Informing Students about Online Safety, Privacy and Citizenship in a Fun and Engaging Way

by

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We accept the Process Paper as conforming to the required standard.

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Abstract

In today’s world, the Internet has become a regular part of our youth’s life. Forward-thinking teachers can no longer ignore the incredible potential of utilizing Web 2.0 tools and social media in an educational context. Embracing the possibilities of online interaction is one of the steps towards raising technologically savvy adults, but for this to happen responsibly, it is imperative that we consider the issue of online safety and privacy. Teaching young children to behave responsibly online can be a difficult task due to the serious and often dry nature of the subject matter. Literature in the field demonstrates the importance of taking a different approach when teaching young ones how to become better digital citizens. This project addresses this issue as it offers a response to the critical question, ‘How can intermediate teachers effectively reach their students and inform them about online safety, privacy and citizenship in a fun and engaging way?’ The ensuing eWarrior workshop was developed as a blended learning opportunity composed of a child-friendly website populated by lighthearted characters and an accompanying workbook. Through a series of varied and interactive hands-on tasks, the eWarrior crew guides students in a quest towards better digital citizenship so that they too may become eWarriors. Activities align with the BC Ministry of Education’s Grades 3 to 6 Curriculum as well as with the Core Competencies for those grades. Several printable materials are available as well as a walkthrough guide for teachers. Initial feedback was very positive, with respondents asserting they believed the website and activities had met the goals of the project, and many teachers hoping to try the workshop with their classes in the coming year.

Major Project URL: https://www.ewarrior.ca

Keywords: online safety, online privacy, digital citizenship, digital literacy, cyberbullying, gamification, blended learning, Internet
Acknowledgements

This has been an amazing journey, with wonderful views and some detours along the way. I am so thankful to all the people who have influenced, encouraged and cheered for me during this time. First, I would like to thank Jean Kloppenburg for putting my train on this adventure track. Thank you for thinking the OLTD program would be a good fit for me – you were right! You have been an awesome supporter and cheerleader throughout this process.

I also want to thank all of the great people in my cohort, who kept me going and provided me with many great ideas, insights and information from their own experience as online teachers. I feel so lucky to have had a strong cohort with such a variety of knowledge.

A big thank you to my family and loved ones, particularly my wonderful husband Dean, who ate more reheated soups this year than one should ever be required to. Thank you for allowing me to prioritize my work so willingly, for pushing me to finish and for believing in me!

Thank you to all of the talented instructors I had during the OLTD program; I have enjoyed it more with every class, all the way to the final station. You guys are amazing and your commitment and excitement about the content made me want to dig in and do my very best.

Finally, a project such as this would not have been possible without a strong mentor and guide, someone who kindly fueled my little locomotive even when times were not so rosy; her support and positive disposition would never let me consider giving up. Mary O’Neill, I am forever grateful for having you as a supervisor and will always remember all the help you so promptly gave me. Your nurturing is the reason why I was able to finish this project.

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Chapter 1 – Introduction

Purpose of the Study

In our technologically enriched world, today’s youth has eagerly embraced social media and online interactions. Exposed to seemingly harmless social games from an early age, the notion that someone is on the other side of the screen is commonplace even to very young children. Besides providing an infinite universe of knowledge and possibilities, the Internet also provides youth with an easy way to keep in contact with their friends, a “chance to spend unstructured time together” (boyd, 2014). Having access to the world, and to each other, at the tips of your fingers is exciting, but also presents serious issues. As educators, we must do our part to ensure online interactions occur from a place of power by providing children with the knowledge and resiliency to navigate the online world with confidence. This research examined the literature surrounding online issues involving youth and currently available online safety training tools, assesses the risks of nonintervention, and applies these findings to the development of an engaging training tool to help raise awareness and encourage responsible online citizens. This is primarily a qualitative study, with no Ethical Review required.

Several studies have been conducted regarding youth usage of social media and the need for proper education regarding online behaviour (O’Keefe and Clarke-Pearson (2011); Bosco and Krueger (2011); Hengstler (2012); Barr and Masters (2001), among others). Other studies have considered enhancing engagement when teaching a subject to primary grades, but few have looked at how we can reach our younger students and present this serious, often scary topic, in a manner that will both engage and influence them. There are many rules about “what not to do” when interacting online, and “how not to teach” youth to behave online, but not enough tools have attempted to provide a solution to this increasingly relevant issue with a more positive perspective.
This project proposes that by offering students an online training tool that teaches proper online behaviour and citizenship at an age-appropriate level, in a friendly, interactive and non-judgmental way, students are more likely to be engaged, to listen and thus become more responsible online citizens from an early age. The purpose of the project is, therefore, to look at the different aspects involved in online safety and behaviour and use these as core fundamentals to the development of an engaging online training tool dedicated to young learners.

**Justification of the Major Project**

From the very beginning of my adventure as a teacher, I embraced technology and integrated it into my classroom as much as I could. I have used a classroom website with web-based resources since my B.Ed practicum, providing students with the opportunity to work at their own pace from home, and encouraged children to use Pinterest, Weebly and other engaging online tools. Like many teachers, I dutifully distributed student consent forms to be taken home for parental signature, to protect the school, and myself, from any issues that might arise while the students engaged in online activities. The forms came back, they were counted and archived, and I didn’t give them a second thought; the list of expectations for behaviour were read in class, signed by the parents, and that was the end of it.

After I signed up for VIU’s Online Learning and Teaching graduate Diploma (OLTD) program, I became more familiar with the importance of online safety and privacy. It may seem like the Internet is something so intrinsically part of our youth’s lives, that the issues surrounding its use are not as serious or as unknown as they once were. In reality, the topic of online safety and digital citizenship grows more relevant every year, as instances of cyberbullying, solicitation of sexual content and online grooming continue to disrupt and even destroy young lives across
different cultures and countries. While young people may put on a façade that they know everything there is to know online, that is simply not the case when it comes to safety.

The Internet has made it possible for predators to reach any child inside the perceived security of their homes; the old adage “don’t talk to strangers” has little meaning in the Internet world, as children and youth are more likely than ever to trust the people they meet in game chat rooms and other social media spaces. The online universe makes it easy for someone to pretend to be someone else, and this is an unforeseen consequence of having the world at our fingertips. According to Whittle, Beech et al. (2012), the act of grooming is a “threat to young people across the world”. Willard (2012) further confirms this by stating that “the proliferation of child predators using the Internet to target young victims has become a national crisis.” In fact, her research uncovered that one in seven children will be solicited for sex online every year. However, we must keep in mind that online predation doesn’t initiate by sex solicitation. Child sex offenders will sometimes talk to their victim for days, and in some case even months, in a game of cat and mouse designed to gain the confidence and trust of the child. This will often start off in a seemingly innocent way, and it becomes crucial for us to educate the child so that the intentions behind online interactions can be identified and safeguarded against.

As I researched into the topics of online safety and privacy and learned more about current school policies, three things became clear. First, the issue of online safety is much more important than I gave it credit for, certainly not something that should be tackled by simply sending a form home to be signed by a parent. While this is still a necessary step, we can’t rely on parents to educate children regarding something they themselves may not be aware of, or comfortable dealing with. In fact, the research clarified how crucial the role of the teacher is when making youth informed about online privacy and safety; we are not only the most prepared
to tackle this issue, but depending on delivery methods, also the most likely to make an impact and be listened to (see Figure 1). Buy-in from parents and peers is desirable, but again, teachers are the most likely to know how to educate students; it is simply what we do.

![Figure 1: Venn Diagram for Online Safety by Angela Jurgensen.](image)

Second, while we have focused on how we can abide by FIPPA and protect ourselves as teachers, and have diligently protected the school by following their online policies, we have not paid attention to the huge elephant in the room: the need to ensure the safety and protection of the children. They may act as if they know everything there is to know about the online world, but the literature reviewed showed that they don’t have the maturity to define what appropriate behaviour is, or appreciate the future consequences of their actions; they also lack the experience to see the ‘red flags’ and thus are often unable to protect themselves from predators.

Finally, while the elephant in the room may be large, and while we may not be able to swallow it whole, we may be able to eat it if we take small bites at a time. Facing the issue of online safety and privacy, and recognizing the need for informing youth of its consequences, was the beginning of my journey into what would become the focus of my final project. Towards the
end of the OLTD program, I changed my topic to online safety as an attempt to take a bite out of this problem, as well as perhaps provide teachers with a different way of looking at online safety and citizenship.

As I sifted through similar materials online, my suspicions were confirmed as a pattern started to emerge: while there were many excellent resources for teachers regarding privacy and safety, there seemed to be a lack of resources that appealed specifically to children. Moreover, many materials simply provided rules that the child was to follow, without attempting to educate them regarding the issues and the reasoning behind these rules. While there are some training resources online regarding online behaviour, such as Cybersafe BC, much of what is available is geared with the adult in mind; further, it does not provide continual support to the classroom teacher. Safekids.com offers rules regarding online safety and citizenship, but like most resources, they are presented in a dry and often oppressive way; some of them try to instill fear, while others treat children and youth in a condescending manner. One of the main points my project tries to emphasize is that online privacy and safety is something that should be faced as a matter-of-fact issue, with no finger-pointing, and needs to be considered from an empathetic perspective. Based on my experience as a mother and a teacher, children and youth can see right through fearmongering tactics; when they are addressed as if we don’t trust their judgment they are less likely to trust us in return, and the communication channels are broken.

Many educators have seen firsthand what can occur when proper precautions are not taken, myself included. We are all aware of the negative impact the Internet can bring to a young person’s life; cyberbullying, sexual predation and inappropriate content are just a few examples of negative online behaviours. But the benefits of having an online presence far outweigh the dangers, as long as we are able to educate children from an early age and continue to reinforce
their learning and promote responsible and informed online awareness throughout their development.

**Critical Challenge Question**

When considering what topic to focus on for this project, I thought of issues that would be relevant and helpful for teachers in their classrooms. The topics of online safety and citizenship came to my attention after having the opportunity to teach the primary grades. Online safety is a recurrent concern for teachers, and it became apparent that while everyone has a strong opinion on the need to protect our younger students, teachers have little guidance regarding how to educate their students on proper online etiquette, safe behaviour and citizenship. This Major Project considers the question, ‘**How can intermediate teachers effectively reach their students and inform them about online safety, privacy and citizenship in a fun and engaging way?**’

**Key Deliverables and Brief Summary**

Providing an age-appropriate training tool that offered guidelines for teachers seemed like a worthy focal point for my research. Therefore, leveraging on my background as a children’s writer and illustrator, as well as my love for Role-Playing-Games (RPG), the study culminates with the creation of an engaging online training tool regarding online safety, found under [www.ewarrior.ca](http://www.ewarrior.ca) (see Appendix A).

This project incorporated gaming elements that mirror Gee’s Learning Principles of Gaming (2003). In one of his principles, the Principle of Interaction; Gee reminds us that “games do talk back”, giving the player “feedback and new problems” and helping keep the player motivated. Gee suggests that texts and textbooks be put in context where they can “talk back.” Using this as a guideline, I developed a feline character, Sir Catsalot, who begins a dialogue with
the student and invites him or her to follow Sir Catsalot and his friends in an adventure quest. Gee’s Principle of Identity is also considered as the child is encouraged to perform tasks or quests and become an eWarrior themselves, engaging in a back-and-forth dialogue as they learn rules of online living. As the website invites students to explore at their own pace, they also experience the Principles of Agency and Thinking Laterally, tackling different areas of the training tool in the order they choose.

This online tool includes lesson plans and precise instructions for teachers, so that it can be used to guide intermediate students towards safe and informed online interactions, as well as the creation of a positive online footprint. Besides the website training tool and teacher package, a game app incorporating Sir Catsalot would be a great way to consolidate learning and present the resource material in an alternate format, and my plan is to tackle this in the future, or assist someone who may be interested in developing this game app on their own as an adjunct to the website offering.

Besides highlighting the value of utilizing principles of gaming to increase student engagement, the findings of my research helped confirm the idea that a lighter and humorous approach might be a good way to reach students when teaching online safety and privacy. These findings are presented as a comprehensive literature review in Chapter 2.
## Definition of Terms

Throughout this Major Project, a few terms required further clarification. The Table below provides the definitions to Terms used throughout the project.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
<th>Source</th>
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</thead>
<tbody>
<tr>
<td>GBL</td>
<td>Game-Based Learning: A type of game with defined learning outcomes. Students use the game</td>
<td>EdTechReview (2013)</td>
</tr>
<tr>
<td></td>
<td>to learn about a specific topic as guided by a teacher.</td>
<td><a href="http://edtechreview.in/dictionary/298-what-is-game-based-learning">http://edtechreview.in/dictionary/298-what-is-game-based-learning</a></td>
</tr>
<tr>
<td>Gamification</td>
<td>The application of game-design elements and game principles (such as badges, points and</td>
<td>Wikipedia</td>
</tr>
<tr>
<td></td>
<td>competition) to increase engagement, learning and comprehension.</td>
<td><a href="https://en.wikipedia.org/wiki/Gamification">https://en.wikipedia.org/wiki/Gamification</a></td>
</tr>
<tr>
<td>RPG</td>
<td>Role-Playing Game, a genre of videogame where the gamer controls a fictional character that</td>
<td>Techopedia</td>
</tr>
<tr>
<td></td>
<td>undertakes a quest in an imaginary world. Characters usually have a central quests and side</td>
<td><a href="https://www.techopedia.com/definition/27052/role-playing-game-rpg">https://www.techopedia.com/definition/27052/role-playing-game-rpg</a></td>
</tr>
<tr>
<td></td>
<td>quests, and have levels or statistics that can be improved over the course of the game.</td>
<td></td>
</tr>
<tr>
<td>Fourth Wall</td>
<td>A conceptual barrier between those presenting some kind of information and those receiving it.</td>
<td>WhatIs.Com</td>
</tr>
<tr>
<td></td>
<td>In theater, it refers to the imaginary wall at the front of the stage separating the audience from the</td>
<td><a href="http://whatis.techtarget.com/definition/fourth-wall">http://whatis.techtarget.com/definition/fourth-wall</a></td>
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performers. Breaking the fourth wall implies the performer (or game, or actor) addresses the audience directly.

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<tbody>
<tr>
<td>UbD</td>
<td>Understanding by Design, an educational planning approach that looks at the desired outcomes in order to design learning experiences.</td>
<td>Understanding by Design Framework</td>
</tr>
<tr>
<td>Blended Learning</td>
<td>An education program that combines a face-to-face traditional setting with supporting online tools This provides students with some element of control over time, place or speed.</td>
<td>Wikipedia</td>
</tr>
<tr>
<td>Avatar</td>
<td>In gaming, Avatar is a graphic representation of yourself. It is the character you assume when you participate in a particular game. The word comes from a concept on Hinduism that means “descent”, referring to an incarnation of a deity on earth.</td>
<td>Wikipedia</td>
</tr>
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Table 1: Definition of Terms
# Project Timeline

<table>
<thead>
<tr>
<th>Dates:</th>
<th>Deliverables:</th>
</tr>
</thead>
<tbody>
<tr>
<td>September-December 2017</td>
<td>Website Development begins, Chapter 2 completed.</td>
</tr>
<tr>
<td>January 10-February 7, 2018</td>
<td>Chapter One completed, Ch. 2 additions and revisions as required. Web build continues.</td>
</tr>
<tr>
<td>February 7-March 1</td>
<td>Chapter 3 completed. Ch. 2 additions and revisions as required. Web build continues.</td>
</tr>
<tr>
<td>March 1-March 15</td>
<td>Web build completed.(v.1)</td>
</tr>
<tr>
<td>March 15-March 30</td>
<td>Call for Reviewer Feedback. Feedback results collated.</td>
</tr>
<tr>
<td>March 30-April 15</td>
<td>Ch. 4 completed. Web build completed.(v.2)</td>
</tr>
<tr>
<td>April 15-April 30</td>
<td>Ch. 5 completed.</td>
</tr>
<tr>
<td>May 15</td>
<td>Process Paper submitted for APA review and final signoff.</td>
</tr>
</tbody>
</table>

Table 2: Project Timeline
Chapter 2 – Literature Review

Introduction

Each day, more and more teachers venture into the Web 2.0 world, searching for tools to enhance learning. This is an exciting time but it is also a time for caution. While attempting to navigate the ocean of Internet and social media possibilities, challenging issues regarding online privacy, online safety and digital citizenship appear everywhere-- hidden rocks just below the surface.

Despite the fact that these hidden issues surround teachers, they should not shy away from using social media as a tool in the classroom. Children gravitate towards the community and validation they get from their online interactions, truly “compelled by friendship” (boyd, 2014, p.18). It is important to become informed regarding these issues and remain positive regarding their applications to teaching and learning. Willard (2012) points out that fostering fear and attempting to turn students away from the online world would be ineffective (p.3), but in reality, it is also counter-productive; teachers must embrace these tools as an opportunity to engage students by offering them opportunities for education through an environment they are already passionate about.

This paper seeks to answer the Critical Challenge Question, *How can intermediate teachers effectively reach their students and inform them about online safety, privacy and citizenship in a fun and engaging way?* The literature review examines FIPPA (Freedom of Information and Protection of Privacy Act) policies and best practices regarding online privacy, safety and citizenship. It also analyzes a few methods for creating online engagement with a focus on child-friendly GBL; gamification; using the emotional component to enhance engagement; and youth’s current usage of social media.
FIPPA and Digital Citizenship

In order to inform students, teachers should first understand online safety and privacy themselves. FIPPA (2013) offers a good place to start discerning which student information needs to be protected. It describes personal information as “any personal information of a type that is commonly used, alone or in combination with other information, to identify or purport to identify an individual” (ch. 165, sch.1); while FIPPA does make an exception regarding disclosure of business emails, phones and position, this is not applicable to a child, and therefore any information regarding a child must be protected. Hengstler (2016) provides a succinct summary of a teacher’s legal obligations and best practices, covering copyright, issues with storage location, safety and protection plans and response to incidents, as well as instructions on how to gather consent to use online tools in the classroom, which should be given by “both the minor and the guardian” (p.4).

Best practices become more complicated when considering how the Internet works, how everyone can be seen as an expert, and thus how much misinformation may present itself to students. A study by Shin and Lwin (2016) focused on defining how children are influenced by their teachers, parents and peers; it involved 746 students aged 12 to 18. The study presented some facts that may be considered alarming. While parents and teachers tend to offer help and inform children how to properly behave in a safe manner online, peers tend to offer advice from an uninformed place, which leads to increased vulnerability. The study also found that the older the child, the less likely it is for their parents and teachers to mediate and assist regarding online behaviour (likely due to the fact parents themselves are not informed), and the more likely it is for students to listen to and be influenced by their peers (Shin and Lwin, 2016, p. 4). Providing developmentally appropriate training on responsible Internet use as the child ages is important,
as well as maintaining open lines of communication and giving parents tools to help reinforce precautionous behaviour.

**Avoidance and Risks Involving Policy**

Bosco and Krueger (2011) mention how school districts often have a skewed sense of what is necessary to keep students safe; while they block pornography, they fail to protect students from other harmful materials, such as hate speech, misinformation and overt consumerism. Students need proper training in order to be able to deal with such issues; however, the tendency is for districts to “give much more attention to what is wrong with these new technologies” (Bosco & Krueger, 2011, para.7) instead of focusing on what is right, and on how much social media and technology enhance learning in our classrooms.

Often, students have the drilled-down notion that they should avoid online communication at all costs. This view isolates them from the wonderful world of research and collaboration that can be found on the Web; moreover, according to boyd (2014), when you make something “forbidden” to a tween or teen, they will eventually explore it, and if we have not addressed any of the issues, they will do so without proper tools to defend themselves.

Hengstler (2011) implies that this tendency towards encouraging online avoidance is often mirrored by the adults in their lives; in fact, many teachers avoid social media and online tools altogether, or avoid becoming informed of their proper use (p.100-103). Many teachers and districts, however, provide leadership and training regarding the use of Web 2.0 and social networking tools. It is important for educators to become aware of the fact that “where progressive policies are in place, they provide support to educators for scaffolding students’ responsible use of this technology in ways that contribute to community, be it classroom, school, town, nation or globe (p. 91).” The Internet is a place of collaboration; working towards a
confident and responsible use of its tools is beneficial for educators (p. 118) as well as students. Instead of banning devices from classrooms, Bosco and Krueger (2011) defend the development of responsible-use policies including a more unrestrictive Internet use, as well as relying on the student to make proper choices in a safe place where they can learn from their mistakes (para. 9-10). However, students must be informed that their digital footprint builds their online reputation.

**Digital Footprints and How They Follow Us**

A student who is able to make proper choices and navigate the online world with guidance is more likely to become an adult that makes proper choices in this highly technological, social-media-laden world (Hengstler, 2012, p. 10). Hengstler reminds educators that digital footprints, or “the aggregation of all your digital activities in all the digital environments you navigate” (p. 2), accompany us throughout our lives, and it is never too early to start creating a positive online persona. She further states that children as young as two often already have a digital persona; in fact, by the time they are two, “92% of all American children already had some digital presence” (p.2). According to Hengstler, inappropriate, negative and discriminatory comments and photos are some of the items that negatively impact our digital persona and students must understand the importance of always presenting in a positive way online. Social media content is “persistent […], can be readily replicated […], it is always ‘on’ […and...] it is highly searchable” (p.6); there are no “take backs” (p.7). These reasons make it imperative for educators to properly inform our students regarding their digital footprints so that they may never regret their unconsidered choices in the future.

Hengstler (2012) goes on to mention a few different issues that can indeed arise when preteens and teens interact with the world online. Some of the most relevant issues mentioned are
inappropriate behaviour, cyberbullying, sexting, and the lack of credibility affecting much of the content online (p.8). Melgosa and Scott (2013) also mention safety risks, such as grooming and stalking, addiction (to gaming/social networking), hacking, viruses and identity theft.

When teaching children about online safety it is important to ensure that the skills acquired will be transferable. According to Barr and Masters (2001), online safety and digital citizenship cannot simply be forced upon the students as theory; they must be experienced (p.296). Their study observed children ages 6 to 8 using SuperClubsPlus, a protected social networking website that offers a safe environment to experience and experiment with social media. They concluded that children are more likely to learn lessons regarding online safety and behaviour when they are actively involved in social networking tools. The authors observed that by the time children started using SuperClubsPlus, students already had interacted with other unprotected social networking sites. Barr and Masters focused their study on younger students to ascertain if this would be a better age to start informing students regarding social network behaviour. While their conclusion did not help clarify if the skills would be transferrable, they did conclude younger children were willing and capable of exploring social networking, and as practice makes perfect, a younger start “before social networking becomes an integral part of their life” (p.304), would only benefit the children involved. This brings us to older students and how they interact with the online world.

**Tweens and Teens’ Usage of Social Media**

An article by O’Keefe and Clarke-Pearson (2011) looks at social media use by tweens and teens. The authors state many of the apps and games available for children, such as The Sims, Club Penguin, YouTube, as well as MySpace and Facebook, should be considered social media sites (p. 800). O’Keefe and Clarke-Pearson elaborate that, as more and more apps and games offer the opportunity to connect with online friends to share victories and gifts, social
media becomes a part of youth’s daily lives. Teens and tweens have “limited capacity for self-regulation and susceptibility to peer pressure” (p. 800), which can cause issues when considering cyberbullying and sexting, for instance. The researchers consider benefits of youth engagement on social media, such as socialization and communication with friends and family, enhanced learning opportunities as they connect with other students to work on projects, and accessing information easily and privately. They also consider the risks, such as cyberbullying, sexting and Facebook depression. O’Keefe and Clarke-Pearson conclude that age restrictions on sites such as MySpace and Facebook need to be better enforced to protect our youngest students.

Developing resilience in our youth -- the ability to filter the content they share and the content they consume, as well as the ability to ask for help when something goes sideways -- is more important than restricting their access to social media. An article by the Telenor Group (2013) implies that this resilience comes from growing the child’s capacity to make their own decisions and recover from mistakes that may happen. Telenor Group (2013) highlights the importance to “strike the right balance between harm prevention and a child’s right to privacy” (p.9). Children also need to explore information they receive and have the freedom to process what was learned in an actual social media environment.

Telenor Group (2013) further states that it may be easier to just lock everything away and avoid allowing the students to use the Internet, but in the long run, the most efficient and realistic measure would be to give them the tools to develop “filters in the mind” (p.9), and teach them how to avoid harmful online experiences as well as how to seek help when they are encountered.

On another hand, boyd (2014) in her book, It’s Complicated, looks at privacy and how teenagers see it differently than adults. boyd highlights the importance of being sympathetic towards teenagers and describes several examples of interactions between youth and adults
which highlight the chiasm between our conceptions. Acting as if adults hold the whole truth, and practicing “intensive parenting” (boyd, 2014, p. 72), may generate disconnection and thus create an environment that will prevent the child from coming for help when something does happen. Tweens and teens need guidance, as they often overshare things online without considerations for how they are portraying themselves to the outside world; however, they still believe they are maintaining their privacy, as they reveal merely an online persona they believe will make them popular among their peers. The book also revealed how strongly teens feel about keeping their private lives away from the adults around them.

boyd highlights that, despite the fact that children often don’t want their postings to be seen by adults in their lives, if these are available to the general public, this perceived invasion of privacy will likely happen (p.57). More importantly, if parents and teachers can obtain access to their blogs and profiles, so can future relationships, universities and employers. Once students understand this, they may be more cautious about what they post online. As teens think through what they post, it is clear that they don’t always make correct decisions. This is where having a proper training protocol from an early age proves beneficial.

Developing a Proper Training Tool

Willard (2012) implies that offering a continuous and positive view of the online world and acknowledging all that can be gained from it, without fearmongering, is absolutely necessary when trying to reach our students. But what would make for an effective, engaging training tool? According to Willard, there is still a lot of work to be done when talking to young people about online and cyber safety. Much of the training available attempts to scare students away from the online world completely, instead of focusing on what can be gained from interacting and exploring responsibly online. Willard states that “inaccurate data, negative norms” and wording
that is demeaning and condescending to youth are still commonly used (p.14); other tools place heavy blame on the child who made a mistake (p.16). This makes it hard for a child to heal and recover from the unforeseen mistake.

While some companies try to create a comprehensive training program (with components for students, teachers and parents), Willard states this is usually based on a “plug them in, quiz them,” and you’re “done” approach (p.15), which is not ideal when dealing with Internet safety. A continuous component – something that is used throughout the school year – is still not the norm; neither is a cyber-savvy strategy, focusing on training for youth regarding “keeping themselves safe”, “presenting a positive image”, “respecting others”, and encouraging them to “take responsibility for the well-being of others” (Willard, 2014).

Engaging Students

Before developing an engaging online tool to teach digital citizenship and privacy, it is relevant to consider what makes certain material engaging, and why. Gee’s (2003) learning principles suggest that some of the techniques and tactics used in video games would be relevant and efficient if applied to educational material. He developed sixteen basic principles that consider GBL and gamification strategies as possible ways to reach student engagement; most notably, the principles of interaction between the material and the learner (the material should “talk back”), identity (making the learning immersive by allowing the learner to take on a different persona), customization and agency (two principles that would encourage the learner to take ownership and control regarding the pace and path of their learning) and providing opportunities to think laterally and explore, would be great ways to enrich the material provided and promote engagement. His final suggestion stops short of including games in education, but
considers a more broad sense of what makes a game addictive and engaging. Gee states that making learning “more game-like” would increase engagement and thus learning.

GBL seems like a good way to reach students, but a study performed in Taiwan by Hsieh, Lin and Hou (2014) suggests that it may not be equally engaging when comparing students of different genders. In their study, 17 male and 17 female students were observed while playing educational games. Hsieh et al. (2014) found that male students seemed to be more engaged with the game, as observed by their level of self-conversation; female students, on the other hand, played the game without these outward vocal cues. These behaviours alone, however, are not enough evidence to prove difference in engagement between female and male students.

Hsieh et al. (2014) state that “typically, researchers have proposed a three-part typology, emphasizing [dimensions of engagement that are] affective [attitude, interest, motivation], behavioral [asking questions and taking part in discussions], and cognitive [goal-setting, self-regulation and application of learning strategies]” (p. 337). These typologies do not consider that male and female students show engagement in different ways, neither do they consider the students’ preferred tendencies.

So, are gaming and GBL not engaging methods to reach female students? Phan, Jardina and Hoyle (2012) point out that the gap between female and male gamers has been consistently closing and now 42% of gamers are female. However, while female students are just as likely as male students to become hooked and excited by games, and just as capable to play them, it all depends on the way the material is presented. Their study shows that female gamers tend to be attracted to different gaming activities and styles.

While the incidence of games involving action and violence (specifically, immersive, role-playing, strategy, action or fighting) is quite a bit higher for male gamers, female gamers
tend to play games that have more of a social and collaborative aspect (puzzles, educational, simulation, among others). When developing an educational game, or a gamified learning environment that appeals to both genders, it is important to try and balance both aspects of the equation, and offer something that will be attractive and captivate both genders equally.

**The Emotional Component**

Becoming engaged with any learning tool demands an emotional attachment from the student. According to Munoz, Levitt, Lumney, Noguez and Neri (2010), emotions “have been proven to influence cognitive processes, motivation and performance” (p. 133). In an attempt to ensure an emotional connection to the students, Munoz et al. (2010) developed an emotional student model for game-play adaptation, and incorporated dialogue which felt human and connected to the students on a deeper level, which proved effective in identifying negative emotions regarding the topic learned, as well as encourage students to explore their learning.

![Student Model for Game-Play Adaptation, Munoz et al. (2010)](image)

*Figure 2: Student Model for Game-Play Adaptation, Munoz et al. (2010)*
A study by Hamari et al. (2015) looks at another emotional aspect of GBL: the feeling of immersion and flow that can be achieved while playing games. Data was collected from a survey of two different groups of players, both playing learning games. Results showed engagement in the game had a direct, positive impact on student learning. An immersive game environment, however, did not by itself enhance learning. The researchers also found that a challenging game increased engagement as well as learning. Increased engagement from challenging games is confirmed by Gee’s (2007) principles of game-based learning, particularly the principles of challenge, pleasant frustration, and just-in-time delivery of information. Gee’s principle of well-ordered problems is also implied in the previous article, as Hamari et al’s study mentions how games typically start off easy and allow the player to grow and learn at a reasonable pace. These scaffolding and encouraging mechanisms are what keep players motivated and engaged for long periods of time.

Hamari et al. (2015) looked at flow theory and analyzed the conditions for flow to occur. What causes someone to become so immersed in a game or activity that time seems to stop and hours become minutes? They concluded that gradual challenges requiring a high level of skill are the main cause of flow to happen when considering games. Students also will be more motivated when they feel they are able to complete a task. Scaffolding the learning becomes important as a student must have a feeling of competence if learning is to happen. This interaction between skill building, engagement, challenges and immersive material helps students achieve the learning outcome (see Figure 3).
While flow is an important goal when designing a game, as it increases engagement, it is important to note that Hamari et al. did not find a correlation between flow and learning. They did, however, confirm that learning is enhanced when the game incorporates a competition aspect. Developing a gamified learning environment, with tasks, points and badges, and a clear flow and direction, may provide enough competition to motivate students.

GBL utilizes an actual game in order to teach a certain topic, such as simulations, educational games and apps. Gamification, on the other hand, applies elements found in games (such as competition, levels, badge collection and so on) to move students through a certain educational topic. The effectiveness of gamification was discussed by Seixas, Gomes and De Melo (2015) who studied students from the eight year of middle school in Brazil. They explored ClassDojo and ClassBadges, gamified environments which help students develop skills such as collaboration and independence. They argue that gamification provides students with immediate feedback regarding their progress and timely rewards which keep students inspired to continue. Besides the expected conclusions regarding competition, rewards and status being a big push for
students, Seixas et al. also concluded teacher involvement is critical when trying to create a real
gamified experience and that a student-teacher relationship that is “solidary and peaceful” (p.51)
is more likely to inspire deeper learning.

Engagement can also be gained through a visually appealing environment. When dealing
with dry, difficult or uncomfortable subjects, a study by Ozdogru and McMorris (2013)
considers the importance of how these topics can be best presented. The study found that
cartoons and particularly positive humour has been proven to enhance teacher-student interaction
as well as student learning outcomes. While it is not clear if cartoons improve student learning
per se, humour is “considered to have both cognitive and affective components” (p.136).
Students in focus groups that used cartoons to enhance learning had higher test scores; cartoons
were shown to decrease stress and anxiety regarding a certain subject matter, which in turn
improved student achievement. When cartoons are used in combination with information,
students are more likely to remember what they learned; so, besides making the information non-
threatening, Ozdogru and McMorris’ study found that cartoons also help the student commit
information to memory. In consideration of these findings, cartoons and humour were integrated
into my project’s website design and adjunct material, becoming a core element of my approach
to building a training tool.

Conclusions

To protect children online, we need to make them aware of the concepts of privacy and
an individual’s digital footprint. The literature points to a lack of high quality training tools to
help teach resilience to intermediate through middle-school students. Current training programs
are often very dry and focus on the negative aspects of social media, relying on fear and guilt in
order to control youth behaviour. This approach is ineffective, as students often do not see any
immediate danger with their online relationships, which are more often than not, harmless. On the other hand, students who have online resilience are better equipped if something does go awry, which makes practicing online interactions in a safe environment all the more important. Online safety and digital citizenship must be experienced in a safe and positive learning environment. Training should be developmentally appropriate for each grade level.

Engagement must also be considered in the creation of a tool for online safety. Humour, cartoons and gamification are important factors in student engagement. Humour and comics can help reach students in a place where they are comfortable. Comics may not increase student learning directly but they do reduce stress and anxiety while increasing recall and transference of skills. Adding comics and humour to gamification and gamified learning environments helps to create a more comprehensive and accessible tool.

When developing a tool that involves gaming concepts that appeal to both genders, it is important to consider the preferences that each gender demonstrates regarding game topics and approaches. A balance between action and socialization must be reached to retain interest and be appealing to both genders equally. For example, adding proper challenges instead of simply awarding completion badges for reading about a particular privacy topic ensures that each badge or task is properly valued.

Finally, a comprehensive teacher resource to accompany this tool is of utmost importance; the teacher should be given appropriate lesson plans in order to bring the spirit of the online tool into their own classrooms and thus inspire a relaxed, safe environment that will provide deeper learning to their students, and foster the development of proper digital citizens.

The findings of this literature review have been considered and applied to the design and development of the Major Project website titled www.ewarrior.ca. Age-appropriate materials,
engagement through humour and gaming concepts were taken into particular consideration. Methodologies as applied to these aspects are presented in Chapter 3.
Chapter 3 – Procedures and Methods

Major Project Development

Beginning the Process

Creating a product that inspires engagement in elementary students was an educational process in itself. The objective of the final product was to encourage students to become self-sufficient online citizens - able to build their digital footprint with caution and identify possible threats when navigating online. Before considering how the material should be presented, it was necessary to narrow down which topics were most important to cover. After reviewing the literature in Chapter 2 as well as online examples, such as the rules for online safety found on Safekids.com, a few topics became highlighted as most important when trying to teach children the basics of online safety and privacy. Priorities included:

- Online safety precautions when interacting with strangers
- Establishing and maintaining one’s privacy
- Safeguarding one’s identity
- Cyberbullying
- Password protection
- Protection from harmful files
- Understanding how to define if something found online is true or not (critical thinking)

Based on these topics, different web pages were designed in order to teach each facet of online safety and citizenship. During the initial phase of this project’s development, it seemed like a good idea to create an acronym that would inspire children to be smarter online. The acronym ‘Smarties’ came to mind. Besides implying using your mind to overcome dangers, it
also alluded to candy and vibrant colours. It was also simple and easy to remember, and so originally the website was built around these letters.

Figure 4: Original Smarties Passport.

A student would be able to arrive at the front page, click on one of the letters, arrive at a different web page, read through the material and complete a reflection. As they completed each letter of the acronym, students could click on the initial page and let the teacher know they had finished the reflection on a certain letter. Their classroom teacher would then provide a small sticker corresponding to that letter, which would be glued to a passport (see Figure 4). The passport also included a pledge to act responsibly online. Stickers, passports, a certificate of completion and a teacher’s package were available for download.

Creating that initial website was an immersive process; major concerns included the mechanics of the website, how the pages would link back and connect, and how the content could be presented clearly and easily. When the website was close to completion, a few
weaknesses became apparent. Despite its relevant content, these weaknesses would make it difficult for students to complete the task even with coaching from the teacher.

With critical analysis it seemed that although its colours were bright, the website itself lacked a true commitment to Gee’s (2007) Principles of Game-Based Learning (GBL.) It would be a challenge to inspire self-guided work, as the site was neither interactive nor friendly. Besides the badges, there was very little reminiscent of a gamified learning environment. The tasks were very similar, and felt much like going through the paces. As it was, it lacked an invitation or a “hook” and its relatively dry approach to learning would not appeal to younger children. There was no real point in collecting the letters; they amounted to no tangible reward in the end. The website also lacked a narrative and a theme that could string all the material together. What started off as a possible unique offering, different from what was already available, became more of the same. As it turns out, even the acronym SMART was already being used to teach online safety, and so, with effectiveness, access and overall appeal in mind, website design began again.

As I was working through the Mobile Learning and Gaming course (OLTD 508) within the Online Learning and Teaching graduate Diploma (OLTD) at VIU, I thought of role-playing games (RPGs) and how much I enjoyed playing them in my youth. In an RPG, players usually assume an avatar and are guided throughout the game by characters that speak directly to the gamer, providing directions regarding which missions or tasks are to be completed.

My very first RPG over twenty years ago was “Ultima Underworld,” a game which was played as a first-person character. The purpose of the game was both entertainment and educational; at the time, I spoke very limited English and the game was heavy with dialogue. Instead of seeing a miniature of a character on the screen and moving it about, the screen showed
the player what the avatar would be seeing – his field of vision (see Figure 5). This was a novel way of looking at gaming; the other characters spoke directly to you, in effect breaking through the fourth wall and immersing the player in the game. The story aims to convince the player that he or she had been thrown in a dungeon and had to find the exit, which was several floors above. The avatar had to battle several creatures in order to survive; players started off with their bare hands, but if the player was lucky, a weapon would soon be found inside a dirty bag somewhere. Since the character starts the game off as a weakened prisoner, the first few levels were basically infested with rats (a common recurrence in RPGs).

Figure 5: Ultima Underworld (1992), retrieved from Wikipedia.

The idea of playing a warrior, guided through the website and obtaining different bits of knowledge along the way, seemed like an appealing game construct which could be applied to my project and be potentially far more engaging than the previous Smarties design. It would also allow for a more familiar gamification of the website, inviting players to take the leap and accept the journey towards learning. However, besides the setting, a good game also provides a hook; I realized the project needed a theme to connect the whole experience while still remaining faithful to the online safety and privacy topic.
Introducing Sir Catsalot

In order to emulate interactivity, the website needed to have a good mentor, a guide that would follow through the quests with the student, provide a call-to-action and keep them engaged. To honor the original rats found in the beginning levels of Ultima Underworld (as well as most of the RPGs after that), a cat warrior emerged as a good choice for a mentor/avatar. Considering the project is geared for students grades 3 to 6 (aged 8 to 12), a larger animal would not have been nearly as captivating as a little kitty cat dressed as a warrior (probably the same principle behind Puss in Boots).

The first version of Sir Catsalot was developed late April 2017 (see Figure 6 below left). The final version to the right shows the difference between versions.

![Figure 6: First version and final version of Sir Catsalot.](image)

Since his first iteration, Sir Catsalot had a helmet and armor, but originally he was presented more realistically. Although the artistic concept on the first version was close to what the website needed, it seemed to be too stiff; due to the serious content in the website, a more
humorous and relaxed style seemed more appropriate. After a couple of redrafts, the simplified version of Sir Catsalot was developed, with mismatching eyes providing him a harmless, endearing and more androgynous look. In traditional RPGs, a warrior is a class that usually utilizes a sword and a shield, and so, these two items were selected to be the main tangible quest goals in the website. The words SWORD and SHIELD became acronyms for topics that would cover the project’s big ideas, while interweaving and overlapping in concept.

Using the premise of an adventure-style game and the character of Sir Catsalot, the content of the website was developed around six big ideas; defining these big ideas was the first step to create an Understanding by Design (UbD) framework.

An Understanding by Design Framework

In order to correct the mistakes made on the first version of the website, a new approach was also needed to ensure that the content and delivery actually achieved the goals of guiding young students towards becoming better online citizens. I decided to adopt an Understanding by Design (UbD) framework in order to achieve the goals of this project.

The basis for the UbD framework is the concept of “backwards design.” This framework considers the intended learning goals and works back towards establishing the best set of tasks to guide students organically towards this goal. Wiggins and McTighe’s Understanding by Design framework (2005) states that UbD focuses on not merely proof of memorization of the content given, but developing students’ ability to be “ready to perform with understanding, knowledge, and skill of their own” (pg. 19). In other words, the UbD framework encourages autonomy; through this approach, the content can be delivered in such a way that the student is capable, in the end, to “infer” as well as “transfer knowledge” between different situations, which is a crucial skill when dealing with the multifaceted online world. Molding a student’s frame of mind
instead of simply asking them to memorize rules of behaviour is the best way to ensure that they are prepared to face every situation from a safe and positive standpoint.

The first step to create a successful UbD framework is to come up with a few “big ideas” to serve as ultimate guidelines regarding understanding of your intended topics. These are not the topics themselves, but demonstrate deeper understanding points that would be transferrable throughout life. A UbD framework covers a few facets of understanding: the capacity to explain something back, to interpret, to apply the knowledge, to shift between different perspectives, to empathize and to self-reflect; the big ideas must take these points into consideration.

Big ideas are worded as best case scenario, listing different ways students gain understanding. Keeping in mind the seven content topics listed in the beginning of this chapter, six big ideas emerged and helped guide this project’s activities and printable material.

1. Students will realize that often people will misrepresent who they are online.
2. Students become more savvy regarding what is appropriate to share online and what should be kept private.
3. Students will understand the importance of telling an adult they trust if something goes wrong, or if something happens that make them feel uncomfortable online.
4. Students will understand the importance of empathy online, and what to do if someone is unkind to them in turn.
5. Students understand the difference between a true fact and something that is made up, and see how easy it is to falsify information online.
6. Students are able to share what they have learned.

When I first learned about UbD during the OLTD Digital Learning Continuum class (OLTD 502), I developed a unique way to organize a UbD framework using colours and
graphics. While Wiggins and McTighe were used as the basis for the UbD framework, my visual representation offers a colour-coding component which links the previously defined six big ideas to specific pages and activities. The first step to start mounting this visual UbD framework was, thus, to assign each big idea a different colour.

**Figure 7: Colour-Coded Big Ideas and Possible Proof of Learning.**

A second brainstorming session provided some possible ways students could demonstrate their learning; these are the ways by which their understanding is assessed. These were placed underneath the big ideas as reminders of my final objective. Finally, with the big ideas and possible demonstrations of learning clearly defined, a series of activities were written in a scaffolding and playful way, building up towards the big ideas. These activities were also colour-coded to match the colours of the big ideas. This clearly indicates which aspects of the big ideas regarding Online Safety, Privacy and Citizenship are being covered by which activity, how balanced the project is and how the activities complement each other. I tried to keep the activities
as balanced and varied as possible, to add to the interest and excitement of the project. The final colour-coded map with scaffolding activities can be found as Appendix B.

This UbD map is also included under Teacher Resources on the website for easy download by the classroom teacher. The activities and individual cartoons on each page were created to generate empathy and increased understanding in a non-threatening, safe environment. All activities within the website are organized into a workshop via a Teacher’s Walkthrough (Appendix D) download under Teachers Resources, to be followed by the classroom teacher.

**BC Curriculum Integration**

Besides assisting students in becoming better online citizens, savvier in their online interactions, this Major Project integrates well with several sections of the new BC curriculum. In order to clarify the added relevance of this workshop for students, the correlations with the BC curriculum were made available to teachers on the website. (See Appendix C for highlighted BC Curriculum Big Ideas for grades 3 to 6.)

**Career Education.** The workshop covers decision making, personal choices and how they affect public identity; using family and community as a source of support and guidance; and how good work habits contribute to long-term personal and career success. It also explores how our personal digital identity forms parts of our public identity.

**Language Arts.** The workshop focuses on exploring stories and texts to help us understand who we are as well as make connections; it also inspires students to question what they read, view and hear in order to become engaged citizens.

**Health Education.** The workshop helps students adopt healthy personal practices and safety strategies to protect themselves and others. It emphasizes the importance of personal choices and developing healthy relationships online.
Major Project Design and Considerations

The website was developed using www.education.weebly.com, an online drag-and-drop design platform which provides flexibility and ease of use which is geared for teachers. I chose this website builder as it offers ease of use, as well as many classroom applications and features that supported this project, such as the files upload feature (which will be useful for receiving photos from other teachers). After initial brainstorming, sketching and planning phases, all graphics were created using Adobe products (Photoshop, Illustrator and InDesign).

![Figure 8: Front Page Graphic.](image)

Site Navigation

The Landing/Welcome Page displays an introductory comic strip as well as an audio file of Sir Catsalot reading the two first panels. Following the sword or the shield on the very bottom of the landing page and selecting a letter will bring you to the content (the focus of each letter is presented as Table 3.) The Sword and Shield pages are also reachable through the top navigation tabs. Delivery of content is performed by Sir Catsalot and his crew of eWarrior friends.
<table>
<thead>
<tr>
<th>Letter</th>
<th>Page</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>Slay Negativity</td>
<td>Empathy and positivity</td>
</tr>
<tr>
<td>W</td>
<td>Words Can Harm</td>
<td>Empathy and positivity</td>
</tr>
<tr>
<td>O</td>
<td>Online Yes, in Person No</td>
<td>Misrepresentation and telling a trusted adult</td>
</tr>
<tr>
<td>R</td>
<td>Respect Yourself and Others</td>
<td>Empathy and privacy</td>
</tr>
<tr>
<td>D</td>
<td>Delete It</td>
<td>Misrepresentation and telling a trusted adult</td>
</tr>
<tr>
<td>S</td>
<td>Stay Safe</td>
<td>Privacy and misrepresentation</td>
</tr>
<tr>
<td>H</td>
<td>Hide Your Identity</td>
<td>Privacy and misrepresentation</td>
</tr>
<tr>
<td>I</td>
<td>Inform Yourself</td>
<td>Critical thinking and fake news</td>
</tr>
<tr>
<td>E</td>
<td>Explain to Others</td>
<td>Share knowledge</td>
</tr>
<tr>
<td>L</td>
<td>Let an Adult Know</td>
<td>Telling a trusted adult</td>
</tr>
<tr>
<td>D</td>
<td>Don’t Overshare</td>
<td>Privacy</td>
</tr>
</tbody>
</table>

*Table 3. Letters and focus for each page on eWarrior.*

The Printable Workbook (Appendix E), while not a web page, is an important resource to support project delivery. The workshop is completed by working with each letter page in the website and the workbook in tandem. The information and activities correlate between the two and complement each other.

The Teacher’s Page offers a printable Walkthrough and information on the topics covered, workshop objectives and functionality of the website. The Walkthrough helps teachers with instructions for delivering the workshop with their students, including prepping the classroom before they start. This page also contains links to a section with the revised BC curriculum and how the project applies to it, as well as a copy of the UbD colour-coded
framework used to create the workshop. Finally, this page invites teachers to submit photos of their students engaging with the workshop. In the future, these will be added to the Graduate eWarriors page, to inspire prospective educators.

The Handouts Page contains handouts for download. These include the Printable Workbook (including teacher version, Appendix F), the eWarrior Passport and Badges (Appendix G), a Classroom Poster about Bad Files (Appendix K), a Make-Your-Own Sir Catsalot Sheet (Appendix I), a Printable Quiz (Appendix H), a Review Worksheet for assessment (Appendix J), and finally a Certificate of Achievement (Appendix L). A companion eWarrior Handbook is also available for download to assist teachers in their delivery of the workshop content. As they work through the pages and the handbook, students can explore the letters in a non-linear fashion, but they are advised to work together within their smaller groups as some activities require group work.

The Game Page is intended for future development of the game application. This would be a mobile app with Sir Catsalot moving through three levels and collecting pieces of information along the way. The literature review shows that Game-Based learning is a great way to create engagement and self-motivation in students, and so this game app would serve as a positive supplement to the website.

The Congratulations page is hidden from students and intentionally tricky to find. Teachers can find the link to it on their Teacher’s Walkthrough. Students can access this page by clicking the Sir Catsalot head from the footer on every page. On the Congratulations page, a sound of cheer and whistling plays to celebrate the student’s achievement. All characters included throughout the workshop can be found here, holding a banner and cheering the student on (see Figure 9). A YouTube video with a dancing cat can also be accessed.
The Parents’ page explains to parents and guardians the intention of this website and invites them to discuss the topics with their children at home. It also considers possible homeschoolers that may be interested in running the workshop.

The Quiz Page helps review the information gained throughout the website by providing real-life situations peppered with humour. This Quiz can be done collectively as a class or printed to be completed individually. The printed version is also available via the Handouts navigation tab.

The eWarrior Graduates page currently contains a call-to-action and a form which can be used to upload classroom photos. In the future, this page will hopefully display photos of different classrooms as they complete the workshop.
Major Project Implementation and Feedback Process

An early version of the eWarrior website and activities were informally field/beta-tested with a classroom of grade 5 students. This was not performed as qualitative research, but as an informal classroom activity, and anonymous student feedback was used to shape the initial look and feel of the final website.

Once the website was completed, a selection of practicing educators was asked to provide anonymous, qualitative feedback on the project via a Google feedback form (See Appendix M.) Questions were restricted to educator opinion to avoid involvement of students as direct subjects of research as no Ethical Review was required, or conducted, for this aspect of the Major Project. These questions addressed ease of site navigation, visual aspects, relevance of information and potential usability, clarity of delivery, engagement and fun, quality of handouts and if the goal of the project was achieved (in the reviewer’s opinion). This feedback was used to assess if the project and materials answered the initial Critical Challenge Question, ‘How can intermediate teachers effectively reach their students and inform them about online safety, privacy and citizenship in a fun and engaging way?’ Findings of the field/beta testing are presented as Chapter 4.
Chapter 4 – Field/Beta Testing and Findings

Field/Beta Testing – Methods and Processes

This Master’s project aimed to address the critical question, ‘How can intermediate teachers effectively reach their students and inform them about online safety, privacy and citizenship in a fun and engaging way?’ In order to assess if others would find this project useful and pertinent, it was necessary to ask for feedback from other professionals in the field.

To retrieve this feedback, I created a Google Form which stated the purpose and goals of the project, asking questions regarding its effectiveness in reaching those goals. Following an email with a request for review participation, the form (Appendix M) was sent out to a select group of students, teachers and professors around March 15th, 2018. This included OLTD and MEdL students as well as some of my elementary Education colleagues. The form was sent as a link via email, and requested that feedback be returned by March 23rd, 2018. The questionnaire was designed to be short, but varied enough that would remain engaging to reviewers; it contained short answers, long answers, multiple choice and rating scales from low to high. The identity of the participants remained anonymous.

The Google Form was divided into the following headings: Content of Website, Navigation and Accessibility of Website, Visual Appeal and Fun! and Final Thoughts. My objective was to determine if the workshop achieved the learning goals defined in this project, and to consider any possible improvements suggested by the participants. My hope was that teachers would find it useful, and that they would envision themselves using it (or portions of it) in their own classrooms.
Feedback Questions

The objective of the workshop was clearly indicated in the form’s header: “The website aims to provide primary and intermediate students with a beginner’s course on the topics of Online Privacy, Online Safety, Cyberbullying, Viruses and Password protection, Protecting your identity, and How to avoid spreading Fake News.” The workshop, including website and printable resources, were assessed through the following form questions:

1. Was the content presented in an engaging way?

2. Where did the content delivery succeed in conveying the basics of these specific topics, and where did it not succeed?

3. In your classroom, what might you exclude from the materials presented in order to save time, or what might you include to add clarity to this workshop?

4. Considering the goals defined above, can you think of a topic that was not covered by this online workshop?

5. Describe the ease of navigation for teachers.

6. Describe the ease of accessibility via mobile devices and a variety of browsers.


8. Describe the ease of navigation from student’s perspective.

9. State your comments and suggestions about navigation.

10. Please provide your comments and suggestions regarding the layouts, headings, font size and other design aspects of the website.

11. The website was designed for children from grades 3 to 6. In your opinion, do you think the site would be appealing and fun for this age group?
12. A fictitious character and crew were designed for this project. How effective are these characters in delivering the course content?

13. Two sound files play upon opening a couple of the pages: one on the landing page and one on congratulations. Is this feature a keeper, or is it distracting?

14. How closely does this blended workshop achieve the goals as outlined in the Teacher’s Walkthrough?

15. What would make you more likely to recommend this workshop to other teachers?

16. Please add any final thoughts and suggestions regarding this online workshop.

Findings of Field/Beta Testing

Fourteen professionals provided valuable feedback to my project. Overall, the response was very positive, with a few of them stating they would be willing to try this in their classrooms in the future. Besides the positive feedback, some very important and constructive feedback was also provided, with many easily implementable ideas to improve this project further and make it more teacher and student friendly.

![Pie Chart with Answers for First Question of Survey](image)

*Figure 10: Pie Chart with Answers for First Question of Survey*
Content of Website. The question, “Was the content presented in an engaging way?” offered a sliding scale from one to ten. The pie chart (Figure 10) shows the results; a great majority of reviewers felt the content was engaging at a 10 out of 10 level, while all of them agreed that the possibility for engagement was at least 70% successful. According to the reviewers, several techniques contributed to this success.

One reviewer reported, “I felt the dialogue among characters did this. At first I was looking for headings but it was an adventure.” A second reviewer stated that “the recognizable theme would help engage students”. The consistent theme seems to have been a hit; another reviewer said that they “liked the Sword and Shield idea, as it helps to explain the idea of being proactive and protecting yourself.” This was mirrored by other reviewers, who stated that “the use of the Sword and Shield acronyms is excellent when combined with a sticker for successful completion of each section. I have many students who would need help reading most of the dialogue” and that “the letters of Sword and Shield associated with a key word is helpful.”

Most reviewers provided validation and seemed excited about the project as it is, stating that “all pertinent aspects of the topics” were presented in an engaging way and that “sections are simple, concise and focused, yet content is thorough”. Some provided constructive criticism which proved valuable when I stepped into my website redesign phase. One reviewer in particular suggested videos to instruct teachers on the various topics, to provide them with basic knowledge before they release the workshop to their students:

“I appreciated that you covered all of the important topics for Internet Safety. What I think is missing is a short lesson or video to teach some of the more difficult topics. Most teachers know nothing about these topics and will need some background and/or resources to learn more. I think many kids will need the teacher's short lesson to start the
group discussions. (...) I really liked how you added many UDL ideas and activities.

Some activities such as: Making a game might need some more explanation and ideas of questions to ask. I loved the metaphor of sand leaving a footprint :) I would add on the making mistakes part that mistakes are an essential part of mastering anything and is what makes our brain grow.”

This reviewer mentioned that the portion of the Workbook in which students are asked to build a game needed a little more explanation. I hadn’t thought of this before; I believed that leaving it open-ended would allow for students to explore building a game based on their experiences with board games, but upon further reflection, the result was a little too open-ended and lacked some ideas or examples. This sentiment was replicated by a different reviewer, who requested “a strong example on how to play the game. The game board design example is good, however I feel my students would struggle with the game play aspect. A couple of examples there would be helpful.” This was something to work on during my revisit of the website build; I also addressed the “making mistakes” portion of the workshop a little further.

One reviewer stated that while the website is “enticing for a young mind and very useful information is presented,” the time required to complete the whole workshop “might be restrictive.” The reviewer suggests “breaking each topic into sub-components, so if time is limited, just complete one of the subtopics that might be enough to get the message across.”

One reviewer raised an important concern about the “Delete It” page, stating that perhaps this “could get kids deleting things from people they don’t know, but their parents know”. This reviewer also asked for more information on how to know which websites to trust, maybe with some examples.
Finally regarding appropriate age levels, the feedback indicated that while most people believe the students would be engaged, some were a little concerned about the age range; one “wondered if it is not a little much reading for the lower grades (3’s) and the quiz uses terms such as diarrhea which may pose more questions. On the other hand, I wonder if it may be a little young for the higher grades (music and repetitive tasks).” This was seconded by another colleague, who said that “grade 6 might be too old for the cat warrior theme.”

The next question under the content header was, “What might you exclude from the materials presented in order to save time, or what might you include to add clarity to this workshop?”

The “Make a Game” activity was mentioned by a couple of reviewers, one of which said they would likely cut it altogether (as well as the Skit section) as they were not sure if they would have enough time. They pointed out, however, that they liked “the idea of getting students to engage with the material and present it in a different way”, but they justified this feeling as being due to the fact that they were planning to gear this workshop to an older audience, and thus planned on substituting the activities with more reflection. Another reviewer seconded this sentiment, going as far as suggesting a few changes, one of which included making the game a cumulative activity, which is interesting as this was the original intent of the game before I moved it into one of the letters:

“To save time:

- slay negativity (more than likely do the what are we thankful for list and either share with a friend or share out using class google doc)
- online Yes, in person No (I would skip the find the differences, or use as a "on your own time/silent time" activity) - delete it crossword (I would skip the find the differences, or use as a "on your own time/silent time" activity)

- hide your identity word search (I would skip the find the differences, or use as a "on your own time/silent time" activity)

- explain to others: I like the idea of creating a board game but to me this would be a cumulative activity once the entire site is completed and the student is a certified eWarrior. Especially if they complete the SHIELD activities first, they will only be partially trained! Possibly a different activity here and the board game as a suggested class cumulative activity? Would be a great way for teachers to gain resources from the students too!"

The organic nature of the website, in which students can decide their path, seemed to be part of its strength: one contributor stated they like “that students are given a choice over with Sword’s and Shield’s letters/aspects they choose and in which order”, while another said they liked how they could, as a teacher, “simply select specific units depending on the grade group”, and that they would personally have focused more on privacy, safety and bullying.”

One reviewer asked for even “more info” and said they would not exclude anything, so this confirmed that having videos addressing these topics individually was an excellent idea. Another reviewer agreed, stating that they “wouldn’t exclude anything because time is so subjective in the classroom. I think each individual teacher could adapt or modify this content as they need to.” I tend to agree with this sentiment, as I have had classes in which this workshop would be successful in its entirety, while other classes would need to have it trimmed down in order to be successful. However, one reviewer still asked for a way to clearly show the topics or
activities in a priority order, a “must teach” versus “should teach” versus “could teach, time prevailing.” Another commenter said that the letter D on the sword was “a little concept heavy”, and that they “might not explain all the malware or skip it”.

The final question in this section asked for reviewers to think of a topic which may not have been covered by the website. Six reviewers felt the topic selection was complete, and that there was nothing else to add. There were some suggestions, however: one reviewer asked to clarify what a student should do if they “receive threats or sexual images”. A second one asked for a formal definition of “the Internet”, so young students can understand what it actually is. A third suggested to include the term “click bait,” to teach students how to go about “avoiding invitations to click on links in email or on websites/ads.” The reviewer suggested this could fall into the “Fake News” section, as you should “think before you click,” which was seconded by another reviewer who asked for info on “pop-ups and misleading links.” One reviewer asked for more positive sections, to point out the good things that come from using the Internet, and a final one asked for a brief summary of FIPPA for parents. These suggestions were taken into consideration and improvements were added to the website to address them, as presented in Chapter 5.

**Navigation and Accessibility.** Regarding ease of navigation from a teacher’s perspective, reviewers stated that the site was mostly very easy to navigate; on a one to five scale, ten reviewers gave it a five, while four gave it a four. Considering ease of accessibility, eight reviewers gave it a five, five gave it a four and one reviewer gave it a three; however, from the section where reviewers were asked to report any issues, one participant stated that the 3 was a neutral as they only tested on a PC. Other reviewers had the opportunity to test on mobile and different browsers, and said that it “worked well on Chrome, Microsoft Edge, and Google
Phone”, as well as “Netscape, and all aspects looked like they were functional.” One participant pointed out that on Android device, it doesn’t look like the page has loaded and the student needs to know to scroll down in order to see the content.

One of the questions asked to imagine the website from a student’s perspective, and consider how easy it was to navigate. Eight reviewers gave it a 5 out of 5, while one picked a 3 because they thought this would be a neutral answer for an adult.

Most reviewers responded positively with their Final Comments on the navigation and accessibility aspect with adjectives such as … “smooth,” “easy,” “intuitive” and “designed with this age group in mind,” as well as “nice repetitive pattern.”

One reviewer stated:

“I had a challenge at first finding the Teacher's Handouts. I didn't look right down to the bottom of the page for a while. (I should have read your email of where to start first, but then wondered if other teachers use it if they would know to do that.) For teachers it might be nice to have a quick note somewhere on the homepage of where to navigate first. I thought it was great for kids to easily follow through.”

**Visual Appeal and Fun!** In this section, I first asked for comments and suggestions regarding the layouts, headings, font size and other design aspects of the website. The reviewers had many positive comments to share, such as “attractive design,” “very colourful, engaging and organized,” “inviting,” “topical, visual, and designed like other primary student sites I have seen,” as well as comments on the graphics and comics, the amount of white space and how easy it was to navigate.

A few contributors offered some constructive feedback regarding the layout and design. Two had a couple of editing suggestions; one mentioned that the main letters which formed the
SWORD and SHIELD in purple and blue were not easy to read for this grade level, and asked for the letters to be perhaps made brighter. Two reviewers mentioned that there is some purple text throughout the site which can be confused for actual links, as the page refers to links; one of them suggested to hyperlink the whole phrase and direct people to that link. Finally, one reviewer pointed out that the “Shield” section does not seem to be as developed as the “Sword” section, and that there should be more cartoons or examples on that side as well.

Regarding the appeal to this age level, 12 out of 14 reviewers agreed that children would love the site; one reviewer stated they believed this to be true, but they had limited interaction with children that age, while another said the age window may be too broad (too much writing for younger levels, too young-looking for grade 6).

The form also asked reviewers to consider Sir Catsalot and his crew of friends, and asked how effective they had been in delivering the workshop content. The pie chart (Figure 11) shows the overall positive reception the characters elicited from the reviewers.

![Pie Chart with Effectiveness of Sir Catsalot and Crew](chart.png)

*Figure 11: Pie Chart with Effectiveness of Sir Catsalot and Crew*
Finally, I asked the participants to consider the two sound files which had been embedded on the Landing page and the Congratulations page of the website, and asked if this feature was ‘a keeper’ or if it was too distracting. The opinions were pretty split regarding this question. While seven reviewers said that the sounds should stay (“kids will love this aspect,” stated one reviewer), three of them said that the sound files were distracting and should not have an auto-launch feature. One contributor loved the Congratulations page sound, but stated that it would be best to play the Welcome page sound and experience it only once as a class. Two more liked the idea of the sound and they enjoyed the first time around, but not on recurring visits to the page (as it auto-launches every time). One reviewer wondered if the page should be silent, as the activities usually happen in a class or a lab and “it might be distracting to other students.”

**Final Thoughts.** The Final Thoughts section asked the reviewers if they believed the project achieved the goals as outlined in the Teacher’s Walkthrough; in other words, if the project would be successful in teaching grades 3 to 6 students how to be safer online and better online citizens. The response was very positive, with ten teachers rating the project a 5 out of 5 and four reviewers rating it a 4 out of 5.

The second question of this section asked reviewers, “What would make you more likely to recommend this workshop to other teachers?” Six teachers said they would recommend it to other teachers as it is; one requested a brief introduction to the Internet and how it works. One of the reviewers asked for a short lesson example, as well as more answers on the teacher’s version of the workbooks (“for each section you ask for phrases, I would add some possible examples to help teachers like me.”) This sentiment was echoed by a second reviewer, which asked for “free and easy lesson plans and worksheets that are ready to go.” Finally, one contributor asked me to extend the grade levels, and explained that although I say this workshop was geared for grades 3
to 6, this reviewer thought “a lot of adults could benefit by working through it too.” I struggled with this when figuring out the age levels for this project. I felt this could be fun enough for older kids, but I wanted this to be an introduction and get teachers interested in sharing this with their intermediate students, so that when they are older, they have a good base. Finally, one colleague stated they would love to hear how these activities worked out for other teachers, and said this would help convince more teachers if they “could hear about how kids liked or didn’t like the activities in the workshop.”

The very last question on the form asked reviewers to add any anecdotal suggestions to improve the workshop. Overall, reviewers expressed their excitement about the workshop and their desire to share it with their students. One reviewer said they are pleased to see this workshop being directed at intermediate students, “as it is critical that they understand these topics- so important to online communication for the 21st Century. A great match to the new curriculum!!” One contributor added “I look forward to letting you know how it goes and sending some examples for your site. I think the more examples posted, the more it will help teachers understand what they can do with their kids.”

As far as constructive feedback, one contributor said that they appreciated how the website “showed how the content relates to LA and CE curriculum,” but that it “would also be nice to show the relation to Core Competencies - it's such a big thing now and one some teachers find hard to assess with class examples.” Another reviewer asked about copyright, as they realized that none of my materials had any sort of copyright notification. There was also a request for an opportunity to give the students “real online experience,” as the workshop is presented primarily on a single site and using a workbook. They requested a “suggested website for a teacher to look at with students” so that they could reinforce the learning gathered within
the workshop. I also received feedback asking for a companion page for parents and guardians; the website actually contains one, but it was hidden from students, and only available on the footer, so the reviewer must have missed it. Finally, there was a request for the quiz to be modified so that the classroom teacher could receive the answers; it also points out that the quiz asks for the child’s name, which would be against the privacy aspect of the website.

**Summary and Thoughts on Feedback Process**

This field/beta-testing process was very illuminating, showing that the eWarrior workshop is indeed something that is needed and will be valued by BC educators. It has brought me hope that other teachers will use it in their classrooms - for the benefit of their students, parents and families. Based on the feedback received, the resources and downloadable materials provided on the website appear to be useful and engaging; the colours, graphics and overall design of the website received very favourable reviews.

The reviewers have also provided me with very specific and constructive feedback that I have since implemented in order to improve the usability and value of the workshop as detailed in Chapter 5. The review process has also brought me to some useful conclusions regarding the overall successes, and possible issues, with implementing this project, which are discussed in detail in Chapter 5.
Chapter 5 – Conclusions and Recommendations

Conclusions in Relation to Project Intent

My objective with this project was to explore the topic of Internet safety and citizenship, and assist teachers in guiding their students towards better behaviour online. The project considered the question, ‘How can intermediate teachers effectively reach their students and inform them about online safety, privacy and citizenship in a fun and engaging way?’ My journey towards the answer culminated with the development of a blended learning workshop, composed of a website supported by a variety of printable materials. Together with this Process Paper, the workshop attempted to answer the critical challenge question presented.

Considering the topics of online safety, privacy and citizenship, the workshop was designed to achieve the following:

- Create an online resource to help intermediate students gain a basic knowledge regarding Internet safety and privacy
- Make teachers more comfortable when teaching such subjects to students
- Offer a humorous and friendly gateway to this serious topic by engaging students with cartoon characters and gamified elements
- Demonstrate the relevance of this workshop by aligning the content and activities with different portions of the BC curriculum

The resulting blended learning package included a printable workbook that engages students in the classroom as they work through the website at their own pace. This resource aimed to transform the teacher into a facilitator and support element; the guides become the characters in the website itself, taking students through different tasks. A page was created for teachers with different links and a Walkthrough designed to guide them as they work in their
classrooms. A final quiz helped solidify the knowledge achieved. Finally, a passport kept track of completed tasks.

The workshop was divided into eleven different sections with overlapping topics, to reinforce the fundamentals of online safety as the student worked through each section. These sections (labelled as the letters on the words SWORD and SHIELD) followed the underlying student goals of the workshop, with outcomes and conclusions as follows:

1. Students will realize that often people will misrepresent who they are online.

   This goal was covered by the following sections:
   - Online Yes, In Person No
   - Delete It

   Activities included written reflections, making a list of trusted adults, finding differences between two images, reading a comprehensive poster and completing a crossword puzzle about dangerous files. According to the survey responses, the variety of activities contributed to the achievement of this goal.

2. Students become more savvy regarding what is appropriate to share online and what should be kept private.

   This topic was covered by the following sections:
   - Respect Yourself and Others
   - Stay Safe
   - Hide Your Identity
   - Don’t Overshare
Activities included written reflections, creating a skit, creating an uncrackable password and solving a word search. While this section successfully covered the main goal, some of the feedback indicated perhaps a little more information was required.

3. Students will understand the importance of telling an adult they trust if something goes wrong.

This topic was covered by the following sections:

- Online Yes, in Person No
- Delete It
- Let an Adult Know

Besides the previously mentioned activities, students also are asked to work in creating a Mistake Jar. Feedback indicated this was a great way to show students how mistakes happen all the time, how they are simply learning opportunities, and how they should not be allowed to affect their lives negatively.

4. Students will understand the importance of empathy online.

This topic was covered by the following sections:

- Words Can Harm
- Respect Yourself and Others

Students were asked to work through the reflections and the previously mentioned skit. They also had the opportunity to watch a video and answer a few introspective questions regarding the characters in the video.

5. Students understand the difference between a true fact and something that is made up, and see how easy it is to falsify information online.

This topic was covered by the following section:
Inform Yourself

Activities included a written reflection and creating a poster to teach others to check before they share something. This section failed to adequately convey how the students should be checking the validity of something they read online; survey results asked for more information on this area.

6. Students are able to share what they have learned.

This topic was covered by the following section:

- Explain to Others

Activities included a written reflection and creating a board game to teach others how to be safer online. The survey indicates that more information and instructions are needed for the board game activity, but that in general the goal was well covered by the activities.

Outcome Evaluation

Overall, this workshop achieved its intended outcomes. The feedback received was overwhelmingly positive, with teachers finding the workshop friendly, fun and welcoming to students. The visual aspects of the site, particularly the potential efficacy of its cartoon characters, received high to very high ratings on the survey. The workshop was also successful in answering to the six predefined student goals. Teachers felt it was thorough in covering all the different topics related to online safety, and enjoyed how the entire workshop could be easily followed without much guidance from the teacher. The Workbook as a means of centralizing the work done by students was a welcome addition, and the final quiz was enjoyed by teachers who appreciated how it helped summarize the learning and how it could be easily used as a summative assessment. Teachers also seemed thankful for having the connections to the BC Curriculum Big Ideas directly available on the Teacher’s Page. As the survey was sent to
professionals in different grade levels, the most excitement came from teachers who were currently assigned this age group, with many concluding that they were eager to try the workshop with their own class even without any modifications or improvements. The majority felt it was a good match for the age group suggested, with some suggesting that the suggested range could be increased further to include other grade levels.

**Results of Findings in Relation to Literature Review**

For the past few years, the online world has grown in importance for our youth, with a majority of children involved in online activities and building a digital footprint as young as age two (Hengstler, 2012). Considering current technological advances, and the increasingly expanding online career opportunities, it is crucial that we facilitate this connection in our classrooms. The BC government agrees with the importance of creating digitally savvy youth, releasing a Digital Literacy Framework back in 2013. This Framework focused on technology-based tasks teachers should be using in their classrooms, growing more complex with every increasing grade. Although it has taken a back seat in the aftermath of the release of the updated BC Curriculum, this Framework mentioned the need for students to develop a sense of Digital Citizenship, privacy and safety.

In reality, it is not wise to tell students to simply avoid dangerous situations online; instead, a broader training program is required. Yet, not many options previously existed in terms of training students to be safer online. My Master’s Project aimed to fulfill this need by providing a resource that could be easily adapted into a variety of intermediate grade levels, from grade 3 to 6. The characters complied with several of the findings from my Literature Review, which supported the idea that creating an upbeat and lighthearted method of training students would be a welcomed pursuit. By removing the adult figure from the trainer’s chair and
substituting it with a sympathetic cat, the material was successfully addressed without pressing the issues as if the cat had all the answers (as suggested by boyd, 2014). It also fulfilled the intention of engaging students with the material by using comics, gamification elements and humour, which not only increase interest but also decrease stress regarding the subject matter.

Generally, the project was successful in creating an online resource for teachers and students interested in learning basic rules regarding online safety, privacy and citizenship that incorporated blended learning, gamification and humour. The project complied with several of Gee’s Learning Principles Good Games Incorporate, such as Risk Taking (encouraged as they explore unique open-ended tasks, such as creating a skit, a board game or a poster), Customization (as they decide how they present their learning and in what order), Well-Ordered Problems (students more in a step-by-step process of learning, with activities that overlap and complement each other) and Agency, the ability students have in deciding which path they will follow as they move through the workshop. Survey participants were overwhelmingly positive regarding the possible efficacy of this project and their intention of either using it or suggesting to teachers in the appropriate grade levels, and provided constructive feedback that proved to be a great addition to the original workshop.

**Major Project Recommendations**

From the fourteen professionals providing feedback to my project, the majority expressed excitement with the potential of the project being used by students, and requested that more information be added to the website in order to make it more complete.

One of the most useful recommendations I received suggested that I create a short video or lesson to teach some of the most difficult topics to the teachers, so that they may be able to answer questions properly as they arise in the classroom. This was seconded by another
reviewer; a third reviewer also mentioned they had a difficult time knowing where to start. This was an excellent point; thanks to this feedback, I have created a series of short videos geared towards teachers. The videos are as follows:

1. Introduction to the eWarrior website – In this video, I gave a quick overview on how the workshop is supposed to be delivered in the classroom and where all the materials are located.

2. Project limitations – In this video, I discuss how to overcome some of the limitations, such as lack of computers in the classroom, and possible lack of expertise by the classroom teacher.

3. The Internet – In this video, I explained the importance of allowing children and youth access to the Internet so that they may build a positive Digital Footprint.

4. Online Privacy and Safety – In this video, I talk about the importance of encouraging students to engage in responsible online interactions. This video discusses privacy as well as how to deal with people who misrepresent their identity online.

5. Cyberbullying – Here, I review the different types of cyberbullying and how can we encourage students to develop their empathy for others online.

Other Suggestions

Several reviewers loved the idea of creating a board game, but did not think the instructions were very easy to follow. I have since added more information and some suggestions for questions the students may want to pull from; I have also moved this task to the very end of the workshop, so that it is a final cumulative task to be performed by the whole class instead of in small groups. It is now a separate Board Game Kit under the Handouts page (Appendix O).
The finished game box can be signed out by students over a weekend, so that they may take it home and teach their families about online safety and privacy.

One of the Workbook’s activities asks students to create a Mistake Jar. One of the reviewers suggested that I add a few more sentences to encourage students to make mistakes as they “are an essential part of mastering anything” and contribute to making our brains grow; I agreed with this sentiment and have changed the workbook accordingly.

Some reviewers expressed concern regarding the time it would take to complete the workshop, and requested for it to be either subdivided further, or for the most important letters to me made clear to teachers, so they would work on them first. Due to the extremely delicate and important nature of this topic, I feel it would be counter-productive for me to restrict exploration in any way. Each one of the components is already broken down as much as possible, and the overlapping nature of the letters is so that I would not be able to remove any without removing some of the content. I prefer to leave this to each individual teacher, who can decide on what would be most important to their class, if they wish to remove anything. Most of the feedback, however, expressed that they would not cut anything, but add even more.

While most reviewers felt the workshop was appropriate for the age level, a couple asked for it to be increased to include older learners (even stating that some adults may benefit from it) while one reviewer felt the material would be too difficult for grade 3’s to follow; I believe that this would fall under classroom adaptation, which every teaching professional must do at any rate when dealing with students in different points of their learning. Yet one reviewer felt it would be too young for grade 6s. I have taught both grades, and have a feeling that it would greatly depend on the class, the excitement and buy-in of teacher who is presenting the
workshop, and the comfort level the teachers may feel with some of the topics in the workshop. I addressed these concerns on my introduction video for teachers.

A few improvements were suggested in terms of topics covered. One reviewer asked to clarify what a student should do if they received threats or sexual images. Another requested to include the term “click bait” under the Critical Thinking portion of the site, as this would be classified as Fake News and you should “think before you click”, while another reviewer requested information on “pop-up ads and misleading links”. I have addressed each one of these briefly in the Workbook.

The Welcome page received a major update. One of the reviewers suggested including an Introduction to the Internet, while another asked for the good things regarding the Internet and the world online to be highlighted; this was such a needed addition to the website, I decided to add a spaceship to the front page which would take the participants to “Cyberspace.” The Sword and Shield selection moved to the bottom of the page with the Internet Introduction.

One of the reviewers suggested that the section “Delete It” should be labelled differently, to stop children from deleting files and emails they are not supposed to. I had not thought about this before, but after reading this comment, I immediately agreed with it. The section is now called “Don’t Click It” which is a much more subtle way of achieving the exact same intention.

Another reviewer stated that they may want to skip the letter D altogether, as it would be too content-heavy to teach in the classroom; this indicated that the fact that the workshop is supposed to be a self-directed endeavor by the students was not made clear. The letter D on the website was built to support the Workbook’s crossword puzzle; students are supposed to hunt through the online poster to find answers to the crossword puzzle. The aforementioned
supplementary introduction video helped further explain the intention and workflow of this aspect of the workshop.

A couple of participants noticed that the section for Shield lacked the amount of cartoons found on the SWORD section. Upon a second look, it seems there is more content and more engagement on the Sword side versus the Shield side. I have now added more content and graphics to the Shield side in order to make it more robust and interesting.

Regarding navigation, one reviewer explained that it took them some time to find the Teacher’s Handouts page; another said that I should have created a page for parents, which in fact I had created. The issue is, while the Teacher’s Page was easily seen on the top navigation menu; which is where we are used to looking for different pages on a site, both of these links are found only on the footer of the page. This highlighted the fact that I did not add a link to the Teacher’s Handouts on the Teacher’s Page, which was an oversight on my part, but also that parents would not find the link to their page on the footer either. This was not a very intuitive design choice. Considering this site was built with the students on the forefront, all the adult pages were somewhat hidden, but there must be a balance between making it kid-friendly and making it easy for teachers and parents to actually use. This was corrected by replacing the Teacher’s Page with an Adult’s Page on the top tabs, which in turn, offered two options: one for the Teacher’s Page and one for the Parents’ Page. I have also added a link on the Teacher’s Page which links to the Handouts Page directly.

One reviewer asked if the letters for SWORD and SHIELD could be made brighter so they would be easier to read for that age group. I find that this would require an overhaul of the website, and the colour of the letters themselves are not the most important part of the workshop.
Due to time limitations, I have decided that my time could be better used improving the website and the printable materials in a more meaningful way.

Regarding the sound files on the opening page and the Congratulations page, the split results inspired me to leave the Congratulations page as it was, but change the front page of the site so that only the teacher has access to the sound file on the Teacher’s Page. The front page of the website could thus be accessed by the whole class together, with the teacher playing the sound file, and then releasing the reigns to the students to explore at their own pace.

In response to the feedback received, the Teacher’s version of the Workbook received more examples and possible answers to account for teachers requesting more direction in that area. A link to the Core Competencies found in the BC Curriculum was also added to the Teacher’s Page; I had not thought of linking the workshop to the Core Competencies, but it only makes sense. In fact, the connections to the Core Competencies are even stronger than the connections to the curriculum, making it even more valuable for teachers who are still trying to grasp these concepts and how to make them concrete in their classroom. I have since added this information to the website; you can find the Core Competency links as Appendix N.

As one teacher asked me about copyright of the printed material, I have added a Creative Commons Attribution, Non Commercial, Share Alike notice on all materials, so that they are not copied and used for profit and so that teachers feel welcome to copy and use these in their classrooms.

Finally, several links with more information were added to the Teacher’s Page, including a link to Edmodo as well as links to the Edmodo downloadable forms created by fellow MEdL graduate Brianne Quist; this way, after students complete their training, they can exercise their online skills together in the classroom in a safe, monitored way.
Project Limitations

While the subject of online safety and privacy is of paramount importance, some limitations might make this workshop more of a challenge for teachers. One of these limitations is the possible lack of enough classroom computers needed to run the workshop. Schools in B.C. have become increasingly more connected to the Internet, with more and more access to computers in classrooms; however, in schools which still lack a balanced computer-to-student ratio, it is not necessary for the students in the classroom to have access to the Internet in order to effectively learn the topics presented on the website. This issue is addressed on the second video for teachers; as long as the teacher has one computer, the workshop can be modified so that the whole class does it together while following the Workbook.

Another possible issue with the website is the amount of comic strip reading that must be done in order to fully understand the topics. Thanks to the group setting, however, no student would be alone trying to understand the comic strip, and students are encouraged to help each other by reading the comic aloud within their small group.

Finally, the way the Quiz page was originally designed did not allow for teachers to receive the answers to their classroom Quiz directly. To simplify the mechanics of the collaborative Quiz, I have since mitigated this issue by removing the submission to the Quiz page, so that it is now simply a conversational Quiz. The original printable Quiz is still available, and teachers are encouraged to use it as one of their summative assessment pieces.

Next Steps

To complement the website further, I plan on creating a series of Powtoon videos involving the workshop characters, starting with a video about cyberbullying, so that all material is cohesive and shares the eWarrior cat theme.
In the near future, I would like to see a game app developed which would allow students to reinforce their learning in a game-based environment. Hopefully this will be of interest to someone else with more extensive programming experience and we could potentially collaborate in creating this game together in order to extend the learning further outside of the classroom.

Final Conclusions

In today’s world, the Internet has become a regular part of our youth’s life. As forward-thinking teachers, we can no longer ignore the incredible potential of utilizing Web 2.0 tools and social media in an educational context. Embracing the possibilities of online interaction is one of the steps towards raising technologically savvy adults, but for this to happen responsibly, it is imperative that we consider the issue of online safety and privacy.

The resulting e-Warriors workshop, based on the Literature Review, successfully employs gamification elements, humour and cartoons to create a learning experience that initiates young students in the topics of online safety and privacy in a fun and engaging way. The feedback received was overwhelmingly positive, and reviewers were visibly excited regarding using the workshop with their own students in the future. This confirms that my approach was able to instill in my peers the confidence needed to tackle this difficult subject. Due to the importance of teaching this subject to kids from an early age, I am hopeful that more and more teachers will see value in providing this workshop experience to their students.

This project will continue to expand further as I build upon the website and engage my own students. I have enjoyed the process of creating this workshop a great deal and, overall, I am pleased with the final results. I hope this workshop will help teachers approach these difficult topics in a lighthearted and fun way with their students. I look forward to hearing their success stories as well as collecting further feedback.
References


Hengstler, J. (2012). Digital professionalism and digital footprints. Document prepared for training session with Vancouver Island University's Administrative Assistants, April 2012. Link: https://d2l.viu.ca/content/enforced/90675-EDUC_OLTD506_W70_F2016/foundations_boundaries/Social%20Media%20Digital%20Footprints%202013_v3.pdf?&d2lSessionVal=29xPPqUDZ8TbGYR1sbWqCVV0o&ou=90675


Appendix A

eWarrior Website Landing Page – www.ewarrior.ca
Appendix B

UbD Framework for Online Safety and Privacy Project

Adapted from Wiggins and McTighe (2005)
### Appendix C

**BC Curriculum Excerpts**

#### Area of Learning: ENGLISH LANGUAGE ARTS

<table>
<thead>
<tr>
<th>BIG IDEAS</th>
<th>Grade 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language and text can be a source of creativity and joy.</td>
<td>Exploring stories and other texts helps us understand ourselves and make connections to others and to the world.</td>
</tr>
<tr>
<td>Exploring and sharing multiple perspectives extends our thinking.</td>
<td>Developing our understanding of how language works allows us to use it purposefully.</td>
</tr>
<tr>
<td>Questioning what we hear, read, and view contributes to our ability to be educated and engaged citizens.</td>
<td></td>
</tr>
</tbody>
</table>

#### Area of Learning: PHYSICAL AND HEALTH EDUCATION

<table>
<thead>
<tr>
<th>BIG IDEAS</th>
<th>Grade 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily participation in physical activity at moderate to vigorous intensity levels benefits all aspects of our well-being.</td>
<td>Movement skills and strategies help us learn how to participate in different types of physical activity.</td>
</tr>
<tr>
<td>Adopting healthy personal practices and safety strategies protects ourselves and others.</td>
<td>Having good communication skills and managing our emotions enables us to develop and maintain healthy relationships.</td>
</tr>
<tr>
<td>Our physical, emotional, and mental health are interconnected.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BIG IDEAS</th>
<th>Grade 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily participation in physical activity at moderate to vigorous intensity levels benefits all aspects of our well-being.</td>
<td>Knowing what we enjoy doing and knowing about our opportunities to participate in those activities helps us develop an active lifestyle.</td>
</tr>
<tr>
<td>Understanding ourselves and the various aspects of health helps us develop a balanced lifestyle.</td>
<td>Personal choices and social and environmental factors influence our health and well-being.</td>
</tr>
<tr>
<td>Developing healthy relationships helps us feel connected, supported, and valued.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BIG IDEAS</th>
<th>Grade 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily physical activity enables us to practice skilful movement and helps us develop personal fitness.</td>
<td>Knowing what we enjoy doing and knowing about our opportunities to participate in those activities helps us develop an active lifestyle.</td>
</tr>
<tr>
<td>Understanding ourselves and the various aspects of health helps us develop a balanced lifestyle.</td>
<td>Personal choices and social and environmental factors influence our health and well-being.</td>
</tr>
<tr>
<td>Developing healthy relationships helps us feel connected, supported, and valued.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BIG IDEAS</th>
<th>Grade 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily physical activity enables us to practice skilful movement and helps us develop personal fitness.</td>
<td>Physical literacy and fitness contribute to our success in and enjoyment of physical activity.</td>
</tr>
<tr>
<td>We experience many changes in our lives that influence how we see ourselves and others.</td>
<td>Healthy choices influence our physical, emotional, and mental well-being.</td>
</tr>
<tr>
<td>Learning about similarities and differences in individuals and groups influences community health.</td>
<td></td>
</tr>
</tbody>
</table>
Appendix D

Teacher Walkthrough

**eWarrior Workshop Walkthrough**

- This workshop was designed to teach grades 3 to 6 students how to be safer online and better online citizens.
- Please read all instructions and look at all handouts beforehand.
- The workshop runs on a Blended model, using this website and the printable workbook.
- This training is intended to be completed before starting on multiple online platforms, such as Weebly, Duolingo, Mathletics, Pinterest and others.
- The topics covered are:
  - Online privacy and sharing
  - Online safety
  - Cyberbullying
  - Viruses, bad files and protecting computers from infection
  - Creating passwords
  - Protecting your identity
  - Fake news and critical thinking

- These topics are divided into two different groups of tasks: “Sword” and “Shield”.
- This workshop may take a week or two to complete, depending on the age of the students.
- It is intended to be worked on a little every day, in chunks of an hour or less; please consider your particular classroom when defining the flow of this workshop, and modify it as needed.
- All printables and extra materials can be found by following the handouts links at the footer of the website, or going [here](#).
Appendix F

Teacher Version - Workbook
Appendix G

Passport and Badges

I pledge to be an awesome eWarrior!
Signed: ________________

My Badges:

SWORD
SHIELD

There are enough badges in the page for eight students. Please distribute to each as they complete each page.
Appendix H

Printable Quiz – Page 1 of 3

eWARRIOR
Check your eWarrrior Status!

Student: ________________________________

1. When I am online, I should not give out...
   A) Recipes for delicious sandwiches
   B) My sister’s name and where she goes to school.
   C) Advice on a cool game.
   D) My favourite song.

2. I met this cool person online, and we have been chatting for months!
   We set up a meet and greet this Sunday. I should...
   A) ...not show up! This person could be dangerous!
   B) ...totally show up, because they sent me their picture and I believe it is their real picture.
   C) ...show up, but bring a trusted adult with me.
   D) Options A and C are correct.

3. The following is an example of BAD sharing:
   A) My best friend asked me to send a picture of my new cute underwear, and I did it!
   B) Some kid I met on the internet asked me to trade nude pictures.
   C) I had diarrhea and posted a picture of myself on the toilet.
   D) I posted a picture on Instagram of myself looking sexy.
   E) All of the above.
Appendix I

Sir Catsalot Paper Doll

Sir Catsalot comes with two extra arms, for non-fighting days!
Appendix J

Review Worksheet

Shield and Sword: Show what you know!

Write down what each letter stands for, and give an example of how you would follow each rule.

S W O R D

Good Job, eWarrior!
Appendix K

Guide to Bad Files Poster
Appendix L

Certificate of Achievement

CERTIFICATE OF ACHIEVEMENT

eWARRIOR

This certificate is awarded to the humankind

for successful completion of eWarrior training and demonstrating an understanding of proper Internet Safety and Privacy procedures.

The Teacher: Sir Catsalot:

_________________________  ________________________
Appendix M

Feedback Form

eWarrior Feedback

Dear Colleague,

We hope you enjoyed using the eWarrior simulation to introduce the concept of online safety and privacy. Your feedback is invaluable in helping us improve the simulation for future use.

Please take a moment to complete this feedback form and let us know your thoughts.

Thank you for your support.

Best regards,

[Signature]

Contact Information

Name:

Email:

Institution:

Comments:

Content of Website

The website aims to provide primary and intermediate students with a hands-on course on the topics of:

- Online Safety
- Digital Citizenship
- Cyberbullying
- Internet and Privacy Awareness

Was the content presented in an engaging way? (%)

Not at all engaging
Not very engaging
Somewhat engaging
Very engaging

Where did the content delivery succeed in conveying the basics of these specified topics, and where did it not succeed?

Your answer:

In your opinion, what might you exclude from the materials presented in order to save time, or what might you include to add clarity to this workshop?

Your answer:

Considering the goals defined above, can you think of a topic that was not covered by this online workshop?

Your answer:

Navigation and Accessibility of Website

This section describes how easy it was for you to get around the different areas of the site, and how easy it was to find different areas such as resources, parent’s page and Congratulated me page.

Ease of Navigation for Teachers (%):

1 2 3 4 5

Easy to navigate

Ease of accessibility via mobile devices and a variety of browsers (%):

1 2 3 4 5

Works well on different mobile devices and browsers

What was the level of difficulty in making the website accessible to people with disabilities?

Very User friendly

Report any issues here:

Your answer:

Ease of Navigation from Student’s Perspective (%):

1 2 3 4 5

I get lost

Comments and suggestions about Navigation:

Year answer:

Visual Appeal and Format

Please provide your comments and suggestions regarding the layout, headings, font size and other design aspects of the website.

Year answer:

The website was designed for children from grades 3 to 6. In your opinion, do you think the site would be appealing and fun for this age group? (%)

Yes, I think kids would love this site
Not really
Other:

A fictitious character and crew were developed for this project. How effective are these characters in delivering the course content? (%)

I liked the characters very much

Two sound files play upon opening a couple of the pages. One on the landing page and one on congratulations. Is this feature a keeper, or is it distracting?

Year answer:

Final Thoughts

How closely does this blended workshop achieve the goals as outlined in the Teacher’s Walkthrough? (%)

This project

What would you more likely to recommend this workshop to other teachers?

Year answer:

Please add any final thoughts and suggestions regarding the online workshop:

Year answer:

Thank you for your participation!

Your feedback will contribute to the success of the project.
Appendix N

Core Competency Links

eWarrior Links to Core Competencies

1. Relationships and cultural contexts
   Tasks: protecting your identity
   - I understand that my identity is made up of many interconnected aspects (such as life experiences, family, history, race, place, social settings)
   a. Personal Values and choices
      Tasks: division of groupwork
      - I can identify my individual characteristics
      - I can describe/express my attributes, characteristics, and skills

2. Self-determination
   Tasks: analyzing fake news, online safety, teaching others
   - I can improve and work towards change in myself and the world
   - I take the initiative to inform myself about controversial issues

3. Self-regulation
   Tasks: general workbooks, cyberbullying section
   - I can take ownership of my goal setting and behaviour
   - I can sometimes recognize mistakes

4. Well-being
   Tasks: stay positive, tasks create a trusted people list, general activities for online safety
   - I can take some responsibility for my physical and emotional well-being
   - I can make choices that benefit my well-being and relationships in my community, including my online interactions
   - I can use strategies to find peace in stressful times

5. Contributing to community and caring for the environment
   Tasks: teaching others, making posters, making board games
   - I contribute to group activities that make my classroom and our school a better place
   - I can identify how my actions and the actions of others affect the environment and can work to make positive change

6. Solving problems in peaceful ways
   Tasks: workbooks, fake news, outcomes can harm, cyberbullying
   - I can solve some problems myself and can identify when to ask for help
   - I can clarify problems, consider alternatives, and evaluate the impact of choices

7. Valuing diversity
   Tasks: cyberbullying activities, words can harm activities
   - With some direction, I can demonstrate respect and inclusiveness
   - I can explain when something is unfair
   - I can advocate for others

8. Building relationships
   Tasks: cyberbullying words can harm activities, general activities
   - I am able to interact with others, can work or play co-operatively, and can communicate clearly with people of differing backgrounds
   - I can identify opportunities to improve and take steps to make positive changes

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C

Communication

1. Connect and engage with others
   Tasks: groupwork activities
   - I ask and respond to simple, direct questions
   - I am an active listener; I support and encourage the person speaking

2. Revisiting, interpreting, and presenting information
   Tasks: absorbing information from workshops and transferring to others
   - I can understand and share information about a topic that is important to me
   - I can present information in a clear and organized way

3. Collaborate to plan, carry out, and review constructions and activities
   Tasks: answering group tasks, teaching others, creating board games
   - I can work with others to achieve a common goal
   - I can summarise key ideas and identify the ways we agree and disagree

4. Explain/review and reflect on experiences and accomplishments
   Tasks: teaching others, creating Posters about dangerous sites and board games
   - I can recount simple experiences and activities and tell something I learned

T

Creative Thinking

1. Novelty and value
   Tasks: create a skit, create a poster, create a keynote
   - I get ideas when I play
   - I can get new ideas to build on other people's ideas to create new things within the constraints of a given form, problem, or materials

2. Generating ideas
   Tasks: create a skit, create a poster, create a keynote
   - I deliberately learn a lot about something so that I can generate new ideas

3. Developing ideas
   Tasks: create a skit, create a poster, create a keynote
   - I make my ideas work or I change what I am doing
   - I can usually make my ideas work within the constraints of a given form, problem, and materials if I keep playing with them

T

Critical Thinking

1. Analyze and critique
   Tasks: workbooks, fake news, people misrepresenting themselves online, cyberbullying
   - I can identify examples that I can use to analyse evidence
   - I can analyze evidence from different perspectives
   - I can identify and evaluate my thinking, products, and actions
   - I can analyze my own assumptions and beliefs and consider ideas that do not fit with them

2. Question and investigate
   Tasks: workbooks, fake news, people misrepresenting themselves online, cyberbullying
   - I can evaluate the credibility of sources of information
   - I can tell the difference between facts and interpretations, opinions or judgements

3. Develop and design
   Tasks: workbooks, fake news, people misrepresenting themselves online, cyberbullying
   - I can make choices that will help me create my intended impact on an audience or situation
Appendix O

Board Game Kit