

New Citizenship for a Digital Age: 21<sup>st</sup> Century Digital Citizenship Education

by

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## **Abstract**

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The focus of the following literature review and project is on the need for digital citizenship to be included as a mandatory part of the school curriculum. Many students enter elementary school already experienced with technology use, and by the intermediate grades are beginning to explore social media. The literature review focuses on research about digital citizenship and looks at students as current and future contributors to Web 2.0. The project, a collaborative website, is a digital citizenship and digital literacy resource for educators of all grade levels and experience levels in technology. It includes information, resources, and lesson ideas that any educator can use to introduce and teach digital citizenship and digital literacy to their students; effectively teaching these concepts will require a community approach. The website allows for access and collaboration by all interested in the digital growth and development of children.

## Table of Contents

Abstract .....	ii
Table of Contents .....	iii
List of Figures .....	v
Acknowledgments .....	vi
Dedication .....	vii
Chapter 1: Introduction .....	1
Students in the Digital Age .....	1
Raising Citizens to Raising Digital Citizens .....	2
The Digital Footprint .....	4
Literature Review Approach .....	5
Need for an Evolving Teacher Resource for Digital Citizenship .....	6
The Project .....	6
Chapter 2: Literature Review .....	8
Search Methods .....	8
The Web and Web 2.0 .....	8
Web 2.0 and Digital Citizenship .....	9
Students on Web 2.0 .....	9
Digital identities .....	9
Defining digital citizenship .....	10
Why Do We Need Digital Citizenship Education? .....	10
Ubiquitous Access to Technology and Web 2.0 .....	10
Need for training on responsible use of Web 2.0 .....	11
Without an active citizenship Web 2.0 will devolve. ....	12
Specific Problems on Web 2.0 .....	12
Cyberbullying .....	12
Online shaming and mobbing .....	14
Online identity .....	14
Digital footprint and online sharing .....	16
Digital Citizenship from Citizenship, not Fear .....	17
Teaching Digital Citizenship .....	17
School Curriculum Approaches and the British Columbia Education Plan .....	19
Conclusion .....	20
Chapter 3: Digital Literacy and Citizenship Resource for British Columbia Educators ..	22
Home Page .....	23
Standards Page .....	25
Standards for Students .....	26
Standards for Teachers .....	28
Resources Page .....	29
Activities .....	30
Twitter in the Classroom .....	32
Student Blogging .....	37
Paper Before Digital .....	42

Backchannels in the Classroom .....	43
Coding.....	46
Creative Commons.....	47
Professional Development .....	51
FOIPPA.....	52
Participate .....	53
@bcdigit Twitter Account .....	54
Public Forum.....	55
BYOD .....	56
BYOD Resources.....	57
BYOD Policies.....	62
Digital Citizenship .....	63
Chapter 4: Final Reflections .....	67
A Journey of Two in a Community of Many.....	67
The Importance of Digital Literacy and Digital Citizenship Resources.....	68
Connecting Beyond the Classroom.....	70
Moving Forward .....	72
Recommendations for Others .....	73
References .....	75

## List of Figures

Figure 1. Home page.....	24
Figure 2. Standards Page.....	25
Figure 3. Standards for students.....	27
Figure 4. Standards for teachers.....	28
Figure 5. Resources page .....	29
Figure 6. Activities.....	31
Figure 7. Twitter in the classroom .....	33
Figure 8. Twitter in the classroom .....	34
Figure 9. Twitter in the classroom .....	35
Figure 10. Twitter in the classroom .....	36
Figure 11. Student blogging.....	37
Figure 12. Student blogging.....	38
Figure 13. Student blogging.....	39
Figure 14. Student blogging.....	40
Figure 15. Student blogging.....	41
Figure 16. Paper before posting .....	42
Figure 17. Backchannels .....	43
Figure 18. Backchannels .....	44
Figure 19. Backchannels .....	45
Figure 20. Coding .....	46
Figure 21. Creative Commons .....	47
Figure 22. Creative Commons .....	48
Figure 23. Creative Commons .....	49
Figure 24. Creative Commons .....	50
Figure 25. Professional development.....	51
Figure 26. FOIPPA .....	52
Figure 27. Participate .....	53
Figure 28. @BcDigLit Twitter account .....	54
Figure 29. Public forum .....	55
Figure 30. BYOD.....	56
Figure 31. BYOD resources.....	58
Figure 32. BYOD resources.....	59
Figure 33. BYOD resources.....	60
Figure 34. BYOD resources.....	61
Figure 35. BYOD policies .....	62
Figure 36. Digital citizenship.....	64
Figure 37. Digital citizenship.....	65

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## **Chapter 1: Introduction**

### **Students in the Digital Age**

I am a digital immigrant, a term coined by technology education consultant Marc Prensky (2001) to describe a person who matured before the technological age. As a digital immigrant, I lived during a time before personal computers became ubiquitous, before the World Wide Web, when the VCR and microwave revolutionized life; a time when people wanting to do research would spend hours in the library locating books on shelves and scanning microfiche for curated articles. Digital technologies have evolved dramatically since that time and they have had a profound effect on the way we live our lives, conduct our business, and educate our children. For the purposes of this document, technology will be used to refer to digital technologies.

As technology advanced, it became a tool of creation. It was a word processor, a creator of slideshows, and eventually a producer of movies. During the early years of my teaching career, technology allowed my students to move from pen and paper to keyboard and screen. Written essays became typed (and easier to read) and PowerPoint became the new poster. During this time in my career, society was in a time of transition where teachers were digital immigrants and students were coming from a variety of households; some digital and some not. Today, I am the only digital immigrant in my classroom.

The students I teach now are known as digital natives, a term used to describe a generation that is, “all ‘native speakers’ of the digital language of computers, video games and the Internet” (Prensky, 2001, p.1). They are the generation that have always had the World Wide Web and mobile technology as part of their lives. They do not know

of a time when an answer was not a few keystrokes away or when you could spread your fingers apart on a tablet to see a closer view of an image. This generation has known the word Google from birth, not just as a noun, but a verb. Most of these students have grown through childhood with smartphones and tablets in their hands, and multiple computers in their household. Over a short period of time, these developments in technology have, in turn, changed the way I teach.

Today, my students enter the classroom with a piece of mobile technology in their hand that is more powerful than what NASA used to get astronauts to the moon. At their fingertips is the collective history and knowledge of the world from multiple perspectives. I am no longer a lecturer or deliverer of knowledge. I have become a guide that helps students find a focus or passion and filter through almost unlimited tools, resources and information in order to support their questioning and learning. With more and more information being made available online, the problem is no longer just finding information and presenting learning; the problem is filtering through an overwhelming cascade of information and then choosing the best tool to present learning.

### **Raising Citizens to Raising Digital Citizens**

The duty of raising children to be effective citizens is not solely the responsibility of parents. Dewey (1929) believed that it took a community to raise a child and that a child should be raised according to the needs and demands of its environment. The community that Dewey described in the 1900's had limited needs and demands. Communities then were separated by physical distance and had limited contact and interaction with other people and cultures. We are now in an age where communities are dependent on each other and interaction with people on a global scale takes place daily

(at least within the western world to which this project's website is attending). The community has grown and changed.

As our community has changed, the need to expand our concept of citizenship has arisen. With fewer physical barriers or borders to limit contact with people from other places and cultures, the digital world offers our learners unprecedented opportunities to communicate and collaborate. While we have always endowed our children with a good sense of citizenship for face-to-face communication, we must now also prepare them to act as responsible citizens online.

The Internet is a powerful tool when used effectively and responsibly. Like any good tool, if used irresponsibly it can become a very distracting and potentially damaging instrument. A technological device on the desks of my students often means they are on task and working. A device in the lap with their head down means that they may be distracted from their work by the charms of Web 2.0. For the purposes of this document, Web 2.0 will refer to all forms of social media and communication on the World Wide Web. A digital classroom needs to offer our student's opportunities to explore, reflect and discuss important issues underlying the digital world so that they are prepared to make responsible choices about the use of technology.

At the middle school level, interaction using Web 2.0 takes place through social media such as Snapchat, Vine, and Instagram. Quick and easy to use, they allow students to efficiently communicate text, audio, video, and pictures to a large public audience. While often innocent enough, social media also provide a public forum that can be misused for cyberbullying, shaming, and inappropriate sharing. The online world offers challenges such as a false sense of anonymity and the power of communication without

face-to-face contact (Holfeld & Grabe, 2012; Morales, 2011). These present opportunities for imprudent students to behave in ways that would not be acceptable in a face-to-face context (or a civilized society).

Bullying has existed throughout human history and the mobile technology along with the Internet has now taken it to the online realm. Cyberbullying, while happening in a virtual world, has very real physical and emotional effects on our students (Chadwick, 2014). It is for this reason that digital citizenship and the responsible use of technology must be taught as a part of the school curriculum. It will take a community approach that involves all people with an interest in raising our youth. This community includes educators, parents, law enforcement, public youth services, and people who have expertise in demonstrating the do's and don'ts of responsible Internet use. Just as it takes a collective effort to educate students to be good citizens, it will take a collective effort to educate them to be good digital citizens.

### **The Digital Footprint**

As citizens, we leave our mark, our footprint on the world. It is based on our interactions with people and the decisions we make through life. The digital footprint is similar with one exception; it is a permanent record that is easily searchable by others and difficult, if not impossible to erase. Everything we do as digital citizens is stored in a vast array of servers and databases. Web 2.0 sites such as SnapChat, Vine, Twitter, Facebook, Instagram, Google and others are constantly gathering information about their users and storing it. With each online interaction, we create a permanent entry into a digital diary of our lives. As a record or reflection of our lives, the digital diary is searched and used by

post-secondary institutions, potential employers, the legal system, and any other persons or organizations interested in finding more about who we are as digital citizens.

As digital citizens, each of our students has the ability and the technology to contribute to the online world. Digital citizens are direct contributors with uncensored opinions that are broadcasted instantaneously on a global scale to whomever is listening. With each of our students being contributors to a growing online community, we must teach them to be intelligent receivers of information as well as positive contributors. As with all citizens, we want our digital citizens to be creative, thoughtful, and respectful. With the growing numbers and capabilities of social networks, our students need to be educated for digital communication and collaboration just as they are taught to communicate and collaborate face to face.

### **Literature Review Approach**

We are in a time where students are teaching teachers about emerging tools, while teachers are trying to teach the students about the bigger picture. Some view technology as a hindrance, not a tool. However, technology and online communication is the reality for our students and the new reality for teachers.

The literature reviewed will focus on what digital citizenship is, and why it should be an essential part of the school curriculum. It will include current frameworks that address digital citizenship and possible adaptations that will have to be made as Web 2.0 evolves in the future.

There is much literature explaining that today's middle school students communicate differently. They are a generation more likely to communicate through text or Web 2.0 than verbally. Being able to interact responsibly in the digital world and

teaching digital citizenship will be crucial in developing students that are responsible communicators and contributors to the global online community. The literature review will support the need to further develop resources that teachers can use in the digital citizenship education of their students.

### **Need for an Evolving Teacher Resource for Digital Citizenship**

As with most technological developments, the capabilities of devices and Web 2.0 sites are changing quickly (Hollandsworth et al., 2011). The advancements of technology have been evolving rapidly. With text being the original format for communication through mobile technology, picture, sound and video are now sent from person-to-person or posted online just as easily.

A teacher resource developed to work with students at the intersections of technology and citizenship must be flexible and adaptable. As the capabilities of Web 2.0 and the needs of the teachers change, the resource must also be able to change. To do this, a Web 2.0-based resource is needed. This resource will allow teachers to communicate and collaborate globally. As new technologies develop and Web 2.0 evolves, new resources and new tools can be contributed. As there are multiple opinions around digital citizenship, there should also be multiple voices and contributors to creating a resource.

### **The Project**

The British Columbia (B.C.) Education Plan (B.C. Ministry of Education, 2015a) is moving towards classrooms that integrate technology and online communication to support collaboration and encourage positive digital contributions. With this project, my goal is to co-create an open website resource to support teachers in teaching digital

citizenship to their students. The website will have a middle school focus with resources appropriate for teaching grades six to eight.

The website provides a platform where resources can be curated along with current links to information about digital citizenship topics. As it is released, the goal for the website is to become a living/growing resource that will stay current through a collective effort. A forum will be included to provide a place for teachers and those with a vested interest in youth and digital citizenship to interact, post questions or concerns, express opinions, and share further information and resources. Other interested teachers will be invited to become co-authors allowing the website to grow and evolve to stay current with changes in technology and needs of the teaching community.

The website at launch is a collaborative effort with my fellow Master's learning partner, [Heidi James](#). Her project, *Digital Literacy and BYOD in Middle School* (James, 2015), will expand upon the need for digital literacies, a key to digital citizenship and 21<sup>st</sup> century learning identified by the International Society for Technology in Education (ISTE) and the Province of British Columbia. Her project can be located in the University of Victoria's D-Space at <http://dspace.library.uvic.ca>.

## **Chapter 2: Literature Review**

### **Search Methods**

Articles and resources gathered for the literature review were searched for using the University of Victoria's Summon search engine, Google Scholar, ERIC Ebscohost, and JSTOR. The main search terms used were: digital citizenship, cyberbullying, online identity, digital identity, digital footprint, digital tattoo, and online sharing. Boolean language was used to ensure that citizenship and identity articles being found by the search engines were relevant to digital technology. References from articles and tags from database searches lead to other connections and articles. Web resources such as B.C. Ministry of Education documents, ISTE documents, and digital citizenship websites that are all related to teaching and the technology curriculum are also included.

### **The Web and Web 2.0**

The World Wide Web has changed. In its original Web 1.0 iteration, information flowed from a relatively small group of content creators who had the skills or resources (companies) to create and post information (content) for a large group of consumers. In Web 2.0, we are all content creators as well as content consumers. Web 2.0 is an environment that gives global voice to individuals. It is a tool that if used responsibly and safely (by those citizens who are engaging in digital spaces) is a space that supports communication and creative collaboration.

Our students are becoming well-versed in Web 2.0. They communicate through multiple networks simultaneously, while they collaborate, explore identity, and create. What some students do not understand about Web 2.0 is the potential harm that can be done to others and to themselves.

The goal of this literature review is to define digital citizenship and examine the need for it to be included as a part of middle school curriculum. It will review the literature regarding student use of Web 2.0 and explore current definitions of digital citizenship. Further examined will be developing aspects of Web 2.0 such as cyberbullying, online shaming and mobbing (negative web contributions), online identity, the digital footprint and online sharing (positive web contributions). Finally, digital citizenship will be looked at through an educational lens. How can digital citizenship be taught and what approaches are being used?

### **Web 2.0 and Digital Citizenship**

Web 2.0 is an interactive community where many students interact. We must look at how students interact with Web 2.0, the digital identities they create, and a definition for digital citizenship.

**Students on Web 2.0.** Web 2.0 has changed the way that students are using the Internet. Students are not only using Web 2.0 to find and research information, they are now also direct contributors to its content (Cassidy, Faucher, & Jackson, 2013). At any time in the day, at school or outside of school, a student with technology is able to easily communicate and contribute content. Technology and its scope have evolved; we must teach our students about digital communication and etiquette (Crompton, 2014).

**Digital identities.** Digital identities on Web 2.0 are now defining student behavior and trends in new and unpredictable ways (Abiala & Hernwall, 2013). With the evolution of technology and Web 2.0 defining digital identities has come new challenges. The misuse of Web 2.0, cyberbullying, and online privacy issues have all developed as

problems facing not only students, but teachers and parents as well.

**Defining digital citizenship.** Digital citizenship can be defined as, “The norms of appropriate, responsible behaviour with regard to technology use” (Oxley, 2010), or "Critical thinking and ethical choices about the content and impact on oneself, others, and one’s community of what one sees, says, and produces with media, devices, and technologies" (Collier, 2009).

### **Why Do We Need Digital Citizenship Education?**

Digital citizenship is an essential piece in the education of today’s youth. Many are immersed in the social aspects of Web 2.0 and developing online identities (Greenhow, Robelia, & Hughes, 2009). There is a need for training on responsible use of Web 2.0 as students explore and develop their digital selves. Without an active education in digital citizenship Web 2.0 will devolve.

### **Ubiquitous Access to Technology and Web 2.0**

Twenty-first century citizenship education is immersing our students in the online world. In North America, 95% of teens have access to the Internet with 83% using Web 2.0. (Dewing, 2010; Seo, Houston, Knight, Kennedy, & English, 2013) With such high numbers of teens using Web 2.0 to communicate, create identity, and engage in exploration, it is not only imperative that our students possess the skills to be citizens in the physical world, but we must also give them the tools to be responsible and contributing citizens to the online world.

As technology continues to evolve at a rapid rate, we are reminded that the digital natives who fill our classrooms have been surrounded by technology since birth (Keengwe, Schnellert, & Jonas, 2012). Before entering school, many children spend large

amounts of time engaging with technology and even some Web 2.0 resources and therefore enter school fluent in its use and language (Hollandsworth, Dowdy, & Donovan, 2011; Hopkins, Brookes, & Green, 2013; Rideout, Foehr, & Roberts, 2010). Through evolving technology, quick access to information, and Web 2.0, life in school and life outside of school are becoming (or will soon become) more intertwined (Hollandsworth et al., 2011). Technology has changed how and when we access information or communicate online. Use of Web 2.0 has become a routine part of everyday life and is no longer restricted to the home or office; it is with us everywhere (Abiala & Hernwall, 2013).

### **Need for training on responsible use of Web 2.0.**

Student interaction on Web 2.0 can and will lead to problematic and, possibly, unsafe activities without proper education and awareness of digital citizenship (Greenhow et al., 2009). Left alone, students will develop their own culture without guidance from their surrounding community of parents and educators. Long-term effects of a lack of action makes finding a solution more difficult as the student-created culture grows larger and more sophisticated over time (Hollandsworth et al., 2011). While comfortable online, most students are not actually aware of how to keep themselves safe with only 15.4% of students saying that they learn about cyber-safety at school. It is impossible to eliminate risk to students on the Internet, therefore we must work with them to teach the skills necessary for continued safety and responsible use of technology (Yilmaz, 2011). Oxley (2010) concludes that irresponsible and harmful use of Web 2.0 is growing; most young people require explicit education in the responsible use of technology; and people should be encouraged to set-up and use a positive online identity to support worthwhile goals.

**Without an active citizenship Web 2.0 will devolve.** With the increased capabilities of mobile technology and the rapid growth of Web 2.0 has come a new venue for negative interactions with others. Cyberbullying, inappropriate sharing and public shaming, online identity and digital footprints have all become mainstream issues (Chadwick, 2014; Moore & Msn, 2012). As a community of adults (teachers, parents, and the community), we teach our students about appropriate citizenship. We teach them about the negative impacts of abusive behaviours (bullying, mobbing, shaming) and other such hurtful activities. We have also taught them about the positive impacts of sharing, respect for others, personal identity, and our individual impact on the world. We do so in the hope of creating positive contributors to the larger community. Digital citizenship is now an essential piece of citizenship education in order to teach students about the same issues (negative and positive web contributions). Our role is to guide students through the positive uses of Web 2.0 while pro-actively educating about and discouraging the negative aspects.

### **Specific Problems on Web 2.0**

Web 2.0 has specific problems with negative contributions. Here we address four of them: cyberbullying, online shaming and mobbing, online identity, and digital footprints and online sharing.

**Cyberbullying.** Cyberbullying is defined as, “willful and repeated harm inflicted through the use of computers, cell phones, and other electronic devices” (Hinduja & Patchin, 2010). While by this definition, cyberbullying takes place using online tools, it has been found that over 75% of cases involved students who know each other personally and interact through face-to-face contact (Reid & Boyer, 2013). Furthermore, 64% of

students grades six to nine report that the bullying that takes place online is often an extension of bullying that is already taking place offline (Kowalski, Morgan, & Limber, 2012; Reid & Boyer, 2013). Cyberbullying is not necessarily increasing the number of bullying occurrences; it is instead a new venue for the same bullying to take place (Cassidy et al., 2013; Collier, 2009; Kowalski et al., 2012)

Cassidy (2013) outlines three distinct differences between face-to-face bullying and cyberbullying:

1. As it takes place online, cyberbullying lacks many of the instantaneous emotions related to face-to-face bullying. Physical distance between the bully and the person being bullied along with the perceived lack of reaction decreases any empathy that a bully may otherwise experience.
2. Cyberbullying has the possibility of being anonymous. While face-to-face bullying happens in person, it is possible for a cyberbully to hide behind false identities. Using a false identity provides a sense of security for the bully that allows them to further detach themselves emotionally.
3. The speed at which the cyberbullying becomes public to a large audience is much greater than face-to-face bullying. Online communication can happen simultaneously through multiple networks. The result of this is cyberbullying incidents spreading uninhibited to hundreds of people in a matter of seconds.

These differences create an environment where students will act in ways that they would not otherwise act in person. They also create an environment difficult for the victim to escape from as cyberbullying does not have the same restrictions imposed by time and distance that face-to-face bullying has. Digital citizenship education will need to go

beyond cyberbullying to empower students with strong technological skills, critical thinking, online safety, and assessment of personal online risk in order to avoid such situations (Cassidy et al., 2013).

**Online shaming and mobbing.** Online shaming and mobbing against people who have acted against perceived social norms is becoming more commonplace. Using Web 2.0 as an outlet for disapproval and anger, large groups of people who are otherwise detached from a situation are able to single out individuals for the purposes of public humiliation and targeting. In many cases, this leads to online as well as face-to-face harassment as the face of the victim quickly becomes more public (Cheung, 2012).

With the increased speed and reach of digital technology, instances of online shaming can quickly become global through media and through the public's use of Web 2.0 (Boudana, 2014). This can quickly provide serious disruption to the lives of those being shamed. With such a large number of people expressing strong opinions of disapproval, online shaming can quickly turn into a mob mentality where people are judged without all of the facts and vigilantism occurs online and in real life as the personal information of the victim becomes public (Cheung, 2012).

Public shaming is creating an environment where people are judged and sentenced without the usual form of investigation or trial and without moderation and context. The issues that cause the shaming are no longer contained to the local communities affected; Web 2.0 is used to broadcast the issue globally.

**Online identity.** Many use the online world to explore their personal beliefs, cultural norms, and relationship skills (Abiala & Hernwall, 2013; Greenhow, Robelia, & Hughes, 2009). Students observe and assimilate other online identities, using them to

customize their own (Reid & Boyer, 2013). As students are creating and contributing to the online world by posting to Web 2.0 (in the form of text, pictures, and videos), writing blogs, and participating in online chatting and gaming, they are simultaneously creating two identities, a real life identity and an online identity (Greenhow et al., 2009; Ribble, 2012).

Boyd (2007) identifies four ways in which the development of an online identity differ from the development of the face-to-face identity:

1. Persistence: speech is ephemeral but electronic text can be stored indefinitely
2. Searchability: a journal in a drawer is very different from putting thoughts in an environment where people can look for specific names and places
3. Replicability: electronic media make it very easy for others to duplicate and change what one or another has created
4. Invisible audiences: one cannot tell who is online reading ones thoughts, and what is written can be read in a context other than that intended.

While these identities are often a true representation of the person, some students choose to create an online identity that does not represent their true selves (Greenhow et al., 2009; Reid & Boyer, 2013). With many social network sites requiring a minimum age, students often begin by misrepresenting their age in order to gain access (Lenhart, Purcell, Smith, & Zickuhr 2011). For some, this is where the misrepresentation ends. Students then use the social networks for communication with friends. For others, the sense of anonymity provided by limited face-to-face contact encourages them to continue

developing an inaccurate digital self. Some students will go as far as to participate in hurtful or even illegal behaviours under the perceived veil of anonymity (Lamb, 2010).

Boyd's (2007) differentiations between face-to-face and online identity need to be taught to students as they navigate their way through the online world. Many students are unaware that their online actions are not only recorded, but can also be publicly scrutinized by others.

**Digital footprint and online sharing.** The digital footprint refers to the recorded history of online activity for any given individual (O'Keeffe & Clarke-Pearson, 2011). For many students, their digital footprints begin at a very young age. Parents and family members post pictures, write blogs, and upload video of children to share with others. Without the consent of the child, a digital footprint begins to take shape (Holloway, Green, & Livingstone, 2013).

As students begin to engage in online activity themselves, they further increase their digital footprint through the websites they visit, the personal information they post, and the Web 2.0 sites that they communicate through. Many students will engage in personal conversations and share private information about their lives through texting, posting pictures, and videos (Davis & James, 2012). Their online world becomes the conduit through which students share their lives - sometimes without any regard as to who will access their Web 2.0 identity (Harris, 2010; O'Keeffe & Clarke-Pearson, 2011). Many students lack an understanding of the permanence of digital footprints. Once posted to Web 2.0, this information is nearly impossible to retrieve and becomes a permanent part of their online identity (Moore & Msn, 2012). Post-secondary institutions, employers, and law enforcement agencies are just a few of the organizations that peer

into the digital footprints and online identities of people in order to gain insight into their offline and online personalities (O’Keeffe & Clarke-Pearson, 2011).

### **Digital Citizenship from Citizenship, not Fear**

When some think of Web 2.0, their focus is on the negative aspects of Web 2.0 instead of the possibilities of online collaboration and communication. With a negative focus, digital citizenship also becomes a negative concept (Collier, 2009). With students communicating, collaborating, and exploring online already, digital citizenship needs to be taught in a way that includes their voice and empowers them, while at the same time protects them (Collier, 2009; Ohler, 2012).

The physical lives and online lives of students have become intertwined and citizenship is equally important in both worlds. Citizenship education needs to be designed to fit with the digital lives of students and taught using Web 2.0 tools. By teaching citizenship to both worlds, physical and digital, simultaneously, citizenship in digital activities fits within the context of the physical communities in which they live (Ohler, 2012).

### **Teaching Digital Citizenship**

In order to combat these challenges, a digital citizenship curriculum to be taught along with citizenship is being suggested. Ribble (2012), has suggested that effective digital citizenship instruction must address:

1. Digital Access: full electronic participation in society – allowing all technology users to participate fully in a digital society if they choose.
2. Digital Commerce: electronic buying and selling of goods – providing the knowledge and protection to buy and sell in a digital world.

3. Digital Communication: electronic exchange of information – understanding the options of the digital communication methods and when they are appropriate.
4. Digital Literacy: process of teaching and learning about technology and the use of technology – learning about and teaching others how to use digital technologies appropriately.
5. Digital Etiquette: electronic standards of conduct or procedure – being considerate of others when using digital technologies.
6. Digital Law: electronic responsibility for actions and deeds – having an awareness of laws (rules, policies) that govern the use of digital technologies.
7. Digital Rights and Responsibilities: those requirements and freedoms extended to everyone in a digital world – protecting the digital rights of others while defending individual rights.
8. Digital Health and Wellness: physical and psychological well-being in a digital technology world – understanding the risks (both physically and psychologically) that may accompany the use of digital technologies.
9. Digital Security (self-protection): electronic precautions to guarantee safety – protecting personal information while taking precautions to protect others; data as well.

(Ribble, 2012, p. 150)

These nine elements for digital citizenship seem to encompass effectively all aspects of Web 2.0 that our students will encounter as they grow from children exploring the capabilities of technology, to teens that communicate, collaborate, and expand their lives through Web 2.0. Some believe that digital citizenship and citizenship should be taught

as one; that the values we instill through citizenship teaching will naturally expand to digital citizenship if Web 2.0 tools are used as a vehicle for those teachings (Collier, 2009).

### **School Curriculum Approaches and the British Columbia Education Plan**

The digital native generation has grown up with technology in their hands and they expect it in their classrooms (Keengwe et al., 2012). Much can be done through technology and mobile technology provides a platform that allows for learning inside and outside of the classroom (Herro, Kiger, & Owens, 2013). With recorders, cameras, and an increasing number of creative apps available, students are using technology for creation, expression, and to engage in social activities. Equally adept at education, social use and creativity, technology will continue to become more capable over time (Cassidy et al., 2013). With ever increasing use of school-provided technology as well as bring-your-own-device (BYOD) programs in schools, it is becoming more essential for both teachers and students to develop a strong understanding of digital citizenship (Ribble, 2012).

The *British Columbia Education Plan* states that:

To ensure students are able to thrive in an increasingly digital world, B.C.'s Education Plan must continue to support quality learning empowered by technology. Educators will need greater access and supports to use technology that enriches the learning process, and to connect with each other, parents and communities. (British Columbia Ministry of Education, 2015a)

With this statement in mind, the B.C. Ministry of Education is developing a curriculum that embraces technology. The ministry document, *Applied Design, Skills and*

*Technology Framework*, describes the development of an Information Technology focus that:

...encompasses evolving processes, systems, and tools for creating, storing, retrieving, and modifying information. As students design, share, and adapt knowledge in critical, ethical, purposeful, and innovative ways, they gain perspective on the long-term implications of life in a digital, connected world and develop literacies to responsibly take ownership of such technologies to augment learning and benefit society. (British Columbia Ministry of Education, 2015)

What currently lacks in the British Columbia curriculum at this time is specific learning outcomes developed with teachers and students that outline the teachings of digital citizenship. This would be starting point resource for teachers and would benefit all levels of technological competencies.

### **Conclusion**

Digital citizenship is an essential part of the school curriculum. Teachers along with parents and the community have always strived to raise responsible, contributing citizens. Programs have been developed by teachers and the community to teach aspects of citizenship such as bullying, sharing, respect for others, personal identity, and our impact on the world around us. Whether taught separately or alongside citizenship, the digital community must now be included in citizenship education.

Web 2.0 is global with instantaneous communication to multiple people in multiple places; it has changed the way we communicate, create and collaborate. The British Columbia Ministry of Education (2015a) recognizes this shift and is embracing technology and Web 2.0. In order to prepare students to work in the digital world with

technology, teachers need to embrace the digital world and technology and be prepared to learn with the students. Resources focused on citizenship in the digital world are an important part of this shift.

## **Chapter 3: Digital Literacy and Citizenship Resource for British Columbia Educators**

The research used for the topic of digital literacy and digital citizenship consistently repeated the ubiquitous nature of technology and how today's learners turn to quick searches to answer their key questions. When we considered the best way to share out our learning and the resources that we believe to be pertinent, a website and an accompanying social media presence seemed to be the best option. Creating more than one venue to find information should increase our traffic of B.C. educators who are looking for resources for teaching digital literacy in their classrooms.

We focused on providing materials that could be immediately applied as well as links to sources of ongoing information-sharing about digital literacy in education. We included frequent references to considerations relevant to teaching with cloud-based computing as well as resources to support teachers seeking informed consent, such as samples of current permission forms and policies. We have encouraged readers to be active participants in the culture of creating and sharing information and provided numerous places to welcome their contributions on this site and through links to other sites.

## Home Page

The *Home* page (Figure 1) is meant to welcome visitors with a user-friendly interface. Pull-down menus are available along the top of the page. The topics that seem to be most commonly discussed on Twitter and other social media websites can be found as buttons on the right side of the page. This will allow visitors to quickly navigate to the page they are most interested in. There is a running footer on each page that can help direct visitors to find other avenues to connect for more information.

To set the tone for the reader, a quote taken directly from the *B.C. Standards of Digital Literacy* (2013) is provided to give clarity to how the term “digital literacy” will be used throughout this website. Although this website may be visited by parents or educators from around the world, the goal is to serve B.C. educators with the unique rules governing cloud-based computing in B.C. schools.

**B. C. Digital Literacy** HOME STANDARDS RESOURCES BYOD

ACTIVITIES ▶

PRO-D ▶

Participate ▶

Digital Literacy is “the interest, attitude and ability of individuals to appropriately use digital technology and communication tools to access, manage, integrate, analyze and evaluate information, construct new knowledge, create and communicate with others”.

This website is designed with British Columbia middle school educators in mind. It will provides links to vetted resources and ideas, as well as standards and policies unique to education in B. C.

Follow us on Twitter!  
@bcdigit  
#digit

Contact  
bcdigit@gmail.com

Proudly created with Wix.com

Figure 1. Home page (Fong & James, 2015). Retrieved from <http://bcdigit.wix.com/bcdigit>

## Standards Page

The *Standards* landing page (Figure 2) provides information about the source of the standards being used on this website. *The Digital Literacy Framework for British Columbia* (British Columbia Ministry of Education, 2013) was used for its standards for students, building upon the *ISTE Standards for Students* (ISTE, 2007). *ISTE Standards for Teachers* state the best practices for teachers teaching with technology. Additional ISTE links to *Standards for Administrators and Technology Coaches* are provided as buttons.


**Standards for Students and Teachers**

The International Society of Technology Educators (ISTE) has created [multiple standards](#) for living, learning, and teaching productively in a digital age. The Government of British Columbia has adopted and expanded upon the language used in [ISTE's Standards for Students](#) through the creation of a provincial framework for Digital Literacy.

 **B. C. Framework for Digital Literacy**

The B. C. Framework for Digital Literacy uses the same language from ISTE's Standards for Students, with specific exemplars for student learning linked to the cross-curricular competencies. Click [here](#) to be taken directly to the Framework or [here](#) to read short summaries of each of the standards for students.

[Standards for Administrators](#)

 **ISTE Standards for Teachers**

ISTE's Standards for Teachers lays out five key areas for teachers to keep in mind as they teach and learn with technology. Click [here](#) to be taken to the ISTE site or [here](#) to read short summaries of each of the standards for teachers.

[Standards for Tech Coaches](#)

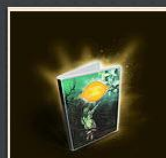
Figure 2. Standards Page (Fong & James, 2015). Retrieved from <http://bcdigit.wix.com/bcdigit#!standards/c4nz>

## **Standards for Students**

The language for this section was taken directly from *British Columbia's Framework for Digital Literacy* (B.C. Ministry of Education, 2013). Each standard (Figure 3) is numbered for easy reference for connection to the activities listed on another page in the website. Each standard is summarized to highlight only the key points. There is a link to the original website source at the top of the page. Teachers in elementary grades should model many of these skills, but effective modelling is dependent upon the expertise of the teacher and the availability of equipment for learners.

## B. C. Standards for Students

The following standards and language are taken directly from the Province of British Columbia's [Framework for Digital Literacy](#). The original source of the following standards used in B. C. can be traced directly back to the International Society for Technology in Education (ISTE) [Standards for Students](#).



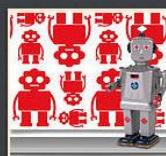
### S1 Research and Information Literacy

Students apply digital tools to gather, evaluate, and use information.



### S2 Critical Thinking, Problem Solving, and Decision Making

Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.



### S3 Creativity and Innovation

Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.



### S4 Digital Citizenship

Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.



### S5 Communication and Collaboration

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.



### S6 Technology Operations and Concepts

Students demonstrate a sound understanding of technology concepts, systems, and operations, and develop computational thinking skills.

ISTE Standards • Students ISTE Standards for Students, Second Edition,  
©2007, ISTE® (International Society for Technology in Education),  
iste.org. All rights reserved. ISTE Standards


Figure 3. Standards for students (Fong & James, 2015). Retrieved from <http://bcdigit.wix.com/bcdigit#!standards-for-students/c4pl>

## Standards for Teachers

The language for this section was taken directly from the ISTE (2008) *Standards for Teachers* (Figure 4). ISTE suggests that teachers consider these standards as they design, apply, and assess learning opportunities for their students. Each of the standards is numbered to provide reference in relation to the activities that appear on another page on this website.

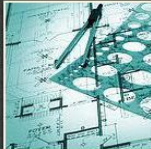
# ISTE Standards for Teachers

Teachers have always held the key to student success, but their role is changing. This language is taken directly from the International Society for Technology in Education (ISTE) *Standards for Teachers*.



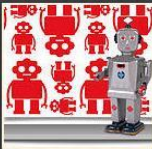
### T1 Facilitate and inspire student learning and creativity

Teachers use their knowledge of subject matter, teaching and learning, and technology to facilitate experiences that advance student learning, creativity, and innovation in both face-to-face and virtual environments.




### T2 Design and develop digital age learning experiences and assessments

Teachers design, develop, and evaluate authentic learning experiences and assessments incorporating contemporary tools and resources to maximize content learning in context and to develop the knowledge, skills, and attitudes identified in the Standards+S.




### T3 Model Digital Age Work and Learning

Teachers exhibit knowledge, skills, and work processes representative of an innovative professional in a global and digital society.



### T4 Promote and Model Digital Citizenship and Responsibility

Teachers understand local and global societal issues and responsibilities in an evolving digital culture and exhibit legal and ethical behavior in their professional practices.



### T5 Engage in Professional Growth and Leadership

Teachers continuously improve their professional practice, model lifelong learning, and exhibit leadership in their school and professional community by promoting and demonstrating the effective use of digital tools and resources.

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ISTE Standards • Teachers ISTE Standards for Teachers, Second Edition,  
©2008, ISTE® (International Society for Technology in Education), iste.org.  
All rights reserved.

Figure 4. Standards for teachers (Fong & James, 2015). Retrieved from


<http://bcdigit.wix.com/bcdigit#!standards-for-teachers/cno5>

## Resources Page

This page serves as a landing page for the Resources (Figure 5) to support digital literacy. It holds four key links out to additional pages found on the website: Activities, FOIPPA, Policies, and Professional Development. Each of the links selected are key topics often searched in relation to digital literacy, and should support the reader in finding what they need. Each link has a brief summary of what they will find on the additional page.

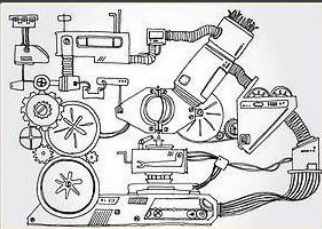
**RESOURCES**

There are many valuable resources to support the development of digital literacy to be found online. Our intent is not to vet every source, but instead to provide readers with a place to begin and suggested additional resources. Please feel free to tweet additional resources to #diglit or @bcdiglit, or leave a comment on our [public forum](#).




**ACTIVITIES**

Follow the link above to view some suggested activities to begin the conversation about digital literacy with your learners.



**FOIPPA and POLICIES**

British Columbia has some of the strictest policies in place to protect our learners when working in cloud-based spaces. Familiarize yourself with the expectations for public schools on the FOIPPA page above, and review some of the language on the shared policy pages to see how to seek informed parental consent.



**PARTICIPATE**

A key component of digital literacy is participation. This resource will be richer with the addition of your voice! Please get involved on the public forum or through our Twitter account @bcdiglit.

Figure 5. Resources page (Fong & James, 2015). Retrieved from

<http://bcdiglit.wix.com/bcdiglit#!resources/ch6q>


## **Activities**

There are many online resources to support teachers in exploring digital literacy with their students. We have chosen to curate a few key lessons that serve as springboards to additional activities (Figure 6). Each of these selected lessons are well-supported with additional links to alternate methods of completing the suggested tasks, and include a clear description about how the author progresses through the topic with their learners. Each of the activities includes a brief summary of the topic, and the connected standards for both teacher and student.

Each activity was selected because it is device-agnostic and will work effectively on almost any BYOD platform. All activities can also be considered entry-level, user-friendly, and open-ended; allowing the teacher to take the activity further or modify to their own level of comfort. The shared activities were also selected to provide support to teachers as they move towards shifting their pedagogical approach to embrace learner-driven curriculum and inquiry.


# ACTIVITIES

The following activities are a brief overview of some suggested activities to try with your students. This list is by no means exhaustive, and to share your own success stories, please use the hashtag #diglit on Twitter, Tweet to the @bcdiglit Twitter account, or post your activities on the [Public Forum](#).




**Twitter in the Classroom**  
S4, S5, T1, T2, T3, T4

Starting a classroom Twitter account provides opportunity to model and discuss digital etiquette and participation. Click [here](#) for some suggestions on getting started.




**Student Blogs**  
S3, S4, S5, T1, T2, T3, T4

Individual student blogs encourages learners to share their thinking visibly with an authentic audience and to seek interactions with other interested individuals. Click [here](#) for more information.



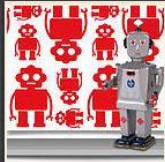
**Paper Before Posting**  
S1, S4, S5, T1, T3, T4

Using paper is a great way to begin exploring the social media world with students. It is a very safe and tangible medium that allows for safe and easy discussion. Like the internet, paper projects displayed on classroom walls or in the hallway are easy for other students, parents and the public to see. They can be used as a great conversation starter into the world of sharing through social media. Click [here](#) for some suggested ideas.




**Backchannels**  
S1, S3, S4, S5, T1, T2, T3, T4

Backchannels provide an opportunity for all learners to have a voice in class discussions, activities, or any other learning experiences. Backchannels extend learner conversations beyond the constraints of class schedules. Click [here](#) for some suggested tools more information.



**Coding**  
S1-6, T1-4

Teaching students how to write and interact with code has become easier than ever thanks to companies and apps that have created block coding and simple script sets to introduce both teachers and students to the language of computers. Click [here](#) for an introduction to coding resources.



**Creative Commons**  
S1-6, T1-5

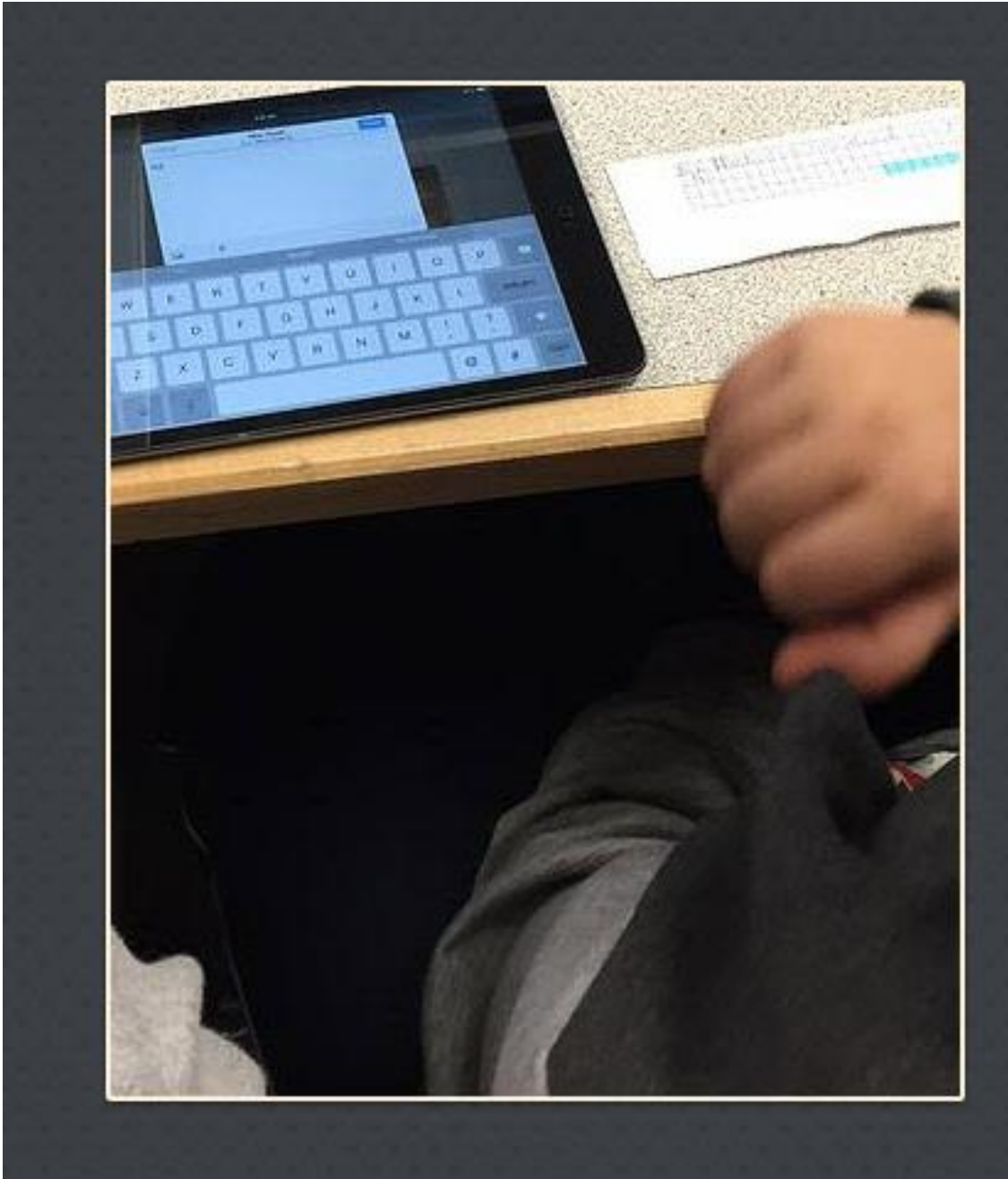
Teaching students how to legally use and create digital resources online can be a challenging goal. By introducing learners to the language of creative commons licensing early, teachers can support the literacy of respecting individual rights in an online environment. Click [here](#) for a list of tools to find creative commons licensed materials.

Figure 6. Activities (Fong & James, 2015). Retrieved from

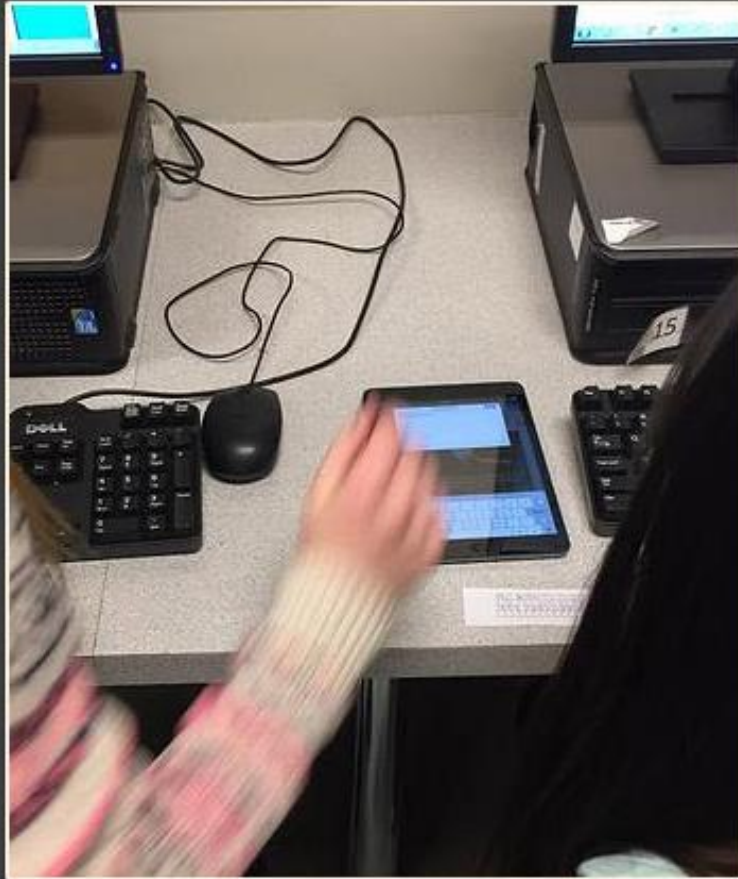
<http://bcdiglit.wix.com/bcdiglit#!activities/c1b4d>

## **Twitter in the Classroom**

Twitter in the Classroom (Figure 7) was chosen as an activity to include because of the availability of global connections and projects. Using Twitter to share out the stories from classrooms opens that classroom to the world. Parents often choose to follow a class's Twitter feed to see what is occurring and to be a part of the conversation. A short list of popular global projects is included to support teachers in providing initial purpose for their use of Twitter in the classroom. There are also two links to lists of classrooms using Twitter and the associated grade levels to facilitate connections for classroom just starting their Twitter accounts. Teachers are reminded to seek informed consent from parents that is compliant for cloud-based computing as per the Office of the Information Privacy Commissioner (n.d.) before having students use the Twitter account, with a link to a collection of media permissions housed on a central page.



*Figure 7.* Twitter in the classroom (Fong & James, 2015). Retrieved from <http://bcdigit.wix.com/bcdigit#!/twitter-in-the-classroom/c14z4>



## Advantages of using Twitter:

When teachers are active on Twitter they learn about global projects to bring into their classrooms.

Look to get involved in Mystery Skypes, Global Read Alouds, Global School Play Day, Hour of Code, Genius Hour and more. Twitter becomes the avenue to connect your learners in a shared Global experience. The hashtags connected to each of these events keep the conversations grouped on your Twitter feed.

*Figure 8.* Twitter in the classroom (Fong & James, 2015). Retrieved from <http://bcdigit.wix.com/bcdigit#!/twitter-in-the-classroom/c14z4>

# Twitter in the Classroom

A classroom Twitter account can be used to connect asynchronously with classrooms all over the globe. It is easy to find classrooms to connect with, please add your own class to these lists.

[Drew Frank's collection of classrooms who Tweet](#)

[A general Google Doc of classrooms who Tweet](#)

A classroom Twitter account should be authored by the learners, but moderated by the teacher. [Informed parent consent](#) is required to use this tool in your classrooms.

Twitter can be used to model the behaviours of an experienced social media user when a teacher makes their thinking visible.

**How to Begin:** Start by sharing your process about how to decide which classroom accounts to follow. Discuss how some adults or experts may have a lot to contribute to our learning, but not everything that they post may be appropriate for an educational account's feed. Look for active classroom accounts to follow. Sometimes you can also find ideal classroom accounts to follow by seeing what accounts your favourite classrooms follow.

Craft your first few tweets together. Ideally, project your Twitter account onto a large screen using a data projector so that all learners can see what you are doing. I usually draft the Tweet on the board with the students. Our first Tweet usually identifies a little information about who we are: age or grade, interests, and a welcoming phrase.

After you send out the first Tweet, see what the students may have noticed: the character limit, the ability to include images, any hashtag you may have (strategically) used. This is your opportunity to discuss etiquette. Students need to know that everything that goes out is immediately public, and should be considered permanent. Classroom Tweets add dimension to the class identity, and should represent the full class as equitably as possible. We discuss how Retweets and Favouriting can be used to interact with other people on Twitter. Look at how other classrooms are using hashtags, and show the students how the hashtags keep all of the conversations related to a particular topic grouped together. Hashtags can also be used to create or tap into a positive community of learning. Over time, encourage students to explore which hashtags could be used to accompany the Tweets that they send out. You may also wish to create or add to a hashtag that represents your class, school or district.

*Figure 9.* Twitter in the classroom (Fong & James, 2015). Retrieved from

<http://bcdigit.wix.com/bcdigit#!twitter-in-the-classroom/c14z4>

**Analog Tweets:** Cut up strips of paper with 140 boxes on them. ([paper copy](#)) Have your second Tweet written by a student or a small group of students. Have the students create a more detailed “welcome” Tweet or a question for their followers. After you collect these paper Tweets you can choose to either send them all out digitally, or vote on one or two that best represent the group of students you are working with. Keep blank copies of these analog Tweets available in an easily accessible place in your classroom so that students can craft Tweets whenever they like.

Possible classroom expectations: Students can create draft Tweets: both on paper or in the actual account, but no one presses Tweet without the teacher moderating or reading each Tweet before it goes live. Our class does not use names or share out identifiable images of students. Some classes do, but ensure that you have parental permission.

**Next steps:** Guide students into taking responsibility for the classroom Twitter account. Co-create a list of topics that should be shared throughout the day or week: upcoming events, the learning that is happening right now, the resources that students are using to learn with, guests in the class, field trip experiences, questions to experts, etc. Keep a list of active hashtags to prompt student thinking on particular topics.

**Management:** Open your classroom Twitter account on a shared classroom device or devices. If you only have access to a device that is shared with other classrooms, ensure that you logout of the Twitter account before the device leaves your supervision. Do not share the password to your classroom account with your students.

**Additional Resources:**

Cybraryman's [collection of all educational Twitter things](#).

A way to have your students [Tweet using Google Sheets](#) by Alice Keeler.

[Starting your own Classroom Twitter account](#).

[60 Ways to use Twitter in the classroom](#).

*Figure 10.* Twitter in the classroom (Fong & James, 2015). Retrieved from

<http://bcdigit.wix.com/bcdigit#!twitter-in-the-classroom/c14z4>

## Student Blogging

Bloggng (Figure 8) with students is a commonly discussed and shared practice. This page is meant to provide clear steps in how to get started with students on writing and responding to a public audience. Several activity processes are shared, as well as a link to a collection of media permission forms for informed parental consent. A rationale for student blogging is included, as well as some suggested platforms with details about the level of teacher management required.



*Figure 11.* Student blogging (Fong & James, 2015). Retrieved from <http://bcdigit.wix.com/bcdigit#!studentblogging/c19sf>

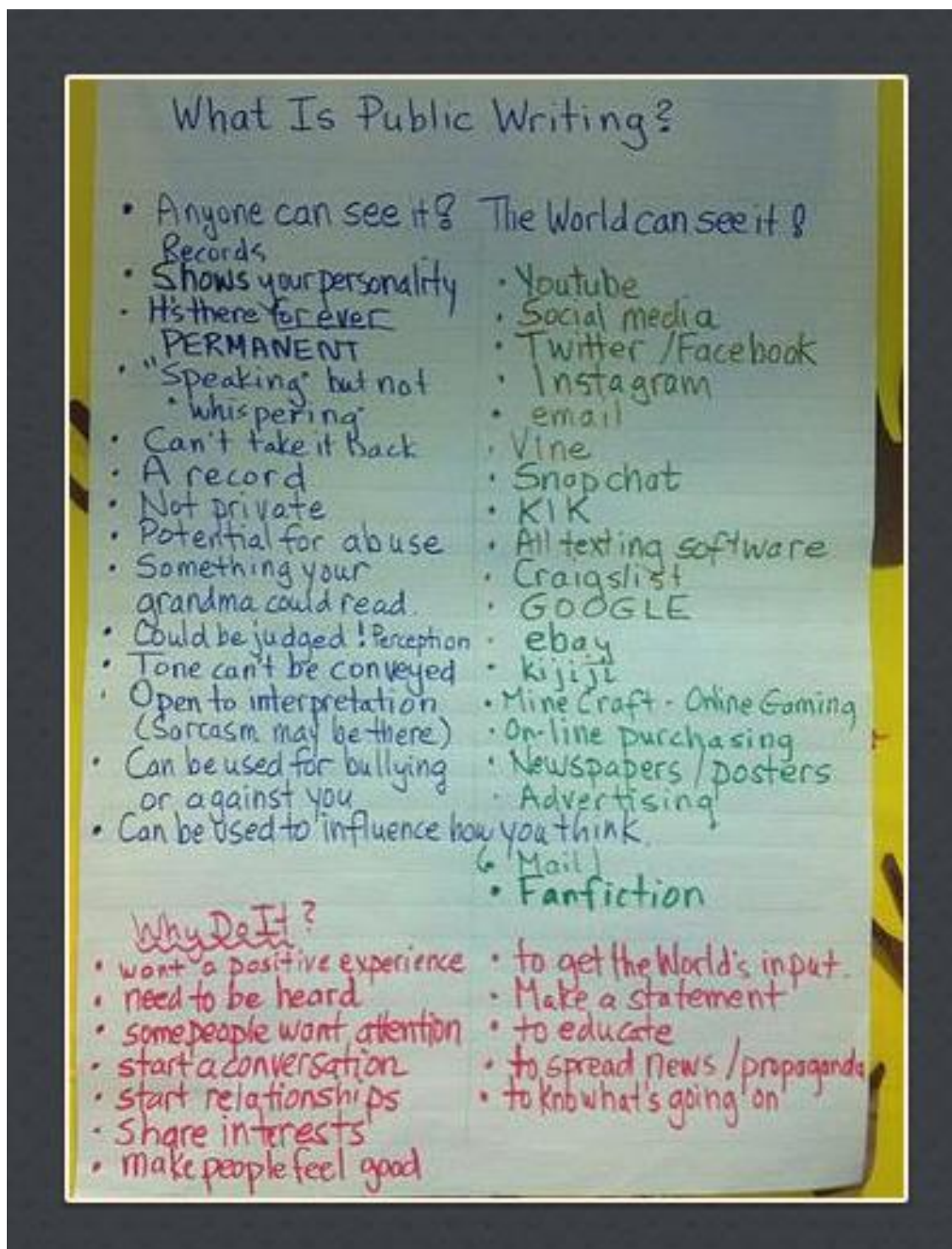


Figure 12. Student blogging (Fong & James, 2015). Retrieved from <http://bcdigit.wix.com/bcdigit#!studentblogging/c19sf>

# Student Blogs

Why share student blogs with the world? Student blogging is a great tool for supporting digital literacy where the student becomes the curator and author of their own educational experience. Students can develop their own network of knowledge nodes and contacts while experiencing exciting connections and global interactions that can ignite a passion for exchanging ideas with others and writing for authentic purposes.

**Getting Started:** Think about WHY you want to get involved in student blogging. A big question will be "who is the intended audience?" If your goal is to facilitate more discussions with classmates or school mates in a private setting, you may wish to pursue wikis or other closed social platforms. These are great private online spaces that contribute to a positive sense of community and begin the conversations around digital etiquette. However, private spaces limit the conversation and exposure to broader audience interactions.

*Figure 13.* Student blogging (Fong & James, 2015). Retrieved from <http://bcdigit.wix.com/bcdigit#!studentblogging/c19sf>

In British Columbia, you will require informed consent for students to participate in using online social tools.

A great launch activity for blogging is to ask students to create paper blogs - an idea shared by Pernille Ripp. This lesson will support students in learning more about writing for a public audience and the idea that comments can extend a digital conversation. After the paper blogs are written by the students, they are posted onto the student's lockers or desks. We leave them up for several days encouraging students and guests to read each and every blog post. Students are given a stack of sticky notes to write comments on the paper blogs. We read several online student blogs and comments and look for comments that create more dialogue. We called those comments "open" comments because they opened a discussion. "Closed" comments were comments that stopped a conversation or were difficult to reply to. Students were asked to write open comments, and "post" their sticky notes on the lockers with the blogs. Students were excited to be receiving comments and wanted to reply, so they learned about nesting their notes, or attaching their replies to the original comments so that the conversation could be read easily as a thread. The blogs were left up for about a week afterwards, and guests and students were welcome to continue commenting.

We discussed how the students might choose to use their blogs and what content they may want to include, such as images, stories, reflections or classroom assignments. It becomes a personal platform for learning and sharing out.

Student blogging can be a great tool to support the development of digital literacy in our students as their blogs grow into a personalized curation and creation space and a platform from which to spring into new conversations with other interested parties on topics that may not be traditionally emphasized in our schools. Blogging bridges the learning at home/learning at school divide by opening a window between the two spaces. Students can share their knowledge on a variety of topics that may not otherwise come up. Blogging will also enable more students to share their learning in a manner that connects closely with their learning process. If they learned something with Multimedia sources, it will be easy for students to not only credit these sources, but link out to share these resources for other interested learners. A student blog can be a place to share out useful sources of information and it can also be a place where students make sense of the information that they are curating. This can be a collaborative effort, where they filter, organize and make meaning of new information through their conversations and posts.

*Figure 14.* Student blogging (Fong & James, 2015). Retrieved from <http://bcdigitlit.wix.com/bcdigitlit#!studentblogging/c19sf>

**Some Considerations:** You may wish to use a blogging platform that you can fully moderate. Kidblog is a popular choice for this purpose. Teachers can moderate both student posts and any posts made by the public. Some teachers choose to have their students create their own accounts and maintain full responsibility for their posts and comments. Whichever direction you choose to take, ensure that parents are informed, and that you actively continue to teach the skills of writing for a public audience throughout the year and the responsibilities of contributing content in a mindful way.

*Figure 15.* Student blogging (Fong & James, 2015). Retrieved from <http://bcdigit.wix.com/bcdigit#!studentblogging/c19sf>

## Paper Before Digital

Using paper (Figure 9) to practice digital literacy skills is an ideal way to start with something familiar before transferring the same skills to the digital realm. Displaying student's paper creations publicly and inviting thoughtful feedback mimics the same interactivity found online. The highly visible nature of the paper practice is a reminder to the learners about the similar nature of things posted online. This also encourages ongoing conversations about what should be posted online. Practicing on paper first and asking the question, "Would we publish this on the walls of our school?" should reinforce the practice of pausing before posting in a digital space.



## Paper Before Posting

**Personal Profiles**

An idea for the beginning of the year is to create personal profiles. Like an online profile, they provide a platform for students to learn about each other. This opens the door for discussions about sharing personal information for others to see. What is privacy? What can we safely share about ourselves? What types of pictures can we post on a profile? Do we have the right to post pictures of friends without asking? How much information can a stranger get from the personal profile I just created? Personal profiles on paper create a safe environment that can then lead to discussions about online profiles.

Once posted, students can post comments about peoples profiles and begin short "online" conversations. Comments can be posted under the profiles just as they would in an online site. Use these conversations to discuss appropriate online behavior and comments.

Vine, Snapchat, Instagram, Facebook, Twitter and blogging are just a few of the ways students can connect online with more avenues being created constantly. Learning how to communicate and be a responsible online citizen develops our students digital literacy and digital citizenship skills.

Other Paper Before Posting ideas: Personal Photo Collage (Instagram), Paper Twitter Chats.

Figure 16. Paper before posting (Fong & James, 2015). Retrieved from

<http://bcdigit.wix.com/bcdigit#!paper-before-posting/c648>

## Backchannels in the Classroom

Backchannels (Figure 10) are tools that provide a means for audience members to be actively involved in conversations synchronously during a presentation or lesson. This page lists several digital resources for opening backchannels in classrooms, with the different features of each made clear. Suggested purposes for using backchannels are also included, as well as a rationale for backchannel use. Student reflections on how backchannels support learning and discussion were also curated to highlight the importance of shifting the emphasis towards student voice in learning.



Figure 17. Backchannels (Fong & James, 2015). Retrieved from <http://bcdigit.wix.com/bcdigit#!backchannel/c23sc>

# Backchannels in the Classroom

Why Backchannel? Providing a backchannel in a classroom offers more opportunities for students to contribute their ideas, questions, insights and ponderings. Backchannels allow for real time collaboration, even while a lesson unfolds. Backchannels allow for a differentiated approach to what participation can look like, and allows conversations and learning to continue asynchronously after a “lesson” ends.

Personally, I've observed a massive increase in student participation in my lessons when I kept the backchannels open throughout the day. I “heard” from students who had not volunteered to speak in class previously – they would insightfully discuss topics through text, offer different ways to explain things, and answer questions posed in real time during lessons. Not every student is comfortable speaking in front of a crowd!

A few commonly chosen backchannel tools:

- Padlet: An online sticky note board – it allows you to upload videos, images links comments, almost anything. It works on every platform. It will also provide you with a quick QR code for your board – which is helpful if you project the “wall” and students can walk by and scan the QR to join.
- Baiboard: an iOS app where you can create a private or public shared space. One feature that I loved about this app is the ability to create multiple “pages” to work on. For several lessons, I created prompts on a series of pages, and the students could reply to the ones that held meaning for them. Organizing the collaborative dialogue on multiple pages kept the conversations more synchronously aligned. This app would be amazing if you were able to open it up to other devices without requiring downloading an app.
- Voicethread: a great tool for student conversation. You can use images and videos to organize and prompt deeper conversations.
- A little dabbling with some of the tools listed by EdTech and Mobile Learning.

*Figure 18.* Backchannels (Fong & James, 2015). Retrieved from

<http://bcdigit.wix.com/bcdigit#!backchannel/c23sc>

An easy to use, private or public chat space called Today'sMeet is a favourite for teachers. This web-based tool allows for hosting a conversation (like a group text) where you can create a "room" that can be open for up to a month. The chat or texting format is easily recognizable by our students. The reason that Today'sMeet has become a popular backchannel tool is because the teacher presence feels light. Although the teacher creates the room and is present and monitoring the discussion, the discussion is student-driven: they genuinely interact WITH and FOR each other – not for the teacher. When a student raises their hand to speak in class, quite often they are awaiting some form of feedback (even in a discussion): a nod from the teacher, approval of their ideas, or praise. In classroom discussions, many students direct their input directly to the teacher – even if they are replying to the last student speaker, their eyes go to the adult, or they wait for the teacher to "call on" who gets to comment next. An effective backchannel works for the students, it becomes their own space. Sometimes these conversations can extend far beyond the classroom walls and hours.

Recently, grade 6 students were asked to reflect on how texting to a backchannel in class helped them. Here are some of their thoughts:

*"texting let us stay in contact throughout the lesson. Even though she was teaching us, we could write a comment and people would see it. Not: 'we ran out of time, so we can't do all of the questions and comments'"*

*"Instead of raising my hand all of the time or calling out, it helped me because I could easily write what I wanted to write and it would get sent and other people could see what I had to say and my teacher could see what I had to say"*

*"it let me express more of what I wanted to say, to say more of what I think"*

Using a backchannel allows you to formatively assess in real time. You are given an opportunity to see leadership from students who may not otherwise stand out. It opens a window into a collaborative and reflective learning environment that is usually hidden from view.

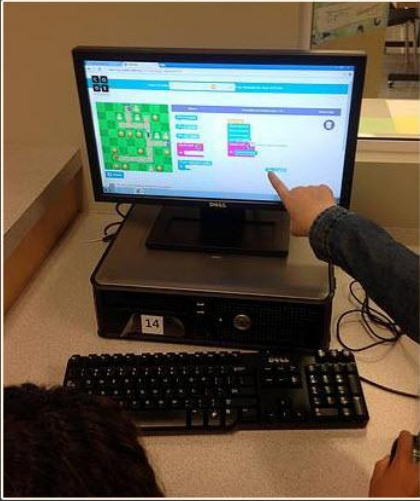
It takes time to find the right backchannel tool, and what works with one group of students may not work with the next group. It is important to find a platform that fits in with your class's community and culture.

**Getting started:** try out a few of the tools shared above with your students. Be prepared to post a question or two to get the discussion rolling, and also to provide a bit of play time as students find their voice.

Figure 19. Backchannels (Fong & James, 2015). Retrieved from <http://bcdigit.wix.com/bcdigit#!backchannel/c23sc>

## Coding

Coding (Figure 11) is a slang term for using the language of computers. Getting started in teaching this skill can be intimidating when a teacher is unfamiliar with the vast assortment of tools available to support their learners. Many apps and online sites include “block” programming, which can be translated to reveal code, but also allow learners to build entirely using interconnected blocks that result in actions and constructions. These sites and apps are tailored to respond to the individual user, allowing learners to progress at their own rates, with clear support and guidance offered by the program’s interface. A suggested starting place, *Hour of Code* (n.d.) is shared as a resource to encourage educators to explore initial steps in learning and teaching with the language of code.



## Coding in Schools

There are many resources available to support teaching coding in schools. Every year there is an event called the "[Hour of Code](#)" encouraging all classrooms globally to pause and take part in coding activities for an hour. The activities are self-directed and do not require any previous experience to run this program effectively as a classroom activity. There are activities for all experience levels, including off-line activities to support the logic found in coding.

You can also find an abundance of apps and online sites for introducing code.

- [Scratch](#)
- [Scratch Junior](#)
- [Kodable](#)
- [Sphero](#)
- [Lego Mindstorms](#)
- [Hopscotch](#)
- [Cargobot](#)
- [Tynker](#)
- [Khan Academy Coding](#)

Figure 20. Coding (Fong & James, 2015). Retrieved from

<http://bcdigit.wix.com/bcdigit#!coding/c7nv>

## Creative Commons

As students and teachers begin curating and creating more resources online for learning, discussions and lessons around intellectual and property rights need to become an ongoing topic. The fair use agreement allows for a lot of materials to be shared for educational purposes, but as students begin modifying, mashing, and creating their own content, it is important to consider which materials allow for these uses. There are many websites that clearly state how the resources are licensed, however, students have learned the ease of use of quick search tools to find what they like and often simply download instead of travelling to the website source of each image. Teaching students to search for media resources using Creative Commons (n.d.; Figure 12) search tools may help to begin the conversation about how to protect individual rights and ownership. This page is meant to provide some examples of Creative Commons search tools, and also to help educate teachers about fair dealing, updates to Copyright Law in Canada (n.d.), and professional development opportunities for more information.



*Figure 21.* Creative Commons (Fong & James, 2015). Retrieved from <http://bcdigit.wix.com/bcdigit#!creative-commons/c1m3q>



*Figure 22.* Creative Commons (Fong & James, 2015). Retrieved from <http://bcdigit.wix.com/bcdigit#!creative-commons/c1m3q>

# Creative Commons

In Canada we use “Fair Dealing” as our language around using materials or work created by others. The laws around copyright in Canada have recently been updated to reflect the broad spectrum of available media and how that media is being used.

The way we use and interact with media is constantly undergoing change. Where we once were satisfied being an audience to other people’s “Funniest Home Videos”, we now upload our own, or make mash-ups of thematic videos we find online. Public domain becomes a grey area; someone shares an image on Flickr that may have originally been copyright protected by the original author, but is now an image of an image with the option to download and share freely. There is a cultural shift towards sharing the wealth of information and resources and knocking down some of the paywalls that exist. MOOCs, open learning and PLNs contribute to the ideals of open source initiatives.

As teachers, what does that mean for how we teach our students to access and use online resources? Every year teachers encounter students who cite “Google Images” as the source for an image that they have copied and pasted into their work. When shown what an actual link to an image looks like (often 4 lines of text long, filled with random numbers and percentage signs), the students exhale and say “Ohhhhhhhh”.

Students are often surprised to learn that those images are actually owned by someone. Many young people are very comfortable “sampling” text, images and video from the Internet for a variety of purposes, and openly share their creations. It is difficult for our students to grasp how things that are so easily shared online can still “belong” to an author or artist.

To set a high standard for your students in using online resources, you can teach them about only using Creative Commons licensed images, or images that they acquire permission to use. You may wish to teach this as a literacy especially if you are encouraging your students to blog and Tweet for a public audience. If your students choose to continue to write and create publically, they will learn to make choices about how they share and licence their own work. They will contribute to a culture where the online community respects each individual's words and work.

*Figure 23.* Creative Commons (Fong & James, 2015). Retrieved from <http://bcdigit.wix.com/bcdigit#!creative-commons/c1m3q>

Some favourite search tools for copyright free material:  
[compfight.com](http://compfight.com) – mainly searches Flickr for images  
[cc search](#) – a tool to help you search multiple mediums, including sources for sound and video

If you are interested in learning more about Copyright law in Canada [ERAC](#) offers a free course for members.

#### Additional Resources

Cybraryman - [creative commons](#)

Or, you can learn a bit about Copyright law from the "Fair Use" privileges in the United States, one of which allows for use of materials for the purpose of satire in the video to the left. Enjoy!

*Figure 24.* Creative Commons (Fong & James, 2015). Retrieved from <http://bcdigit.wix.com/bcdigit#!creative-commons/c1m3q>

## Professional Development

The *Professional Development* page (Figure 13) is meant to be a curation of sources of professional development opportunities and communities available to educators on their own time. Each of the opportunities is shared as buttons to links that open in external windows. Several of the sources of professional development can be found by following Twitter hashtags relevant to the topic of digital literacy. There is also a widget where the @bcdigit Twitter feed can be constantly streamed and updated, with a “follow” button to encourage readers to connect. Two sources of professional learning can be found through the Commonsense educator’s network and through Google’s curriculum. One Google+ community is shared as a place to seek connections with other educators discussing digital literacy.

The image shows a webpage titled "Professional Development" with a dark background. The title is in large, orange, sans-serif font. Below the title is a paragraph of text in a smaller, light-colored font. Underneath the text are six brown, rounded rectangular buttons arranged in a 3x2 grid. The buttons contain the following text: "#diglit", "Twitter Chats", "Digital Literacy G+", "#digcit", "Commonsense PD", and "Google's Curriculum". To the right of the buttons is a white Twitter feed widget. The widget has a "Tweets" header and a "Follow" button. It displays three tweets: one from Tom Whitby (@tomwhitby) dated 31 Oct, one from Jeremy Black (@blackimoto) dated 7 Nov, and one from BCDigLit (@BCDigLit) dated 6 Nov. The third tweet is partially cut off at the bottom of the widget.

Figure 25. Professional development (Fong & James, 2015). Retrieved from <http://bcdigit.wix.com/bcdigit#!pro-d/cj3b>

## FOIPPA

The purpose of this website was to acknowledge the unique constraints placed on educators in B.C. as they navigate the FOIPPA (n.d.) (Figure 14) while teaching their learners about digital literacy using cloud-based media. This page serves to clarify some of the mystery about the language and expectations of FOIPPA and what that means for educators. Some key considerations are addressed and a link to the B.C. website for FOIPPA is included.



**British Columbia's Freedom of Information and Protection of Privacy Act**

**Why Care is Needed Beyond B.C.**

Many cloud based storage solutions such as iCloud, Google Apps for Education, Microsoft Office 365, and Dropbox seem like good solutions for storing and sharing documents. However, all of these tools have storage held in other countries. This creates a conflict with B.C.'s Freedom of Information and Protection of Privacy Act (FOIPPA). Any information stored outside of Canadian borders is subject to the laws of the country it is stored in, therefore giving foreign governments and agencies direct access to materials and information about Canadian students and families.

Cloud based storage solutions are also used by the companies themselves as a source of data. Data-mining is used for targeted marketing by first and second party companies, focused advertising and straight-forward gathering of usage statistics.

**Considerations for Personal Device Use**

Having a personal device is a tempting tool for teachers. It can be a convenient way of recording, documenting and photographing those memorable moments in classrooms. Personal devices whether Apple, Android, or Microsoft all are linked to cloud based storage outside of Canada. As educators, we need to be aware of the settings if using our personal devices to ensure that any type of sharing or online backup are turned off.

**Informed Consent**

Canada's FOIPPA laws do not prevent teachers from using cloud based storage or tools. Using these tools does however require us to be vigilant with permissions and protocols from the school district and from the parents.

[British Columbia's FOIPPA Webpage](#)

Figure 26. FOIPPA (Fong & James, 2015). Retrieved from

<http://bcdigit.wix.com/bcdigit#!freedom-of-information-and-privacy/c1sj8>

## Participate

An important component of digital literacy is participation. Encouraging students to create content and contribute to the exchange of information online is an essential skill. The ISTE *Standards for Teachers* (2008) indicate that educators must also participate (Figure 15). Participating in digital literacy encourages the development of one's own skills, as well as promoting digital leadership and the sharing of ideas and resources. This page is meant to suggest initial ways for teachers to participate. There are links to connect teachers to the @bcdigit Twitter account and a list of educational hashtags to explore. There is a link to the educational Twitter chat schedule, and an invitation to moderate or contribute to either the website or the upcoming @bcdigit Twitter chat.

**Participate**

Digital Literacy is all about participating in a global community. There are many options available to you and your students. Consider creating your own online presence if you have not yet done so. A welcoming place to begin is by hatching your own professional Twitter account. Use your district's hashtag and follow the conversations. Connect with a few educators and see who they are following. When you feel comfortable, add to the conversation: share out stories from your classroom, from your professional learning, or questions you have for the people you are hoping to connect with.

We are looking to add more administrators to this site. If you would like to be a part of the team, please Tweet to us @bcdigit or email us.

Join us on Twitter

Twitter Chats

Education Hashtags

Contact Us

Public Forum

Figure 27. Participate (Fong & James, 2015). Retrieved from <http://bcdigit.wix.com/bcdigit#!participate/c1r5d>

## @bcdigit Twitter Account

A B.C. digital literacy twitter account (Figure 16) was created and will continue to be moderated by both authors of this website, with the invitation left open to include other moderators. Once this account has generated more interest and interactions, a Twitter chat has been planned to increase the discussion of digital literacy in middle school classrooms around our province, and seek additional resources and idea-sharing from around the globe. A link to the website resource is available in the Twitter profile.

The image shows the Twitter profile for @BCDigLit. The profile picture is a photograph of a locker with several papers and colorful sticky notes attached to it. The bio for @BCDigLit reads: "Exploring digital literacy with middle school educators in British Columbia and around the world. Chat date/time TBA. British Columbia, Canada bit.ly/1Mu1Sdz". The account has 4 tweets, 38 followers, 7 following, and 1 like. The tweets section shows three tweets, including one retweeted by Tom Whitby and another by Jeremy Black. The 'Who to follow' section lists Tim Hortons, Michelle Hiebert, and BCTF. The 'Trends' section lists #LoveYourself, #EndOfTheDay, #mondaymotivation, and #Mizzou.

Figure 28. @BcDigLit Twitter account (Fong & James, 2015). Retrieved from <https://twitter.com/BCDigLit>

## Public Forum

The goal of this website is to build capacity and confidence in teaching digital literacy in middle school classrooms. In order to provide a diverse base of ideas and information, a *Public Forum* page (Figure 17) was created to invite ongoing conversations on related topics. A link to this page can also be found on the *Participate* page.

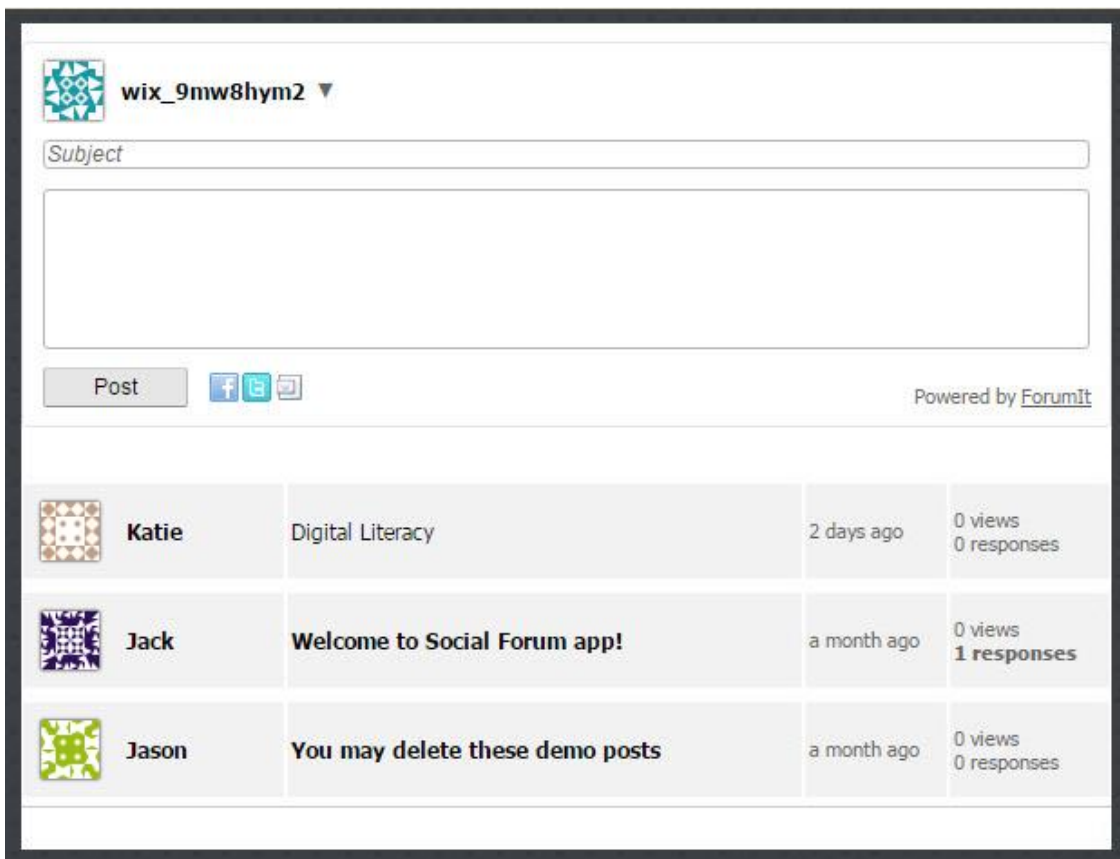


Figure 29. Public forum (Fong & James, 2015). Retrieved from <http://bcdigit.wix.com/bcdigit#!public-forum/ca3v>

## BYOD

Encouraging learners to explore and apply digital literacy skills on their own devices may ensure a greater association of the lessons being taught in class extending into long-term understanding and use of these skills (Dirksen, 2012; School Technology Branch Alberta Education, 2012). This *BYOD* landing page (Figure 18) will take readers to suggested activities, acceptable use policies and BYOD policies, and collected resources to support personal device use in middle school classrooms.

**Bring Your Own Device (BYOD)**

Teaching Digital Literacies through the use of personally-owned devices increases the likelihood that lessons taught with these devices may be associated with the devices beyond the classroom. Often, our "online etiquette" that is taught in computer labs remains linked only with behaviours expected at school.

**Bring Your Own Device Resources**

Teachers use their knowledge of subject matter, teaching and learning, and technology to facilitate experiences that advance student learning, creativity, and innovation in both face-to-face and virtual environments. Click [here](#) to get started with BYOD.

**BYOD Policies**

There are a variety of policies used around our province. Choose the language and the expectations that work for your individual school or classroom based on the experience level you and your learners have with the use of personal technology for learning. Click [here](#) for policy samples.

Figure 30. BYOD (Fong & James, 2015). Retrieved from

<http://bcdigit.wix.com/bcdigit#!byod/c1tsl>

## **BYOD Resources**

BYOD can seem like such a simple idea until teachers realize that learning does not simply transform with the addition of new technology. Proactive design and pedagogy needs to go into the initial planning stages about how a BYOD program can be successful in our schools. The *BYOD page* (Figure 19) is meant to provide resources to promote a mindful adoption of BYOD practices in middle school classrooms. A classroom discussion topic is included, as well as examples of student thinking around how BYOD can be used to support learning. Device agnostic platforms and activities are listed, with a focus on increasing student voice and choice. Additional links to other resource include the BYOD chat on Twitter, a Pearltree collection of resources for BYOD adoption at all levels of experience, a Livebinders collection of resources, and the Cybraryman library of resources for BYOD.

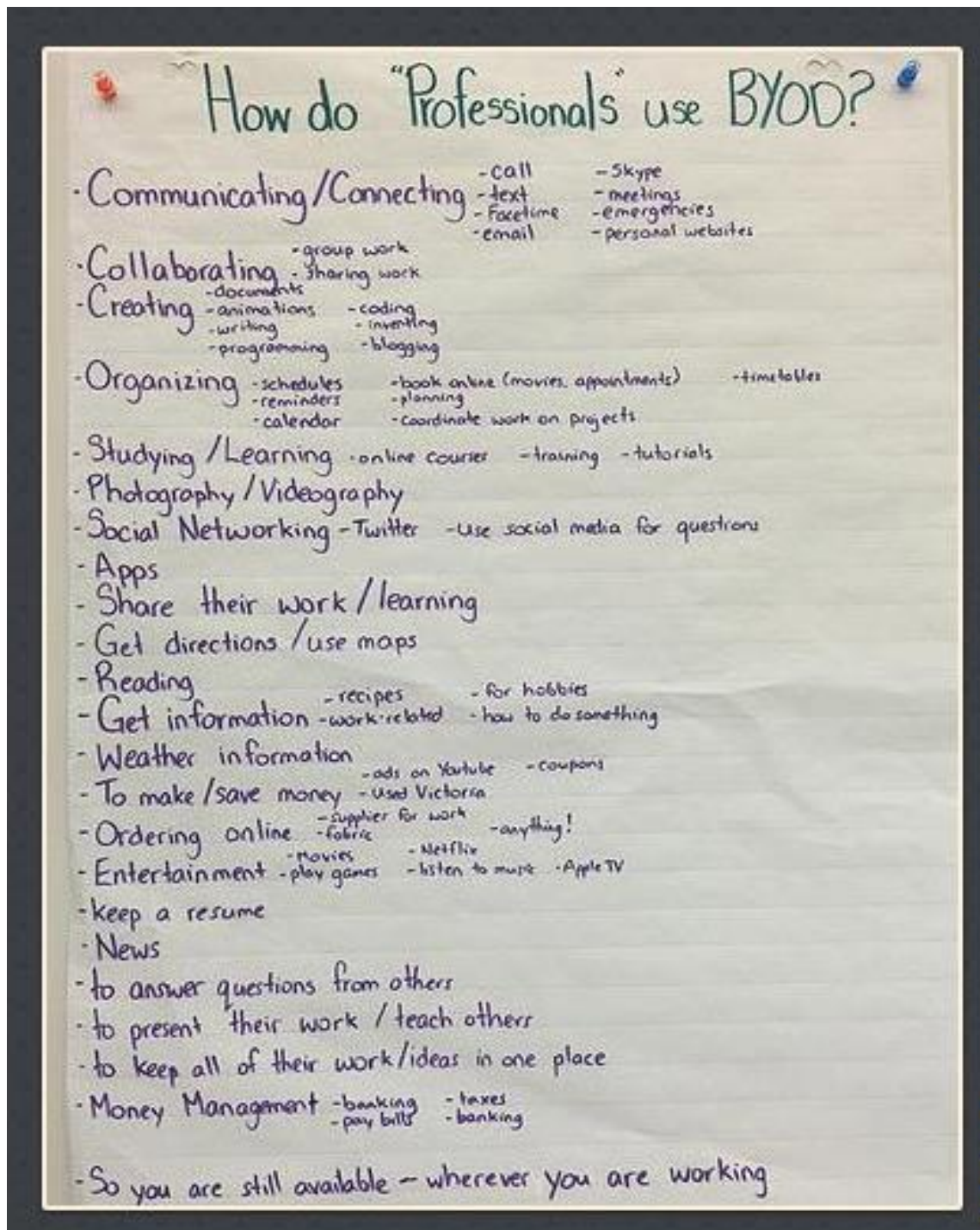


Figure 31. BYOD resources (Fong & James, 2015). Retrieved from <http://bcdigit.wix.com/bcdigit#!byodresources/cd3r>

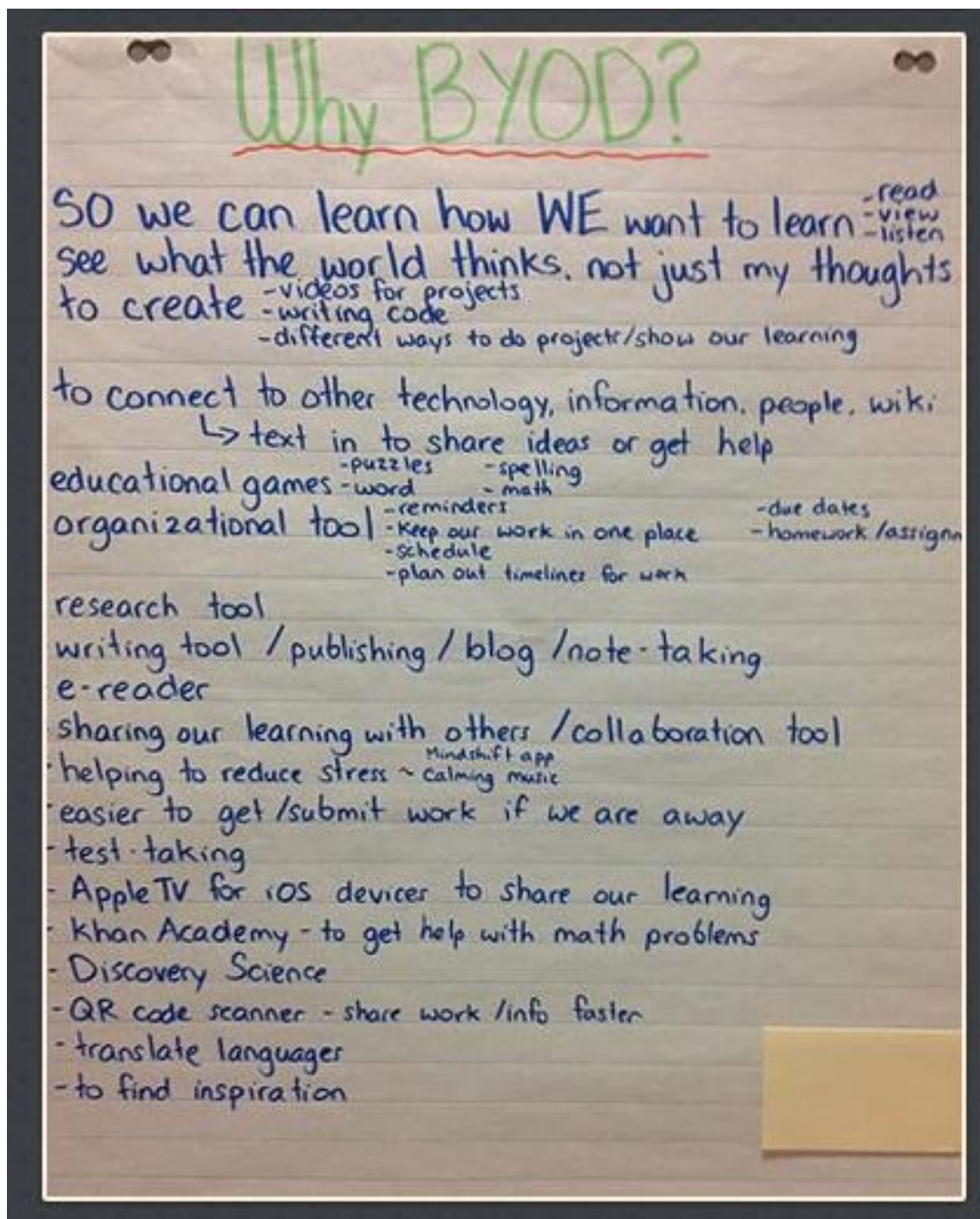


Figure 32. BYOD resources (Fong & James, 2015). Retrieved from <http://bcdigit.wix.com/bcdigit#!byodresources/cd3r>

# BYOD Resources

There are many online resources for Bring Your Own Device programs. Choose activities that are device-agnostic, and will encourage student ownership of learning.

For example:

- blogging
- connecting on social platforms or backchannels
- maintaining a personal e-portfolio
- Google Apps for Education
- Office365
- research
- creation of multi-media
- personalization of learning: allow students to pursue topics of interest, seeking information in ways that best support their learning needs
- Genius Hour

*Figure 33.* BYOD resources (Fong & James, 2015). Retrieved from

<http://bcdigit.wix.com/bcdigit#!byodresources/cd3r>

One way that I have started the meaningful implementation of BYOD in my own classroom is by asking my students to reflect upon how professionals use their own devices in their day-to-day activities to support their work, pleasure, or learning. A day or so later I ask the students how their own devices could be used in schools to support their work, pleasure, or learning. I keep both lists posted and add on as we discover new mindful ways that technology can be used in our lives.

Other resources to support BYOD in your classrooms can be found by following the links on the buttons below.

BYOD Twitter Chat

Pearltree Collection BYOD

BYOD Livebinder

Cybraryman BYOD

*Figure 34.* BYOD resources (Fong & James, 2015). Retrieved from <http://bcdigit.wix.com/bcdigit#!byodresources/cd3r>

## BYOD Policies

The *BYOD Policies page* (Figure 20) is meant to support teachers in creating policies for their school or district by looking at the language that other schools and districts are using at the middle school level. A process for creating policy is suggested where the document is co-crafted by colleagues, students, administration, and parents all meeting to have input. There is also a suggestion to investigate whether the district requires any standard language or documents for adopting a BYOD policy. We chose to include a link to the Alberta Education (2012) BYOD document, as it is an excellent example of a well-crafted and thoughtful approach to transforming learning and teaching with the addition of personal devices.

**Bring Your Own Device (BYOD) Policies**

Use these samples as place to customize your own policy. Consider the needs of your learners and the families in your community. How will you ensure equitable access to technology? Many schools are disassembling iPad carts to add a few individual iPads to each classroom to provide technology to students who do not have access to their own devices for whatever reason.

When developing your own policy consider looking at policies already in place in your district. Is there any standard language that you must include? Create the policy with parents, students, colleagues and administrators having input on the expectations.


Alberta BYOD Document

- Ridgeview gr. 4-7
- BYOD Surrey
- BYOD Coquitlam
- Rosedale Traditional BYOD
- GMS BYOD
- BYOD Vancouver
- BYOD Chilliwack

Figure 35. BYOD policies (Fong & James, 2015). Retrieved from <http://bcdigit.wix.com/bcdigit#!byodpolicies/c12fw>

## **Digital Citizenship**


Using personal devices at school to apply the lessons of digital literacy may support learners in developing life-long habits and practices that enable them to be active participants and proactive citizens. The *Digital Citizenship page* (Figure 21) is meant to reinforce the idea that citizenship can be defined in familiar terms wherever it is being examined: whether in a face-to-face interaction or a digital collaboration. Digital footprints is a suggested discussion topic to support student thinking about the legacy of their digital work.



What is Digital Citizenship? Digital citizenship is how our students interact with the online world. Digital citizenship defines what is considered responsible behavior with the use of technology. Digital citizenship is also the impact we have in the online community. It is who we choose to interact with and how we choose to interact. Our 21st Century students are citizens of Web 2.0 and many of them are contributing personal information to the online community through interactions with social media. They are no longer passive consumers of Web information, but active creators of Web content. Through a growing and evolving suite of social media sites, our students communicate and contribute by living simultaneous online and offline lives.

Citizenship as taught by many guides our actions in the physical world. Learning about digital citizenship will guide our actions in the digital world. Web 2.0, the Internet, World Wide Web; however described, the online environment is an abstract and intangible world that is hard to understand for many students. Yet, many of our students use it for connecting and communicating daily. Social media provides different platforms and media for our students to communicate and share personal information.

*Figure 36.* Digital citizenship (Fong & James, 2015). Retrieved from <http://bcdigit.wix.com/bcdigit#!digital-citizenship/c322>



## Digital Footprints

The digital footprint refers to the recorded history of online activity for any given individual. For many students, their digital footprints begin at a very young age. Parents and family members post pictures, write blogs, and upload video of children to share with others. Without the consent of the child, a digital footprint begins to take shape.

As students begin to engage in online activity themselves, they further increase their digital footprint through the websites they visit, the personal information they post, and the Web 2.0 sites that they communicate through. Many students will engage in personal conversations and share private information about their lives through texting, posting pictures, and videos. Their online world becoming the conduit through which students share their lives; sometimes without any regard as to who will access their Web 2.0 identity.

Many students lack an understanding of the permanence of digital footprints. Once posted to Web 2.0, this information is nearly impossible to retrieve and becomes a permanent part of their online identity. Post-secondary institutions, employers, and law enforcement agencies are just a few of the organizations that peer into the digital footprints and online identities of people in order to gain clear insight offline and online personalities.

*Figure 37.* Digital citizenship (Fong & James, 2015). Retrieved from <http://bcdigit.wix.com/bcdigit#!digital-citizenship/c322>

This website is meant to constantly evolve as new resources, ideas, and moderators are added. At this point in time, we have captured the first iteration of what we hope will become a valued resource to educators in B.C. as they support their middle school learners in developing their digital literacy skills.

## **Chapter 4: Final Reflections**

### **A Journey of Two in a Community of Many**

This master of education degree has brought together two middle school educators, Heidi James and Jarod Fong, who share a common interest in exploring best practices for fostering digital literacy and digital citizenship skills with our learners. Our Master's journey began with an examination of how a BYOD practice can impact student learning. Our two schools were at different places exploring BYOD. One school had welcomed student-owned devices with a policy in place for three years while the other was beginning discussions about implementing a BYOD policy. The school with more BYOD experience had noticed that they had reached a "plateau" in personal device use, where routine use focused primarily on Internet search tools, video and still camera use, and text-based software applications. The school that was starting their journey needed to overcome staff concerns, student habits, and equitable access.

The common ground for both schools was the need for a solid pedagogical purpose for personal device use in our classrooms. This led to discussions about how a foundation of digital literacy was needed for the educational community in order to guide how connected learning could be supported through personal technology. Jarod Fong and Heidi James began exchanging ideas and collaborating over this shared interest from the first year of this Master's program and have continued to collaborate since.

A community of learning has been a theme throughout our Master's journey. Using technology, we have been connected with a cohort of educators from throughout B.C. Together with leaders in educational technology and guest speakers from across

North America we have expanded our personal learning networks beyond our districts and into the connected environment of Web 2.0.

### **The Importance of Digital Literacy and Digital Citizenship Resources**

B.C. has a complex tapestry of laws designed to protect the privacy of our youth. In order to ensure that the activities that support the development of digital literacy meet the standards set out by the FOIPPA, educators must have access to the language and expectations set out by the Province of B.C. Heidi chose to examine the language of *B.C.'s Digital Literacy Framework* (British Columbia Ministry of Education, 2013) and its implications for learners and educators.

Digital citizenship and responsible use of technology by students and educators is becoming increasingly important as many students who enter classrooms are already experienced with social media. Our students are not just consumers of information, but are quickly becoming contributors to Web 2.0. With that in mind, Jarod chose to take an intensive look at digital citizenship and the best practices for creating a positive, contributing online community.

The goal for our co-created project, a website for educators, was to develop a resource that teachers everywhere can use to explore resources and activities related to digital literacies and digital citizenship. With the audience of the website being teachers new and experienced to digital resources, we ensured that the language used explains complex concepts in a friendly and non-threatening way. In order for the website to remain relevant, it will be continually updated and welcome new authors and contributors regularly.

The website includes many of the facets that teachers need to navigate technology in education. We first began by looking at the goals for responsible technology education. Information from the *B.C. Standards for Students* (British Columbia Ministry of Education, 2013) as well as the *ISTE Standards for Teachers* (International Society for Technology in Education, 2008), *Standards for Administrators* (International Society for Technology in Education, 2009), and *Standards for Coaches* (International Society for Technology in Education, 2011) are included as guides for technology use in schools by all parties involved in education. The B.C. framework and ISTE standards provide a solid foundation for teachers to begin thinking about and forming their practices.

While standards are a starting point to technology in education, there are many more resources for teachers to be aware of and access. To assist teachers in beginning their own journey of teaching with technology, we chose to include activities that introduce digital literacy and citizenship. The activities are safe for all teachers of all levels, and are good practice with regards to teaching digital literacy and responsible digital citizenship. These activities are broad in topic and allow teachers to explore different aspects including social media, coding, and differentiated learning for students. For further information, building a knowledge base, and expanding learning networks, there are links to professional development resources, educational technology communities, and policies such as B.C.'s FOIPPA laws. The content of the website is well grounded in digital literacy and digital citizenship. As technology use and online connectedness increase and become integral parts of a student's 21<sup>st</sup> century education, both of these focuses will become important in education and in the future of social and professional networks.

The launch of our website is not the end of our resource development; it is the beginning. Technology and its capabilities evolve and change at a rapid rate. In order for our resource to maintain its relevance, we are inviting the education community to help us. Through our Twitter handle, @BCDigLit, we will be hosting future educational Twitter chats to connect educators and others with an interest in education to our resource in order to include other voices, experts, and contributors. Our hope is that the website created by two educators for a Master's project will grow to a resource authored by an international community.

### **Connecting Beyond the Classroom**

One of the major themes of our Master's experience has been community and growing our personal learning networks (PLNs). Our first area of challenge and growth was the development of individual personal blogs where we shared out our learning, reflected, and exchanged feedback. Being public, this became an authentic learning experience for both educators as we explored our own anxieties and thought processes about writing for a global audience alongside our own learners as they completed a similar blogging task. We were asked to increase our presence on social media through participation on Twitter chats, reading and commenting on blogs, and sharing out links of value. These activities provided insight into our own interactions in cloud-based social platforms and the required literacies needed to be a positive experience in these spaces.

Becoming a part of a global network not only helped to calm our anxieties, but it also exposed us to the nearly unlimited resources of a global online community. We learned the value of becoming a part of that community as we continued to expand and connect with people. People such as "The Maker," Syliva Martinez, "The Story Teller,"

Alan Levine, “The Joyful,” Dean Shareski, and “The Inquirer,” Jeff Hopkins, introduced us to so much more than technology in education. They exposed us to educational philosophies and pedagogies that we could take, explore, and implement in our classrooms. Their stories and experiences were real and well grounded; they broadened our horizons as teachers. Connecting with other experienced educators online introduced us to a vast and varied array of ways to connect with our learners. There are more people like those we have met; we simply need to continue exploring with confidence and connecting with them.

As our experience connecting to educators has helped us to grow as teachers, our goal now is to connect our students using technology. There are educators and students of all types that are online and wanting to connect for the purposes of learning, collaborating, and sharing experiences. Connecting online is a safe and engaging way for us to introduce our students to the global community and embed the concepts of digital literacy and digital citizenship.

We were also provided with the opportunity to engage in several passion projects to support our own explorations in self-directed learning. These projects supported our personal development of information literacy skills as we learned to vet resources quickly and navigate our own learning needs. Again, Jarod and Heidi found themselves in similar genres of study as they explored how to support their personal health. Jarod chose to increase his physical health literacy while Heidi worked to practice mindfulness and meditation to add balance to her endeavors. In the spirit of fostering effective digital literacy through collaboration and communication, Jarod and Heidi continued to learn

and work together through the process of arriving at the shared project of a digital literacies resource for middle school educators in B.C.

### **Moving Forward**

As we take with us the collective experiences of our TIEGrad community, we cannot help but acknowledge the impact of three years of learning in a cohort of exceptional educators from across B.C. The topics explored have been as diverse as the cohort itself and already we take the experiences learned through our time with #tiegrad to our careers. Our confidence as members of a collaborative online community, the growth of personal learning networks, the learned benefits of self-regulated and inquiry based learning, and the pure joy of engaging in passion projects are all experiences that we will take with us into the future. We have been guided by professors who wished to empower us in our own learning journeys and hoped that their model would impact our own pedagogical beliefs. Learning is exploring, experiencing and evaluating. Learning is personal for each of us and therefore a single teaching is not sufficient.

The experience of being a student in the 21<sup>st</sup> century learning environment has impacted our perceptions of education. We have been students surrounded with and connected through technology, and asked to engage in pedagogy of self-regulation and inquiry-based learning. This environment has given us the experience of choosing not just what we learn, but how we learn. We have been encouraged to embark on our own self-directed learning journeys. This has not only increased our confidence as educators, but has allowed us to gain the expertise to be confident in presenting our ideas to others.

Both Heidi and Jarod are engaging in discussions about changes and innovations in education with parents, district leadership, and the Ministry of Education. Through

collaborating, networking, and gaining experience, we stand behind our educational beliefs with confidence as we present our ideas to others. Our Master's program encouraged us to share our ideas not just with those around us, but publicly and confidently through social media. Our blogs, Twitter conversations, assignments, and projects were all shared on a global platform. We are no longer insular in our thoughts and teachings. We are able to share our work, our thoughts, and our ideas with a much larger network of educators and benefit from the feedback we receive. This can only lead to better and more sound educational practice.

### **Recommendations for Others**

As technology becomes more ubiquitous and integrated with education, it will be important for educators to recognize that it is not simply a tool, but a way of life for our students. Technology gives multiple access points of communication and can blur the lines between their physical reality and their online reality; online life and physical life are becoming one. While we have always taught literacy and citizenship, it is imperative that we now include digital aspects to both of these topics.

Educators need to be mindful that our students are being prepared for a world that will change drastically over the course of a lifetime. They do not just require the knowledge of digital literacy and digital citizenship, but they require adaptable skills and guidance as they continue to learn how to navigate a changing technological world. Teachers and students need to learn together. Our students should not live two lives, a school life without technology and a technology-rich life outside of school. Technology should be used in their schools to teach about responsible and effective technology use.

Finally, there is a vast network of experts that are willing to share ideas and teach about responsible and effective technology use. If you feel alone in your quest, you are not. Begin by searching within a community of comfort. Seek out colleagues, experts within the district, or people with similar ideas who can be companions on a learning journey. When comfortable, begin to explore the larger global community. It is amazing how many people will respond to a question posted on Twitter.

A community of learning is a powerful force that can embrace and create positive change in education. Our #tiegrad community has always been strong. We have found the joy in learning together as a cohort and, as we end our Master's journey, there is no doubt that our network of learning will continue to be strong and collegial into a future that we will explore together. We are role models for our students, and resources for our colleagues of what education can be moving toward; a community of learners that is global, and embraces all people who care about education and have found the joy of learning.

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