual Conference of the American Educational Research Association, San Diego, CA.

Johnson, G. M., & Puplampu, P. (2008). A conceptual framework for understanding the effect of the Internet on child development: The ecological techno-subsystem. *Canadian Journal of Learning and Technology, 34*, 19-28.

Juvonen, J., & Gross, E. F. (2008). Extending the school grounds?—Bullying experiences in cyberspace. *Journal of School Health, 78*, 496-505.

Kaffar, B. J. (2006). Exploring the effects of online instructional models on the writing achievement of high school students with and without disabilities (Doctoral Dissertation). University of Nevada, Las Vegas, NV.

Katzer, C., Fetchenhauer, D., & Belschak, F. (2009). Cyberbullying: Who are the victims?: A comparison of victimization in internet chatrooms and victimization in school. *Journal of Media Psychology: Theories, Methods, and Applications, 21*, 25-36.

Kearsley, G. (1997). The Virtual Professor: A Personal Case Study. Retrieved from http://home.sprynet.com/~gkearsley/virtual.htm

Kearsley, G., & Shneiderman (1999). Engagement Theory: A framework for technology-based teaching and learning. Retrieved from http://home.sprynet.com/~gkearsley/engage.htm

Kraut, R., Patterson, M., Lundmark, V., Kiesler, S., Mukopadhyay, T., & Scherlis, W. (1998). Internet paradox: A social technology that reduces social involvement and psychological well-being? *American Psychologist, 53*, 1017–1031.

Li, H., & Wang, X. C. (2008). Transformation of public kindergartens in Shenzhen. *Chinese Education & Society, 41*(2), 41-70.

Lieberman, D. A., Bates, C. H., & So, J. (2009). Young children's learning with digital media. *Computers in the Schools, 26*(4), 271-283.

Lin, C. (2008). Beliefs about using technology in the mathematics classroom: Interviews with pre-service elementary teachers. *Eurasia Journal of Mathematics, Science & Technology Education, 4*(2), 135-142.

Livingstone, S. (2003). *Young people and new media*. London, England: Sage.

Loewen, S. (2006). Exceptional intellectual performance: A neo-Piagetian perspective. *High Ability Studies, 17*(2), 159-181. doi:10.1080/13598130601121300

Mace, C. A. (1932). *The psychology of study*. London, England: Methuen & Co. Ltd. viii, 96.

Madden, M., Lenhart, A., Duggan, M., Cortesi, S., & Gasser, U. (2013). Teens and technology 2013. Retrieved from http://www.pewinternet.org/~/media/Files/Reports/2013/PIP_TeensandTechnology2013.pdf

Malone, Y. (2002). Social cognitive theory and choice theory: A compatibility analysis. *International Journal of Reality Therapy, 22*(1), 10-13.

Mann, D., Shakeshaft, C., Becker, J., & Kottkamp, R. (1998). *West Virginia story: Achievement gains from a statewide comprehensive instructional technology program.* Santa Monica, CA: Milken Exchange on Educational Technology.

Matsumoto, D., & Juang, L. (2004). *Culture and Psychology*. Toronto, ON: Wadsworth.

Mayer, S. J. (2005). The early evolution of Jean Piaget's clinical method. *History of*

Psychology, 8(4), 362-382. doi: 10.1037/1093-4510.8.4.362

McCrae, R. R., & Costa, P. T. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of Personality and Social Psychology, 52*, 81-90.

McKenna, K. Y. A., & Bargh, J. A. (2000). Plan 9 from cyberspace: The implications of the Internet for personality and social psychology. *Personality and Social Psychology Review, 4*, 57–75.

McLeod, S. (2011). Bobo doll experiment. Retrieved from http://www.simply psychology.org/bobo-doll.html

McPheeters, D. (2010). Cyborg learning theory: Technology in education and the blurring of boundaries. *World Future Review*, *1*(6), 34-39.

Mentzer, G., Cryan, J. R., & Teclehaimanot (2007). Two peas in a pod? A comparison of face-to-face and web based classrooms. *Journal of Technology and Teacher Education, 15*(2), 233-246.

Merton, R. K. (1948). The self-fulfilling prophecy. *The Antioch Review, 8*(2), 193-210.

Merton, R. K. (1968). *Social theory and social structure.* New York, NY: Free Press.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded source book*. Thousand Oaks, CA: Sage.

Moloney, J. F., & Oakley II, B. (2010). Scaling online education: Increasing access to higher education. *Journal of Asynchronous Learning Networks, 41*(1), 55-70.

Moore, G. (1965). Cramming more components onto integrated circuits. *Electronics Magazine, 38*(8).

Mundy, M., Kupczynski, L., & Kee, R. (2012). Teacher's perceptions of technology use in the schools. *SAGE Open*, 1-8. doi: 10.1177/2158244012440813

Nayak, S. K., & Kalyankar, N. V. (2010). E-learning technology for rural child development. *International Journal on Computer Science & Engineering, 1*(2), 208-212.

Nie, N. H., & Erbring, L. (2000). Internet and society: A preliminary report. Stanford Institute for the Quantitative Study of Society. Retrieved from http://www.stanford.edu/group/siqss/Press_Release/Preliminary_Report.pdf

Norman, W. T. (1967). *2800 personality trait descriptors: Normative operating characteristics for a university population.* Ann Arbor, MI: University of Michigan, Department of Psychology.

North American Association for Environmental Education. (2012). Early childhood environmental education programs: Guidelines for excellence. Retrieved from http://breeze.cce.cornell.edu/p4b9agurc46/

Ofcom (2012). Significant rise in children's texting and time spent online. Retrieved from http://media.ofcom.org.uk/2012/10/23/significant-rise-in-children's-texting-and-time-spent-online/

O'Neil, R. M. (2008). It's not easy to stand up to cyberbullies, but we must. *Chronicle of Higher Education*, *54*, A23.

Pajares, F. (2002). Gender and perceived self-efficacy in self-regulated learning. *Theory Into Practice, 41*(2), 116–125.

Papanis, E., Giavrimis, P., & Papani, E-M. (2010). The contribution of the Internet into learning. *Review of European Studies, 2*(1), 54-60.

Patchin, J. W., & Hinduja, S. (2007). One of three teens and six preteens victims of cyberbullying. *New Social Worker, 14*, 30.

Patton, M. Q. (2002). *Qualitative research & evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage.

Paul Harris, interview by Harvard Graduate School of Education. Imagination important for children's cognitive development, March, 1, 2002. Retrieved from http://news.harvard.edu/gazette/story/2002/03/imagination-important-for-childrens-cognitive-development/

Paul, R., & Elder, L. (2007). Critical thinking: The art of Socratic questioning. *Journal of Developmental Education, 31*(1), 36-37.

Paulson, A. (2003). Internet bullying. *Christian Science Monitor*, *96*, 11.

Penn State University (n.d.). Erikson's theory of psychosocial development. Retrieved from http://info.psu.edu.sa/psu/maths/Erikson's%20Theory%20of%20Psychosocial%20Development%20(2).pdf

Piaget, J. (1936). *Origins of intelligence in the child.* London, England: Routledge & Kegan Paul.

Piaget, J. (1945). *Play, dreams and imitation in childhood.* London, England: Heinemann.

Piaget, J. (1973). *Memory and intelligence*: New York, NY: BasicBooks.

Piaget, J. (1988). Education for Democracy. In K. Jervis and A. Tobier (Eds.) Proceedings from the Cambridge School Conference on Progressive Education.

Polat, E., Adiguzel, T., & Akgun, O. E. (2012). Adaptive web-assisted learning system

for students with specific learning disabilities: A needs analysis study. *Educational Sciences: Theory & Practice*, Special Issue (Autumn), 3243-3258.

Purcell, K., Buchanan, J., Friedrich, L. (2013). The impact of digital tools on student writing and how writing is taught in schools. Retrieved from <http://www.pewinternet.org/~/media//Files/Reports/2013/PIP_NWP%20Writing%20and%20Tech.pdf

Raptis, A., & Rapti, A. (2002). *Learning and teaching in the era of Information Society: A holistic approach.* Athens, GA: Self-publishing.

Reeckman, B., & Cannard, L. (2009). Cyberbullying: A TAFE perspective. *Youth Studies Australia, 28*(2), 41-49.

Resnick, M. (1998). Technologies for lifelong kindergarten. *Educational Technology Research & Development, 46*(4), 43–55.

Resnick, M., Martin, F., Berg, R., Borovoy, R., Colella, V., Kramer, K., & Silverman, B. (1998). Digital manipulatives: New toys to think with. In C. Karat, A. Lund, J. Coutaz, & J. Karat (Eds.), *Proceedings of the Special Interest Group on Computer–Human Interaction (SIGCHI) Conference on Human Factors in Computing Systems.* New York, NY: ACM Press.

Saldaña, J. (2009). *The coding manual for qualitative researchers.* Los Angeles, CA: Sage.

Saniotis, A., & Henneberg, M. (2011). Future evolution of the human brain. *Journal of Future Studies, 16*(1), 1-18.

Santrock, J. W. (2007). *A topical approach to life-span development* (3rd ed.). New York, NY: McGraw-Hill.

Schacter, J. (1999). *The impact of educational technology on student achievement: What the most current research has to say.* Milken Exchange on Educational Technology, Santa Monica, CA.

Seo, H. A., Chun, H. Y., & Jwa, S. H. (2011). Relationship between young children's habitual computer use and influencing variables on socio-emotional development. *Early Child Development and Care, 181*(2), 245-265.

Sharf, R. S. (2008). *Theories of psychotherapy and counseling: Concepts and cases* (4th ed.). Belmont, CA: Brooks/Cole, Cengage Learning.

Shneiderman, B. (1994). Education by Engagement and Construction: Can Distance Education be Better than Face-to-Face? Retrieved from http://www.hitl. washington.edu/scivw/EVE/distance.html

Shneiderman, B. (1988). Relate-Create-Donate: An educational philosophy for the cyber-generation. Computers & Education, in press.

Shneiderman, B., Alavi, M., Norman, K. & Borkowski, E. (Nov 1995). Windows of opportunity in electronic classrooms, *Communications of the ACM, 38*(11), 19-24.

Sinicki, A. (2013). Modern cases of feral children. Retrieved from http://www. healthguidance.org/entry/16139/1/Modern-Cases-of-Feral-Children.html

Smith, G. M. (1967). Usefulness of peer ratings of personality in educational research. *Educational and Psychological Measurement, 27*, 967-984.

Smith, P. K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S., & Tippett, N. (2008). Cyberbullying: its nature and impact in secondary school pupils. *Journal of Child*

Psychology & Psychiatry, 49, 376-385.

StopBullying.gov (2014). Key components in state anti-bullying laws. Retrieved from http://www.stopbullying.gov/laws/key-components/index.html

Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques.* Newbury Park, CA: Sage.

Strom, P., Strom, R., Wing, C., & Beckert, T. (2009). Adolescent learning and the internet: Implications for school leadership and student engagement in learning. *NASSP Bulletin*, *93*, 111-121.

Sue, D. W., & Sue, D. (2008). *Counseling the culturally diverse: Theory and practice.* (5th ed.). New York: John Wiley & Sons.

Sweeney, C. (1999). A chatroom you can be NE1 (pp. 66–68). New York, NY: New York Times Magazine.

Thomas, T. (2011). Developing first year students' critical thinking skills. *Asian Social Science*, *7*(4), 26-35. doi: 10.5539/ass.v7n4p26

Turkle, S. (1995). *Life on the screen: Identity in the age of the Internet.* New York, NY: Simon and Schuster.

Turow, J. (1999). The Internet and the family: The view from the family, the view from the press. The Annenberg Public Policy Center of the University of Pennsylvania. Retrieved from http://www.appcpenn.org/Internet/family/rep27.pdf

U.S. Bureau of Labor Statistics as cited in the *Statistical Abstract of the United States: 2011*, Table 615. Retrieved from http://www.census.gov/compendia/statab/

U.S. Census Bureau. (2013). U.S. and world population clock. Retrieved from

http://www.census.gov/popclock/

van der Veer, R., & Valsiner, J. (1991). *Understanding Vygotsky: A quest for synthesis*. Oxford, England: Blackwell.

Van Wormer, K., & Davis, D. R. (2003). *Addictions treatment: A strengths perspective*. Pacific Grove, CA: Brooks/Cole.

Vasquez III, E., & Serianni, B. A. (2012). Research and practice in distance education for K-12 students with disabilities. *Rural Special Education Quarterly, 31*(4), 33-42.

Visser, P. S., Krosnick, J. A., & Lavrakas, P. J. (2000). Survey research. In H. T. Reis, & C. M. Judd (Eds.), *Handbook of research methods in social and personality psychology* (pp. 223–252). New York, NY: Cambridge University.

Vogel-Scibilia, S. E., McNulty, K. C., Baxter, B., Miller, S., Dine, M., & Frese III, F. J. (2009). The recovery process utilizing Erikson's stages of human development. *Community Mental Health Journal*, *45*(6), 405-414. doi: 10.1007/s10597-009-9189-4

Vygotsky, L. S. (1962). *Thought and language*. Cambridge, MA: MIT Press and Wiley.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University.

Vygotsky, L., & Luria, A. (1994). Tool and symbol in child development. In J. Valsiner & R. van der Veer (Eds.), *The Vygotsky reader* (pp. 99-172). Oxford, England: Blackwell.

Wagoner, B. (2009). The experimental methodology of constructive microgenesis. In J. Valsiner et al. (eds), *Dynamic Process Methodology in the Social and Developmental Sciences.* Springer Science + Business Media. doi: 10.1007/978-

0-387-95922-1_5

Watson, J. B. (1930). *Behaviorism* (revised edition). Chicago, IL: University of Chicago.

Wilson, R. (1994). *Environmental Education at the Early Childhood Level*. Washington, D.C.: North American Association for Environmental Education.

Wood, D., Bruner, J., & Ross, G. (1976). The role of tutoring in problem solving. *Journal of Child Psychology and Child Psychiatry, 17*, 89−100.

Wood, E., Mueller, J., Willoughby, T., Specht, J., & Deyoung, T. (2005). Teachers' perceptions: Barriers and supports to using technology in the classroom. *Education, Communication & Information, 5*(2), 183-206.

Xu, J. (2007). Middle-school homework management: More than just gender and family involvement. *Educational psychology, 27*(2), 173-189.

Young Children (2008). On our minds: Meaningful technology integration in early learning environments. *Young Children, 63*(5), 48-50.

Appendix A: Consent Form

You are invited to take part in a research study of the impact of the Internet on childhood learning and social development through the lens of veteran K-8 teachers. The researcher is inviting educators who have taught K-8th grade for a total of 20 years (regardless if consecutive) to be in the study. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Matt Glowiak, MS, NCC, LPC who is a doctoral student at Walden University.

Background Information:

The purpose of this study is to explore the perceptions of veteran K-8 teachers regarding the Internet's impact on childhood learning and development. With the data acquired from this study, future researchers, school counselors, educators, parents, and others may develop and implement better methods, approaches, and strategies used in the instruction provided to K-8th grade children. This includes any teaching, parental guidance, counseling, supervision, or other influence selected to benefit learning and social development.

Procedures:

If you agree to be in this study, you will be asked to:

- Participate in a 45 to 60-minute interview containing 10 open-ended questions. (Note: interviews will be recorded via digital audio device for later analysis.)
- Face-to-face interviews: meet at a place of best convenience to the participant
- Online interviews: login to Skype or FaceTime
- Participate in an additional interview as necessary

Here are some sample questions:

> How has the quality of education in your classroom changed over the past 20 years?
>
> In what ways have your teaching approaches and methods changed?
>
> How have you, as an educator, kept up with these changes over the past 20 or more years?

Voluntary Nature of the Study:

This study is voluntary. Everyone will respect your decision of whether or not you

choose to be in the study. No one at Walden University or your corresponding institution will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind later. You may stop at any time.

Risks and Benefits of Being in the Study:

Being in this type of study involves some risk of the minor discomforts that can be encountered in daily life, such as light stress, anxiety, frustration, or upset mood. Further, being in this study would not pose risk to your safety or wellbeing.

Analysis of the data may reveal a better understanding of the positive and negative experiences of this environment. With this information stakeholders may continue to create and refine strategies that maximize the benefits of the Internet's impact on learning and social development. Given that thoughtfully created environments have already demonstrated an ability to heighten childhood abilities, this study may help participants improve their own classroom environment to at least some degree.

Payment:

There is no monetary compensation for participation.

Privacy:

Any information you provide will be kept confidential. The researcher will not use your personal information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in the study reports. MP3 audio data will be kept secure using encryption software and password-protected filing. The actual Skype and FaceTime videoconferences will be protected using WPA2 Enterprise security with 128-bit AES encryption. Data will be kept for a period of at least 5 years, as required by the university.

Contacts and Questions:

You may ask any questions you have now. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you.

-Please print or save this consent form for your records.

Statement of Consent:

I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By replying to this email with the words, “I consent,” I understand that I am agreeing to the terms described above.

Appendix B: Interview Questions

1. How would you describe any formal technology training and personal experience with the Internet?
2. Please share with me your experience in using the Internet as a tool for teaching and learning.
3. How has the quality of education in your classroom changed over the past 20 years?
4. How have the students' attitudes toward learning changed?
5. In what ways have your teaching approaches and methods changed?
6. How have you, as an educator, kept up with these changes over the past 20 or more years?
7. How do you perceive the Internet's impact on individual student learning development?
8. How do you perceive the Internet's impact on individual student social development?
9. How do you perceive the Internet's impact on a societal level?
10. How do you perceive the Internet's overall impact moving into the future?
11. Do you have any additional questions, comments, or concerns?

Appendix C: Recruitment Letter (Administrators)

Dear Administrator,

My name is Matt Glowiak, and I am a doctoral student in the Counselor Education and Supervision program at Walden University. For my dissertation I am conducting a study to explore the impact of the Internet on childhood learning and social development through the lens of experienced K-8 teachers. By analyzing veteran teachers' responses I hope to provide a better understanding of the positive and negative experiences in this contemporary environment. This study is seeking 15 teachers who have taught K-8th grade for a total of 20 or more years (may be non-consecutive). Those selected will participate in 45 to 60-minute interviews that explore their perceptions regarding student learning and social development across a continuum of time. All interviews will be scheduled at a location most convenient to the participant and for a time agreed upon by both parties. Follow-ups may be scheduled as necessary.

This letter is available for email distribution, posting, and referral. Should you know any teachers who meet the criteria and might be interested in participating, please forward this message. Interested teachers will need to contact me to express interest in participation. Thank you for your assistance.

Cordially,

Matt Glowiak, MS, NCC, LPC

Appendix D: Recruitment Letter (Faculty)

Dear K-8 Teacher,

My name is Matt Glowiak, and I am a doctoral student in the Counselor Education and Supervision program at Walden University. For my dissertation I am conducting a study to explore the impact of the Internet on childhood learning and social development through the lens of experienced K-8 teachers. By analyzing veteran teachers' responses I hope to provide a better understanding of the positive and negative experiences in this contemporary environment. This study is seeking 15 teachers who have taught K-8th grade for a total of 20 or more years (may be non-consecutive). Those selected will participate in 45 to 60-minute interviews that explore their perceptions regarding student learning and social development across a continuum of time. All interviews will be scheduled at a location most convenient to the participant and for a time agreed upon by both parties. Follow-ups may be scheduled as necessary.

Qualified and interested teachers will need to contact me to express interest in participation. Should you know any other teachers who also meet the criteria and might be interested in participating, please forward this message. Thank you for your time and potential participation!

Cordially,

Matt Glowiak, MS, NCC, LPC

Appendix E: Open Codes

- Positive adaptation
- Negative adaptation
- Advanced conceptualization
- Compromised conceptualization
- Increased attention
- Decreased attention
- Good information
- Bad information
- Availability of resources
- Availability of information
- Hands-on learning
- Vicarious learning
- Experiential learning
- Homework simplification
- Individualized learning
- Integration
- Administration and the Internet
- Administrative policies
- Administrative politics
- Lesson planning
- Internet safety
- Cyberbullying
- Parental involvement
- Parental influence
- Setting/maintaining boundaries
- SMART Boards
- Face-to-face communication
- Positive social factors
- Negative social factors
- Speed of communication
- Social media websites
- Student attitudes
- Personal experience
- Mental health disorders
- Teacher attitudes
- Teacher training
- Teaching style
- Technology changes
- Traditional vs. contemporary
- Longevity of the Internet

- Internet use in the household
- Internet use in the classroom
- Internet use with children with disabilities
- Mobile Internet use
- Resourceful websites
- Miscellaneous

Appendix F: Categories and Subcategories

Category: Teacher experience

Subcategories:
- Amount of personal experience with the Internet
- Amount of classroom experience with the Internet
- Age

Category: Teacher comfort level

Subcategories:
- Outcomes of Internet use personal
- Outcomes of Internet use in the classroom
- Teacher attitudes

Category: Boundaries

Subcategories:
- Need for boundaries
- Student attitudes
- Teacher influence
- Actions employed by the schools
- Parental influence
- Parent-teacher influence

Category: Social factors (Positive)

Subcategories:
- Communicating through the Internet
- Traditional face-to-face communication
- Speed of communication
- Social networking
- Resources available to the student

Category: Social factors (Negative)

Subcategories:
- Risk factors
- Cyberbullying
- Suggestions for proper socializing through the Internet

Category: The traditional classroom

Subcategories:

- Traditional approaches and methods
- Traditional technology
- Hands-on learning

Category: The evolving classroom

Subcategories:

- Access to information
- Resourceful websites
- Lesson planning
- Current Internet-based technology
- SMART Board
- Hands-on learning
- The interactive classroom
- Internet applications for use with children with disabilities
- Future predictions

Appendix G: Selective Coding

Category: Teacher experience and comfort level

Subcategories:
- Formal training and personal experience
- Teacher attitudes
- Age

Category: Boundaries

Subcategories:
- Need for boundaries
- Bad information
- Teacher influence
- Parental influence
- Parent-teacher influence

Category: Social factors

Subcategories:
- Communicating through the Internet
- Traditional face-to-face communication
- Risk factors
- Cyberbullying

Category: The evolving classroom

Subcategories:
- The traditional classroom
- Student attitudes
- Attention
- Resourceful websites for the classroom
- Lesson planning
- Advanced conceptualization
- SMART Board
- Adaptability
- The interactive classroom
- Internet applications for use with students with disabilities
- Future Predictions

Appendix H: IRB Approval Number

03-20-14-0125866

Curriculum Vitae

Educational Background

Advanced Placement Curriculum, 1997 - 2001

-*Bolingbrook High School;* Bolingbrook, IL

-Cumulative GPA: 4.67

B.A., Psychology, 2001 - 2005

-*The University of Illinois;* Champaign, IL

-Cumulative GPA: 3.10, Major GPA: 3.65

M.A., Mental Health Counseling, 2007 - 2010

-*Walden University;* Minneapolis, MN

-Cumulative GPA: 3.93

Ph.D., Counselor Education and Supervision, 2010 - Present

-*Walden University;* Minneapolis, MN

-Cumulative GPA: 4.00

Publications: Refereed Journals, Newsletters, Magazines

Reicherzer, S., Patton, J., & Glowiak, M. (2011). Counseling Transgender Trauma Survivors. *ACA Vistas:* Electronic Database.

Glowiak, M. V. (2013). Self-care for caring professionals. *Illinois Counselor*, 5, 8-9.

Glowiak, M. V. (2013). The Internet's place in counseling. *CONTACT: An Illinois Counseling Association Publication*, 75, 6.

Glowiak, M. V. (2014). The dawn of distance counseling. *CONTACT: An Illinois Counseling Association Publication*, 76, 8-9.

Glowiak, M. V. (2014). The E-practice. *CONTACT: An Illinois Counseling Association Publication*, 77, 13.

Glowiak, M. V. (2014). Reinventing professional community through informed engagement: A call to potential counselors. *Illinois Counselor*. Manuscript submitted for publication.

Publications: Textbook Chapters

Simpson, L. R. & Glowiak, M.V. (2011). Consultation, coaching, and supervision. In D. Capuzzi & M. Stauffer (Eds). *Career Counseling: Foundations, Perspectives, and Applications* (2nd ed.). New York, NY: Routledge.

Glowiak, M. V. (2012). Individual counseling: Traditional and brief approaches. In D. Capuzzi & D. Gross (Eds). *Introduction to the counseling profession* (6th ed.). New York, NY: Routledge.

Moss, R., & Glowiak, M. V. (2012). Therapeutic alliance and the helping relationship. In D. Capuzzi & D. Gross (Eds). *Introduction to the counseling profession* (6th ed.). New York, NY: Routledge.

Glowiak, M. V. (2013). Escaping reality: Adolescent substance abuse. In D. Capuzzi & D. Gross (2013). *Youth at risk: Prevention resource for counselors, teachers, and parents* (6th ed.). Alexandria, VA: American Counseling Association.

Presentations

Dixon-Saxon, S., Marszalek, J., & Glowiak, M. V. (2012). *Learn about the MS in mental health counseling-on-demand*. Retrieved from http://www.waldenu.edu/News-and-Events/82861.htm

Spillman, J., Simpson, L., Perepiczka, P., Glowiak, M., & Jett, E. (2012). *Student wellness and the residency experience*. Poster session Presented at the 2012 NFM Symposium, Minneapolis, MN.

Capuzzi, D., Gladding, S., Lee, C., Stauffer, M., Glowiak, M., & Erber, N. (2013). *Male counselors and male clients: Sharing counseling experiences*. Learning Institute Presented at the 2013 ACA Conference, Cincinnati, OH.

Glowiak, M. V. (2013, October). *Learning how to network and maximize your conference experience*. Presentation for the Northern Illinois University Chapter of The Illinois Counseling Association, DeKalb, IL.

Glowiak, M. V. (2013, November). *Opiates: From "harmless" pills to lethal injections*. Presentation at the 2013 Illinois Counseling Association Annual Conference, Skokie, IL.

Glowiak, M. V. (2014, March). *Enhancing counselor community engagement through advocacy*. Presentation at the 2014 American Counseling Association Annual Conference (CSI sponsored session), Honolulu, HI.

Glowiak, M. V. (2014, Fall). *Perceptions of veteran K-8 educators on the impact of the Internet on learning and social development*. 50-minute roundtable discussion at the 2014 AARC National Assessment & Research Conference, Moline, IL.

Sheperis, D. S., & Glowiak, M. V. (2014, Fall). What research competencies do CES students really learn in their programs? 50-minute content Presentation at the 2014 AARC National Assessment & Research Conference, Moline, IL.

Certificates and Licenses

-National Certified Counselor [Certification # 277087]: Expires 05/31/2016

-Licensed Professional Counselor [State of Illinois # 178.007268]: Expires 03/31/2015

-National Provider Identifier Number: 1962823724

Work Experience

Stonybrook Center, 2013 - Present

a) Counselor for 56 clients all primarily diagnosed with opioid use disorder with varied secondary and other dually diagnosed conditions

b) Provide case management services to entire caseload as well as others requiring immediate assistance

c) Provide couples, marriage, and family systems counseling (as necessary)

d) Group leader for elective employment services group

e) Conduct varied psychological assessments and evaluations

Integrative Counseling & Psychological Services, PC, 2013 - Present

a) Private practice clinician serving children, adolescents, and adults with a variety of diagnoses and issues including: substance abuse and dependence, autism spectrum disorder, mood disorders, anxiety disorders, sexual trauma, domestic violence, and bipolar disorder

b) Provide case management services to entire caseload as well as others requiring immediate assistance

c) Provide couples, marriage, and family systems counseling (as necessary)

d) Conduct various psychological assessments and evaluations

Honors and Awards

-Ranked 7th of 365 students in graduating class, 2001

-Honor roll recipient, 1st honors all 8 consecutive semesters, 1997 - 2001

-Induction into the National Honor Society, 2001

-National Merit Scholar, 2001

-Who's Who Amongst American Students, 2001

-American Presidential Academic Achievement Award, 1997-2001

-Top Graduating Male Athlete GPA Award, 2001

-University of Illinois scholarship recipient for a 30 or higher ACT score, 2000

-Bolingbrook Rotary Club scholastic scholarship, 2001

-James Scholar honors in college of LAS, 2001 - 2002

-Dean's List honors in the college of LAS four semesters in a row, 2003-2005

-Outstanding Doctoral Student Nominee (Omega Zeta Chapter of Chi Sigma Iota), 2011

-Who's Who Amongst Professionals, 2012

-Chi Sigma Iota International Leadership Fellow, 2014

Internships

Champaign Police Department Juvenile Offender Outreach Program, 2004 - 2005

a) Mentor for two adolescents in the juvenile justice system

b) Responsible for helping adolescents meet court-mandated goals

c) Tutor and assist in academic goals

Resurrection Behavioral Health, 2009 - 2010

a) Group leader for individuals suffering abuse and addiction

b) Responsible for organizing and inputting client information

c) Responsible for selecting group topics and setting daily agendas

Northern Illinois University Community Counseling Training Center, 2012 - 2013

a) Conduct intake assessment and counsel individual clients

b) Assist in program development and advocacy

c) Assist in the writing of grant proposals for university funding

d) Supervise master's-level students in practicum experience groups

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Teaching Experience

Walden University Teaching Assistant, 2011 - 2013

-Teaching assistant for Dr. David Capuzzi, Ph.D., NCC, LPC

a) Assist in providing detailed feedback and critical thinking questions to 25 students over two classrooms

b) Assist in assigning grades according to a strict rubric

c) Assist in any other tasks germane to the classrooms' needs

Northern Illinois University Intern, 2012 - 2013

-Facilitate master's level practicum experiential groups

a) Lead here-and-now focused supervision sessions with 7 master's students for 15 hours per semester

b) Provide feedback and guidance on students' experiences

Organizations

-Peer Mediators counseling organization for students, 1997 - 2000

-Big Brothers/Big Sisters tutoring and mentor program, 2000 - 2001

-National Honor Society, 2000 - 2001

-Sigma Phi Epsilon fraternity, 2001 - Present

-Psi Chi, 2004 - 2005

-Chi Sigma Iota, 2009 - Present

-American Counseling Association, 2010 - Present

-National Board of Certified Counselors, 2011 - Present

-Association for Counselor Education and Supervision, 2011 - 2013

-Illinois Counseling Association, 2011 - Present

-Illinois Association for Multicultural Counseling, 2011 - 2013

-Illinois Counselor Educators and Supervisors, 2011 - Present

-CES Ethics Committee member for ACA Team Competition, 2011 - 2012

-International Association of Marriage and Family Counselors, 2013 - Present

-Chicago Counseling Association, 2013 - Present

-Golden Key International Honour Society, 2013 - Present

Service Positions

-Newsletter Co-Editor for Omega Zeta Chapter of Chi Sigma Iota, 2011 - 2012

-Newsletter Editor for Omega Zeta Chapter of Chi Sigma Iota, 2012 - Present

-Newsletter Committee Chair for Omega Zeta Chapter of Chi Sigma Iota, 2012 - Present

-Walden University Alumni Ambassador, 2012 - Present

-American Counseling Association Graduate Student Committee Member, 2012 - 2013

-American Counseling Association Graduate Student Mentor, 2012 - 2014

-Chi Sigma Iota International Counselor Community Engagement Committee, 2013 - Present

-President-Elect of Chi Sigma Iota Omega Zeta chapter, 2013 - 2014

-Chi Sigma Iota International Leadership Fellow, 2014

-President of Chi Sigma Iota Omega Zeta chapter, 2014

-President of Chicago Counseling Association, 2014

-National Board of Certified Counselors Mentor, 2014

-Chi Sigma Iota International Chapter Development Committee, 2014

-Chi Sigma Iota International Chapter Grants Review Panel, 2014

-Chi Sigma Iota International Counselor Bookshelf Review Panel, 2014

-Technology Committee Chair for Omega Zeta Chapter of Chi Sigma Iota, 2014

-Chapter Representative (Executive Board member) for Illinois Counseling Association, 2014

Current Projects/Pending Presentation & Publications

Glowiak, M. V., & Mayfield, M. (2016). Middle childhood: Physical and cognitive development. In D. Capuzzi & M. Stauffer (PhDs). *Human Development Across the Life Span: Applications for Counseling.* Hoboken, NJ: John Wiley.

Glowiak, M. V., & Mayfield, M. (2016). Middle childhood: Middle childhood: emotional and social development. In D. Capuzzi & M. Stauffer (PhDs). *Human Development Across the Life Span: Applications for Counseling.* Hoboken, NJ:

John Wiley.

Glowiak, M. V. (2014). Connecting with multiculturalism. In B. Erford (Ed.),

Orientation to the counseling profession (2nd ed.). Columbus, OH: Pearson.

References

Stacee Reicherzer, Ph.D., LPC-S (Texas), NCC
-Academic Program Director- B.S. in Human Services at Walden University

Laura R. Haddock, Ph.D., LPC-S (MS), NCC, ACS
-Counselor Education & Supervision Program Coordinator at Walden University

David Capuzzi, Ph.D., LPC, NCC
-Past president of the American Counseling Association (1986-1987)
-Senior Faculty Associate at Johns Hopkins University
-Professor Emeritus at Portland State University
-Walden University

Justin D. Lauka, Ph.D., LCPC, CCMHC, NCC, ACS
-Core Faculty at Adler Professional School of Psychology

Victoria White Kress, Ph.D., LPCC-S (OH), NCC
-President of Chi Sigma Iota International (2012-2013)
-Co-Chair of American Counseling Association's Graduate Student Committee
-Community Counseling Clinic Director
-Clinical Mental Health Counseling Program Coordinator
-Professor at Youngstown State University