

The Brave New Online World of Teens and a Call to Action for Educators

By

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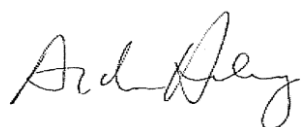
The Brave New Online World of Teens and a Call to Action for Educators

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Dedication

Many thanks go out to Charles Scott for his valuable input, encouragement and support throughout the entire process of writing this paper. I would also like to thank my wife, Amanda, and my two girls, Quinn and Briar, for supporting me in the writing of this paper and the completion of my master's degree. Your support and encouragement have made all the difference! Thank you.

Abstract

The aim of this study was to investigate current research regarding the online practices of teens, and make recommendations regarding the role of the school counsellor in providing support and education to ensure the safety of high school students. According to research, today's teens are faced with a new digital reality never experienced before. This "Brave New Online World" includes serious safety risks, privacy issues, and a rise in cyberbullying- and sexting-related suicides. Research shows that while students have largely been facing these challenges with little guidance from previous generations due to a "digital divide", recent efforts have been made to create digital literacy curriculum highlighting safety and digital citizenship. This study aims to investigate research on these topics and provide recommendations to high school educators wishing to support students' online education. I recommend that future studies examine the effectiveness of teacher / counsellor lead digital literacy curriculum through pre and post survey methods.

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Chapter I

Introduction

“Individual insanity is immune to the consequences of collective insanity” – Aldous Huxley, Brave New World Revisited

In the last 15 years, a digital revolution has occurred that has forever changed the landscape of what it means to be human and connected to the world. Previously long held beliefs surrounding the issues of privacy, community and connectivity have been challenged and usurped by the widespread use of new technologies, producing a digital generation gap. There is a divide between today’s “digital natives” (teens), and their “digital immigrant” parents, teachers and counsellors, who feel overwhelmed by these new technologies and do not know how to keep their children safe (Prensky, 2001). Although most adolescents exhibit technological fluency, their brain maturation is incomplete. Therefore, they are more likely to make impulsive decisions and employ thrill seeking behaviours online (Reyna & Farley, 2006). While technical innovation has always been embraced first by the youngest generation, this is the first cohort to enter into a “Brave New Online World” where their digital decisions may have consequences that extend well beyond adolescence into adulthood. This digital revolution has created a new reality for 21st Century adolescents, where one foolish online decision may forever alter relationships, educational admissions, scholarships, career opportunities, and unknowingly place one in harms way. Given the limited cognitive and moral development of typical adolescents, it is imperative

that caring educators provide guidance to students regarding online social and ethical responsibilities.

Statement of the Problem

There have been several negative consequences that have arisen from the widespread use of new 21st Century technologies. An increasing number of students have reportedly experienced cyber bullying, yet a recent study indicates that only 44% of respondents would tell an adult if they were a victim of cyber bullying (Kite, Gable, & Filippelli, 2010). In recent years there has been an alarming trend of teen suicides due to the relentless nature of online bullying. Many adolescents spend much of their time on social networking and chatroom sites, sharing personal information with acquaintances and strangers. As many of these sites are designed to facilitate sexually charged discussion, predators have been known to frequent these sites and pose as adolescents, where they groom victims before arranging an encounter (Wolak, Finkelhor, Mitchell, & Ybarra, 2010). The media have reported an increasing number of stories where adolescents have been involved in “sexting”, or transferring sexually explicit material to each other over their cell phones. This disturbing illegal and dangerous trend is occurring as a growing number of university admissions personnel and employment agencies are doing online searches of applicants as part of their screening process (Dowell, Burgess, & Cavanaugh, 2009). It is clear that many adolescents have not been given appropriate guidelines for safe and responsible digital citizenship.

Purpose of the Study

The purpose of this study is to examine current research of 21st Century adolescent online behaviors and assess the risks associated with the widespread use of new digital mediums. This study aims to raise awareness around the issue of teen online safety by examining adolescents' exposure to media, beliefs surrounding privacy and information sharing, knowledge of possible online risks and dangers, and awareness of their online reputation or "Digital Footprint". This study will also evaluate the efficacy of digital literacy curriculum through a literature review of previous current peer-reviewed studies. This study will also include recommendations for school counsellors who wish to provide support, guidance and education to ensure the safety and well-being of high school students.

Evaluation Questions

1. Is there a generational digital divide between today's online teenagers and their parents, educators and counsellors?
2. What are the current online habits and decisions of teenagers and do these pose a threat to their safety, development and reputations?
3. What behavioral and moral theories best explain these online habits, and can these theories help inform effective digital literacy curriculum and behavioral change?

Definition of Terms

There are several terms that need to be clarified in order to clearly comprehend this paper; thus, as part of my conceptual analysis, I offer the following definitions, with appropriate citations.

Digital Literacy: “Digital Literacy is the ability to locate, organize, evaluate, and create information using digital technology” (Poore, 2011, p. 23).

Digital Natives: “The new students today are all native speakers of the digital language of computers, video games and the Internet” (Prensky, 2001, p.1). These students grew up with digital technologies from birth or a very young age and so are fluent in digital technology argots.

Digital Immigrants: All those not born into the digital World but at some point have adopted the new language of the digital age (Prensky, 2001).

Digital Citizenship: The book entitled *Digital Citizenship in Schools* defined this as “the norms of appropriate responsible behavior with respect to technology use” (Ribble & Bailey, 2007, p. 10).

Digital Footprint: A digital footprint is a trace that remains after an individual’s actions in a digital environment, including the use of TV, mobile telephone, Internet, sensor or any other device (Nerut, 2012).

Cyberbullying: “This encompasses bullying by mobile phones, and the Internet, in many different guises (e.g., text messages, video-clips, emails, websites, and virtual Worlds” (Smith, 2009, p. 180).

Sexting: “The practice of sending sexually explicit message or photographs of oneself or others on digital electronic devices” (McEachern & McEachern-Ciattoni, 2012, p. 2).

Instant Messaging (IM): “Written communication in over digital devices” that is transferred and available to a receiver immediately (Varnhagen et al., 2009, p. 719).

Troll: “Trolling entails luring others into pointless and time consuming discussions” often with the intent of upsetting established communicative norms and values (Herring, Job-Sluder, Scheckler, & Barab, 2002, p. 372).

Flaming: “An electronic mail or Usenet news message intended to insult, provoke or rebuke” (Herring et al., 2002, p. 372).

Online Predator: Someone who uses the Internet to prey upon victims (usually for sexual or monetary purposes) (Marcum, 2007).

Grooming: “Grooming involves a clever process of manipulation, typically initiated through a nonsexual approach, which is designed to entice a victim into a sexual encounter” (Berson, 2003, p. 9).

Cyberporn: “Cyberporn is the term given to pornographic bulletin boards, digitized images, and “interactive” sites available through locations on the World-Wide Web” (Potter & Potter, p. 33).

Scope of the Study

This study will concentrate largely on the online realities and digital concerns of students in the middle and high school years from grades 6 through to grade 12. Social cognitive theory and Kohlberg’s moral development theory will serve as the theoretical framework to explain adolescent online actions and inform effective solutions. Digital literacy advocate, lecturer and expert, Jesse Miller from “Mediated Reality” will be consulted about his research, including findings and recommendations for educators.

In his enlightening book, *Talking Back to Facebook*, James Steyer (2012) explains what is at stake for childhood and adolescence through the dynamic change of the recent digital revolution. He posits that we have thrust today’s youth into a vast uncontrolled social experiment that has dramatic ramifications for our notions of adolescence, learning, and human relationships. He describes a world where many children have digital footprints before they are even born, occurring when parents post ultrasound photos online. More than 90 percent of

children today have an online history by the age of 2, and many have already figured out how to work their parents' smartphones to watch cartoons. He encourages parents and educators to engage with this new reality and attempt to influence today's youth towards responsible use of these powerful technological tools (p. 3). Students should not be left unprepared, merely to be the guinea pigs of this digital social experiment. As in the past, today's counsellors, teachers and administrators have an obligation to provide relevant guidance for the students whom they serve. This study will endeavor to outline the new digital realities of 21st Century students and make recommendations to educators who wish to provide support regarding the safe stewardship of these new technologies.

Summary

The explosion of new technologies in recent years combined with exponentially increased accessibility to young people has created a unique challenge to teachers, counsellors and administrators charged with the duty to protect and support students. In recent years, new technological tools have been employed by young people with little input or guidance from parents or educators. The aim of this paper is to examine current literature and peer-reviewed articles to provide educators with a deeper understanding of the unique online challenges and dangers faced by middle and high school students today. This paper will also investigate research regarding current digital literacy curriculum, with an aim to provide recommendations to educators. The consultation with acclaimed lecturer and researcher, Jesse Miller, will provide additional awareness of the current online issues faced by teens, and will also include recommendations to educators who wish to support students' healthy online behavior. In light of the research indicated above, this paper's aim is to help inform educators to better support the

digital / personal safety and reputations of the students whom they serve.

Outline of the Remainder of the Paper

The remainder of the paper will include a theoretical frameworks section, Chapter II, which draws upon theoretical perspectives relevant to the digital lives of students, including social cognitive theory and Kohlberg's moral development theory. This is followed by a literature review that will be divided into 3 sections:

1. 21st Century Realities
2. The Dangers and Risks Faced by Students
3. The Digital Footprint

Chapter III will begin with discussion and recommendations and a section entitled "A Call to Action through Digital Literacy Curriculum". This section will also highlight the limitations to this paper and will include recommendations for future research.

Chapter II: Literature Review

Theoretical Frameworks

Social Cognitive Theory

There are many motivating factors that guide and affect human behaviors. Social cognitive theory (SCT) outlines these influences and provides a rationale for effectively altering behavior (Bandura, 1977). SCT is an expansion of Bandura's social learning theory, which suggested that an individual's behavior is not dictated by inner forces nor environmental stimuli, but rather a continuous interaction between behavior and its controlling conditions (Bandura, 1971). From this perspective, human development, adaptation and change are facilitated within a social system whereby human nature can be shaped by direct and observational experiences (Bandura, 2001). If an individual's, or peers' actions are seen to produce negative results, one is less likely to continue the actions or behavior. Due to the responsive nature of one's social environment, the acquisition of response information largely guides learning and behavior. Bandura posits that much of this can be accomplished through modeling rather than through direct experience (Bandura, 1977). Further, Bandura posits that nearly all learned behavior from one's direct experience can be learned through the observation of others' behavior and their consequences. Through this vicarious learning of behavior and consequences students could be enabled to develop a higher online moral code without having to learn through trial and error of personal interactions (Bandura, 1971). The digital literacy classroom could be the best place for this modeling to occur as peer modeling is recognized as a sizable factor in adopting new behaviors in intervention and prevention programs (Bandura, 1977). As Ribble and Bailey suggest in the book *Digital Citizenship in Schools*, "Students can be expected to make mistakes when using technology, but through modeling and direction students need not make the same

mistake twice” (2007, p. 2). A great deal of social learning occurs from models in one’s immediate environment. However, much of this learning is absorbed unintentionally from pervasive modeling from mass media (Bandura, 2001). The advertisements portrayed in various media are examples of social cognitive theory in action. This is where the consumer / viewer may wish to emulate the observed values and behaviors through their purchases. Modeling appropriate online behavior is not entirely different. Peers, parents and teachers are also observed by students as examples of normative behavior (Lyons, 2012).

SCT asserts that while human behavior is guided by direct and vicarious experience, much of human behavior is adopted through anticipated outcomes. This is where one’s actions are regulated to a large degree by the anticipated future consequences (Bandura, 1971). According to Bandura, effective modeling, or observational learning, must undergo a four-step process. Firstly, one must undergo the *attentional process*, where one attends and recognizes the essential features of the model’s behavior. The *retention process* is where the actions of the model are represented in the subject’s memory in symbolic form. This process involves verbal coding, as much of the cognitive processes that govern human behaviors are largely more verbal than visual. The third element of modeling is the *motoric reproduction process*, where one must coordinate the modeled behavioral skills and integrate them to produce new forms of behavior. The final component is the *reinforcement and motivational processes*. *This is where positive incentives* reinforce the modeled and newly coordinated desirable behavioral skills (Bandura, 1971).

SCT encourages the adoption of healthy behaviors and provides a theoretical base for behavioral change in substance abuse and prevention programs (Bandura, 2004) “Motivation is enhanced by helping people see how habit changes are in their self-interest and the broader goals

they value highly” (Bandura, 2004, p. 144). SCT’s theory of behavioral change through modeling provides hope for concerned counsellors and educators who wish to alter high-risk online behaviors of students. Although the challenges of the new digital reality may be daunting, SCT suggests that through proper online pedagogy, with an emphasis on modeling, counsellors and educators can provide a safe way to inform students of the risks associated with online life.

Moral Development Theory

Built upon Piaget’s moral psychological research of childhood, Kohlberg’s moral development theory includes adolescence and extends into adulthood, thereby proving to be an excellent guiding theory for this paper. Kohlberg’s moral development theory exists within physical, social and cognitive parameters. As the brain’s prefrontal cortex is not fully developed until adulthood, many adolescent mental processes result in decisions that are self-centered and lack empathy, perspective taking and social sensitivity (Eslinger et al., 2009). This serves to explain many of the misguided, self-centered, unsafe or cruel actions adopted by many adolescents today.

Moral development theory includes six sequential hierarchical stages split into three developmental levels, with each level having two stages (Kohlberg, 1971). Kohlberg posits that a child’s moral compass begins in what is called “Pre-Conventional level I”. At this stage, moral value resides in the needs and wants of the individual. Decisions are made to maximize the wants of the individual whilst avoiding punishment (Siponen & Vartiainen, 2004). At stage two, the individual’s moral judgment is motivated by the desire to meet one’s needs but sometimes may meet the needs of others if reciprocity is envisioned (Kohlberg, 1971). Students usually enter the “Conventional level II” during the middle school years. Stage three is coined the “good boy-nice

girl” orientation, where moral actions are taken to appear in a good light to others. At stage four the individual’s moral judgment is based upon maintaining the social law and performing one’s duty to preserve the social order (Ma, 2011). Kohlberg’s Post-Conventional level III, the “autonomous and principled level”, is achieved when an individual makes an effort to identify moral values separate from those holding authority or power and apart from his or her place in the group (Kohlberg, 1971). At stage five’s “social-contract legalistic orientation”, one is clearly aware of the relative personal or individual values and opinions as well as the parallel importance of procedural rules when reaching consensus (1971). This stage of law making is in contrast to stage four’s law abiding moral judgments. In stage five, “the laws and duties are based on rational calculation of overall utility, or the greatest good for the greatest number” (Ma, 2011, p. 2193). At stage six, the “universal ethical-principle orientation”, one’s moral compass is not drawn from something static such as the “Ten Commandments”, but rather from a sense of conscience in concurrence with self-chosen ethical principals that are logical, ethical and consistent. At this, the highest stage of Kohlberg’s moral development theory, “The principles of justice require us to treat the claims of all parties in an impartial manner, respecting the basic dignity, of all people as individuals. The principals of justice are therefore universal; they apply to all” (Kohlberg, 1971, p. 2).

Kohlberg (1971), posited that the majority of adolescents do not progress to the fourth stage of “law and order” until early adulthood. Therefore, it is during the precarious “good boy-nice girl” stage that a students’ decisions are highly influenced by their peer group and where many social norms are internalized (Berkowitz, 2004). It is precisely at this point in moral maturation that many of today’s youth experience copious amounts of unsupervised online screen time (Berson & Berson, 2003).

Central to Kohlberg's theory is that stages and developmental levels are hierarchical, meaning no stage may be skipped and once a developmental stage has been reached there can be no regression (Walker, 1982). This is cause for measured optimism to concerned counsellors and educators. If students are given the appropriate tools for moral and cognitive development, they can never again regress to a lower moral stage of development, thereby increasing the likelihood of ethical and safe online behavior.

21st Century Realities

The Internet was created in the 1960's by the military industrial complex within the United States. It was designed to function without centralized control so that the system would still exist in the event of a military strike on a major city or region. In many ways, the Internet's interconnected design without centralized control functions much like a state of anarchy. In 2010, Eric Schmidt, CEO of Google stated "the internet is the first thing that humanity has built that humanity doesn't understand, the largest experiment in anarchy that we have ever had" (Brennan, 2011, p. 16). It is in this state of online anarchy that today's students are coming of age and finding their way, largely on their own.

In 2001, researcher and author Mark Prensky wrote an influential article entitled "Digital Natives, Digital Immigrants", which outlined the vast differences in technological competency and usage of children and youth versus the adult population. In this article, Prensky identifies technology users as two distinct groups. "Digital Natives" are young people who, after having been surrounded by digital technology since birth, employ an instinctive ability to understand and navigate through various digital media. "Digital Immigrants" are the adults who can remember the world before the digital revolution and must now learn the new language and

customs of this new online world (Prensky, 2001). Certainly children and young people represent a large segment of Internet users. A 2009 study by the Pew Internet & American Project reported that 74 percent of American adults are online, in comparison with 93 percent of young people aged 12 to 17, and the youth percentage is expected to rise (Chow, 2009). Another recent study found an 18 percent increase in internet usage of children aged 2 to 17 (Nielson, 2009). This digital world is increasingly being populated with ever-younger participants.

Many children are exposed to the Internet as toddlers on their parents' laps and an increasing number of pre-teens navigate the web unaccompanied (Chang, 2010). In light of this fact it is alarming that according to a 2006 study, only 1 in 5 teenagers had some form of Internet blocking software installed on their home computer. From that figure, many teens still indicated receiving unwanted or offensive materials online (Albin, 2012). Unsupervised Internet access means that young people may be exposed to information, material and situations that would otherwise not be available to them (Brennan, 2011). The amount of time children and teens spend online has risen dramatically in recent years, as well. According to a Kaiser Family Foundation study, the average child between the ages of 8 and 18 spends 7 hours and 38 minutes online per day (DiBenedetto, 2011).

Because many students have been raised in this technologically steeped environment, many parents and educators view them as technologically advanced individuals possessing all of the knowledge needed to navigate through the digital world. Unfortunately, many "digital immigrants" feel that they do not possess the skills to adequately support students in this new environment and choose to remove themselves from the conversation (Ribble & Bailey, 2007). Many parents view their children as the house "guru" regarding the Internet and subsequently tolerate much more of their children's increased screen time due to the perceived benefits of

technical skill acquisition (Fleming, Greentree, Cocotti-Muller, Elias, & Morrison, 2006). There is a lack of inter-generational co-viewing of Internet materials in the home, as most homes do not have a central location for the home computer. This also leads to unsupervised screen time (Burrow-sanchez, Call, Zheng, & Drew, 2011).

A 2004 study in the United Kingdom found that 28% of parents considered themselves to be at the beginner level of comprehension of the Internet and computers, compared with 7% of children. This same study found that only 12% of adults considered themselves to be at an expert level in contrast with 32% of children under the age of 17 (Livingstone & Bober, 2004). However, the fact remains that not all students are as technologically adept as they may seem and not all educators and parents are as technologically inept as they may consider themselves to be. Just because students feel comfortable using a medium does not necessarily mean they know how to use it appropriately (Ribble & Bailey, 2007).

Research shows there is a significant gap between children's usage of technology, the skills associated and parental awareness (Brennan, 2011). Media researcher and lecturer Jesse Miller, spoke of countless situations where uninformed parents had bought an iPod or other digital device for a young child without researching the possible consequences of third party applications. He stated that many parents wrongly believed their child was unable to text strangers from an iPod because no phone number was assigned to that device. However, countless free downloadable applications, such as text +, assign free telephone numbers to anyone, thereby allowing unsupervised children to access text, voice or video connectivity 24/7 through wireless Internet access at home or at school (Miller, 2012).

In many ways, social media sites are the "malls" for the 21st century child or adolescent. Sites such as Facebook and Instagram are used by youth to socialize, catch up on gossip,

collaborate on schoolwork, gain validation and engage in self-expression and identity formation typical to adolescence. A staggering 30 billion pieces of content is uploaded to Facebook every month (Collier & Magid, 2011). There are many benefits to this digital form of socialization. This includes learning about the world beyond one's sheltered environment, being exposed to various possible interests, and developing civic engagement through the online support of causes that are meaningful to adolescents (Collier & Magid, 2011). However, as with any medium there is also the opportunity for students to be exposed to the dark side of humanity through social media sites. The anonymity of the Internet allows predators and bullies to create false identities and potentially harm young people online.

The use of text messaging media has exploded in recent years with children and adolescents. Students text message each other to make plans, make quick comments online to small groups or to discuss homework, often whilst doing other things. Through the use of text messaging media, students have created a new language through the use of acronyms, abbreviations, word combinations, emoticons and grammatical shortcuts to convey messages faster than formal language (Varnhagen et al., 2009). Varnhagen et al.'s research found this new language aided in multitasking ability and dispelled parent and teacher concerns that this new language was eroding young people's ability to write essays and formal communications (p.730).

However, the implications surrounding the amount of text messaging and its effects upon interpersonal social skills are not fully known at this time. A recent Nielsen study reported the average American 13 to 17 year old exchanges 3,339 text messages per month, or around 111 per day (Nielsen, 2011). Given these statistics, it is no wonder that many parents and educators feel as if today's children and adolescents are easily distractible due to their digital devices. MIT professor of social science Sherry Turkle (2012) posits that constant use of digital media inhibits

our capacity to give our full attention to an individual or to any singular task. While many teens use text messaging instead of actual face-to-face interactions, they are often deprived of important interpersonal cues such as of tone of voice and facial expressions (Steyer, 2012). This deprivation of interpersonal cues proves problematic when considering healthy social development from a social cognitive theoretical perspective. Central to SCT is the contention that individuals largely choose their behaviors based upon the response information from those around them. “By observing others, one forms a conception of how new behavioral patterns are formed and on later occasions, the symbolic construction serves as a guide for action” (Bandura, 1977, p. 192). Since text messages are merely written symbols, the meaning and emotions within the message must be interpreted by the reader. Emotions in text messaging must be made explicit using either emoticons, or the use of capitalization to indicate shouting (Varnhagen et al., 2009). As much of human communication is interpreted through subtle body language and tone inflection, the preference for text messaging over face-to-face encounters may inhibit the development of healthy and appropriate interpersonal skills.

Throughout history there has always been a lag between the introduction of a new technology and a set of behavioral and social norms that surround such technology (Brennan, 2011). Viewed through both Kohlberg’s stages of moral development and social cognitive theory, one can find cause for concern given the unfettered access to both online content and the constant connectivity of this generation. Firstly, as most adolescents’ moral development peaks at Kohlberg’s stage three, one must pay significant attention to the online communities and the social norms that exist there, as these are likely to affect the offline moral development of students as well. Viewed through social cognitive theory, one must also look to the modeling of the social norms within online communities as individuals learn values, styles of thinking and

behaviors from extensive modeling within communities (Bandura, 2001). A significant amount of recent research indicates that many of these online communities do not provide a positive model for moral development (Greenfield, 2004). In fact, it is often these online communities that pose the greatest risks to adolescents' mental health, personal safety and privacy.

The Dangers and Risks Faced by Students

Online Predators

Until recently, sexual predators were thought of as shady characters frequenting playgrounds, parks or malls attempting to lure potential victims in these public venues. With the advent of the Internet combined with the amount of adolescent unsupervised access to digital technology, the emerging threat to young people is from the new online friend who appears like any other teenager online. This new friend, (the Internet predator) emboldened by the anonymity of the Internet and armed with the knowledge of online teen culture, forms friendships and relationships with potential victims using social media sites, instant messaging or chatrooms (Berson, 2003). These online predators stalk and seduce naïve adolescents from the privacy of their bedrooms, professing love, friendship and marriage to get what they want from youth: sex (Marcum, 2007). This goal is achieved through a process called online grooming, where a predator begins a relationship with the victim through non-sexual discussions or topics on social media sites or chatrooms. The victim's trust is gained as this deceptive relationship continues online through the predators' manipulative and calculated online interactions. The predator attempts to gain the victim's affection and trust, often by presenting themselves as a mentor or confidant of the victim (Fleming et al., 2006). This trust is used to make the victim more malleable to sexual advances later in the relationship when the online bond has been solidified

(Berson, 2003). The 2010 film “Trust”, directed by David Schwimmer, outlines this process of online victimization through grooming, where seemingly benign online conversations eventually lead one 14 year old girl to an offline meeting with a predator in a motel room where she is sexually abused (Bellin & Festinger, 2010).

Some predators use child pornography along with adult pornography to desensitize victims to graphic sexual images and to lure victims into sending images of themselves (Marcum, 2007). Many predators also have exhibitionistic tendencies and use their web cameras to send naked photos of themselves to potential victims. One study found 18 percent of child molesters sent out provocative pictures of themselves to victims and one in five molesters had convinced victims to do the same (Wolak et al., 2010). The Youth Internet Safety Survey reported the online experiences of over 1500 American children between the ages of 10 and 17 years of age in 2003. In this study, 19% of children reported unwanted sexual solicitation and 25% reported exposure to unwanted adult content (Wolak, Mitchell, & Finkelhor, 2003). While many of these online relationships lead to the sexual abuse of a minor, some have led to self-harm and suicide. In 2012, a British Columbian teenager, Amanda Todd made international headlines after sending a nude photograph to an online predator who later posted her pictures to social media sites. She was subsequently subjected to intense cyberbullying and traditional bullying which contributed to her suicide (Puxley, 2012). High profile suicides such as Amanda Todd’s, along with the television show “To Catch a Predator” have led to legislative action and major policy change within large social media outlets. In August 2009, Illinois governor Pat Quinn signed a new bill that bans known sexual predators from using social media sites. Between 2008 and 2009, Facebook removed more than 5500 convicted sex offenders from its site (Chang, 2010). The fact that the number of “known” predators on Facebook was so high is

especially alarming when one considers a 2010 survey which discovered that more than 37 percent of U.S. 10 to 12 year olds were on Facebook (Collier & Magid, 2011). At this stage of development students are particularly vulnerable to sexual solicitation and exploitation online as they are experiencing a growing curiosity about sexuality and experimentation in the transition from childhood to adulthood (Wolak et al., 2010). Although parents are the first line of defense in keeping their children safe online, the gap in technological knowledge unfortunately leaves many students unprotected and at risk for abuse (Berson, 2003). This risk for abuse is apparent when one considers the findings of one study entitled *Clustering of Internet risk behaviors in a middle school population*, which discovered that 31.1% of boys and 27% of girls reported posting personal information online. This same study indicated that 7.7% of students posted the name of their high school and 1.2 % posted their home address (Dowell, Burgess, & Cavanaugh, 2009).

Cyberbullying

Traditional bullying occurs when more powerful individuals initiate abusive relationships with individuals in a less powerful position, resulting in physical or emotional harm. Bullying has been studied extensively over the last 30 years and most schools have acted upon this research by enforcing policies to reduce bullying incidences in schools. However, more recently a new form of bullying has become apparent that has significant consequences for young people online (Smith, 2009). Smith posits that cyberbullying, (a growing phenomenon) is an extension of traditional bullying through the use of smart phones, mobile digital devices and the Internet (p.180). Traditionally, bullied individuals were able to escape the taunts and emotional, physical or mental abuse once they left the schoolyard or playground. Now, through the use of smart

phones, social media and chatrooms, bullied students experience this victimization relentlessly 24 hours a day, 7 days a week through the new online playground of the Internet (Albin, 2012). Recently, cyberbullying has received international attention due to several high profile cases of cyberbullying-induced suicides that have outlined its negative effects on adolescent mental health. In 2011, Courtney Brown, 17, was found hanging in her basement (Scott, 2011). After an alleged gang rape where digital images were uploaded to the Internet, Rataeh Parsons, 17, killed herself (Mas, 2013). Saskatchewan's Todd Loik took his life just days before his 15th birthday due, in part to cyberbullying ("Todd Loik, Saskatchewan Teen Commits Suicide After Alleged Bullying," 2013). These are but the latest Canadian victims tragically informing the discussion of cyberbullying and the detrimental effects it has on adolescents. Current research has indicated that cyberbullying has more harmful effects upon adolescent development than traditional bullying, and victims may suffer from long-term sociological and psychological problems due to this new phenomenon (Albin, 2012). Albin further posits that although cyberbullying does not involve personal contact between victim and bully, it can cause serious psychological side effects including, low self-esteem, depression, behavioral and concentration disorders, as well as physiological side effects such as stress induced headaches, and nausea (p. 165). The effects of cyberbullying are made all the more humiliating by the potential of a wide audience of peers viewing the bullying through social media. Quite often, this is where bystanders can become additional bullies towards the victim (Chang, 2010).

Perhaps the most disturbing discovery associated with cyberbullying is its prevalence with today's youth. The second Youth Internet Safety Survey, recording the Internet experiences of students aged 10 to 17, found that 9% of respondents had been victims of online harassment in the past year. This figure was up 50% from the first YISS done a mere 3 years earlier (Ybarra,

Mitchell, Wolak, & Finkelhor, 2006). Another study found that 33% of adolescents had experienced cyberbullying in the past year, where “mean threatening, or embarrassing things were said about them through email, instant messaging websites or chatrooms”, with 9% specifically being targeted on social media sites (Dowell et al., 2009b, p. 551).

While the effects of cyberbullying from the victim’s perspective have received extensive study, a new field of study is researching cyberbullying from the bully’s perspective. A recent study has discovered that 81% of online bullies reported being a victim of cyberbullying *before* doing the same to others (Ybarra & Mitchell, 2007). Ybarra & Mitchell’s 2007 study also found that while cyberbullies had a higher likelihood of being a victim, it also found that perpetrators of cyberbullying faced concurrent mental health problems similar to traditional bullies, including substance abuse, delinquent behavior and a poor relationship with their caregivers (p. 1).

When looking at cyberbullying behaviors from a social cognitive theoretical perspective, one notices a growing lack of empathy and moral behavior online. Bandura (1971) asserts much of the behaviors that people display are learned deliberately or unconsciously through the powerful influence of example. Furthermore, “people are more likely to exhibit modeled behavior if it results in valued outcomes than if it has unrewarding or punishing effects” (Bandura, 2001, p. 7). When one considers the relative anonymity of the Internet and the lack of legislation directed at the pursuance of cyberbullies, Bandura’s social cognitive theory helps to explain the motivations for youth engaging in what would be considered amoral behavior online. In social cognitive theory, one’s moral behavior is chosen based upon not only moral reasoning but also self-regulatory mechanisms and self-monitoring judgment. Much of these self-regulatory mechanisms are interpersonal in nature. Therefore, one might argue that the technological medium of social media inhibits the social cues that help inform youths’ self-

regulatory mechanisms. With little or no visual cues and a real physical distance between the online participants, there is little chance that children and adolescents can develop an understanding of a cause and effect relationship between their online words and the emotional impact upon others (Brennan, 2011).

Bandura's social cognitive theory of moral agency also examined how otherwise "normal" people can commit horrible acts towards others when individuals experience "moral disengagement" (or a deactivation of internal moral controls). This is achieved when individuals minimize their role in the harmful activity, disregard or distance themselves from the impact of their actions or they blame the victim (Hymel, Rocke-henderson, & Bonanno, 2001). Again, the technological medium through which cyberbullying takes place may contribute to moral disengagement through the removal of social cues, where one can convince one's self that "it's just a joke", or fabricate further justifications such as "I didn't hit her or anything". (Bauman & Pero, 2011). This online moral disengagement allows individuals to act in ways that are contrary to their internal moral code. This should present a concern to educators as there is a growing body of evidence that supports the contention that moral disengagement in children and adolescents is linked to aggressive behavior (Gini, Pozzoli, & Hymel, 2013).

Cyberpornography

Shortly after the advent of the Internet, concerned individuals and organizations began to outline the potential harm in freely accessible data on the information highway. Certainly, there are many dangers on the Internet including, online hate groups and cults, instructions on committing violent acts, gambling, invasion of privacy, infringement of intellectual property rights, cultural imperialism, and for the purpose of this section, sexual information and its online

representation and messaging. Cyberporn is a term given to pornographic digital images, interactive sites and bulletin boards available on the world wide web (Potter & Potter, 2001). Some researchers assert that “pornography has been linked to every technological innovation affecting visual communication from cave paintings to cyberspace” and the “moral panic” of children watching online pornography is largely a recent middle class phenomenon (Potter & Potter, 2001, p. 43). However, when one considers the impressionable moral development of students at this time in their lives, combined with the apparent frequency that cyberpornography is accessed by youth voluntarily or involuntarily, concerned counsellors and educators should assess the possible negative implications.

With little effort, a child can deliberately or inadvertently be exposed to obscene and violent pornographic materials via the world wide web (Berson, 2003). Several recent studies have attempted to measure the amount of children’s exposure to online pornography. One study tracked the Internet habits of users ranging from age 10 to 24, and concluded that 37.9% of the individuals had obtained pornographic materials online (Ma, 2011). A 2004 U.K. study revealed that 68% of all 12-19 year olds claim to have seen pornography online, with 20% saying many times (Livingstone & Bober, 2004). Another study by the researchers at the London School of Economics indicated that one in eight children between the ages 9 and 19 had viewed a porn site with a violent element in it (Behr, 2013). Sadly, the impact of children’s exposure to cyberpornography has been subjected to little scientific research (Sabina, Wolak, & Finkelhor, 2008). While it is difficult to assess the internalized harm and offense that access to such materials may have on students, the Livingston & Bober study asked individuals how they felt after viewing online pornographic images. Twenty percent of the study’s respondents indicated that they were disgusted, 14 percent said they didn’t like it, and 8 percent wished they had never

seen it, and nearly half, (45 percent) when looking back at their internet experiences with pornography, thought they were too young to have seen it when they did (Livingstone & Bober, 2004). Another study found that half of the boys and one third of the girls felt shame after watching pornography (Sabina et al., 2008). While these figures indicate a negative experience with pornography, what is perhaps more alarming is the normalization and pervasiveness that online pornography has in today's youth culture. One study found that students were remarkably blasé about the subject and found that consuming pornography was a "rite of passage" (Potter & Potter, 2001, p. 37).

According to social cognitive theory, many of the behaviors individuals exhibit are internalized and highly influenced through the communities they frequent. Therefore, given the apparent widespread teenage consumption of pornography, one must consider the implicit and explicit messaging within the culture of pornography. Behr's article "Generation X-Rated" outlined a University of Arkansas study which found 90% of the pornography studied had elements of verbal or physical aggression towards women (Behr, 2013). Many of the more recent pornographic films include young women engaging in "degrading aggressive oral sex" where their apparent discomfort and tears become the titillating draw for the viewer (Palmer, 2011). Furthermore, the "pornification" of mainstream popular culture normalizes this embedded messaging, and can be seen in recent music videos such as Miley Cyrus' *Wrecking Ball*, video games such as *Grand Theft Auto*, and even commercials (Palmer, 2011). If one can claim (as many researchers have), that the modeling of behaviors in pornography strips away humanity and celebrates cruelty (Behr, 2013), one can see the apparent dangers in a society of young people who may internalize such behaviors. "It is now normal for 16-year-old girls to think they shouldn't have pubic hair. That is an idea derived from porn" (Behr, 2013, p. 30). Young men

are also growing up with a toxic understanding of their role in sexuality. Social scientists and therapists are now struggling to help many young men who have sexual dysfunctions due to their addictions to cyberpornography (Palmer, 2011). According to Kohlberg's stages of morality, today's adolescent students wish to fit in with the dominant culture, being perceived as the "good girl or good boy". Disturbingly, if students wish to fit in with today's "pornified" culture, they may make choices that serve to reinforce the social ills as gender inequality and misogyny. Social cognitive theory posits, "people gain understanding of causal relationships and expand their knowledge by operating symbolically on the wealth of information derived from personal and vicarious experiences" (Bandura, 2001, p. 3). Given the prevalence and frequency of violent pornographic material available online, counsellors should be concerned with these "vicarious experiences" of children and youth today, and consider the possible implications of the internalization of that messaging.

Violence and Video Games

Video games are now available to children through various media, including cell phones, game consoles, computers and hand held devices. The various types of video games combined with the sheer amount produced have made the video game industry into a large part of North American culture. Video games now play a sizable role in the entertainment media consumption in children and teens' lives (Schanding, 2013). Graphic and brutally violent video games are heavily consumed by children and teenagers today, causing researchers and educators to be concerned about the possible long-term consequences. Several studies have found a correlation between frequent violent video game usage and antisocial, aggressive and violent behaviors. This research has led to the establishment of a ratings system to help children and parents better

understand video game media consumption (Becker-Olsen & Norberg, 2010, Saleem, Anderson, & Gentile, 2012). Some researchers state that children may be more vulnerable to the influence of frequent violent content due to their influential stage of emotional, cognitive and emotional development (Olson et al., 2007). Other studies indicate that exposure to repeated physically violent video games serve to desensitize children to real violence (Becker-Olsen & Norberg, 2010). Some researchers believe that the young gamer may be developing their impulse “fast-twitch” portion of their brain far more than their prefrontal cortex, or the logical, orderly, planning portion of the brain (Steyer, 2012).

Social cognitive learning theory suggests that “input variables, (personal and situational) affect a person’s internal states, (cognition, affect and arousal) and ultimately guide the person’s learning and behavioral responses” (Saleem et al., 2012). Further, social cognitive learning theory finds that repeated programming through antisocial behavioral gaming scripts can have long-term effects upon cognitive and precognitive structures such as beliefs, attitudes and stereotypes, and cognitive emotional constructs such as conditioned responses, lack of empathy and hostility (Saleem et al., 2012). When one considers the widespread sales of games such as the *Grand Theft Auto* series, *Call of Duty*, *Kill Zone* and *Resident Evil* with the graphic violence and negative behavioral messaging therein, it should come as no surprise that many young gamers exhibit these negative behavioral outcomes in their offline life.

Unsafe Online Communities

The Internet has enabled students to share content and explore new subjects in a connected online environment like no generation before. However, this connectivity also allows users to seek out and participate in unhealthy or unsafe online communities. Many at-risk

students are seeking out help and advice from self-harm or pro-suicide websites rather than through appropriate mental health support systems (Baker & Fortune, 2008). There is a great deal of public concern regarding the proliferation of self-harm websites that propagate anorexic or bulimic lifestyles, also known as “pro-ana” and “pro-mia” sites, that direct youth to engage in unsafe and life altering activities (Schrock & Boyd, 2008). While there is little scientific research into the effects of eating disorder websites, one study found no healthy messages being exchanged within the communities studied and found a negative impact on young women who frequented “pro-ana” websites (Rodgers, Skowron, & Chabrol, 2012). Jessie Miller also recounted several “pro-cutting” online communities that glorified self-harm including frequent uploaded photographic evidence and specific directions on how to hide cutting from parents and teachers (Miller, 2012).

There are over 100,000 websites that model and encourage and instruct vulnerable viewers to commit suicide. Many sites include graphic pictures, suicide notes and methods to successfully end one’s life, such as the most effective way to point a gun in one’s mouth (Alao, Soderberg, Pohl, & Alao, 2006). Some of these websites have even been used to rally suicidal individuals and make and fulfill suicide pacts (Swannell, 2010). Swannell, 2010, posits that developmentally, youths are particularly vulnerable to sites such as these because they lack self-regulatory skills and are more likely to become involved in risky behaviors (p.178). Further, young people also have a higher incidence of co-morbid substance abuse and depressive disorder (Alao et al., 2006).

Many marginalized or vulnerable youth have indicated that they frequent chat sites for the support and similar problems shared by the members of the online group. One study indicated that the main benefits of youth frequenting chat sites was a sense of “feeling

understood, feeling part of a community, or help with coping with psychological distress” (Baker & Fortune, 2008, p. 121). Many of these sites are attractive to youth who are survivors of trauma, abuse or members of minority groups such as homosexuals and feminists (Herring et al., 2002). While it is true that the relative anonymity of the Internet may allow vulnerable students to discuss their problems more openly with a degree of privacy, it also opens them up to further attack and negative experiences from “bad actors” who enter the forum with the sole purpose of disrupting the membership through “flaming” comments, hate-speech, or “trolling”. Herring et al. 2002 cited a case where an online forum for sexual abuse survivors was disrupted from a character self-named “daddy”, who traumatized the community by writing graphic descriptions of violent sexual acts to all present in the forum (p.373). The study found that emotionally charged, or vulnerable sites such as those listed above are particularly targeted by cyberbullies looking to inflict harm. Clearly, given the vulnerable state of the students frequenting these sites, online interactions such as those listed above do nothing to ameliorate the risks that brought them to the sites in the first place (Herring et al., 2002).

The Digital Footprint

In previous generations, most of what was done during childhood and adolescence faded away into memory, or merely became anecdotes for family and friends. Today’s youth do not have the luxury of that impermanence of memory. Many students have a digital footprint from the day they were born through their parents’ online posts, and continue to live their lives on display through a digital medium that never forgets their words, actions, pictures and videos (Kuehn, 2012). One study examining young people’s understanding of their digital footprint indicated that some do consider what they post online “oh, I always worry about what I post

online coming back to bite me later on...I'm very aware that the things I post online are public and can be stored on other sites as cached without notification" (Davis, Katz, James, & Santo, 2010, p. 134). Sadly, the preceding statement from 16-year-old Julia indicates an awareness and cautiousness that is lacking in most children and adolescents today. Given the amount of rampant cyberbullying and sexting behaviors adopted by a large portion of youth today, many fail to realize the permanence of their actions until it is too late (Miller, 2012). The most damaging to one's online reputation are unkind or angry posts, compromising videos or pictures and interpersonal conflict / fights caught on film or described through text (Collier & Magid, 2011).

It is vital that students realize that their digital footprint may have a detrimental impact on them many years from now. They may not know that in the future, university admissions officers and prospective employers may "Google" them and limit their future job prospects based upon their digital footprint (Harper, 2010). Many career-limiting situations that are caught on film occur when individuals are socializing with friends. "Candid shots of drinking or provocative behavior can haunt you" (Kuehn, 2012, p. 68). One recent study outlined a case where a recent college graduate impressed the interviewer with her resume and articulated speech, but was passed over for the position due to some inappropriate content on her Facebook page (Davis et al., 2010). Recently, there are many news stories outlining the proliferation of sext messaging and the damage caused by this new phenomenon. One such story is Jessica Logan's, a high school senior who unfortunately sent a nude photograph of herself to her boyfriend, who promptly shared this photo with his friends. Soon this picture was distributed throughout the school and subsequently, she was the recipient of relentless bullying and cyberbullying. Sadly, she ended her life due (in part) to this initial sext sent "privately" to someone she thought she could trust (Albin, 2012).

There are many motivating factors for teens that choose to engage in online sexting. These include attempts to attract or maintain a partner, seek attention or to respond to social pressures. Although these reasons for experimental behavior are nothing new to adolescence, the permanence and replicable potential of the images, videos or texts present a new challenge to youth and may lead to long term consequences (Houck, Ph, Houck, & Seifer, 2013). According to Kohlberg's stages of moral development, adolescents' moral reasoning maintains the expectations of their perceived "group" as valuable in its own right, regardless of immediate and obvious consequences (Kohlberg, 1971). Therefore, since children and adolescents are living in such a "hypersexualized" media focused world, it should come as no surprise that they are engaging in online activities that resemble that culturally dominant messaging (Palmer, 2011). Kohlberg posits that "mature thought develops from an active change in patterns of thinking, brought about by experiential problem-solving situations" (Hayes, 1994, p. 261). Unfortunately, 21st century adolescents' online experimentation and self-discovery through trial and error will be memorialized for all time through their digital footprint (Palmer, 2011).

Chapter III: Discussion of Implications

Summary

The purpose of this research paper was to outline the new 21st Century online realities encountered by children and adolescents, including risks and long-term implications, to determine what steps can be taken by educators to better support students. The research was conducted using current scholarly peer-reviewed articles, relevant documentaries, educational websites and consultation with Internet expert, Jessie Miller. The literature review attempted to answer the following questions related to this research project.

1. Is there a generational divide between today's online teenagers and their parents, educators and counsellors?
2. What are the current online habits and decisions of teenagers and do these pose a threat to their safety, development and reputations?
3. What behavioral and moral theories best explain these online habits, and can these theories help inform effective digital literacy curriculum and behavioral change?

A Call to Action Through Digital Literacy Curriculum

The digital revolution of the past decade has presented adolescents, parents and educators with new challenges never before experienced. The Internet is uncensored, meaning anyone can publish and view materials online. An Internet service provider links individuals to material but does not control what is viewed, meaning that it is up to individuals to behave ethically and make safe decisions online (Magid, 2003). Many parents and educators feel helpless and without a relevant voice when they consider the 24/7 culture of connectivity that exists with today's teens through online platforms such as Facebook, Twitter, Instagram, Vine and countless others

(Ribble & Bailey, 2007). Clearly, millions of teens, parents and educators require relevant guidance to navigate through this new wave of technological advancement (Steyer, 2012). Nigram and Collier's 2010 report entitled *Youth safety on a living Internet*, found that many children are not learning effective digital literacy skills at home or at school. This is due in part to prohibitive firewalls in educational settings, school liability fears, as well as teachers who do not fully understand technology. Unfortunately, this has created an environment where children and adolescents have taken it upon themselves to create their own ethical norms and learning environments online, leaving many open to harm (Nigram & Collier, 2010).

Historically, media literacy skills have been taught in the classroom (Davis et al., 2010). However, if educators are to be effective they must consider their own limitations before attempting to "teach" appropriate and moral online behavior. Researchers suggest that educators must first seek to understand online culture and increase their own digital literacy before instructing "proper" online behavior through a top down approach. "Only by fostering their own understanding of the literacy needed for critical inquiry in the twenty-first century will educators be able to instruct students on the appropriate use of emerging resources and prepare them for civic involvement" (Berson & Berson, 2003, p. 166). Fortunately, there are numerous educational leaders and non-profit organizations that provide resources to concerned educators who wish to remain "in the know" about online matters. Not surprisingly, many of these resources can be found on the Internet. A free online resource for educators can be found through the website commonsense.org. This website includes scope and sequence curricula directed at students from grades 1 through 12, and includes extensive materials directed at educators. The tab entitled *professional development*, leads educators to lessons designed to enhance practice from teaching digital citizenship to selecting appropriate digital learning tools

("Commonsense.org," 2013). I-safe.org is another website for educators wishing to extend their digital literacy skills. This site includes lesson plans for students K through 12 and has an entire section devoted to educating the "digital immigrant" ("i-SAFE," 2013). Both of these sites claim to use research data to inform the lesson plans offered. Jostens' "Pause Before You Post" online campaign also provides educators with resources regarding the implications of online personal publishing. This campaign includes lesson plans, supporting YouTube videos, and pamphlets directed at educators and teens (Patchin & Hinduja, 2013).

The International Society for Technology in Education, or ISTE, has created a workbook to inform educators and students through a philosophy called "Digital Citizenship". Ribble and Bailey (2007), describe digital citizenship as "the norms of appropriate, responsible behavior with regard to technology use" (p. 10). As a way of understanding online life and the use, misuse and abuse of digital technology, the book outlines nine elements that make up digital citizenship. These elements are digital access, digital commerce, digital communication, digital literacy, digital etiquette, digital law, digital rights and responsibilities, digital health and wellness and digital security. These nine elements are used as a starting point for discussion and accompany specific curriculum directed at helping educators and students become digital citizens (Ribble & Bailey, 2007). Nigram and Collier's 2010 study states that while individual programs (like those listed above), have been evaluated by their developers, there remains a need for a comprehensive National study researching the efficacy of such curricula. Further it suggests that online issues should not be viewed in isolation, but rather as part of an overall program aimed at online *and* offline moral development. "The skills we are talking about and trying to develop in terms of making judgments about dangerous situations, not being mean toward other people, reporting things to or discussing things with adults and parents, taking responsibility for your own

behavior” (p. 25). Before this development can take place, we educators must be fully digitally literate ourselves if we are to take on the responsibility of guiding young people through the online world (Poore, 2011).

The challenge in educating students towards a moral and responsible use of technology is that educators and counsellors speak a different language that may appear outdated or irrelevant to “digital natives” (Prensky, 2001). Students who have been raised with the Internet, computers and mobile technology seem to think differently than their “digital immigrant” parents and educators. Internet expert Mark Prenski muses about the cognitive processing of the digital natives,

They develop hypertext minds. They leap around. It’s as though their cognitive structures were parallel, not sequential. Linear thought processes that dominate educational systems can actually retard learning for brains developed through games and web surfing processes on the computer (Prensky, 2001, p. 4).

Therefore, the challenge for counsellors and educators is to develop new ways of presenting curriculum that reaches the “digital native”. Researchers suggest that a collaborative approach must be met between teacher and student thereby creating a common ground of what it means to be a “digital citizen” (Ribble & Bailey, 2007, Poore, 2011). One way of doing this would be to establish a community of practice that focuses on digital literacy issues. This community of practice would include all key stakeholders who share a concern for the safe use of technology by students. Stakeholders would include students, community leaders, administrators, parents, educators, and media experts. This community of practice would create local needs assessments and use survey data to drive policies and practices as well as evaluate the efficacy of current digital literacy curriculum (Lyons, 2012). One study entitled *Fostering Cross-Generational*

Dialogues about the Ethics of Online Life, created a forum where concerned educators and teens could openly discuss the various moral and ethical situations encountered online as well as possible risks. This study's findings suggest that this model of engaging dialogue between the "digital natives" and "digital immigrants" was a promising one in the creation of effective and relevant media literacy education. Adults were able to better understand the needs and perspectives of students while the "digital natives" were able to learn about some of the dangers and ethical dilemmas from an adult perspective. This study also found that the adolescent participants displayed a higher degree of consequence thinking than their adult counterparts, bearing resemblance to Kohlberg's early stages of moral reasoning whereby an egocentric view of morality prevails (Davis et al., 2010). This is precisely why teens require appropriate modeling and guidance with regards to online safety and ethical digital conduct. Poore's 2011 study articulates the necessity for collaboration between the generations.

We will not be able to achieve a liberating, collective intelligence until we can achieve a collective digital literacy, and we have now, more than ever, perhaps, the opportunity and the technologies to assist us in the human project of shaping, creating, authoring and developing ourselves as the formers of our own culture (Poore, 2011. p. 25).

Many researchers believe that successful digital literacy and online safety awareness efforts must include parents into the discussion, as they provide access to digital technology and the Internet for their children (Berson & Berson, 2003). As many parents may be unaware of the online issues facing teens, or unprepared to mitigate those issues, they must be drawn into the discussion by caring educators. "School counsellors are in a unique position to assist in efforts to reduce and prevent online victimizations because of their continual interaction with students,

parents, and other school faculty” (Burrow-Sanchez et al., 2011, p. 6). While the majority of the research indicates that effective digital literacy curriculum should be directed at all stakeholders including parents and educators, Wolak et al’s 2010 study suggests that more focus should be directed towards “at-risk” youth. This study posits that many of the youths who are victims of Internet crimes may not be receptive to the advice and direction from adults as many of these teens may be victims of familial abuse or alienated from their parents. “Prevention strategies should be targeted more directly at adolescents themselves, using media and authorities, including other youths, that have their confidence” (Wolak et al., 2010, p. 26). Clearly, as this is a relatively new field of study, there are bound to be conflicting methods of how to instruct children and adolescents towards safe and ethical usage of digital technologies.

Limitations

This study was limited by several factors. There is limited peer-reviewed research on this topic due to the relatively recent advent of the Internet. Little can be understood regarding the long-term moral implications and lasting effects of the problems outlined in this paper, as this is a relatively new phenomenon. Another limitation of this paper is its complete reliance upon previously published research. Further, much of the research used was conducted using data collected within the United States or Europe. To date, very little scholarly peer-reviewed research on this topic has been conducted within Canada. This means that much of the findings may not be applicable or generalizable to a Canadian adolescent demographic. This paper did not conduct any local statistical research, thereby limiting this paper’s relevance and generalizability to a British Columbian population.

Conclusions

The first question of this study was: Is there a generational digital divide between today's online teenagers and their parents, educators and counsellors? When compared with their parents and educators, young people make up a considerably larger segment of the online participation (Chow, 2009), and the average teenager spends much more time online than their caregivers as well, clocking in at 7 hours and 38 minutes online per day (DiBenedetto, 2011). "Digital natives," otherwise known as today's teenagers, have spent nearly their entire lives navigating the web, in stark contrast with their "digital immigrant" parents and educators (Prensky, 2001). There is a gap in technical knowledge between parents and their children (I. R. Berson, 2003). Therefore, many children and teens consider themselves technologically advanced individuals compared with their parents and educators (Livingstone & Bober, 2004). This has also led many adults to believe that their children know more than they do with regards to online matters (Fleming et al., 2006). Subsequently, many adults have chosen to remove their voice from the online conversation (Ribble & Bailey, 2007). There is a significant gap between children's usage of technology, the skills needed and parental awareness (Brennan, 2011).

The second question of this study asked, what are the current online habits and decisions of teenagers and do these pose a threat to their safety, development and reputations? Historically, adolescents have often made poor decisions with little regard for the long-term consequences that may influence the course of their adult lives. This is due in part to incomplete brain maturation, which leads to impulsive, thrill seeking behaviors (Reyna & Farley, 2006). This physiological reality combined with unsupervised screen time has led to many new problems. As teenagers are naturally experiencing a curiosity about sexuality and experimentation, they are particularly vulnerable to online sexual solicitation and exploitation from online predators

(Wolak et al., 2010). Their personal safety is further compromised due to apparent posting of personal information online. Some teens even publically post their home address (Dowell et al., 2009).

Due to the anonymity of the Internet and the lack of physical and interpersonal cues, many students have a reduced fear of punishment in their online interactions. This has led to several incidences of cyberbullying amongst children and adolescents. The tragic effects of cyberbullying have been made public through several recent high profile suicides (Albin, 2012). According to research, as many as 33% of adolescents had experienced cyberbullying over the course of a year with many being specifically targeted on social media sites (Dowell et al., 2009). A large percentage of online bullies reported being a victim of cyberbullying before bullying others (Ybarra & Mitchell, 2007) suggesting that this may be a negative feedback loop contributing to more cases of cyberbullying in the future.

Teens deliberately and inadvertently are being exposed to violent pornography (Berson, 2003). One study concluded that nearly 40% of users ranging from age 10 to 24 had obtained online pornography (Ma, 2011) and another study found that 68% of 12 to 19 year olds had seen online pornography with 20% stating that they had experienced online pornography frequently (Livingstone & Bober, 2004). A statistically significant number of these impressionable minds have admitted to viewing violent pornographic materials online (Behr, 2013). While a large number of adolescents admit to feeling negative emotions after viewing such materials (Livingstone & Bober, 2004, Sabrina et al., 2008) many consider viewing pornography to be a rite of passage (Potter & Potter, 2001). Considering that much of the online pornography contains misogynist messaging, educators should be concerned about the “moral norms” that

enter the mainstream culture through this medium, and the possible internalization of these norms during adolescence, a vulnerable developmental period (Palmer, 2011).

Violent video games are heavily consumed by teenagers today, despite the rating system that was devised to help prohibit impressionable youth from viewing this negative and violent messaging (Becker-Olsen & Norberg, 2010). Violent video games are a large part of the entertainment media that children and teens consume (Schanding, 2013), and this exposure may negatively affect teens due to their influential stage of development (Olson et al., 2007). Repeated exposure to violent video games desensitize teens to real violence later in life (Becker-Olsen & Norberg, 2010), and this negative scripting serves to entrench precognitive structures such as beliefs, attitudes and stereotypes (Saleem et al., 2012).

Many vulnerable teenagers are seeking out help from unhealthy online communities rather than pursuing appropriate mental health options (Baker & Fortune, 2008). Several at-risk teens are obtaining dangerous and possibly deadly advice from pro-anorexia, pro-bulimia, and pro-cutting websites (Rodgers et al., 2012, Miller, 2012). Some vulnerable teenagers are exposed to pro-suicide sites that give advice on such matters as writing suicide notes or effective ways of ending one's life (Alao et al., 2006).

Many teens today are not applying critical thinking skills to their digital interactions, and subsequently they have been disregarding their own "offline" moral compass regarding conduct, trustworthiness, respect and civic virtue (Berson & Berson, 2003). This has led many teenagers to engage in cyberbullying and sexting behaviors. Unfortunately for today's digital natives, these activities have long-term effects upon their adult lives as many employers are now "Googling" prospective employees and limiting opportunities for these youth based upon their discovery of questionable online content (Davis et al., 2010).

Left to their own devices, and on their own devices, many adolescents are practicing unsafe habits online, unaware of the permanence of their online actions whilst being exposed to graphically violent, pornographic, misogynist, and negative messaging. Clearly, current online habits and decisions of many teenagers do pose a threat to their safety, development and reputations.

The third question of this study asked which behavioral and moral theories best explain these online habits, and can these theories help inform effective digital literacy curriculum and behavioral change? Social cognitive theory and Kohlberg's moral development theory provide an effective research driven base for the behavior modification of adolescents as they both focus on social interaction of peers at a time when peer groups are influential in adolescent behavior (Lyons, 2012).

Kohlberg's moral development stages help to explain several of the misguided, cruel or unsafe actions of teenagers. Viewed through this lens, these seemingly immoral actions indicate a moral functioning of stage 1 or stage 2, where individuals make moral decisions based upon their own best interests or to avoid punishment (Kohlberg, 1971). Kohlberg's moral development theory places the majority of adolescents at stage 3, the influential "good boy-nice girl" stage where an individual's decisions are likely influenced by their peer group and where social norms are internalized (Berkowitz, 2004). Kohlberg's theory asserts that mature thought can be brought about (in part) by active changes in behavior through experiential problem solving circumstances (Hayes, 1994). The classroom should be that place where students can experience and learn from experiential problem solving situations in a safe and appropriately modeled environment.

Social cognitive theory is an excellent theory for this topic as it asserts that people understand causal interactions and increase their wisdom by interpreting personal and vicarious

experiences as positive or negative (Bandura, 2001). Peer modeling is also a foundation for social cognitive theory and has been found to be a key aspect in changing behavior (Bandura, 1977). The application of these theories in the design of effective digital literacy efforts would include a guided understanding of social media promoting social experiences that model moral and safe online actions and judgments.

Recommendations

It is clear that a large percentage of teenagers are facing the aforementioned challenges without help from educators or parents (Nigram & Collier, 2010). In light of the research findings of this study there were several recommendations for educators who wish to provide support to students in this new digital world. There were several studies found in the literature that make a strong case for the inclusion of digital literacy curriculum in a middle school and high school setting (Chang, 2010, Brennan, 2011, Magid 2003). However, to be effective, educators must first have a firm grasp of the technical landscape as well as the online culture of adolescents before attempting to model appropriate online behavior to them (Berson & Berson, 2003). Many educators do not feel competent or comfortable with 21st century technologies; however, there are a number of excellent resources that can serve as a starting point for professional development and digital literacy curriculum in a school setting (Common Sense Media, 2013; i-SAFE Foundation, 2013; Ribble & Bailey, 2007). Teachers have a wide range of skill levels and need to stay informed on emerging technological trends and how they affect the students whom they serve (Berson & Berson, 2003).

Research also confirms the need for educators to collaboratively co-create the relevant educational curriculum *with* students (Ribble & Bailey, 2007). This can be accomplished through

honest and candid discussion between the generations (Davis et al., 2010), and also through the creation of a community of practice, which would include administrators, educators, students parents and media experts addressing locally surveyed needs assessments with relevant materials from a united perspective (Lyons, 2012).

Research has shown that parents have a very important place in this dialogue and must be brought in to the discussion. Many parents wish to be heard but do not know how to help their children navigate these 21st century problems (Steyer, 2012). Therefore, caring counsellors and educators can use their knowledge and perspective to help draw parents into the digital literacy discussion (Burrow-sanchez et al., 2011). Researchers warn that while adults may be alarmed at the many potential online risks, recent digital literacy curriculum has moved away from the fear based approach and more towards a harm reduction approach (Nigram & Collier, 2010).

As the Internet is often devoid of interpersonal cues, effective digital literacy curriculum places students in scenarios of vicarious experiential learning (Berson & Berson, 2003). If students can learn from the mistakes of others through effective digital literacy curriculum, they may be spared the long-term negative effects that so many teens have endured thus far (Steyer, 2012). Bandura's social cognitive theory provides hope for today's youth through this form of education through vicarious experiential learning.

In actuality, virtually all learning phenomena resulting from direct experiences can occur on a vicarious basis through observation of other people's behavior and its consequences for them. Man's capacity to learn by observation enables him to acquire large, integrated units of behavior by example without having to build up the patterns gradually by tedious trial and error (Bandura, 1971, p. 2).

“No social stability without individual stability” – Aldous Huxley, (Brave New World)

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