Digital Citizenship:

Student Perceptions of the Effectiveness of a Digital Citizenship Intervention

SSM

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Abstract

The impact of a school-wide digital citizenship intervention using a cyber media expert at raising student awareness of 8 key online behaviours was investigated by using a mixed methods exploratory approach. A survey (n=20) collecting both quantitative and qualitative data was distributed to all grade 9 students from one middle school in the Comox Valley, School District 71. The response rate was 29%. After current literature was reviewed, a Likert-scale survey was created to identify effectiveness at raising digital citizenship awareness of 8 key online behaviours involving: privacy settings, chat rooms, instant messaging, SMS/MMS texting, cellular phone/smart phone privacy, social networking platforms, cyberbullying/digital peer aggression, and reporting procedures. The survey also consisted of two open-ended questions which were used to elicit longer responses for feedback on what students would immediately change after attending the intervention and feedback on what online topics students would want more information on in future interventions. The results of this study suggest that a school-wide intervention was effective at raising student awareness about digital citizenship. Gender did not play a significant difference among the majority of the online behaviours. Results to the open ended questions indicated that students were willing to take action to keep themselves safe online and provided suggestions for future interventions. In addition, future suggestions for research and implications for policy and practice in schools were discussed to prepare both educators and students for this digital era.

Keywords: digital citizenship, cyber media expert, social media, cyberbullying, online behaviours
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Dedication

This research is dedicated to anyone who has ever been hurt or harassed online.

I stand with you.
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Chapter 1: Introduction

Purpose of the Study

The purpose of this study was to help students become safe online and to decrease the rate of cyberbullying. Since technology continues to change at an accelerated rate, it is hard for educators and parents to keep up with the safety parameters associated with new websites and apps. Electronic communications have boomed almost overnight making it easier to communicate with more people in the blink of an eye (Englander, 2010).

Certain technological tools, such as Facebook and Twitter, allow for social interaction. Ninety-three percent of American teens between the ages of 12 to 17 years old have been online (Ryan & Kariuki, 2011). Research indicates that students want to feel connected with their peers and to be significantly accepted by them (Krapp, 2005). Unfortunately, the need to connect with technology could have some devastating effects. According to Ryan and Kariuki (2011), recent behaviours within social networks have given rise to cyber abuse more commonly referred to as cyberbullying.

Cyberbullying involves the use of technology as a medium to hurt and harass another individual. Hinduja and Patchin (2008), define cyberbullying as actions that repeatedly make fun of another person online via email, text message or on social media sites. Cyberbullying can be further divided into sub-categories (Willard, 2005). These categories include flaming (sending angry or vulgar messages), harassment (sending repeated offensive messages), cyber-stalking (harassment with threats of harm), denigration (posting harmful or false statements of others), masquerade (impersonating another person in a negative manner), outing and trickery (sending material that is
humiliating and/or engaging in tricks to get personal information) and exclusion
(intentionally omitting a person from the group). Most adolescents use social media sites
and cell-phones (texting/pictures) to harass their peers. Some adolescents use a fake
screen name to create anonymity which can yield more threatening messages than those
in person, as the harasser believes that he/she won’t be caught (Varjas, Talley, Meyers,
Parris, & Cutts, 2010).

Schools, parents and law enforcement agencies must work closely to deal with
issues regarding cyberbullying to protect the victim and prevent ongoing harassment.
Twenty years ago, bullying only happened in person, nowadays a cyberbully can
continuously bully via new technological media (Varjas, Talley, Meyers, Parris, & Cutts,
2010).

According to a study done by Consumer Reports (2011) 7.5 million Facebook
users were children (under 13 years old) and of those, one million children were harassed,
threatened, or subjected to other forms of cyber-bullying on the Facebook website. A
study by the National Crime Prevention Council (NCPC) found that 43% of high-school
students experienced cyber-bullying (NCPC, 2015). Cyberbullying has now been listed
as the 4th most common type of bullying in school after physical, verbal and socio-

Victims of cyber-bullying often have the same negative symptoms of anxiety,
fear, depression and suicidal thoughts as traditional forms of bullying. Perceived threat is
just as toxic emotionally and physically as actual threat (Varjas et al., 2010).
Cyberbullying also has the potential to interfere with student learning (Patchin &
Hinduja, 2010; Ryan & Kariuki, 2011). In a study by Ryan and Kariuki (2011), 72% of
pre-service teachers were aware that cyberbullying was a problem in schools, 89% agreed that their students were affected by cyberbullying but only 15% of these teachers felt confident about managing cyberbullying. In addition 58% of students who experienced cyberbullying do not report it to their parents or other adults.

Unfortunately, social networking sites do little to circumvent cyberbullying incidents. They do not block computer IP addresses associated with the harasser, since multiple users can be using the same IP address. According to Twitter Inc.’s Help Center information page, the harasser can also use multiple IP addresses to continue to harass from various online (WIFI) connections (www.twitter.com). In a statement by Turner (2014), a constable with the Comox RCMP, the privacy settings of many social media sites are not 100% secure (A. Turner, personal communication, October 1, 2014). Victims and/or witnesses must report incidents to law enforcement for safety (NCPC, 2015). In 2007, the province of Ontario had introduced new legislation that included cyberbullying among students as a punishable offence (Ryan & Kariuki, 2011).

Most schools are aware of (some) cases of cyberbullying and they do consider it a problem. They also believe it is the duty of the school to inform students about cyberbullying and to help find solutions to cyberbullying incidents involving students (in or out of the school/school hours). Most schools organize preventative actions aimed at students, parents, or teachers, but they often seem uncertain about the appropriateness and effectiveness of their actions (Vandebosch, Poels, & Deboutte, 2014).

The goal of this study was to examine the effectiveness of a grade-wide intervention to promote digital citizenship awareness. The reason this study is important to me is because I want my students to be good digital citizens who know how to behave
in a safe and appropriate manner while using online resources. In addition, I have had personal experience with the negative effects of cyber-bullying and I want my students to practice safe online etiquette so they will be protected and prepared for this new digital era.

Having taught Informational Technology (IT) courses and courses (academic and non-academic) which integrate technology, the importance of educating students about proper online behavior is paramount. There have been increasing trends of technology integration in the classroom nationally. Bring Your Own Device (BYOD), iPads and laptops are becoming more popular in classrooms (Diemer, Fernandez, & Streepey, 2012). With more technological devices in the school, there has also been an increase in the misuse of these tools. Educators also have to be mindful of how the technology is being used and advocate for safe and respectful online practices. The prevalence of cyberbullying could be decreased by raising awareness of responsible and ethical use of information via communication technologies (Akbulut & Cuhadar, 2011). These trends motivate me to pursue research in the area of safe technology practices in and out of the classroom.

**Justification of the Study**

Cyberbullying is a relatively “new” topic in educational literature and there has not been much research conducted on finding definitive solutions or effective preventative measures. Very few studies have addressed what schools are currently doing about cyberbullying and what the potential barriers and facilitators for these actions might be. As cited by Vandebosch, Poels, and Deboutte (2014), schools have been slow
to respond to the increased incidences of cyber bullying and are only now extending bullying practices to include online activities.

Parris, Varjas, and Meyers (2014) conducted a study on high school students’ suggestions for preventing cyberbullying and found that there was a need for preventative strategies. Students suggested a need for increased security, awareness and wanted dialogue with the person in conflict to de-escalate the situation. Students also reported that peers would benefit from increasing online security at school and at home, as well as becoming more aware of their cyber-surroundings. Students also had suggestions of ways to reduce cyberbullying such as the use of curriculum/school information sessions. Students did not believe that adults could completely eliminate cyberbullying from occurring but that the frequency of cyberbullying could be lowered. In addition, students wanted the adults to place the blame on the perpetrators of the negative behavior and not on the technology itself.

The importance of parent/teacher training in technology and cyber-bullying was also stressed. Interventions should also be focused on helping students increase their online safety and awareness (Parris, Varjas, & Meyers, 2014).

The current study was conducted with all grade 9 students, aged 14 to 15 years old, from one middle school in SD71. According to Lindfors, Kaltiala-Heino, and Rimpela (2012), the highest proportion of cyberbullying was among 14 year olds of both sexes. This age pattern fits directly with psychological and physiological changes associated with puberty.

Cyberbullying awareness should be included in school curricula (Patchin & Hinduja, 2010). A school-wide approach in conjunction with professional development,
school assemblies and community supports were also recommended to raise awareness and education about cyberbullying (Ryan & Kariuki, 2011). Adopting appropriate and effective intervention methods to help students become good digital citizens was recommended (Parris, Varjas, & Meyers, 2014; Vandebosch, Poels, & Deboutte, 2014).

According to Nixon (2014), “Cyberbullying is an emerging international public health concern, related to serious mental health concerns, with significant impact on adolescents’ depression, anxiety, self-esteem, emotional distress, substance abuse, and suicidal behavior... also related to adolescents’ physical health concerns” (p. 154). Effective prevention and intervention efforts regarding cyberbullying are lacking and they must be a priority.

**Research Question and Hypothesis**

With the high prevalence of technology use among students and the increasing trend in cyberbullying, I wanted to examine the impact of an intervention that aimed to reduce the number of negative online behaviours.

Previous studies and personal experience drove me to investigate: Will a school-wide digital citizenship intervention presented by a cyber-media expert raise grade 9 student awareness of key online behaviours?

It was hypothesized that grade 9 students may find that a school-wide intervention on digital citizenship would be effective at raising the awareness of key online behaviours as summarized from Ribble, Bailey, and Ross (2004) such as: privacy settings awareness, chat room etiquette and privacy information, instant messaging and privacy information, SMS/MMS texting etiquette and privacy information, privacy using cellular phone/smart phone technologies, appropriate behaviour regarding social
networking platforms (such as: Facebook, Twitter, Skype, Tumblr, Instagram, Snapchat, Vine, and ASKfm), awareness of cyberbullying/digital peer aggression behaviours, and reporting procedures with regards to negative online issues to designated school personnel (i.e., teachers, counselors, & administrators) or law enforcement. In addition, this digital citizenship intervention would be used to provide education and information on how to deal with negative behaviours online and help protect students from any emotional and physical distress.

**Definition of Terms**

Cyber-bullying can be defined as bullying that takes place using electronic technology. It includes: cellphones, computers, tablets, social media sites, text messages, chat and websites (Ryan & Kariuki, 2011). With the prevalence of cell phones among teenagers, hand-held devices are the quickest method of interacting. Rouse (2014), defines hand-held devices as compact computing devices that are small enough to fit in one’s hand (i.e., cell phone, tablets, I-Pad, tablet and gaming devices).

Another common platform for cyberbullying is the use of a social media sites. According to Kaplan and Haenlein (2010), social media can be defined as computer-mediated tools that allow people to create, share or exchange information, ideas, pictures and videos in virtual communities and networks (i.e., Facebook). Other forms of online communication include the use of blogs (Abulibdeh, 2013). Blogs are a discussion or informational site published online and consists of discrete entries (i.e., “posts”) in reverse chronological order. These blogs may be either single or multi-author.

In this research, a cyber media expert named Darren Laur (aka “The White Hatter,”) was used as a presenter for the school-wide intervention. A cyber media expert
is a person that is well versed with technology use and is trained with handling online issues. Darren is a Staff Sergeant with the Victoria police department and has over 29 years of experience. He is a certified advanced open source intelligence and social media investigator and specializes in the area of personal safety and self-protection both online and off-line (personalprotectionsystems.ca). Darren gave a two hour presentation on the topic of digital citizenship which included eight key online behaviours: privacy settings, chat room etiquette, instant messaging and texting etiquette, appropriate social media use, cyberbullying/digital peer aggression behaviours, and reporting procedures.

Students were asked to rate the effectiveness of the intervention for raising their awareness of the eight key online behaviours by using a Likert scale, from 1 (very ineffective) to 5 (very effective). Awareness is defined in this study as having an understanding of the risks and precautions associated with the use of digital technologies. Digital technologies in this research specifically include: social media sites and cellular/smart phones. Students in this study were all grade 9 students from a middle school in the Comox Valley. This group of students was chosen because it was purposive and a sample of convenience. Most grade 9 students are aged 14 years which was found to be the age, which is most susceptible to negative online behaviours (Lindfors, Kaltiala-Heino, & Rimpela, 2012), and therefore had the most to benefit from attending this intervention. In addition, this sample was convenient because I had access to these students as their teacher.

Educators and students want to be proficient on how to use these Internet platforms, which could be achieved by receiving Information Technology (IT) Training. IT training includes courses related to the application, design, development,
implementation, support or management of computer-based information systems (www.trainingindustry.com). IT training is often distributed via a training course or workshop in order to develop skills for new technologies.

After receiving the appropriate training, educators and students should model appropriate online behaviours, deeming themselves as good digital citizens. Good digital citizens are individuals who participate in appropriate and responsible technology use (Ribble, 2015). There are nine elements of digital citizenship, which consist of: etiquette, communication, education, access, commerce, responsibility, rights, safety and security (Ribble, Bailey, & Ross, 2004).

**Brief Overview of Study**

This study used a mixed method design (of quantitative and qualitative data collection) in its approach to assess student perceptions of whether a cyberbullying intervention helped raise awareness on how to become good digital citizens.

Research took place with students enrolled in grade 9 in one middle school in the Comox Valley located on central Vancouver Island, B.C. Comox Valley is numbered as School District 71 (SD71). Currently, there are 19 public schools represented by SD71. Of those, 14 are categorized as elementary, three secondary and two schools considered a mix of both elementary and secondary.

A post intervention survey was administered to willing, anonymous grade 9 participants after the intervention. Parent consent and student assent forms were attached to the survey for participation in this study. The survey consisted of two background demographic questions, eight close-ended Likert style questions and a final section for two open-ended responses. The two open-ended questions were used to elicit longer
responses for feedback on what students would immediately change after attending the
intervention and feedback on what online topics students would want more information
on in future interventions. The survey results were calculated and analyzed using
descriptive statistics. Students involved in this study had minor incentives to participate.
The research was aligned with the standards put in place by the Ethics Board.
Chapter 2: Literature Review

Introduction

The literature review in this chapter is presented in three sections: the emergence of cyberbullying, online regulation, and online safety education. The purpose of the first section on the emergence of cyberbullying is to present the current statistics about the growing trend of cyberbullying incidences, discuss how cyberbullying differs from traditional bullying, examine the profile of the cyber-bully, discern if a particular gender is targeted more often for cyberbullying, and determine where cyberbullying occurs. The second section, online regulation, discusses the importance of having school districts and individual schools create policies to regulate technology use. In addition, several provinces and territories have laws specifically dealing with negative online behaviours under their provincial Education Act. The suggestions from the current BC Education Plan to incorporate anti-bullying programs in schools are also discussed. This section will also summarize anti-cyberbullying laws that are currently in place in both Canada and the United States. The final section of this literature review focuses on online safety education. This section gives related research about the negative symptoms and consequences of cyberbullying on students, the lack of current education on digital citizenship and the responsibility of the school to educate both students and teachers on safe and appropriate online behaviours. This chapter helps establish a need for a digital citizenship intervention in schools and suggests the best approach to facilitate the intervention.

Emergence of Cyberbullying

Technology is evolving at such a rapid rate that according to the New Brunswick
Department of Education (2010), technology will experience the equivalent of 20,000 years of growth in just this century. By grade 2, some students can already type 60 words per minute, are adept in using social media accounts and text messaging, can manage networks of hundreds of people, have published creative work, and are earning salaries online.

With today’s youth becoming well versed in technology, there are opportunities for negative interactions, such as cyberbullying, which have negative impacts on others. Cyberbullying involves the use of technology as a medium to hurt or harass another individual. Actions include: repeatedly making fun of another person online through email, text message or making posts about another person that they don’t like (Patchin & Hinduja, 2010).

According to Hinduja and Patchin (2012), no research had existed on the topic of cyberbullying prior to 2002. The majority of the research on cyberbullying has been published in the last five years (Faucher, Jackson, & Cassidy, 2015). The rate of technology use among students is increasing. More than 97% of youth in the United States are connected to the Internet in some way with over 66% of fourth to ninth graders going online from their bedrooms (Notar, Padgett, & Roden, 2013). With the increased use of technology, there has also been an increase in negative online behaviours. Reports on the prevalence of cyberbullying and victimization have been growing each year, especially among middle school students (Bailey, 2013; Dilmac, 2009).

Several studies have been conducted to analyze the rate of cyberbullying in public schools. Wong-Lo and Bullock (2011) collected data via anonymous survey using paper-pencil survey with 37-question items for adolescents (aged 13-17 years) and a web-based
A 22-question item survey for parents of the adolescents. Each survey was coded to ensure confidentiality of the study and individual variables were examined in the survey among the two target groups, which included: demographics, personal experiences, vicarious experiences, and preventative resources. A total of 137 participants (62 adolescents; 75 parents) responded to the survey. The results found that 90% of the adolescent group had either experienced cyberbullying as a victim or a bystander. Seventy percent had been bullied 1-2 times within a month, and half of the victims did not know their perpetrator.

In a study by Juvonen and Gross (2008) an anonymous web-based survey was used with one thousand four hundred fifty-four 12- to 17-year-old youth. The results indicated that 72% of young adolescents aged 12-17 years old have experienced at least one incident of cyberbullying. Of those adolescents, 41% were bullied 1-3 times online, 13% were bullied 4-6 times, and 19% has experienced cyberbullying 7 or more times.

Katzer, Fetchenhauer, and Belschak (2009), researched the occurrence of online bullying among chat room forums. They had 1,700 participants from grades 5-11 from German schools. The students completed a modified version of the Olweus Bully/Victim Questionnaire (OBQ). The OBQ is an anonymous standardized, validated, multiple-choice questionnaire designed to measure a number of aspects of bullying problems in schools. The results indicated that 34.7% of the participants were harassed every 1-3 months, 31.6% of the participants claimed to be harassed for no apparent reason, and 12.3% of the participants were teased. These studies confirm that cyberbullying is a current issue among adolescents and that the majority of the cyber victims were harassed more than once.
Two-thirds of students reported that cyberbullying was just as serious as
traditional bullying, and most likely worse, as the many of the bullies said things they
would not say in person (Strom, Strom, Wingate, Kraska, & Beckert, 2012). The Internet
allows for cyberbullying messages to be readily distributed to a mass audience with a
single click, making the information hard to remove, which adds to the humiliation of the
victim. Cyberbullying can occur 24/7 and not only when in close proximity to the victim.
The cyberbully also believes that his/her anonymity from hiding behind a screen will
shield them from punishment (Strom et al., 2012); however, not all cyberbullies are
anonymous. According to Yilmaz (2011), 26.9% of student cybervictims could identify
their harassers. There has been 26% overlap between traditional bullying and
cyberbullying (Notar, Padgett, & Roden, 2013), indicating that these two types of
bullying are not mutually exclusive. Furthermore, victims of traditional bullying were
more likely to report the incident as compared to victims of cyberbullying. According to
Notar, Padgett, and Roden (2013), 40% of cyber victims would not report the incident
and only 1 in 10 would tell an adult.

According to a 2009 Canadian study, 50% of youth who admitted to
cyberbullying claimed they had done it in retaliation to being bullied first. It is common
for both parties in a cyberbullying scenario to view themselves as victims (Media smarts,
2016). Age, computer proficiency, and amount of time spent online are predominant
indicators of someone who would engage as a cyberbully (Hinduja & Patchin, 2011).
Cyberbullies spend 38.4 hours per week online compared to 26.8 hours per week for
teens overall (Bailey, 2013).
According to Hinduja and Patchin (2008), over 32% of boys and 36% of girls have been victims to cyberbullying. In a study by Beran and Li (2005), 432 students in grades 7-9 participated on a 15-question survey on cyber harassment also found that there were no differences among genders. According to Dilmac (2009), more males have reported engaging in cyberbullying, but females may engage in indirect bullying and relational aggression. Kowalski and Limber (2007) interviewed middle school and high-school students in a focus group format and found that more girls than boys viewed cyberbullying as a serious problem.

In a study of 124 middle school students, 32% of the participants felt that cyberbullying was a problem in their school (Accordino & Accordino, 2011). Cyberbullying most frequently occurred at public schools and least at public charter schools (Mark & Ratcliffe, 2011). Instant messaging, chat rooms, e-mails, and websites were the top four mediums used to engage in negative online behavior (Kowalski & Limber, 2007).

The findings from these studies indicate that frequency of cyberbullying is high compared to that of traditional bullying, and is often worse. Half of the cyberbullies see themselves as victims and often claim that their negative online actions are in retaliation to being harassed first (Media smarts, 2016). On average, a cyberbully is online 11.6 hrs more/week than other teens and is therefore subjected to more social interactions (Bailey, 2013). These studies also indicate that gender did not play a significant role in being either the cyberbully or the cybervictim. Students that attended public schools were the most likely to engage in cyberbullying behaviors using the online platforms of: instant messaging, chat rooms, e-mails, and websites.
In my experience as a public school educator for the last seven years, I have witnessed students becoming more and more engaged with their technology, especially with their cellular/smart phone technologies and with managing their social media networks. Students are often distracted by their cellular/smart phone technology during class time and there have also been an increase in cyberbullying incidences. The aim of my research is help students raise awareness of key online behaviours with regards to digital citizenship.

**Online Regulation**

With the growing awareness on the topic of cyberbullying, many new laws have been created to circumvent negative online behaviours. These new laws are created to reflect the current trends. Lawmakers are realizing that cyberbullying is a crime and rules need to be in place to protect current and future victims. As we notice changes at the federal level, a trickle-down effect will transpire at the provincial and district levels, where new policies for reporting cyberbullying and protecting students will be initiated. The following section describes how these policies are coming in place at the international, federal, provincial, and district levels.

In the United States, 49 states already have bullying laws in place, with 15 states that include cyberbullying laws and another five states considering adding cyberbullying laws (Hinduja & Patchin, 2012).

Federally, the Canadian government’s anti-cyberbullying legislation, Bill C-13, came into effect in 2015. Justice Minister Peter MacKay officially announced the new law at a high school in Etobicoke, Ontario, where he spoke to students about the “dark side” of technology. He stated that the goal of Bill C-13 is to make Canadians, especially
youths, safer online while allowing them to protect their personal integrity when it comes to online sharing of personal images or information. Some consequences of sharing intimate and inappropriate images have been devastating leading some youths to commit suicide (Puzic, 2015).

Several provinces and territories have laws specifically dealing with negative online behaviours under the Education Act. These include: Ontario, Quebec, Alberta, Nova Scotia (Cyber-Safety Act), New Brunswick, Manitoba, and the Northwest Territories (Media Smarts, 2015).

The BC Education Plan recommends that schools incorporate the “Expect Respect and A Safe Education” (E.R.A.S.E) bullying program, which is a 10-point comprehensive prevention and intervention strategy (Ministry of Education, 2012). It is designed to promote positive mental health and well being among students. In addition, it addresses bullying and other student safety matters in schools. E.R.A.S.E. bullying also includes up-to-date online resources for parents as well as information on cyber-bullying (Ministry of Education, 2012).

Schools should intervene to prevent cyberbullying off-campus and define cyberbullying in schools. Poland’s work (2010) proposes that educators limit the use of cellular phones by students in a school setting. In the Comox Valley, School District 71 uses a policy titled: Computer and Internet Access Responsible Use Agreement, which all students, staff, and support staff must adhere to. This agreement reminds users to conduct themselves in a responsible, decent, ethical, and polite manner while using the computer and Internet access system. If users do not comply they may run the risk of one
or more levels of the system being revoked, or disciplinary action—such as loss of privileges, suspension, or legal action.

There are seven main topics under the *Computer and Internet Access Responsible Use Agreement*, which include guidelines on: personal safety, online behaviour, privacy, use of school or school board system resources, unacceptable materials, copyright and plagiarism, and personally owned computer equipment and devices. Within the school district, an individual school may have their own code of conduct relating to computer and Internet use.

The importance of a computer policy in schools is to help give guidance on safe computer usage. Not only does it help outline how to use technology appropriately at school but it also describes how to report unsafe behaviours. One of the key online behaviours that were investigated in my study included student awareness of the importance of reporting cyberbullying behaviours to appropriate school personnel.

**Online Safety Education**

The National Crime Prevention Council (2010) found that 46% of high-school students experienced cyber-bullying and had associated negative symptoms of: anxiety, fear, depression, and suicidal thoughts.

Methods to prevent cyberbullying include: positive digital behaviour, practicing online safety, and rejecting digital abuse (Holladay, 2011). Students need to learn and practice safe online skills such as: not disclosing personal information and reporting suspicious behaviour. Karaduman and Ozturk (2014) suggest that digital citizenship should be regarded as a unifying theme or skill for primary education instructional programs and be integrated with the outcomes of all courses. Twenty-first century goals
of digital citizenship are to educate, empower, and protect students (Isman & Canan-Gungoren, 2014). Tangen and Campbell (2010) noted that only 10% of high school students stated that they had received instruction on dealing with cyberbullying.

According to the International Society for Technology in Education (2016), there is a need to educate students on digital citizenship, which can be defined as applying and advocating behaviours necessary for legal, ethical, safe and responsible use of information-communication technologies online.

In a study by Parris, Varjas, and Meyers (2014), research was conducted to elicit student suggestions for preventing cyberbullying. Forty students (20 from an urban school and 20 from a suburban school) participated in individual, semi-structured interviews. Student preventative strategies included: increased security, awareness, and dialogue with the person in conflict to de-escalate the situation. Students reported that peers would benefit from increasing online security, as well as becoming more aware of their cyber-surroundings. In dealing with ways to reduce cyberbullying students suggested the use of curricular and school information sessions for students, parents, and community. In addition, students did not believe that adults could stop cyber-bullying from occurring. Students indicated that adults should place the blame on the people responsible (bullies) for their negative behavior and not on the technology itself.

Other suggestions from Parris, Varjas, and Meyers (2014) included the development of legislative initiatives, which require schools to adopt anti-bullying and anti-cyberbullying policies. This also included the formulation of learning outcomes with regards to social skills (both in person and online), providing facilities such as a computer lab to train students and teachers, and promoting awareness in schools.
As reported by Al-Zahrani (2015), education can be the most effective way to protect students from risks associated with online participation. In the 21st century, educators should be obligated to teach current learners about cyber safety in order to identify and prevent technology misuse. An issue with educators is that they often perceive digital citizenship as a “technology problem rather than a societal issue that affects everyone” (Ribble, 2012, p. 149). Educators may feel insufficient in enacting technology policies if they are unfamiliar with the technology itself. Crichton, Pegler, and White (2012) recommend that educators need to be introduced to new technologies as learners first. According to Kennedy, Russom, and Kevorkian (2012), teachers stated that educators play an instrumental role in bullying prevention and felt a need for direct training on this issue. In a study by Glasner (2010), regarding educating teachers about bullying and prevention methods, of the 191 surveys (145 completed and 51 partially completely), 99% of the teachers reported they were aware of the topic of cyberbullying and the negative side effects for the victims. Eighty-eight percent of the teachers felt that schools should have intervention policies and that parents of the bullies and victims should be involved in mediation efforts.

Vandebosch, Poels, and Deboutte (2014) conducted a study on perception, current actions, and future needs of schools on the topic of cyberbullying. The teachers were asked to use a 5-point Likert scale to indicate the relative importance of certain aspects when considering the adoption of intervention materials and programs against cyberbullying. The researchers addressed the problem of cyberbullying among young people and how it can have damaging mental health effects such as stress, depression, low self-esteem, poor academic performance, and suicide. Schools have an important
responsibility to address the problem of cyberbullying (as they have with traditional bullying), by providing emotional support and technology skills to protect students as they delve into this digital era. Traditional anti-bullying programs have been effectively addressed by using the “whole school approach,” which can be adapted to include cyberbullying. The aim the study by Vandebosch, Poels, and Deboutte (2014) was to look at cyberbullying intervention practices already in place, to look at future interventions and to address potential barriers/factors involved with the topic of cyberbullying. Adopting appropriate and effective intervention methods to help students become good digital citizens were recommended (Parris, Varjas, & Meyers, 2014; Vandebosch, Poels, & Deboutte, 2014).

The findings also indicated that most schools are aware of some cases of cyberbullying and they do consider it a problem. They also believe that it is the duty of the school to inform students about cyberbullying and to help find solutions to cyberbullying incidents involving students (in or out of the school/school hours). Most schools organize preventive and/or curative actions aimed at students, parents, or teachers, but they often seem uncertain about the appropriateness and effectiveness of their actions.

There is a need for more professional guidance in this area and more evidence-based intervention programs that would be appealing to students. Another suggestion included the use of anti-cyberbullying manuals and for teachers to provide feedback to schools regarding the outcomes of their efforts (Vandebosch, Poels, & Deboutte, 2014).

According to Campbell (2005), it is imperative for schools to set up preventative measures within the school and enforce a straightforward reporting policy. Neglecting
this issue could have some devastating consequences. According to Cetin, Eroglu, Peker, Akbaba, and Pepsoy (2012), victims of cyberbullying experience a sudden drop in grades, increased absences and truancy, and feelings that schools are no longer safe. Cyber victims also suffer from depression, social anxiety, low self-esteem, and substance abuse (Cetin et al., 2012). More than 50% of the cyber victims did not know who their harasser was. The anonymity of the cyberbully left the victims feeling anxious, as they feared whom it could be. Cyber victims feel a range of emotions, 57% felt angry and 36% felt sad and hurt. Students also reported that the harassment led to lower academic success, affected in-class attention, and contributed to a higher number of absences at school (Bailey, 2013).

Richardson, Bathon, Flora, and Lewis (2012) identified digital citizenship as the least studied among issues regarding technology in schools and there was a need to focus on technology standards for school leaders. A popular intervention program in the United States is called the Olweus Bullying Prevention Program. Its aim is to reduce and prevent bullying, improve peer relations, improve the social climate of classrooms, and reduce anti-social behaviours.

According to Sabella (2009), there is potential to promote preventative measures during the early developmental years among elementary students. Teachers and staff could benefit from seminal training on the proper use of mobile tech devices for young students. Older students could benefit from web-based or lesson plan intervention strategies to deal with cyberbullying.

School districts need to plan for this new digital era and to prepare its teachers through professional development for the teachers, administrators, and staff.
Educational leaders could support their constituents by becoming transformational leaders and sharing their vision of acquiring new technological skills. This could help transform a school culture into one that is technologically competent and safe. Transformational leaders inspire and motivate their followers to drive change and reach their full potential by focusing more on their needs while still working towards a shared vision (Northouse, 2010). Goal setting is also indicative of the path-goal leadership style whereby the technology leader assists teachers in the school’s goal of digital citizenship. Teachers would be able to work their way up a hierarchy of technology competency from learner, basic, proficient to advanced. As teachers gain more confidence with their technology skills, they are better equipped to help their students.

It is also imperative to educate parents and community members with safe and appropriate technology skills since negative online interactions, such as cyberbullying, have devastating effects on youths. Poland (2010) recommends that both teachers and parents be educated about cyberbullying. Eighty-nine percent of parent participants of a web-based survey indicated that they were knowledgeable about the issues relating to cyberbullying and 89% reported to have no knowledge if their child has or has not been a victim of cyberbullying (Wong-Lo & Bullock, 2011). Less than a year ago, a local newspaper Headlined a story titled: “Teach online safety in school, experts say,” (Fletcher, 2015). The demand for safe online education is real and it is important.

Although cyberbullying is still considered a relatively new topic in education, there is already a growing trend to come up with preventative measures. These studies confirm the need for schools to adopt appropriate and effective intervention methods to help their
students become good digital citizens by practicing safe and appropriate online behaviours.

These recommendations have led me to incorporate both a school-wide intervention and the use of a cyber-media expert on this topic of digital citizenship. Even though my research was only conducted with grade 9 students from one school, there were a total of six schools that attended the digital citizenship school presentation, and 130 parent and community members that attended the evening information session. Teaching parents about online safety and helping them establish rules for their children is another way to play an active role in the prevention of cyberbullying. There are also many online tools, such as the website for Common Sense Media, geared towards helping parents understand technology (Notar, Padgett, & Roden, 2013).

My study is a result of the need to fill the gap in the literature and to determine whether a school-wide digital citizenship intervention using a cyber expert was perceived by students as effective at raising student awareness of online behaviours. This type of study, to my knowledge, has never been researched. It is my aim that if my intervention was perceived as effective by students it could be used as a template in other schools, both in and outside of School District 71, to help raise student awareness about safe and appropriate online behaviours.
Chapter 3: Methodology and Methods

Research Design

The aim of the current research was to gather information about student perceptions of the effectiveness of a school-wide intervention regarding safe online practices. The school-wide intervention involved the use of a cyber-media expert to relay information on safe and unsafe online behaviours in an assembly setting, promoting good digital citizenship behaviours. The cyber-media expert, Darren Laur, was known as “The White Hatter,” a Staff Sergeant with the Victoria Police Department who specializes in cyber protection (http://www.personalprotectionsystems.ca). According to Ribble, Bailey, and Ross (2004), digital citizenship can be defined as the norms of behaviour with regard to technology use. In order to understand the complexity of digital citizenship and the issues involved with technology use, abuse, and misuse, nine elements of digital citizenship have been identified (Ribble et al., 2004). These elements include: etiquette, communication, education, access, commerce, responsibility, rights, safety and security.

Darren was known to give interventions in our school district presented information highlighting these digital citizenship behaviours. All grade 9 students from one middle school were invited to respond via a student survey on the effectiveness of the presentation in terms of raising digital citizenship awareness. A survey was used since it is a useful tool in gathering opinions of a large sample size. The survey asked about 8 specific key online behaviours that fit within the areas of digital citizenship outlined by Ribble et al. (2004). In addition the format of the survey and use of a Likert-scale was modeled after previous literature on high school teachers’ perceptions of cyberbullying prevention and intervention strategies from Stauffer (2011). Proper education in digital
citizenship was selected as an intervention to offset some negative online behaviour such as cyberbullying; however, the current study was not able to assess long-term student behaviour patterns. The research question in this current study was: Will a school-wide digital citizenship intervention presented by a cyber-media expert raise grade 9 student awareness of key online behaviours?

From the results of this study I hoped to gain an understanding of whether a school-wide intervention was an effective strategy in providing information to students on how to behave and protect themselves online.

In a study by Ryan and Kariuki (2011), 72% of pre-service teachers were aware that cyberbullying was a problem in schools, 89% agreed that their students were affected by cyberbullying but only 15% of these teachers felt confident about managing cyberbullying. Most schools organize preventative (anti-bullying) programs aimed at students, parents, or teachers, but they often seem uncertain about the appropriateness and effectiveness of their actions (Vandebosch, Poels, & Deboutte, 2014). The prevalence of cyberbullying could be decreased by raising awareness on responsible and ethical use of information via communication technologies (Akbulut & Cuhadar, 2011).

According to Parris, Varjas, and Meyers (2014), students had suggested that a way to reduce cyberbullying was to use curriculum/school information sessions. The importance of parent/teacher training in technology and cyber-bullying was also stressed. The students wanted the interventions to be focused on helping students increase their online safety and awareness; therefore, this study was designed to examine the impact of a cyberbullying intervention that has been used in our school.
Participants

The Comox Valley is located on the east coast of Vancouver Island, B.C and is numbered as School District 71 (SD71). Comox Valley consists of three municipalities: Cumberland, Courtenay and Comox with a total population of 63,538 (www.comoxvalleyrd.ca). During the 1990s, the region was one of the fastest growing in British Columbia due to the building boom in Courtenay as well as development in Cumberland and Union Bay (Wikipedia.org). The growth industries were tourism and construction; the Canadian Forces (CFB Comox) provides significant economic stability since the decline of logging and mining in the region after the 1960s and fishing in the 1990s. The service sector accounts for over 50% of employment. The top three sector employers of the Comox Valley include: the CFB Comox, School District 71, and St. Joseph’s Hospital (www.investcomoxvalley.com).

Currently, there are 19 public schools represented by SD71. Of those, 14 are categorized as elementary schools, one middle school, one community school, and three secondary schools. Significant reconfigurations have occurred in the last decade to accommodate the declining student population. The current study took place with all grade 9 students in one middle school in SD71. The school, Lake Trail Middle School, was chosen out of convenience and was purposive for the research. It was convenient since I was employed there during the duration of the research and it was purposive since previous literature by Lindfors, Kaltiala-Heino, and Rimpela (2012), indicated that students aged 14 years were highly susceptible to cyberbullying incidences. This age pattern fits directly with psychological and physiological changes associated with puberty, which leaves this group very susceptible to online bullying behaviours. Since
grade 9 students were highly susceptible to cyberbullying, this group had the potential to benefit the most from the intervention.

Lake Trail Middle School is the only remaining middle school in SD71 and consists of approximately 270 students in grades 7 to 9. The school is proud of its core and elective programs, mini-exploratory courses, and its athletics programs. The school consists of a diverse student population that includes: honours programs, learning assistance programs, First Nations programs and shares its building with the international school office and international students from Mexico, Spain, Taiwan, and Korea. The school itself is a well-equipped facility. Students have access to a multipurpose room, concession, a band room, and a weight lifting program at lunch and afterschool, a fitness room, a drama room, an art room, a combined woodwork and metalwork room, a home economics room, a textiles room and a large gym. The school is technology rich with three computer labs and fully equipped library. Outdoors, the school has two sports fields and is attached to Morrison Creek Nature Park.

In order to improve internal validity, all grade nine students were asked to participate in the research the day after the intervention. The total possible sample size in this study was 70 students. There were no pre-selected students resulting in an unbiased, purposive sample. Every participant remained anonymous.

Twenty students, out of a total grade 9-population size of 70, responded to the anonymous survey (Appendix A), indicating a response rate of 29%. Of the respondents, 50% were female, 45% were male, and 5% did not disclose their gender. Overall, 90% were 14 years old and 10% were 15 years old.
**Instrument Used**

Having personally experienced the negative effects of online behaviours (including cyberbullying and harassment), I sought to examine the impact of an intervention that could assist students to become more digitally responsible when online. These factors lead to the decision of using a mixed-methods study of both quantitative and qualitative data collection via a post intervention survey. By having a combination of data collection methods, I would be able to gain a stronger insight into student perspectives.

I decided on the post-survey design since it is a useful tool in gathering opinions of a large sample size. From the sample size of respondents, the description of the population was inferred. The survey (Appendix A) consisted of: two demographic questions asking participants about their age and gender, eight closed-ended Likert-scale questions and two open-ended questions. The close-ended questions helped enhance the consistency of response across participants since they were easier to respond to, less time-consuming, and faster to tabulate. The limited response was what motivated me to include open-ended questions as well. Open-ended questions allowed for more freedom of response and were easier to construct. The two open-ended questions provided additional information for me that would only be possible through the use of this format, as students were provided with the space to respond in detail. I did not want to limit the responses to these questions through the use of a Likert scale, but rather wanted to provide participants with the space to reflect and share their own experiences and insights about the intervention.
This survey was designed to assess the effectiveness of the intervention for raising awareness of particular online behaviours. The close-ended questions were based on Darren’s presentation, which identifies eight key online behaviours which connect to some elements of digital citizenship as defined by Ribble et al. (2004). His presentation addresses appropriate and inappropriate behaviours using social media and cell phones, which relates to the notion of etiquette. His presentation also discussed privacy settings and passwords, which connects to security and safety. In addition, he spoke on reporting negative online behaviours, which pertain to responsibility. The students responded to these questions by using a Likert scale. The Likert scale ranged from 1 (very ineffective) to 5 (very effective). The format of the survey was modeled after research from Stauffer (2011) on high school teachers' perceptions of cyber bullying prevention and intervention strategies. Stauffer used both close-ended questions (Likert-scale) and open-ended questions on his survey design. The two open-ended questions were used to elicit longer responses for feedback on what students would immediately change after attending the intervention and feedback on what online topics students would want more information on in future interventions.

The type of survey was cross-sectional since I collected information from a sample that was drawn from a pre-determined population. I wanted to gather information from grade nine students post intervention. Information was collected at just one point in time (even though the respondents had two weeks to complete the survey). In order to increase internal validity, the survey was pre-tested, reviewed and analyzed by other teaching professionals before distribution. The survey was also sent to the cyber-media expert to ensure that all the questions asked on the survey were relevant to the
presentation. Clarity of questions, procedures and appropriateness of language were reviewed to increase validity of the survey.

**Procedures Followed**

Upon receiving ethics approval from Vancouver Island University, consent from School District 71 (Comox Valley), and from the individual school principal, I presented the survey (Appendix A) and a joint parent/guardian consent and student assent form (Appendix B) to the other grade 9 teacher at the school. The other grade 9 teacher served as a research assistant to confirm that the joint parent consent/student assent forms were signed and separated from the completed surveys to ensure anonymity.

One day after the intervention had taken place, I read the announcement (Appendix C) to all grade 9 classes. The students were made aware that the joint parent/guardian consent and student assent form were to be given to their parents to be signed. The joint parent/guardian consent and student assent form and corresponding survey were taken home for the parents to examine prior to the students completing the survey. Students were informed that participating in this research was entirely voluntary and their decision to opt out would not affect their academic standing. Once their parents had consented, students were given two weeks from the initial day of receiving both the consent form and survey to complete the survey. One week after the initial day of receiving both the consent and survey, I read the reminder announcement (Appendix D) to all grade 9 classes.

Students were reminded that they could choose to discontinue participation by simply not submitting their survey to the drop box set up at the school office. Participants were instructed to not write their name or identify themselves in any way on the survey.
The information provided by students on the survey would be kept strictly confidential and no one would be able to identify them based on any information they provided. The survey questions were kept to a single page by condensing questions to a manageable amount that would not discourage students from participating.

Both the survey and consent form had their own sealable envelope attached to heighten privacy upon return. Students were also informed that once they had submitted their surveys they could not be retrieved. The survey results were anonymous to the teacher, thereby protecting the identity of the students.

The mode and timeline of data collection was identical for both my class and that of the research assistant to increase internal validity. All grade 9 students received a minor incentive of receiving a pizza slice voucher for considering participation in the research. The pizza slice voucher was attached to the survey. Since the incentive was minor and available to the entire population, participating students were not the only students rewarded thus eliminating personal motivating factors for participating (personal biases). In addition, the surveys were taken home and completed in a non-academic setting with lengthy time-line (two-weeks) to avoid stress and minimizing data collector biases.

I felt that a two-week window would provide students with ample time to do the survey and return it to the secure drop box at the office. In addition, I didn’t want the students to forget the impact of the intervention, as memories tend to fade with time. After the two-week window had expired, I collected the surveys from the secured box in the office and began the task of calculating, summarizing, and analyzing the data provided by the participants.
Validity and Reliability

The goal of this study was to gain an understanding of the perceptions students held regarding a school-wide intervention on appropriate online behaviours (digital citizenship). I took steps to strengthen both the external and internal validity of the study. I used a mixed-methods design, which produced responses from each participant in various forms on the same topic. Longer open-ended responses and several short responses were elicited which gave me more information to use to address the research question.

Creating an anonymous survey for participants to complete once the students had received parental consent minimized the risk of data collector bias.

Keeping the survey short helped to ensure a respectable response rate of 29%, thus improving the external validity. This response rate may allow the opportunity for this study to be generalizable to other grade 9 students in the school, the district, and potentially provincially.

A limitation I had was not being able to member check the qualitative data collection (open-ended questions) for possible misinterpretations, which could affect the credibility of the responses.

Additionally, in the current study, there was a thematic cross over between open-ended and close-ended questions. If similar themes emerged between open-ended and close-ended questions, that would add to the overall validity of the study. I ensured that only relevant questions were asked which added to the validity of the study. I also
attempted to increase validity by submitting a draft survey to teaching professionals for feedback and input prior to distribution to individual participants.

Another limitation was having data from grade 9 students from just one school. Each school has its own culture and sub-groups. The sample group was very specific (pre-dominantly Caucasian) so the results may not be transferable to other districts in British Columbia. Although it is suggested that the results from this research cannot be generalized beyond the school and grade, they can be used to inform teaching practice and to provide information for those who wish to replicate the study (Fraenkel, Wallen, & Hyun, 2012).

One of the flaws in this study includes the methods used for data collection. I only used open-ended survey to obtain qualitative information. If I had more time to conduct this research, I could have included other qualitative methods such as semi-structured interviews and observations to further triangulate the results. This intervention was chosen because it had previously been performed at our school, but future work on the impact of how raising digital citizenship awareness would effect cyberbullying incidences would ideally be researched with more ongoing programs.

**Data Analysis Techniques**

At the end of the two-week time frame students completed their surveys (Appendix A) and the surveys were collected from the secured box in the office. My research assistant confirmed that the joint parent consent/student assent forms were signed and separated from the completed surveys to ensure anonymity. The 20 completed surveys were examined and the first step I took was to code and categorize the qualitative data that was provided by students in the two open-ended survey questions.
Specific themes emerged from the responses when coding and categorizing was completed. Participant quotes were used to relay student perspectives in regards to the intervention. Average means were calculated for each of the close-ended Likert scale questions both for the whole group and for differences between males and females.
Chapter 4: Findings and Results

The purpose of the current study was to measure grade 9 student perceptions of the effectiveness of a digital citizenship intervention in SD71. From the results of this study I hoped to gain an understanding of whether a regular school-wide intervention was an effective strategy for providing information to students on how to behave and protect themselves online. Eight key online behaviours that were covered by the intervention were asked about in a survey (Appendix A). They included:

- Privacy settings awareness
- Chat Room etiquette and privacy information
- Instant messaging and privacy information
- SMS/MMS texting etiquette and privacy information
- Privacy using cellular phone/smart phone technologies
- Appropriate behaviour regarding social networking platforms such as: Facebook, Twitter, Skype, Tumblr, Instagram, Snapchat, Vine, and ASKfm.
- Awareness of cyberbullying/digital peer aggression behaviours
- Reporting procedures with regards to negative online issues to designated school personnel (i.e. teachers, counselors, & administrators) or law enforcement

Seventy surveys were distributed to all grade 9 students from one middle school in SD71 who attended a digital citizenship intervention. The total number of surveys returned was 20, which represents a return rate of 29%. Using background demographic data from Section 1 of the returned surveys (see Survey Section 1, Appendix A), 50% of respondents were female, 45% of respondents were male, and 5% did not disclose their gender. In addition, 90% of the students were 14 years old and 10% were 15 years old.
To begin to analyze the student perceptions of the effectiveness of digital citizenship intervention in SD71, the second section of the survey collected data that focused on the eight key elements (See Survey Section 2, Appendix A). Students responded to the eight key elements using a Likert Scale, which ranked 1 as “very ineffective,” 2 as “ineffective,” 3 as “average,” 4 as “effective” and 5 as “very effective.” The data for this portion of the survey have been summarized in Table 4.1 as well as Figure 4.1. The mean student perception was 4.10 for the effectiveness of the intervention on the topic of privacy setting awareness. The mean student perception was 3.90 for the effectiveness of the intervention on the topic of chat room etiquette and privacy information. The mean student perception was 4.05 for the effectiveness of the intervention on the topic of instant messaging and privacy information. The mean student perception was 3.84 for the effectiveness of the intervention on the topic of SMS/MMS texting etiquette and privacy information. The mean student perception was 4.16 for the effectiveness of the intervention on the topic of privacy using cellular phone/smart phone technologies. The mean student perception was 4.05 for the effectiveness of the intervention on the topic of appropriate behaviour regarding social networking platforms such as: Facebook, Twitter, Skype, Tumblr, Instagram, Snapchat, Vine, and ASKfm. The mean student perception was 4.47 for the effectiveness of the intervention on the topic of awareness of cyberbullying/digital peer aggression behaviour. The mean student perception was 4.05 for the effectiveness of the intervention on the topic of reporting procedures with regards to negative online issues to designated school personnel (i.e., teachers, counselors, & administrators) or law enforcement. The range of the data was from 3.84 to 4.47, with a mean score over all behaviours of 4.01 indicating that the students perceived the
intervention to be effective in all eight key components of online behaviours. The lowest mean student perception was 3.84 for the topic on SMS/MMS texting etiquette and privacy information. This mean number was the lowest among the eight tested key elements. The highest mean student perception was 4.47 for the effectiveness of the intervention on the topic of awareness of cyberbullying/digital peer aggression behaviour.

Table 4.1

*Mean Student Perceptions of the Effectiveness of a School-Wide Digital Citizenship (Cyber-safety) Intervention [1 (very ineffective) to 5 (very effective)]*

<table>
<thead>
<tr>
<th>Key Components of Online Behaviours</th>
<th>Mean Level of Effectiveness (n=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Privacy settings awareness</td>
<td>4.10</td>
</tr>
<tr>
<td>Chat Room etiquette and privacy information</td>
<td>3.90</td>
</tr>
<tr>
<td>Instant messaging etiquette and privacy information</td>
<td>4.05</td>
</tr>
<tr>
<td>SMS/MMS texting etiquette and privacy information</td>
<td>3.84</td>
</tr>
<tr>
<td>Privacy using cellular phone/smart phone technologies</td>
<td>4.16</td>
</tr>
<tr>
<td>Appropriate behaviour regarding social networking platforms</td>
<td>4.05</td>
</tr>
<tr>
<td>Awareness of cyberbullying/digital peer aggression behaviours</td>
<td>4.47</td>
</tr>
<tr>
<td>Awareness of reporting procedures</td>
<td>4.05</td>
</tr>
</tbody>
</table>
The sample of participants was almost split in half among the genders with 50% identifying as females and 45% identifying as males. The previous data could be broken down even further to examine whether gender had an effect with regards to the effectiveness of the digital citizenship intervention (refer to Table 4.2 and Figure 4.2). When comparing the results between males and females, the means were within 0.1 among genders on the topics of: privacy setting awareness, instant messaging etiquette and privacy, and social media behaviour. Male participants perceived the intervention as more effective on the topic of chat room etiquette. Female participants perceived the intervention as more effective on the topics of: SMS/MMS texting privacy using cellular phones/smart phone technologies, cyberbullying/digital peer aggression awareness and reporting.
Table 4.2

*Mean Student Perceptions Based on Gender of the Effectiveness of a School-Wide Digital Citizenship (Cyber-safety) Intervention*

<table>
<thead>
<tr>
<th>Key Components of Online Behaviours</th>
<th>Males (n=9)</th>
<th>Females (n=10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Privacy settings awareness</td>
<td>4.20</td>
<td>4.10</td>
</tr>
<tr>
<td>Chat Room etiquette and privacy information</td>
<td>4.10</td>
<td>3.80</td>
</tr>
<tr>
<td>Instant messaging etiquette and privacy information</td>
<td>4.10</td>
<td>4.10</td>
</tr>
<tr>
<td>SMS/MMS texting etiquette and privacy information</td>
<td>3.75</td>
<td>4.00</td>
</tr>
<tr>
<td>Privacy using cellular phone/smart phone technologies</td>
<td>3.63</td>
<td>4.70</td>
</tr>
<tr>
<td>Appropriate behaviour regarding social networking platforms</td>
<td>4.10</td>
<td>4.10</td>
</tr>
<tr>
<td>Awareness of cyberbullying/digital peer aggression behaviours</td>
<td>4.40</td>
<td>4.70</td>
</tr>
<tr>
<td>Awareness of reporting procedures</td>
<td>3.90</td>
<td>4.30</td>
</tr>
</tbody>
</table>
The third and final section of the survey asked the participants two open-ended questions (see Survey Section 3, Appendix A). The results are summarized in Tables 4.3 and 4.4 respectively.

The first open-ended question asked participants if they would make any immediate changes to their online behaviour after attending the digital citizenship presentation (intervention). The most popular response, with seven respondents out of 20 planning on: increasing their privacy settings on social media sites. The second most popular response with four respondents was “nothing” as students felt that they were already taking digital safety precautions. The third most popular response was a two-way
tie, at three respondents each, planning on: increasing their privacy setting/password on their cell phones and thinking twice before posting content online as it may have future implications. The fourth most popular response was a three-way tie, at one respondent each planning on: deleting information from their social media profiles, turning off locations settings, and not adding strangers as “friends” on social networking sites. There were four respondents that did not complete this question on the survey.

Table 4.3

Student Responses of Changes to their Online Behaviours after attending the Intervention

<table>
<thead>
<tr>
<th>Responses</th>
<th>Male Students n=9</th>
<th>Female Students n=10</th>
<th>Total Students n=20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nothing/No changes</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Privacy setting on social media sites</td>
<td>3</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Privacy setting/password protection on personal cell phone</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Delete information from social media profile</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Thinking twice before posting content online/future implications</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Turning off location settings</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Not adding strangers as “friends” on social networking sites</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>No response</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
The second open-ended question asked participants if there were specifically any other types of online behaviours, social networking platforms, reporting procedures, or any other type of online issue that they would want more information on. Of the returned surveys, the most common response (n=5) stated that they had no other questions or unsure of what questions to ask since they felt the presentation did a good job covering the main topics. The second most common response was a four-way tie, of 1 respondent wanting more information on: privacy settings on Nexus phones, Facebook profile privacy information, computer/cell phone viruses and other security settings. There were nine respondents did not answer this question on the survey.

Table 4.4

*Student Responses of Other Topics want more Information On*

<table>
<thead>
<tr>
<th>Responses</th>
<th>Male Students n=9</th>
<th>Female Students n=10</th>
<th>Total Students n=20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nothing/Unsure</td>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Privacy setting information on a Nexus phone</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Facebook profile/privacy information</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Computer/Cell phone viruses</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Other security settings</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>No response</td>
<td>4</td>
<td>5</td>
<td>9</td>
</tr>
</tbody>
</table>
Chapter 5: Summary, Discussion, and Implications

Summary

According to Ryan and Kariuki (2011), 93% of teens between the ages of 12-17 years have been online and recent behaviours within social networks have given rise to cyber abuse. The purpose of this research study was to determine grade 9 student perceptions of the effectiveness of a school-wide digital citizenship intervention, using a cyber-media expert, on the awareness of online behaviours. The sample size consisted of 70 students from Lake Trail Middle School from the Comox Valley (SD71). This sample was purposive, because I worked at this middle school as a grade 9 teacher and most grade 9 students are approximately 14 years old. According to Lindfors, Kaltiala-Heino, and Rimpela (2012), the highest proportion of cyberbullying occurs among 14 years olds of both sexes.

A mixed-methods study of both quantitative and qualitative data collection via a post intervention survey was used. The survey consisted of: two demographic questions, eight closed-ended questions (Likert scale) and two open-ended questions. The eight closed-ended questions were summarized from the nine elements of digital citizenship of: etiquette, communication, education, access, commerce, responsibility, rights, safety and security (Ribble, Bailey, & Ross, 2004). These questions specifically asked about student perceptions of the effectiveness of the intervention on online behaviours of: privacy settings awareness, chat room etiquette and privacy information, instant messaging and privacy information, SMS/MMS texting etiquette and privacy information, privacy using cellular phone/smart phone technologies, appropriate behaviour regarding social networking platforms (such as: Facebook, Twitter, Skype, Tumblr, Instagram, Snapchat,
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Vine, and ASKfm), awareness of cyberbullying/digital peer aggression behaviours, and reporting procedures with regards to negative online issues to designated school personnel (i.e., teachers, counselors, & administrators) or law enforcement. The students were asked to rank the level of effectiveness from 1 “very ineffective” to 5 “very effective”. The format of the survey was modeled after research from Stauffer (2011) on high school teachers' perceptions of cyber bullying prevention and intervention strategies.

In order to conduct this research, procedural guidelines were followed. Ethical approval was granted from both the Vancouver Island University Research Ethics Board and School District 71. In addition, permission to conduct the study at the middle school was sought from the school principal.

Discussion and Conclusions

Of the 70 grade 9 students at Lake Trail Middle School, only 20 surveys were completed, yielding a response rate of 29%. Of the respondents, 50% were female, 45% were male, and 5% did not disclose their gender. Overall, 90% were 14 years old and 10% were 15 years old. The reason that the majority of the students were 14 years old, was because this research was conducted in January and most participants had yet to experience their birthday for 2016. This sample size was purposive since I wanted to test 14 year olds due to the research conducted by Lindfors, Kaltiala-Heino, and Rimpela (2012), indicated that 14 years are most susceptible to cyberbullying behaviours among both sexes.
The results of this current study have shown that, overall, grade 9 students found the digital citizenship intervention “effective” at raising awareness on all eight online behaviours.

Cyberbullying/peer aggression awareness was measured as being the most effective averaging at 4.47. This topic was the most emphasized by the cyber expert, Darren Laur, as he discussed the high levels of cyberbullying cases and suicides in British Columbia and nationwide, which in-turn left a lasting impact on the students. In addition, one student from the school later contacted Darren Laur regarding a cyberbullying incident indicating that our school is dealing with current issues on this topic.

After cyberbullying/peer aggression awareness, the following key online behaviours that had the next highest level of effectiveness were: privacy using cellular phone/smart phone technologies and privacy settings awareness. The topics of instant messaging etiquette and privacy information, appropriate behaviour regarding social networking platforms, and awareness of reporting procedures each had the same mean level of effectiveness followed by chat room etiquette and privacy information. I was surprised to see that chat room etiquette and privacy information had a mean level of effectiveness of only 3.90 since, according to one study, 34.7% of the students were harassed every 1-3 months on a chat room forum (Katzer, Fetchenhauer, & Belschak, 2009) and it was listed as second highest medium used to engage in negative online behaviour (Kowalski & Limber, 2007).

SMS/MMS texting awareness was ranked lower among all topics at 3.84, which was in between 3 “average” and 4 “effective.” The reason for this slightly lower ranking
could be attributed to the fact that most students do not use the SMS/MMS feature on their cellular/smart phone technologies as much as they use instant messaging or social media for sending messages. According to the literature, instant messaging, chat rooms, e-mails, and websites were the top four mediums listed in order, that were used to engage in negative online behaviour (Kowalski & Limber, 2007).

When comparing the results between genders, the discrepancy in level of effectiveness was within 0.4 on seven of eight the key online behaviours asked about in the survey. The only key online behaviour that had a significant discrepancy between the genders was about privacy using cellular phone/smart phone technologies. Female respondents (n=10) gave a mean Likert scale score of 4.70, which was between “effective” and “very effective” and the male respondents (n=9) gave a mean Likert scale score of 3.63, which was between “average” and “effective.” A possible reason for this difference could be that males already felt knowledgeable on the topic of privacy using cell phone/smart phone technologies. Another possibility is that females feel more susceptible to cyber harassment through vulnerable applications on their cell phones (i.e., being asked to take inappropriate pictures using their cell phone). A recent suicide of a Vancouver area teenager in 2012, Amanda Todd, shed light on this issue, as she was continually cyber harassed and blackmailed into providing graphic pictures to her harasser. Amanda had posted a 9 minute video on YouTube on September 7, 2012 that later went viral after she died. The video was titled “My Story: Struggling, bullying, suicide and self-harm” in which she used a series of flash cards to share her story of being bullied (Wikipedia, 2016).
The two open-ended questions were used to elicit longer responses for feedback on what students would immediately change after attending the intervention and feedback on what online topics students would want more information on in future interventions.

In response to what immediate changes students would make to their online behaviour, the top three responses were: changing their privacy settings on social media sites, changing their privacy setting/password on cell phone, and thinking twice before posting content online. When analyzing data from the close-ended questions, the topics of: privacy settings awareness, privacy using cellular phone/smart phone technologies and awareness of cyberbullying/digital peer aggression behaviours were also the top three topics that the students perceived the intervention to be most effective at raising awareness on.

Thinking twice before posting content online not only pertains to cyberbullying/peer aggression, but also to what students may be posting about themselves. Darren emphasized how everything you post online is: public, permanent, and searchable by anyone. Many colleges, universities, and employers are now conducting “Google” searches to look at potential students or employees to see if their digital dossier is clean. Darren gave examples of how employers did not hire potential employees if their search indicated that the person was a drug user, racist, or sexist. In fact, colleges and universities have also backed out of admitting students into their schools and/or retracted sports scholarships. This message resonated with the students as many indicated they would think twice before posting content online.

The intervention focused on the importance of not allowing “strangers” to view or access students’ personal profile pages on social media. Darren Laur, the cyber expert,
recounted stories of how many students and adults were giving open access to their social media pages. He noted that students were often giving out too much personal information, such as: home address, name of their school, and birth dates, which left them open to not only sexual predators, but also to personal identity theft such as: credit card fraud.

Darren also mentioned the importance of changing passwords on both social media sites and cell phones every 6 months and to make them secure. He also mentioned that 4 digit passwords could be cracked in 72 hours, compared to 6 digit passwords, which would take months or years. It was also important not to share passwords with anyone, other than your parents, because “best friends” one week, could easily turn to “enemies” the next during middle school years. There have been cases where a falling-out of friendship has allowed the disgruntled friend to lock the other person out their own personal social media page as revenge and post harmful or blackmailing content.

The second open-ended question focused on what online topics participants would want more information on for future interventions. The majority of the students had no suggestions as they felt that intervention was effective at raising awareness of online behaviours. There was a four-way tie of 1 response each where participants said they wanted information about: other cell phones, Facebook profile privacy, viruses, and other security settings.

Darren did focus his talk to iPhones primarily and some information on Android phones but did not directly mention safety suggestions for Samsung or Nexus smart phones. For questions regarding social media privacy settings, specifically Facebook profile privacy, he suggested that students contact him directly on his “White Hatter”
Facebook page for what steps and actions to take to increase security. He also mentioned that he would double-check any student’s personal Facebook page to ensure that the privacy settings were intact.

The student session of the intervention did not mention all types of computer viruses. It did state not to click on suspicious links and that they may allow backdoor access to personal information. The evening parent and community information session spent a significant amount of time on the type of viruses that students may be susceptible to and what anti-virus software parents should invest in. I think that this was a valid concern for our students and this information should also be introduced into the student intervention session since many teenagers are becoming more and more tech savvy.

Finally, the last comment about wanting to know about “other security settings” was too vague to decipher. I don’t know if the student was asking about information on computer security settings, cell phone security settings, video game security settings or the security settings of a different technology altogether. I would recommend that the student mention which technologies he/she was referring to in order to better address the question.

After conducting this research, I noted that the intervention was considered, by participants, as effective at raising awareness of the eight key online behaviours. The open-ended questions indicated that students want to improve their digital citizenship by keeping themselves safe online through taking actions such as: limiting their personal information, increasing privacy settings, and thinking twice before posting content online. This intervention was able to provide a base level of education on the topic of cyberbullying which falls in line with 21st century goals of digital citizenship which are
to educate, empower, and protect students (Al-Zahrani, 2015; Isman & Canan-Gungoren, 2014). In one study, only 10% of students stated that they had received instruction on dealing with cyberbullying (Tangen & Campbell, 2010). Vandebosch, Poels, and Deboutte (2014) noted that although most schools organize preventive, detective and/or curative actions aimed at students, parents, or teachers on the topic of cyberbullying, they often seem uncertain about the appropriateness and effectiveness of their actions. The aim of this research helped to fill the gap by measuring the effectiveness of a digital citizenship intervention. The students felt that the intervention was thorough on the topic of digital citizenship awareness, with a select few inquiring about individual topics. According to Parris, Varjas, and Meyers (2014), student preventative strategies suggested a need for increased security awareness and cyberbullying awareness. The results of my study indicate that students found the digital citizenship intervention effective at raising their awareness on these topics of privacy setting awareness and cyberbullying/peer aggression awareness as confirmed by the high mean levels of effectiveness that were calculated from the close-ended questions. Vandebosch, Poels, and Deboutte (2014) had suggested that more evidence-based intervention programs that would be appealing to students are needed. Overall, the students were very engaged in this intervention since student responses to the open-ended question indicated that they would immediately make changes after attending the presentation. Students in class also discussed how they added the White Hatter to their Facebook page to stay connected with the cyber-media expert. This intervention also utilized a school-wide approach, which was recommended in previous literature (Parris, Varjas, & Meyers, 2014; Vandebosch, Poels, & Deboutte, 2014).
Limitations

There are a few limitations to this study. First, the study included students from only one middle school in SD71. This district recently reconfigured its schools and Lake Trail was the only remaining middle school. The different subcultures and diversity of this one school would differ among other schools both in and outside of the district, which suggests that the results of this one study may not be transferable. In addition, only grade 9 students were selected for this study since they were associated with the age (14 years) that most students had experienced negative online behaviours including cyberbullying (Lindfors, Kaltiala-Heino, & Rimpela, 2012). The grade 9 classes were already split into 3 divisions. Of those divisions, I was only directly teaching 2 divisions; however, all 3 divisions were invited to participate. The survey response rate was 29%, which was lower than anticipated. This could be attributed to the fact that I only directly taught two-thirds of the grade level.

Secondly, the survey itself was also limiting. Although steps were taken to increase internal validity, this was the first time that the survey had been used and the results were based on self-reported data. In the quantitative section of the survey (See Appendix A, Survey, Section 2), students responded using a Likert-scale for effectiveness of the intervention for improving awareness of eight key online behaviours. This section provided good quantitative feedback, but did not allow for students to respond in depth to why they found a certain online awareness topic was effectively covered by the intervention. In addition, there were only two open-ended questions (qualitative data collection) for students to respond in-depth with regards to what immediate changes they might take after attending the intervention, and what online topics they wanted more
information on. Some of the responses were too vague to address appropriately. Another limitation of this section would be the lack of member checking on the interpretation and analysis of open-ended responses.

Thirdly, the use of the cyber expert came with additional challenges, such as scheduling and fundraising. Not only did I have to take into consideration our school schedule, but also had to make sure that Darren was available to present at our school. Darren resides in Victoria, BC and he was busy with his job as a Staff Sergeant for the Victoria police department, runs his own business, and was already booked up at many other schools presentations both in Canada and the United States. Trying to find a time that would accommodate both our school schedule and his availability took effort. Not only did I want to book the 2-hour presentation school presentation, but also I wanted to book an additional 2-hour evening parent/community night session. It took three months for all the scheduling timelines to work smoothly. In the end, he presented the first day back from our winter break. In my experience as an educator for seven years, I know that most students may not be prepared to learn academics after a two-week break. I hoped to capitalize on this setback by having a captivating speaker present about a current and trending issue of digital citizenship. Fundraising was another hurdle I had to overcome, the costs for the two presentations totaled $1395. Our district has had funds in the past to have Darren attend schools in the past, but they were only doing so on a two or three-year rotation. This meant that I had to fundraise for the presentations in order for this research study as proposed to take place. By reaching out to other schools, District PAC, individual school PACs, community outreach groups, and grants, I was able to fundraise
over my target. The additional money was put towards student-led anti-cyberbullying program and bursaries for students that model good digital citizenship.

**Suggestions for Future Research**

I would suggest the use of other qualitative methods such as semi-structured interviews and observations to further triangulate the results. I would have liked to ask the students about specific incidences pertaining to digital citizenship awareness such as: if they have even been a cyber victim or cyber bully, what specific social media platforms they currently use, how often they use their technologies, and if their parents/guardians are aware of their online behaviours. The data from this study could be used to research in-depth the open-ended question responses and fill gaps from lower scoring close-ended Likert questions. I would want to ask students about which chat room forums are the most popular, why they don’t specifically use SMS/MMS texting, and which brand of technologies they use and if that influences their online behaviours.

With the by-product of this research opening the door for a student-led anti-cyberbullying program at our school, further research could involve looking at the impact of student-driven projects on promoting digital citizenship.

**Implications for Policy and Practice**

The British Columbia Ministry of Education is calling for implementing responsible technology use protocols (digital citizenship) into curriculum to coincide with the new BC Education Plan. Technology integration in the classroom will drive a new way to teach and learn (Ministry of Education, 2015). Technology will experience
20,000 years of growth this century and students as young as 7 years old know how to search the Internet, text, use social media, and can earn salaries online (New Brunswick Department of Education, 2010). Education will see a shift as it prepares to go digital with every textbook used in K-12 education fitting onto a tablet weighing less than 300 grams.

With such a reliance on technology being at the forefront of education, districts and individual schools will have to ensure that proper guidelines and policies are in place to keep students safe online. School District 71 (2015) uses a policy titled: Computer and Internet Access Responsible Use Agreement which all students, staff and support staff must adhere to. This agreement reminds users to conduct themselves in a responsible, decent, ethical, and polite manner while using the computer and Internet access system. If users do not comply they may run the risk of one or more levels of the system revoked, and/or disciplinary action- either loss of privileges or suspension and/or legal action.

We cannot stop the technology boom from occurring but we can be prepared for it. Educators need to be trained to understand the technology first before they can teach their students how to become good digital citizens. The aim of this research was to examine the effectiveness of a digital citizenship intervention. The survey questions were based off of the intervention by the cyber-media expert, Darren, who addressed eight online behaviours: privacy settings awareness, chat room etiquette and privacy information, instant messaging and privacy information, SMS/MMS texting etiquette and privacy information, privacy using cellular phone/smart phone technologies, appropriate behaviour regarding social networking platforms (such as: Facebook, Twitter, Skype,
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Tumblr, Instagram, Snapchat, Vine, and ASKfm), awareness of cyberbullying/digital peer aggression behaviours, and reporting procedures with regards to negative online issues to designated school personnel (i.e., teachers, counselors, & administrators) or law enforcement. These behaviours are related to some of the digital citizenship elements, specifically etiquette, security, safety, and responsibility (Ribble et al., 2004). Students had rated this school-wide intervention to be effective at raising awareness on all eight key online behaviours. The results of this study indicate that students were also willing to make the necessary changes to become safe online, which could also translate to appropriate digital use in schools. Schools need to understand that digital citizenship is a skill that students need to acquire and want to acquire in today’s environment. In classrooms, teachers could work collaboratively with their students to create guidelines on appropriate technology use such as: using digital communication technologies when they are not interrupting learning, using digital communication technologies to enhance learning (i.e., sharing documents via Google Docs with multiple authors), or using digital communications for reporting (i.e., parent-teacher portal via MyEd BC). Digital etiquette could also be reinforced within these guidelines reminding students that technology use involves respecting others online and not to engage in negative behaviours such as cyberbullying.

Schools also need to train their educators to be prepared for this influx of technology use and possible misuse in the classroom. Only 15% of teachers feel confident about managing cyberbullying (Vandebosch, Poels, & Deboutte, 2014). I would suggest that schools and school districts begin to have dialogue on the topic of digital citizenship and then bring in relevant professional development focused on cyber
safety. Strong leadership is required to enact these changes in schools and to inspire teachers to learn technology-associated skills for the 21st century. According to Richardson, Bathon, Flora, and Lewis (2012), educational administrators should model digital citizenship by: ensuring equitable access to digital tools/resources; promote, model, and establish policies for safe, legal and ethical use of technology; promote and model responsible social interactions via technology use; and lastly, model and facilitate the development of a shared cultural understanding of global communication/collaboration tools. It is imperative that school-wide policies are in place to ensure that technology is being used in a safe and appropriate way to promote good digital citizenship behaviour such as the “Computer and Internet Access Responsible Use Agreement” used in SD71. This is a policy which all students, staff, and support staff must adhere to. This agreement reminds users to conduct themselves in a responsible, decent, ethical, and polite manner while using the computer and Internet access system.

Schools need to set up preventative measures and enforce a straight forward reporting policy (Campbell, 2005). Another suggestion could involve the use of anti-cyberbullying manuals and for teachers to provide feedback to schools regarding the outcomes of their efforts (Vandebosch, Poels, & Deboutte, 2014). More professional guidance in this area and more evidence-based intervention programs that would be appealing to students are needed. As teachers gain more confidence with their technology skills, they will be able to help their students. Technology will continue to evolve, but we want to ensure that we are keeping our students and ourselves safe as we navigate through this digital era.
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*School Psychology International, 32*(6), 645-654. doi:

10.1177/0143034311410262
Appendix A: Student Survey

PLEASE DO NOT WRITE YOUR NAME OR IDENTIFY YOURSELF IN ANY WAY ON THIS FORM.

Section 1

Demographic Data

1. What is your age? _________
2. What is your gender? ______________

Section 2

Closed-ended Questions (Likert Scale)

How effective was the cyber-media expert’s presentation at increasing your awareness of the following online behaviours?

1. Providing privacy settings awareness.

<table>
<thead>
<tr>
<th>Very ineffective</th>
<th>Ineffective</th>
<th>Average</th>
<th>Effective</th>
<th>Very effective</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

2. Chat Room etiquette and privacy information.

<table>
<thead>
<tr>
<th>Very ineffective</th>
<th>Ineffective</th>
<th>Average</th>
<th>Effective</th>
<th>Very effective</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
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</table>

3. Instant messaging etiquette and privacy information.

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<thead>
<tr>
<th>Very ineffective</th>
<th>Ineffective</th>
<th>Average</th>
<th>Effective</th>
<th>Very effective</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

4. SMS/MMS texting etiquette and privacy information.

<table>
<thead>
<tr>
<th>Very ineffective</th>
<th>Ineffective</th>
<th>Average</th>
<th>Effective</th>
<th>Very effective</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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</tbody>
</table>
5. Privacy using cellular phone/smart phone technologies.

<table>
<thead>
<tr>
<th>Very ineffective</th>
<th>Ineffective</th>
<th>Average</th>
<th>Effective</th>
<th>Very effective</th>
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<td>1</td>
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<td>3</td>
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<td>5</td>
</tr>
</tbody>
</table>

6. Appropriate behavior while using social networking platforms such as: Facebook, Twitter, Skype, Tumblr, Instagram, Snapchat, Vine and Ask.fm.

<table>
<thead>
<tr>
<th>Very ineffective</th>
<th>Ineffective</th>
<th>Average</th>
<th>Effective</th>
<th>Very effective</th>
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<table>
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<tr>
<th>Very ineffective</th>
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<th>Average</th>
<th>Effective</th>
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</table>

8. Reporting procedures with regards to negative online issues to designated school personnel (i.e. teachers, counselors & administrators) or law enforcement.

<table>
<thead>
<tr>
<th>Very ineffective</th>
<th>Ineffective</th>
<th>Average</th>
<th>Effective</th>
<th>Very effective</th>
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</table>

**Section 3**

**Open-Ended Questions**

1. Will you make any immediate changes to your online behaviour after attending this presentation? If so, what?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

2. After attending this presentation, specifically list any type(s) of online behaviours, social networking platforms (i.e. Facebook), reporting procedures, or any other online issue that you would want more information on?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

*Thank you for your time and consideration 😊*
Appendix B: Joint Parent/Guardian Consent and Student Assent Form

Parent/Guardian Consent and Student Assent Form for:

**Student Perceptions of the Effectiveness of a Digital Citizenship Intervention**

**Introduction:**

In addition to being your child’s academic teacher, I am a student at Vancouver Island University working to complete a Masters degree in Educational Leadership. As part of the program I am engaged in applied educational research, which is designed to inform and improve my professional practice.

**Key Terms:**

*Social media platforms:* computer-mediated tools that allow people to create, share or exchange information, ideas, pictures and videos in virtual communities and networks (i.e., Facebook).

*Digital citizenship:* the norms of behaviour with regard to technology use.

*Cyber media expert:* a person who specializes in online conduct.

*Cyberbullying:* bullying that takes place using electronic technology. It includes: cellphones, computers, tablets, social media sites, text messages, chat and websites.

**Description of Research:**

I have designed a research project that will survey students on their perceptions of whether a school-wide presentation using a cyber media expert is an effective intervention at improving their awareness of safe and appropriate online behaviours.

Your child is being invited to participate in this research because he/she is a grade 9 student at Lake Trail Middle School and within the age range that is most susceptible to inappropriate online behaviours.

To participate in this research, your child is asked to fill out the attached survey, which should take approximately 15-20 minutes.
The survey will remain completely anonymous. Your child will have 2 weeks to complete and return the survey along with the joint parent consent/student assent form. Please use the provided sealable envelope for enclosing both the joint parent consent/student assent form and the completed survey. The envelope is to be returned into the designated, secured box in the main office. The box will be locked in the principal’s office for storage until the 2-week deadline has expired.

**Potential Risks**

There are no known harms associated with your child participating in this study. Your child’s treatment in class and/or grades will not be affected whether or not they participate, since I will not know who has participated in the study.

**Confidentiality and Anonymity**

All records of participation in the study will be kept confidential. The joint parent consent/student assent form and survey are to be returned in the same envelope to the designated, secured box in the main office. My research assistant will separate the joint parent consent/student assent forms out before providing me with the anonymized surveys for my analysis. The joint parent consent/student assent forms will be collected by my research assistant and will be stored in a locked filing cabinet in his/her home office until the study is complete. I will not know who participated in the study. All paper data will be locked in a drawer in the principal's office. The electronic data and results of this study will be stored on a secured, password protected computer at my home office.

Electronic files will be permanently deleted from the hard drive from my computer at my home office. Paper data will be destroyed (by burning) 3 years after research is completed (June 2019).

The results of this study will be used to determine whether a school-wide presentation was an effective intervention for bringing awareness to safe and appropriate online behaviours. This will help inform my practice as an educator since I teach IT, health and wellness courses and use technology integration in my academic courses. In addition, the results may lead to recommendations for other schools in SD71 about the perceived effectiveness of school-wide presentations on digital citizenship. I plan to present my findings at the Masters of Educational Leadership Conference in Spring 2016. The thesis might be published online in the VIU library's VIU space.

**Participation**

Participation is completely voluntary and confidential. You or your child may refuse to participate or may withdraw from the study at any time prior to submitting the survey for any reason and without penalty. They may also skip any question they do not wish to answer.

Because surveys are entirely anonymous, your child’s survey will not be retrievable once it is submitted since it will be impossible to distinguish their survey answers from any others that have been returned.
If you do not wish to have your child participate in this study, then you need not do anything but simply discard the consent form and survey.

**Concerns about your treatment in the research**

If you have any questions or desire further information with respect to this study, you may contact Dr. Rachel Moll, Faculty of Education, Vancouver Island University at 250-753-3245 x 2161, Email: rachel.moll@viu.ca

If you have any concerns about your treatment as a participant in this research, please contact the Vancouver Island Research Ethics Officer at reb@viu.ca or by telephone at 1-888-920-2221 (local 2665).

**Contact Information**

If you have any questions about this research project, or would like more information, please feel free to contact me at the email address below:

SSM
Master of Education Student
Vancouver Island University

**Consent**

Your consent is being requested to include your child’s survey responses as data in this study. If you and your child consent to the research study procedures above please sign below and return the consent form to the main office at Lake Trail Middle School.

**Parent Consent:**

I have read the above form and give consent to include my child’s survey responses as data in this research study.

_________________________________ ______________________________
Parent Signature Date

**Student Assent:**

I have read the above form and give assent to include my survey responses as data in this research study.

_________________________________ ______________________________
Child/Student Signature Date
Good morning. I am Ms. SSM and have been teaching grade 9 students for the last 6 years in the Comox Valley. Currently, I am enrolled in the Master’s of Education Program at Vancouver Island University in Nanaimo. In one of the courses, Research Methods 550, I was able to create a research project on a topic that I care deeply about - Digital citizenship.

Digital citizenship can be defined as the norms of behaviour with regard to technology use. As you know, Darren Laur aka “The White Hatter” was in yesterday to do his presentation on safe and appropriate online behaviours. I want to get your feedback, as grade 9 students, through a survey on whether you found his presentation effective on your awareness of appropriate online behaviours.

I am going to hand out a joint parent consent and student assent form along with the student survey with a sealable envelope to all grade 9 students at Lake Trail Middle School. I will need consent from both your parents and yourselves (assent) to participate in this research. The completed parent consent/student assent form and the completed survey are to be returned into the same sealable envelope provided. The sealed envelope will then be collected in a designated, secured box located in the main office.

Your participation in this research is completely voluntary and will remain anonymous. Each survey also contains a pizza slice voucher that you can use in the school’s cafeteria regardless of whether or not you choose to participate.

The survey will take about 15-20 minutes to complete. You do not have to respond to all of the questions if you don’t want to. In addition, you can opt out of participating at any time prior to submitting the survey.

The deadline for the survey is in 2 weeks from today which will be [month/date]. I will give a reminder announcement in a week. If you and your parents consent to participate in this study, please complete the survey at your earliest convenience. Once the sealed survey has been submitted, I will not be able to retrieve it since all respondents will be anonymous.

Please take the joint parent consent and student assent form along with the survey home. Review both documents with your parents. Thank you for your time and consideration.
Appendix D: Reminder Announcement Script

Good morning. Last week, I handed out a joint parent consent/student assent form along with a student survey. The survey was issued to gain (grade 9) student perspectives on whether the presentation by the “White Hatter” was an effective intervention to bring awareness to safe and appropriate online behaviours.

Thank you to those of you that have already submitted their sealed envelopes consisting of their joint parent consent/student assent form and completed survey to the main office. The deadline for the survey is in 1 week on [month/date].

If you are interested in participating in this study, please review both the joint parent consent/student assent form along with the survey with your parents. There are extra copies of the parent consent/student assent form, the student survey and sealable envelopes on the back counter.

I will need consent from both your parents and yourselves (assent) to participate in this research. Please enclose both the parent consent/student assent form and the completed survey into sealable envelope provided. This envelope is to be returned to the designated, secured box located at the main office.

Thank you for your time and consideration for this research.