The New Literacies of Web 2.0: A Case Study of One School District

by

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Abstract

While we know that youth are increasingly using the Internet for school purposes like gathering information for assignments, research is just beginning to identify the actual Internet processes and practices of adolescents when learning. This study joins the theoretical conversation surrounding New Literacies Theory by combining the perspectives that Web 2.0 is a new literacy, that the new knowledge economy requires youth to be literate in new ways, and that Web 2.0 is a democratic medium.

This is a case study using the mixed methods of interviewing, participant observation, and surveys. The goal of the case study school district was to implement digital literacies in its schools. The principal at the focal school had adopted this goal and was encouraging teachers to implement Web 2.0 tools. Survey findings showed that the majority of teachers were not using Web 2.0 tools in their practice. However, the practices of three teachers who were using Web 2.0 tools were investigated. Findings showed that these teachers used Web 2.0 tools in both new literacy ways and traditional ways that simply took a former practice and technologized it.

Findings further showed that the students were not frequently using the Internet in ways that engendered practices associated with new literacies. This was partly attributed to the fact that teachers were not using these literacies in schools. Descriptive statistics and t-tests showed statistically significant differences between many of students’ self- and school-selected practices. Most of the tools were used more frequently for self-selected reasons, whereas only wikis were used more often for school-selected practices for both accessing and contributing to
information. Also, students accessed the web for information more often than they contributed
to it. This practice matched that of their teachers. The focus group interview showed that
students’ self-selected Internet practices were more participatory and social whereas their
school-selected practices were more passive.

This study extends the developing New Literacies Theory by proposing that no one form
of literacy supersedes or holds more value than another. It also suggests that we take care not
to devalue existing forms of literacy when we begin to integrate new forms.
Preface

Ethics approval for this study was obtained from the University of British Columbia Behavioural Research Ethics Board. The certificate number is H08-00431.
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Glossary

**Blog (Weblog):** refers to a dynamic website that can act as an online journal. It allows the user to instantly and regularly publish on the Web and for others to comment on their publication.

**Bricolage:** refers to taking bits and pieces of a variety of available materials to create a new piece. This technique can be used by taking works that others have created and then manipulating, combining, and shaping those works to make it one’s own.

**Digital Literacy:** refers to the ability to communicate and find information in digital environments. It extends to include the ability to evaluate, synthesize, create, and share information.

**Hypermedia:** refers to plain text, hypertext, audio, video, graphics and other multimedia representations that are connected to one another in a non-linear fashion.

**Hypertext:** refers to text that is linked to other text based on the relationship it has to the other text or the structural organization of the work. It is not reliant on chronology.

**ICT:** stand for Information and Communication Technology. It refers to technologies that have information and communication capacities. In education, the “C” in ICT is often neglected and the focus is put mostly on information retrieval.
Internet: refers to a system of networks that is interconnected. World Wide Web refers to the information that can be accessed on the Internet. Because in everyday use and in many scholarly and tabloid articles the terms Internet and World Wide Web are used interchangeably, I shall use them interchangeably in my paper as well.

Knowledge Society: refers to a society where knowledge is a valued economically, socially, and culturally.

Learning: refers to the act of gathering, synthesizing, analyzing, evaluating, presenting, and creating knowledge. In my paper, I will borrow from Kevin Leander (2008) and refer to learning in two ways: self-selected and school-selected. School-selected learning refers to the work that teachers have assigned students and does not encompass the broader understanding of self-motivated learning that students pursue on their own. Though it is sometimes difficult to distinguish the two, I prefer these terms over the dichotomy of in-school and out-of-school that assume that the lives of youth happen in different unrelated spaces. Furthermore, learning refers not only to accessing, accumulating, evaluating and synthesizing knowledge, but more broadly to contributing to knowledge by creating as well.

Machinima: refers to taking video and audio clips of games and then producing movies with these shots.

Microblog: refers to blog technology that allows for short regular post updates.

Mods: refers to changing existing games by creating new elements like characters, weapons, storylines, and environments.

Podcasts: refer to audio files of interviews, talks, lectures, or other genres of the spoken word.
that can be downloaded to computers and audio players.

**RSS:** stands for Really Simple Syndicate. It is a feed that works to pull new information from the Web into one location.

**Social Bookmarking:** refers to a system of storing, managing, and organizing bookmarks on the Web and then sharing these bookmarks with others. These sites can also be a practical option for searching for Web pages that others have bookmarked and tagged.

**Social Media:** refers to Internet tools that allow users to generate knowledge and connect with other individuals. In this manuscript, the term social media is used interchangeably with Web 2.0 and Social software.

**Social Networking:** refers to dynamic websites where members create communities online that allow them to connect with other individuals in that community and learn about their interests, activities or any additional posted subject matter.

**Social Software:** refers to the applications available on the World Wide Web which allow individuals to contribute content to the Web in a fairly simple manner. Examples include YouTube, Facebook, Flickr, Wikipedia, and most blogs.

**Social Web:** refers to components of the Web that are participatory, collaborative, and distributed. These are dynamic environments where several users can contribute. These spaces are also known as Web 2.0 environments.
Web 2.0: refers to the second generation of the World Wide Web. The Web is no longer a place to go simply to retrieve information; it is now a place to go to contribute information and to add knowledge. It is a democratic environment that encourages knowledge dissemination. Because it is a social space, it is frequently referred to as the social Web.

Wikis: refers to dynamic websites that allow for a collaborative digital writing space. Users can add and edit content with considerable ease.

Youth: refers to individuals who are 12-18 years of age.
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Dedication

This dissertation is dedicated to Nasser who asked me one day, “Why don’t you go get your PhD?” as if it was the most straightforward obvious next path in life. With this question and a follow-up conversation, he awakened in me a lifelong dream I never knew I had and instilled in me the confidence to believe I could actually be accepted into a program and complete the degree. Thank you for bringing out the best in me.
1.0 Introduction to the Study

1.1 Background

The Internet holds enormous potential for literacy and education and consequently a need has grown to investigate its capability as a resource for learning. Educators have only begun to tap into the power of the Internet. James Edwin (2001) uses a metaphor to show that we will not begin to understand how computers and the Internet can influence education until we stop holding back and let new technologies play the large role in classrooms that they can. He depicts a scene where the pencil and paper are the new technologies and educators are excited about their potential. They’re not sure of the full impact however, so are not willing to give one to each student. Rather, they decide to place one pencil and one piece of paper in each classroom and see what will happen. Do we look at computers, the Internet, and social media in this same apprehensive manner? It is not adequate to position one computer per classroom or situate several in a lab (Edwin, 2001). We will not feel the full impact of the Internet until we embrace its potential and allow students increased access paired with critical literacy skills that will assist them to safely and responsibly partake in these digital environments.

This study explores the practices of the educators and students within one school district and school that have set as their goal to incorporate digital literacies, especially Web 2.0 practice (refer to the glossary for a list of definitions), within the curriculum.
1.2 The Study

1.2.1 Problems

Research has shown that knowledge is being taught in schools in traditional ways that do not encompass the new ways of learning and understanding that are engendered in Web 2.0 (Warschauer & Ware, 2008; Lanksear & Knobel, 2007; Ertmer, 2005). Learning in schools is rarely democratic, participatory, collaborative, distributed, or multimodal. Teachers seldom use the Internet in new Web 2.0 ways, but instead assign projects that do not lead to novel Internet use. As a result, a disconnect builds between students’ self- and school-selected Internet use.

1.2.2 Research Questions

To explore the stated problems, I asked three questions:

1a. How are the administrators of a district and the teachers at a school (who have set as their goal to incorporate digital literacies within the curriculum) using and encouraging the use of the social Web to support learning in different disciplinary areas?

1b. What tensions may arise as a result of the imposition of these uses on the traditional structures of schooling?

2. How are students using the social Web to assist their school content learning?

3. To what degree is this school district’s goal of mandating digital literacy within the curriculum being adopted by its students?
1.2.3 Synopsis of the Research Design

I conducted a variation of the triangulation mixed method design (Creswell & Clark, 2007) to gather and analyze data about the critical case being studied. The case is of a school district that has set as one of its goals to incorporate digital literacies within the curriculum. The study further centres on a focal school within that case. I used the tools of participant observation, interviewing, and surveys to derive findings for the study.

My research strategy involved using purposive sampling to gather data through multiple methods from administrators at the school and district level and teachers at the focal school (including the teacher-librarian). I used multistage cluster sampling to select the student participants who automatically fell into the classes of the focal teachers. The design consisted of a preliminary phase and two other phases. Both quantitative and qualitative methods of data collection were used during all phases concurrently and weighted equally.

The preliminary phase held two purposes: to identify the site of study and to create and test all study instruments. First, I searched for school districts, schools, and educators who were keen on incorporating digital technologies, specifically Web 2.0 practices, to enhance student learning and identified the two potential districts. Upon closer inspection of these two districts, I chose Pacific Coast School District as the site of study. From that point, I identified Stoneledge Secondary as the focal school because of its keen adoption of the district’s digital literacy goals and then identified three teachers at the focal school who were attempting to incorporate the social Web into their teaching practices.
Second, I created and tested all the instruments that I intended to use for the study. Because three of the tools I planned to incorporate in the study had not previously been used as a data collection instrument, I decided to conduct a pilot study using the instruments to ensure their efficacy. As a result, two of the instruments were eliminated from the study. The pilot study also led me to make minor adjustments to other more conventional instruments such as the questionnaires and the interview protocol.

The purpose of the first phase of the research was to get an initial understanding of the district by interviewing the people responsible for creating the policies around the technological initiatives and to explore the manner in which the administrators and teachers of the focal school were attempting to implement the district policy by incorporating the social Web within the curriculum and school. This involved attending district presentations focused on technology learning, spending time at the focal school, reading online and paper literature about the school, visiting virtual classrooms, and interviewing the Superintendent, the Assistant Superintendent, the District Principal of Technology and Innovation, the three secondary school principals of the district, and three teachers at the focal school. To acquire an overall understanding of the school’s digital literacy practices, I also surveyed all willing teachers at the focal school using an online questionnarie.

The purpose of the second phase of the research was to examine more deeply the ways in which teachers were incorporating the social Web within the curriculum and to focus on the ways in which students were using it to learn. Overall, I spent an average of two days a week for a full school year at the research site for data collection. The number of days I spent on site
each week depended on the phenomenon being observed and the class schedules surrounding the phenomenon. During this stage, I conducted a survey of all willing grade 8 and 10 students using a paper questionnaire. Willing grade 10 students also participated in a focus group interview conducted using a blog. Before, during, and after the survey and focus group, I continued to conduct classroom observations in the three focal teachers’ classes.

1.2.4 Terminology

When talking about Internet literacy, both the scholarly world and the popular media use a barrage of terms. Some examples include Internet literacy, Web literacy, World Wide Web literacy, information literacy, media literacy, digital literacy, and Information and Communication Technology (ICT). Even the grammar around the terms is not exact. Do we capitalize the words Internet and the Web? Are they proper nouns? Should literacy be plural or singular? Though each term had its individual purpose in its naissance and growth, in many ways they can and have all been used interchangeably as well. I position how the terms are used within this manuscript in the glossary. The glossary further defines the many new terms that are fashioned daily such as Web 2.0 and social software. When reviewing the literature for this study, I used the terms employed by the authors of the papers cited. For the remainder of the chapters, I use the term Web 2.0 interchangeably with social media, social Web, social software, and social Internet tools. Because the Internet practices explored in this study are largely delineated by the social Web, the next section provides some needed background.
1.2.5 The Social Web

The present literature and discourse around the Web makes continuous mention of the second generation of the Web—what is now referred to as Web 2.0. The 2.0 r/evolution is a social movement. The Web has now become a social and democratic place where any individual with Internet access and literacy skills can contribute to it. It is a new movement of collaboration, participation, knowledge creation, democratization of knowledge, and ease of information dissemination in multimodal ways and as a result holds enormous potential for education. It stands apart from the first generation of the Web, where only a few individuals who were highly literate in both language and technology could contribute to it.

Dale Dougherty, co-founder of O’Reilly Media, coined the term Web 2.0 in 2004 (Jones, 2007). The idea came about during a discussion about the differences between companies that survived the dot-com bust and those that did not. It became apparent that many of the companies that survived the bust shared many similar social features such as user contribution and participation (Tapscott & Williams, 2007). The group discussing this issue also wanted to portray that the Web would continue to be an invaluable and important tool. Some maintain that the difference between Web 1.0 and 2.0 is intangible because technology naturally evolves and the Web changes with new technologies combining both new and old characteristics with a combination of features from both to create the current functioning of the Web (Cormode & Krishnamurthy, 2008).

The inventor of the Web, Tim Berners-Lee, originally intended to create an interactive environment where everyone could edit information. This was his idea of interactivity, not the
notion of clicking our way through websites (Lamb, 2004). Therefore, he maintains that all Web 2.0 activities are supported by Web 1.0 principles and this “revolution” that many tout was his intention for the Web from the start. Regardless of its origins, the potential for education persists and consequently educators have begun to explore and mine this potential. However, as a result of factors such as commercial interests, fear of unintended consequences, loss of control, and inadequate time and resources, educators tend to tread lightly when adopting new Web 2.0 tools in their practices. Consequently, the democratic, participatory, collaborative, distributed, and multimodal components innate to the social Web are only slowly finding their way into classrooms, if at all (Moayeri, 2010; Lanksear & Knobel, 2007; Ertmer, 2005).

1.3 A Theoretical Framework in the Making

This study joins the ongoing theoretical conversation surrounding New Literacies Theory. New Literacies is an evolving theoretical construct and as a result this framework “takes an open source approach to theory development, at the highest level, inviting everyone who studies the Internet’s impact on our literacy lives to contribute to theory development and to benefit from others’ contributions” (Leu et al., 2009, pp. 5-6). My study combines the following three perspectives in developing its framework and adding to New Literacies Theory: 1. that certain uses of Web 2.0 tools make them new literacies, 2. that the new knowledge economy requires youth to be literate in new ways, and 3. that because of their participatory, democratic, collaborative, and distributed natures, Web 2.0 tools are new literacies that have the potential to keep the Internet as a democratic medium, unlike media that came before it.
1.3.1 New Literacies

Traditionally literacy is defined as the ability to read and write. Many have challenged this notion and have expanded the definition of literacy. Gee (1996) approaches literacy through the lens of discourses. He discusses two types of discourses. Our primary discourses have to do with the way we have learned to be and the way we have learned to do things while growing up within our homes and with our families. Conversely, secondary discourses are the way we have learned in institutionalized settings like schools, churches, and places of work. The farther away our secondary discourses are from our primary discourses and other secondary discourse, the more difficult it is to work within the secondary discourse. That is one reason that can lead marginalized groups to have difficulty with their secondary discourse (Lankshear & Knobel, 2007). Literacy then can be defined as mastering a secondary discourse (Gee, 1996).

The concept of vernacular literacy—those that are “rooted in everyday experience and serve everyday purposes” (Barton & Hamilton, 1998, p. 251)—fits well with the notions of primary and secondary discourses and the new literacies perspective. Unlike the dominant literacies of schools, vernacular literacy takes a grass-root approach and originates in everyday life. Vernacular literacy draws out from daily needs and is a hybrid practice which merges from various life domains. They are much more likely to be self-selected literacy practices than practices that are imposed on individuals by institutions (Barton & Hamilton, 1998).

Because of the changing digital environment, the tensions that exist between the secondary discourse and the primary discourse paired with vernacular literacy, the new literacies perspective needs to offer broader definition of literacy than only the traditional
notions of reading and writing. Such definitions are beginning to be formed by researchers. One
definition of the new literacies of the Internet and other Information and Communication
Technologies (ICT) offered by Leu et al. (2007) is as follows:

The new literacies of the Internet and other ICTs include the skills, strategies,
and dispositions necessary to successfully use and adapt to the rapidly
changing information and communication technologies and contexts that
continuously emerge in our world and influence all areas of our personal and
professional lives. These new literacies allow us to use the Internet and other
ICTs to identify important questions, locate information, critically evaluate
the usefulness of that information, synthesize information to answer those
questions, and then communicate the answers to others (p. 1572).

However, as suggested by the authors themselves, this definition is incomplete and not
fully adequate as new literacies are continually changing. With time, the definition of new
literacies will have to be adjusted to meet the changes in technology and culture. Also, as new
literacies is a perspective in the stages of forming into a theory, the definition is in the
developing stages and open to additions and changes.

If we look back, we see some vivid similarities between traditional and new literacies.
This is especially true if we look across cultures. We see literacies that are connected to images
and sound. We see connections to oral storytelling, instruments like drums and flutes, facial
expressions, gesturing with arms and hands and an abundance of rock carvings (Bruce, 2003).
These literacies along with others have all found their way into the digital realm of ICT via the
Internet. Even the act of recognizing and valuing these forms has allowed them to be slotted under the term literacy.

The new literacies perspective (Lankshear & Knobel, 2003; Leu et al., 2004) sees literacy as a social term that has with it positive and negative connotations such as “literate,” “illiterate” and “illiteracy.” These terms have a social class association (Lankshear & Knobel, 2003) and do not encompass the many different ways to be literate, including using the needed language in the required way within the communication context (Gee, 1990).

New literacies are gaining social value (Warschauer & Ware, 2008). This is happening because culture and literacy cannot be separated from technology. They are complexly and intricately connected to one another (Warschauer & Ware, 2008). Issues of identity are connected to technology as well because individuals join online communities and embody new selves and attempt to assimilate within the virtual community. Because literacies are shifting in society, a major disconnect is becoming apparent between the self- and school-selected literacy practices of adolescents (Warschauer & Ware, 2008). Regardless of whether schools value the myriad of ways that students construct meaning with text, all the different ways remain an inherent part of the definition of literacies.

The term “old” in phrases like “old literacies” and “old times” is misleading because it implies that those concepts are no longer in existence (Gee, 2002). That is not the case. Literacy in its traditional sense holds a high value and continues to prevail especially in academic settings. If youth do not become competent with academic language, lower class and minority students will continue to be disadvantaged (Gee, 2002). The difference is that academic
language is no longer the sole tool for knowledge formation nor is there agreement that it is the most powerful one.

To consider a literacy new it needs to involve not only new technology, but also new ethos (Lankshear & Knobel, 2007). The new ethos refers to the fact that “new literacies are more ‘participatory,’ ‘collaborative,’ and ‘distributed’ in nature than conventional literacies. That is, they are less ‘published,’ ‘individuated,’ and ‘author-centric’ than conventional literacies. They are also less ‘expert-dominated’ than conventional literacies” (Lankshear & Knobel, 2007, p. 9).

Here, too, vernacular literacies play an important role as social and cultural underpinnings assist in adding value to new literacies. They have the potential to “give rise to new practices—improvised and spontaneous—which embody different sets of values from dominant literacies” (Barton & Hamilton, 1998, p. 253). Tensions arise in these situations as vernacular literacies don’t necessarily “require experts and teachers through whom access to knowledge is controlled” (Barton & Hamilton, 1998, p. 22) and contentious debate may arise as some teachers may consider it their job to resist such vernacular, popular, and grass-root practices and instead replace it with schooled practices.

Many components of ICT have arisen from vernacular literacy and include the ethos to which Lankshear and Knobel refer. Warschauer & Ware (2008) identify the following six features that show ICT’s revolutionary characteristics, all which contain the ethos: 1) New literacies in the form of ICT allow written communication to be interactive as seen with instant messaging and texting, 2) ICT allows for simultaneous communication with several participants
from around the world as with listservs, blogs, bulletin boards, and discussion forums, 3) ICT encourages non-linear reading through hypertext challenging former notions of narrative reading, 4) ICT allows multi-media creation to become a community affair where many contributors combine a variety of digital tools to create a given product, 5) ICT allows for anyone’s creation to be easily self-published for a global community through outlets like blogs, wikis, homepages, and podcasts, and 6) ICT connects the limitless plethora of information together on a database that is available globally.

Not all components of ICT are considered new literacies; rather only those cases that have both new technologies and new ethos would be considered as such (Lankshear & Knobel, 2007). New technologies that are being used in traditional ways are not considered new. For instance, word processing is not a new literacy as it is employing writing in the form of traditional genres with a new technology and consequently only replicating a traditional literacy. Even the function of tracking changes collaboratively with others is a process that existed previously on paper. This is not to say that it does not have the potential to be used as a new literacy. The key remains in the manner that the technology is used and not the technology itself.

Technology in the form of new literacies is allowing us to effortlessly manipulate digitized bits (Lankshear & Knobel, 2007). We can easily remix songs, manipulate photos, and reengineer games. Therefore, we should not look at new literacies “in terms of fleeting instances, such that email is already an ‘old’ new literacy. Rather, new literacies are as ‘long’ as the ‘moment’ of their juxtaposition with ‘conventional’ literacies” (Lankshear & Knobel, 2007,
p. 20). For instance, the acts of writing fan fiction, remixing music, and publishing zines are considered new literacies even though they have existed for decades (Lankshear & Knobel, 2007).

As educators, are we considering these new literacies as critical to learning or are we only valuing traditional literacy? Many Web 2.0 tools comprise the described new literacies components and consequently hold great potential for learning.

1.3.2 New Knowledge Economy and New Literacies

Literacy has historically been defined as the ability to decode and comprehend text. This definition was limited even before the advent of digital technologies. Still many schools today embrace this definition (Warschauer & Ware, 2008) and consequently may focus only on decoding activities that involve much memorization and rote and have less room for critical analysis, creation, or collaborative activities. Literacies can be viewed as plural with each literacy requiring different types of skills and capability depending on the function and context that structure that literacy (Luke & Freebody, 1999; New London Group, 1996).

The perspective of New Literacies then focuses on more than the basic traditional literacies. It broadens its view to include “skills, knowledge, and attitudes that enable complex ways of getting and making meaning from multiple textual and symbolic sources” (Warschauer & Ware, 2008, p. 215). Three discourses that surround literacy and technology include the Learning, Change, and Power Frameworks (Warschauer & Ware, 2008).
The Learning Framework is frequently seen in quantitative studies and is adopted by a broad range of researchers (i.e. Cuban, 2001; Becker, 2000). It is concerned with how learning can be enhanced by using new technologies and focuses on assessment and scores on standardized reading and writing test. Researchers using this framework, however, have difficulties showing links between increased use of new technologies and increased test scores. It is more critical to notice that it is not the mere presence of the technology that is going to influence learning but rather how that technology is used. Many researchers including Street (1995) and Lankshear & Knobel (2003) agree that technology “is better understood not as having an impact but rather as helping reshape a broad social ecology, and thus affecting learning in ways that are unforeseen” (Warschauer & Ware, 2008, p. 219).

The Change Framework has to do with the radical digital shift happening within literacy. New technologies are compared to the printing press in 15th century Europe where rapid shifts were occurring in communication and knowledge production (Warschauer & Ware, 2008). This framework includes research from multiliteracies studies (i.e. New London Group, 1996), game studies (e.g., Gee, 2003), and cultural studies (i.e. Tyner, 1998). Like the Learning Framework, the technology itself does not automatically improve learning or life. It is the manner in which the technology is used that will benefit users.

The Power Framework has to do with economic, social, and cultural equity that come with issues such as access to technology. It has similarities to both the Learning and the Change Frameworks. Like the Learning Framework, it puts high value on student school achievement and like the Change Framework, it recognizes rapid shifts. The key to this framework is in its
focus on equality of access. It focuses on how unequal access could have devastating consequences for individuals in a society. It will make privileged individuals “interacting” and the less privileged “interacted” (Warschauer & Ware, 2008, 228). It also focuses on the influences of power that exist in schools especially the inequality of these relationships when it comes to literacy learning (Cummins, 1995).

High degrees of activity and criticality with Web 2.0 applications are associated with empowerment because these abilities enable participation, invention, and knowledge-building (Jenkins, 2006; Lankshear & Knobel, 2006). Castells (2002) argues that lack of opportunities to contribute to today’s networked society is “one of the most damaging forms of exclusion in the economy and culture” (p. 3). Schools have a responsibility to address the inequities of new literacies competency amongst today’s youth. The digital age has the potential to balance power because the knowledge economy is fluid, global (Bauman, 1998, 2000), and networked (Castells, 2001). Because technology has lessened the need for proximity, individuals are less interdependent on one another, and therefore, those with technological capital are no longer bound to any one community or its economical potentials (Bauman, 2000). As society changes, individuals need to possess the skills that will allow them to be competent within that society and schools need to provide support for learning such skills.

Researchers have labelled the manner in which labour and work have shifted in the past years with terminologies like “postFordism” (Piore & Sable, cited in New London Group, 1996) and “fast capitalism” (Gee, cited in New London Group, 1996). This era refers to a time that has passed the days of assembly lines of unskilled work and stringent hierarchies (New London
Group, 1996). This was a time of conflict between employers and their workers where tensions existed between how much and how quickly work would be done. It was a top-down system where the employers had all the power and knowledge and, therefore, would control the workforce. Then there were mediators that would broker between the employers and the workers.

This too is the way Gee (2002) explains that knowledge was viewed in schools: knowledge was created and owned by experts and enforced on students. Traditional literacies focus on academic languages (which are used in places other than schools as well). Castell (2000) described the idea of decentralization breaking hierarchical structures of organizations: “The main shift can be characterized as the shift from vertical bureaucracies to the horizontal corporation” (p. 176).

Instead of focus on hierarchy, there is now a focus on collaboration. Instead of workers being skilled in one small facet of production, they are expected to be multifaceted individuals who can contribute in a variety of ways (New London Group, 1996). In this new knowledge economy of the information age, progressive organizations (and schools) are beginning to empower their employees (and students) at all levels to make significant contributions and decisions. They are expected to identify problems, locate, evaluate, and understand information related to the problem, and then synthesize and present this information (Leu et al., 2004). Will policy makers, educators, parents, and even students embrace such a shift?

People will only accept new social languages if they value what it brings. James Gee (2002) suggests that “[p]eople can only see a new social language as a gain if they recognize
and understand the sorts of socially-situated identities and activities that recruit the social language; if they value them or, at least, understand why they are valued; and if they believe they (will) have real access to them or, at least (will) have access to meaningful versions of them” (p. 63).

The new capitalism relies on the fact that shifts are happening so quickly that it becomes far more productive to collaborate and share knowledge than to go at it alone (Gee, 2002). According to the New London Group (1996), there are three types of design in the New Capitalism that are well compensated: the capacity to design new identities, affinity groups, and networks (Gee, 2002).

Designing new identities refers to the ability to design products, services, and experiences. Designing affinity groups is where an affiliation is formed by a group of people based on similar interests, agendas or activities. Wenger (1998) referred to this as “communities of practice” within a workplace and Brown and Campione (1994) referred to this as “communities of learners” in schools. In such communities, knowledge is considered to be both “intensive,” meaning every individual has specific knowledge to share, and “extensive,” meaning every person shares that knowledge with others. Therefore, knowledge is not kept by any one person but rather shared with one another (Gee, 2002). New people to the community of practice learn by participating in the community and not by getting instruction from outside the community (Gee, 2002).

Designing Networks has to do with connecting people and organizations in a manner in which they can easily communicate. Networking also connects people to technological tools
(Gee, 2002). The more connections one has with different networks, the more opportunity to access information and consequently learn, change, and adapt. However, if everyone is connected in the same ways then no one holds any advantage. The more connections we make (either physically or virtually) the weaker these connections are. This used to be a disadvantage, but now this view is shifting. The more connection one has, the more mobile s/he is and, therefore, the quicker one can move around leaving others to deal with the chaos they have left behind (Gee, 2002).

It is relevant for schools to create networked communities where youth communicate and contribute to the knowledge base. The growth of Web 2.0 allows for youth to be contributors to the new knowledge economy. However, many of today’s youth are exposed to richer learning experiences outside of schools than in schools (Gee, 2002). This is seen with gaming that includes factors like learning in engaging forms. It is difficult for youth who are engaging with this sort of learning experience at home to then go to school and be engaged in a more one-dimensional learning style in a top-down setting with no networks or affinity groups.

1.3.3 Web 2.0 as a Democratic Medium

The Internet is owned by the collective and different from media that preceded it because it is a democratic medium that allows for the dispersing of ideas (Lessig, 2002, Benlker, 2006; Fabos, 2008). The Internet, similar to the radio and television before it, started off with the intention of being a democratic medium that would equalize the power between the elite and marginalized, but its current path is leading it to be run by commercial interests and as a result capitalism is in position to once again trump democracy (Fabos, 2008). Therefore, as with
radio and TV, the Internet which started as a public democratic movement is becoming a medium primarily for commercial endeavours (Fabos, 2008). This view is already evident. However, one major difference between the Internet and former media is that the Internet remains open to the public allowing any user to contribute to its development for public good, personal gain, or commercial interest.

At the onset, the Internet was marketed to youth on television by focusing on its educational benefits and exploiting parents’ fears that their children would fall behind if they were not connected to this technology with vast educational potential. Fabos (2008) suggests that the reason behind marketing it as an educational tool instead of a business tool was to play on the fear of parents and have every household connected to the Internet so that companies could capture their audience before switching the focus of the Internet to commerce. This strategy worked as most US schools were connected to the Internet by 2000 and the Internet became the fastest growing media technology in history.

Fabos (2008) claims that while schools and homes were getting wired because of their excitement over the educational potential of the Internet, commercial factions and the government were “quietly paving the way toward Internet privatization and commercialization” (p. 850). As the Internet was being set up for business motives, the public was seeing it as an educational tool. Although, not much public money was spent on creating educational content on the Internet, much money was spent on getting schools and libraries connected to the Internet (Fabos, 2008).
However, like the model of educational institutions and education publication houses, commercial interests play an important role in providing strong education content. Furthermore, commercial interests can play a large role in creating democratic communities. The risks arise when individuals cannot critically decipher the agendas of business and when commercial interests silence the voice of the individual. When average individuals do not have a medium to express themselves, then commercial entities can control content without consideration for the larger good.

However, because Web 2.0 applications have the potential to compete against commercial interests, commercial entities now have to compete with the average person. For example, for the first time in history, any individual with an Internet connection and adequate technological capital is capable of broadcasting their own Internet radio or television station on websites such as YouTube. And although commercial interests are a high stake influence behind many providers that allow us this same outlet, the fact that the Internet differs from previous media in this manner allows everyday people to have much greater control.

Web 2.0 is putting the reporting pen in the hand of the average masses and allowing them to make decisions on what is the most important and relevant topics. The practice of citizen journalism encourages the average person to act as reporter and submit stories for publication. Moreover, websites like Digg allow readers to choose which news stories they most enjoy or “digg” and the stories with the most “digg” clicks will end up on the homepage. With such Web 2.0 sites, publishers and editors no longer have exclusive control of the content. Therefore, what is considered important is no longer the decision of commercial entities or of
an elite group of educated people of a higher social class. Or rather it has the potential not to be. Power and control will continue to remain with certain groups until the digital gap narrows.

Similarly, commercial systems like eBay and Amazon encourage shoppers to rate items and services offered by contributing merchants and the community as a whole. Lankshear and Knobel (2003) describe implementing “rating systems as public evaluations of ‘worth’ (moral, commercial, intellectual, etc.)” (p. 133). Rating systems put power into the hands of the consumer assuring that they do not get abused by the merchants selling the products. It also offers a commercial space that can be as affordable for people with less financial means as for more affluent people. Having your store located on Times Square is no longer as important as it once was. Owning real estate on virtual Times Square costs the same as owning it in a virtual shanty town. This shows the increased importance of developing expertise with new literacies because the economy is highly reliant on knowing how to navigate through and contribute to such environments. Virtual real estate prices are starting to see a hike however, as increasing product visibility and ensuring that it does not get lost amidst the myriad of available products can be achieved for a fee.

Fabos (2008) reminds us of other endeavors to democratize the Web like the public knowledge movement and educators’ and librarians’ current attempts to build and archive information for public good. She sites sources like Wikipedia, INFOMINE, ibiblio, and the Internet Archive. Similarly, researchers like John Willinsky are building and advocating for open journal systems. Such public movements to democratize and disseminate knowledge continue to grow.
Similarly, David Noble (1998) warns us to beware of the commercialization of education. He fears that computerization combined with commercialization is taking over educators’ autonomy, intellectual property, and jobs. He asks the question “What’s driving this headlong rush to new technology, with so little deliberation on the pedagogical and economic costs?” (p. 30). His answer is the commercialization of education. He states that in higher education, the shift to implement new technologies has “resulted in the systematic conversion of intellectual activity into intellectual capital and, hence, intellectual property” (p. 30).

Fear of loss over intellectual property heightens in the era of the social Web as educators and academics begin to make their materials freely available through podcasts, courseware, conference presentations and other forms. However, options already exist to protect one’s work. Creative Commons has borrowed the © of copyright and shifted it into the following: 

This symbol allows the creator of a work to choose the level of copyright. This gives the sharing, remixing, and reusing of intellectual property a legal stance.

Noble (1998) implicates cable companies, hardware and software companies such as Apple and Microsoft, and the publishing and “edutainment” industries such as Disney and Prentice-Hall as the main advocates of “technologizing” education for the sake of profit (p. 30). These points remind us to tread lightly and think critically when bridging the Internet with education; however, the democratic, distributed, and participatory qualities of the new Web and the movement toward open access systems that are opening doors for public good remain a compelling reason to promote exploration of the digital sphere.
Schools can play an active role in avoiding the pitfalls of commercialism, yet still capitalize on the many advantages that it can provide. Educators need not ban or avoid using commercial Internet tools and can even use these same tools in democratic ways. In fact, it is important to incorporate these tools in ways that will assist learning and assist students in being critical users of these tools. Otherwise, youth will face these same commercial interests on their own with no assistance from educators and will therefore be less likely to be critical consumers. Lastly, capitalism plays an important role in the growth of a democratic society; therefore, it is not adequate to dismiss a democratic medium simply because commercial interests play a role in its development.

1.4 Summary

This chapter began by situating the study, presenting the research problem and questions, summarizing the research design and taking into consideration the varied terminology. It proceeded to introduce the three perspectives that form its theoretical framework. The next chapter will review the literature in the field of digital literacy bringing particular attention to the issues of folksonomy, the digital divide, the different mindsets of learning, the dichotomies employed and students’ self- and school-selected Internet practices.

Chapter 3 introduces the setting of the research and details the research design and the data analysis strategy implemented for the study. Chapters 4, 5, and 6 present the findings of the study. Chapter 4 focuses on the analysis of the district where the school is located providing a larger context for the study. Chapter 5 targets the findings of the focal school concentrating on teacher practices. Chapter 6 presents the findings of the study that was informed by the
students of the focal school. The dissertation ends with Chapter 7 where I draw conclusions, consider the study’s implications, expand on the theory, identify limitations of the study, and make recommendations for future research. Included in the appendices of the dissertation are methodological instruments, forms, and other relevant documentation.
2.0 Review of the Literature

2.1 Perspectives

The extensive integration of the Web for daily use is challenging the structures of learning and the notion of what it means to be literate (Leu et al., 2004; Gee 2002). Consequently, literacy researchers are increasingly focusing their attention on studying young people’s Internet practices. This chapter reviews the relevant literature in the digital literacy context. It considers the perspectives of a horizontal learning structure, the role of the Internet as a public good, the incremental digital divide, and the tensions between adolescents’ self- and school-selected Internet practices.

2.2 Learning as Folksonomy

Students rely on the Internet as their main information source (Williams & Rowlands, 2007; Gunn, 2005). It is their textbooks, their library, their tutor, their homework guide, and their guidance counsellor (Levin & Arafeh, 2002). Moreover, the new social Web is allowing the Internet to be their notebook, their study group, and their auditorium as well. The Web is no longer solely a place to retrieve information; it is a place to share, display and disseminate information. Users of the World Wide Web no longer need to be passive audiences of information (consumers) as with media such as television and radio, but have the opportunity to be active participants contributing to and controlling the content of the information (producers). They now have the occasion to shape the quality of the information and respond to it (Sade-Beck, 2004).
Furthermore, the Internet acts as students’ backpacks and their lockers as well (Levin & Arafeh, 2002). Because information can be stored, retrieved and shared over the Internet, there is little need to own, carry, and store heavy resources. Students can readily use the Internet to access information, complete assignments and projects, and post their final product. Alternatively, they could email their work to their teachers. This logistical point can help us imagine a physical change to future schools. Will we have hallways with no lockers? Will we have classrooms filled with laptops? Will we have classrooms at all, when the communication ability of the Internet allows for effectual instruction from a distance?

Physical changes are still not largely apparent, although more schools have computers and Internet access than ever. Organizational structures of knowledge that have a potential of filtering their ways to schools and businesses, however, are changing so that things are no longer categorized from top down but rather are horizontally related. This is referred to as folksonomy. Folksonomy works with tagging. Rather than there being large categories and then subcategories below the larger categories as with taxonomy, folksonomy allows for each file, Webpage, and application to be identified with many different descriptive labels, called tags. These files can later be retrieved by searching these keyword tags.

Tagging is a social process which allows others to find the items that have been tagged and allows others to learn more about those items based on the ways that they have been tagged. This is prevalent in the Web 2.0 environment. Photos on programs like Flickr, videos on websites like YouTube, and websites on social bookmarking sites like Del.icio.us all rely on tagging to label, identify and retrieve information. Such websites allow for the storage,
description, and sharing of files. This change reflects the manner in which schools can change as well. Drawing on this model, researchers like Gee (2002) suggests that educators move away from the top-down manner of teaching and instead rely on horizontal learning where collaboration is encouraged and where every individual contributes to the learning process since the sum of what the students in the class know surpasses that which the teacher knows. Similarly, the New London Group (1996) prompts us that it is much more likely that the collective knowledge of a classroom will be larger than that of any individual teacher. This points at the importance of moving away from the teacher as knowledge container and provider, and shifting to a more collaborative and active learning model.

2.3 Digital Divide

Bringing new literacies like Social Network Sites (SNS) and blogs into the classroom may take away from the innate interest that they presently hold for many youth and by making it a school literacy practice then youth might no longer partake in them outside of school. However, not all youth are partaking in these practices and if they are not engaged with them in schools, it is possible that they will not be engaged with them at all.

Even though Internet use is exploding all over the world, the manner in which the Internet is being used differs significantly creating a new type of digital divide. “Despite the growth in the numbers of Internet users, a rather small minority of these users has the capability to use the Internet in ways that are creative and that augment their ability to participate effectively in today’s knowledge societies” (Mansell, 2004, p. 179). Families engage
with digital technologies in diverse and varied ways but having access to technology at home is not sufficient to eliminate the digital divide (Snyder & Beavis, 2004).

When discussing the digital divide, the discourse often focuses on the discrepancies between different ethnic groups. For example, significantly fewer African American and Hispanic children spend time online compared to Caucasian children (Corporation for Public Broadcasting, 2002).

Furthermore, much focus is put on the difference between the affluent and the economically disadvantaged. For instance, disadvantaged students mostly use computers for practice while advantaged students use them to problem solve (Kuiper & Volman, 2008). Multimedia literacy has included more than just critical engagement with media environments; it has also referred to the ability to produce and display media as well. The form and degree to which the production has taken place has been dependent on the socio-economic status (SES) of the school. In less affluent schools, such practices as drawing, collages, and posters prevail whereas in more affluent school, it is not unusual to see media practices like newspaper and magazine production, photography, and radio or video production (Luke, 2002). In the new age of possible multimedia production through online computer access, the options of engaging with new production possibilities have significantly increased whereas the costs have decreased.

Digital divide between users and non-users can also translate to digital divide between the old and the young, between the “digital immigrant” and the “digital native,” (Prensky,
between teachers and students. How can we as educators catch up and stay caught up in this rapidly moving digital world?

The notion of a generation gap between teachers and their adolescent students, however, may be more of a perception than a reality as many new teachers are quite close in age to their students and are part of the same generation and have many of the same cultural interest. The generation gap develops rather because of the identities that each party ends up forming because of the place they have taken in society (Lewis & Finders 2002).

In reading much of the literature on the engagement of adolescents with new digital literacies, I imagined a picture of active, excited youngsters who could do anything they want as long as they were allowed access to a computer and were let free to explore. This, however, is not the image of many youth I know, including privileged youth. Many youth still fear new technologies and are not drawn to spending their time engaged in this manner. This lack of interest, disinclination, or fear will widen the digital divide.

Even the inclusion of one laptop per student in classrooms does not play a significant role in lessening the digital divide. Warschauer et al. (2004) noted two contradictions in classrooms with laptops. First of all, students in laptop classrooms did not score higher on standardized tests than students in standard classrooms. Second of all, including laptops in classrooms did not narrow the digital divide between students of lower and higher SES as was anticipated (Warschauer, 2008). Therefore, access is not a significant enough factor by itself to narrow the digital divide. Research is needed to investigate what factors would play a role in lessening the divide. Also, it is important to remember that a digital divide is typically
ephemeral. It changes with rapid speed as technologies become more quickly available and easier to use. Thus, time in itself holds the potential for lessening digital divides.

In 2009, the capability of Web 2.0 to narrow the digital divide was demonstrated when Iranian citizens informed the world about corrupt government practices. Websites like twitter, Facebook, and YouTube allowed citizens to show the world firsthand accounts of protests, atrocities, and injustices. Citizens who quickly turned into impromptu journalists captured videos and images using their cell phones and posted them on YouTube, blogs, SNS, and photo sharing sites. They tweeted on twitter and posted on Facebook hourly accounts of the activities on the streets. Protest pages were formed on Facebook and the conglomerates responded to this frenzy of information rapidly. They took a step toward narrowing the digital divide by quickly making available Persian sites and translations. This was a firsthand example of the Internet allowing for democracy and communication to prevail despite the efforts of a repressive government to silence its citizens.

Similarly, this practice was adopted by Tunisian citizens to inform the world of their plight in December of 2010. In addition to Tunisia’s own government’s ban on open information, the world media was slow to report the events. Before newspapers like The New York Times, The Chicago Tribune and The Boson Globe had any front-page coverage of the situation in Tunisia, sites on the social Web such as twitter and YouTube, were ablaze with first person accounts and became the best resource for learning about and staying abreast with this event. These outlets allowed for voices to be heard and played a significant role in expelling the country’s president from power in Jan 2011 and ending his autocratic rule.
The Internet continues to play a critical role in democracy as citizens from other countries such as Egypt and Libya are continuing to stand up against their governments by using Web 2.0 tools like Wiki Leaks, Youtube, twitter, and Facebook. This practice has proved so effective that governments are resorting to shutting down all Internet access.

2.4 Tension between Mindsets

Lankshear and Knobel (2007) refer to two types of mindsets which have to do with physical and digital space. They refer to the first mindset as “physical-industrial” and they refer to the second, which encompasses ethos, as “cyberspatialpostindustrial” (pp. 9-10). The first mindset supposes that the modern world has not shifted in a fundamental way, but has made significant technological advancements (Lankshear & Knobel, 2007). Conversely, the second mindset supposes that the modern world has changed in a fundamental way and that this shift has to do with the technological advancements and its capacities. The second mindset is about “people imagining and exploring new ways of doing things and new ways of being that are made possible by new tools and techniques, rather than using new technologies to do familiar things in more ‘technologized’ ways (first mindset)” (Lankshear & Knobel, 2007, p. 10).

This theory fits well with the shift to Web 2.0. Tim O’Reilly (2005) suggested that the failure of dot-com companies may have been a result of them having Web 1.0 features (that encompass mindset 1) as opposed to companies who thrived and had 2.0 features (that encompass mindset 2) (Lankshear & Knobel, 2007). Web 1.0 applications are more similar to desktop applications that are created to be used in the static ways that those who created them intend them to be used (mindset 1). People use these applications presumably because
they deem them reliable and authoritative (Lankshear & Knobel, 2007). Web 2.0 applications encourage contribution by the masses and allow them to have control over the content posted (mindset 2).

Web 1.0 is similar to an industrial approach where there is a strong separation between those who consume and those who produce (mindset 1). Web 2.0 is based on a post-industrial approach and focuses on “collective participation,’ ‘collaboration’ and distributed expertise and intelligence, much more than on manufacture of finished commodities by designated individuals and work teams operating in official production zones and/or drawing on concentrated expertise and intelligence within a shared physical setting’” (mindset 2) (Lankshear & Knobel, 2007, p. 17). Wikipedia is a model case of a Web 2.0 application and the second mindset as it enables users to collaborate and contribute their knowledge and expertise. It “embraces the power of the Web to harness collective intelligence” (O’Reilly 2005, n.p.). Another important component that distinguishes between Web 1.0 and 2.0 is the idea of folksonomy mentioned earlier and its structure of tagging and searching instead of categorizing in a hierarchical manner.

In both Web 1.0 and Web 2.0 ways, the Internet is now used more often than the TV (Synovate, 2007) and it is available on all sorts of devices including Personal Digital Assistants (PDA) and mobile phones (Shih & Allen, 2006) and therefore can be accessed nearly anywhere. It is no surprise then that the Internet is the students’ primary source of information for personal and schooling reasons (Williams & Rowlands, 2007).
2.5 Dichotomies: Real or Perceived Extremes

In this manuscript, I have used several dichotomies. I refer to self- versus school-selected practices, primary and secondary discourses, to Web 1.0 and Web 2.0, to mindset 1 and mindset 2, to online and offline practices, to concepts such as the digital divide. These concepts, however, are not true dichotomies. They represent more of a continuum and even overlap one another.

For example, students’ lives cannot be separated into school life and personal life because personal life often takes place during school hours and school life happens outside of school hours. Youth socialize and game online during the school day and use online tools like Instant Messaging and search engines to complete assigned homework after school hours.

Accordingly, the division between a primary and secondary discourse are blurred as well. The information students learn and the connections they make at school highly influence their home lives. Likewise, the culture and family influences that they bring with them to school shape their experiences at school and their outlook and understanding of information. It can therefore be problematic to make distinctions such as school versus personal practices or discourse 1 versus discourse 2. For this reason the terms self- and school-selected practices have been chosen for this study. These terms still remain problematic and need more refinement, but assisted in homing in on the practices that youth use for learning the school curriculum.
Similarly Web 1.0 and Web 2.0 are not opposites and can coexist peacefully. Web 2.0 tools such as blogs and wikis are frequently used in Web 1.0 ways. For example, people go to sites like Wikipedia or wiki answers to get information and never post or comment on other people’s information. The birth of Web 2.0 does not represent the death of Web 1.0 nor does it mean that it is an evolved form. Similarly, new generations of the Web, such as the already talked about Web 3.0, do not represent an end to Web 2.0 tools or notions.

As technological advancements continue, we begin to imagine new ways of living and being. We don’t necessarily adopt these ways at the start, but they are forethoughts and ideas in progress. Therefore, it would be best to view mindset 1 and mindset 2 as a continuum. The technology is created and then we imagine a shift in living and then we begin to implement that shift. Alternatively, we imagine the shift and conceive the technology.

Online and offline lives are not separable either. When we are online, we are also present in the offline world where we have contact with people and offline resources such as printed books and offline technologies such as telephones or television. Indeed online practices can often lead to offline ones and offline practices can end up online. For example, we download music onto our MP3 players and walk around town listening to them. We type up blog entries on Word documents that we then upload onto online spaces. These practices are highly interrelated. They work with one another and feed off one another.

Lastly, the digital divide is a complex issue that goes beyond the dichotomy of haves and have-nots. The digital divide encompasses many different factors and these measurements are still not well established. It can include factors such as access to hardware, access to software,
broadband width, digital skills, gender, interest, age and much more. Freedom and autonomy of access, for example, is a factor that can highly influence learning and knowledge. Those who have it have access to a much larger library of information than those who do not.

On the other hand, simply meeting one or some of the outlined measures does not mean that we are digitally literate. For example, simply owning a computer does not mean that we are competent at using it or know how to use it for a given purpose. It is possible to have good access and still lag behind. Conversely, a concept like the digital divide risks discounting those individuals who do not have as much access. It is unfair to lump a population who doesn’t have access as digitally lagging since access is not the only measurement.

The remainder of this section of the paper discusses ways in which youth are engaging with the Internet in mindset 2 ways for self-selected reasons and in mindset 1 ways for school-selected reasons and shows the challenges that lie in bridging these two practices. Although the chapter is organized in this manner, as mentioned above, it is inherent that there is an overlap between self- and school-selected practices.

2.6 Self-Selected Internet Practices

People learn in several contexts simultaneously and learning occurs across these contexts (Baron, 2006). Therefore, the knowledge that youth attain outside of school can be optimized to learn the concepts that are being taught at schools and similarly the content learned at school can enhance the knowledge learned outside of school (Baron, 2006). School learned knowledge can motivate students to explore similar notions outside of school while
knowledge that students bring with them to school will assist them in understanding notions taught in school (Baron, 2006). Adolescents are actively engaging with the Internet to write, communicate, play, create, and share for self-selected reasons outside of the school setting. These experiences have the potential to enhance their knowledge building in school.

### 2.6.1 Writing

The social Web is allowing for passive readers to turn into active writers. Readers can now respond to the information that they acquire. The social Web has changed the singular direction of communication to multidirectional and plural. Not only can we respond to the writer, we can comment to others as well and comment on the comments of others. For example, with email we can communicate with one or several people at once and we can change the original message that was sent by adjusting it and forwarding it. Although this democratization of the creation and dissemination of knowledge brings about concerns of authority and reliability, it holds the advantage of diffusing the power of the author and as a result the authority of the text (Kress, 2003). Youth are adopting these practices through instant messaging, texting, chatting, emailing, blogging, and social networking.

In the last decade, social, economic, communicational, and technological changes have allowed youth to take a more participatory role in the writing process. Social changes are deconstructing the structural frames and forms of writing that have previously existed. Economic changes are encouraging new uses and reasons for writing. Communicational changes are shifting the manner in which we construct meaning, putting a stronger focus than ever on image and allowing that form to be accessed with increasing speed. Technological
changes are altering the manner in which information is disseminated, breaking the traditional link between writing and book and bringing into forefront the medium of the screen (Kress, 2003).

Kress (2003) points out that the shift from book to screen does not put an end to what he refers to as “alphabetic writing.” It does not do so because of the cultural capital that we have invested in writing and because of its continuous massive use and need. Conversely, even the need to put the adjective of alphabetic in front of writing suggest the increasing need to re/consider different and new frames when discussing writing.

2.6.2 Communicating

New technologies are allowing for communication to become easier, more reliable, quicker, cheaper, and less formal. Furthermore, they are shaping our language. The use of texting, chatting and using instant message programs have exploded amongst youth and have encouraged a shorthand approach to writing that has lessened our concern about the formalities of language usage such as paying attention to spelling, grammar, and mechanics.

The “recreational use of texting may ultimately lead to addiction” and consequently increase student writing; consequently, it is advantageous to welcome texting as a legitimate form of writing rather than seeing it as “an alien and inferior form of language that is infecting the ‘real’ English language and resulting in lower standards in examinations” (Carrington, 2005, p. 168).

On the other hand, the case persists that texting is degrading language, and therefore should be discouraged (e.g. Baron, 2005). Using terms like “degrade,” in describing language, however, once again values certain literacies over others. I would argue that language does not
degrade; rather it changes. And texting has indeed altered our language, but so has popular culture for many years. That’s why we have words like bootylicious and muggle in our dictionaries. Also, texting the acronyms brb and lol is no different than placing a personal advertisement in a local newspaper that reads something like this: DBM seeking SWF. NS preferred…. So although the literacy may seem new at first glance, the form of communication is not so different than what we’ve seen before. Regardless, communication over the Internet is a rapidly growing activity with which youth engage.

Lewis and Fabos (2005) conducted a study on adolescent instant messaging and its connection to literacy and social identity. They found that participants preferred instant messaging to other communication methods. Their participants found instant messaging to be convenient because they could readily contact their friends or know when they would be available for contact, they avoided long distance fees when wanting to contact friends from out of town, and instant messaging made social interaction easier by removing the threat that immediacy imposes. Students preferred instant messaging to chat rooms because they preferred communication with friends over strangers (Lewis & Fabos, 2005).

Many of Lewis and Fabos’s (2005) finding were contradictory to what is portrayed in popular media. For instance, participants did not use txt speak like lol and brb in their communications. Participants were cognizant of mechanical correctness to the point that they txted the asterisk symbol (*) to indicate an accidental spelling error. This was especially so for people they were trying to impress. Students considered “linguistic features to manipulate the written tone, voice, word choice, subject matter, and structure of messages in order to sustain
interesting conversations and cut off those that were not of interest” (Lewis & Fabos, 2005, p. 1126). Participants said that they enjoyed thoughtful lengthy exchanges and not short monosyllabic utterances like “cool.” They described points where they played with language in their instant messages including an instance of starting each sentence with “I want” and another instance where the conversation pursued solely by using song titles. They used language in poetic ways that required thought. They complemented their written contributions with visual elements. They did this to add to the excitement of their point or to indicate that they had more to say.

New ways of communicating over the Internet appear regularly. SNS and microblogs are current trends that are growing exponentially especially amongst youth. Young people post messages, videos, and photos for one another, they poke one another to initiate communication, and they tweet daily updates of their lives. When an issue of importance arises, it is quickly shared with the growing network and comments are posted relating to the issue, encouraging communication over a large variety of subject matters.

2.6.3 Gaming

Contrary to popular belief, research has found that video-games support rather than thwart literacies that are traditionally valued in schools. In fact, 36 principles of learning within video games that are neglected in schools have been identified (Gee, 2003).

Conventional commercialized games that youth buy and play are only one form of gaming. Another type of gaming includes the narrative genre allowing for an interactive 2.0 gaming style. Game based graphic novels are being created by youth where they compose
stories by adding text to screen shots that they take of video games. Similarly, the new genre of machinima encourages movie production by adding audio to video shots taken of games. Mods are yet another form of active participation within the gaming community. Here, users change existing games by creating new elements like characters, weapons, storylines, and environments (Warschauer & Ware, 2008). Like with the Web 2.0 arena, users are no longer just consumers; they now can make additions and changes to their favourite games and can take the concepts of these games to produce their own stories. This type of creation brings up questions of authorship, copyright, and genre similar to those we are seeing with the Web.

Because gaming includes text, images, motion, sound, and interpretation by the player, video games would be classified as a new literacy (Gee, 2007). Having knowledge and expertise in gaming is a form of cultural capital. It is still uncertain how this cultural capital can be optimized in schools for educational purposes (Burn, 2008); however, because of its high motivational impact, it is worth the investigation.

2.6.4 Creating

Most Web 2.0 applications fit under the heading of creating because 2.0 environments allow for learning to be socially constructed, collaborative, participatory, widely distributed, and shared. Creative endeavours like machinima and Mods, slotted under gaming above, fit here as well. Perhaps a more apropos heading here would have been recreating. Web 2.0 has seen a revolution in re/creating and piecing together already existing work in a variety of different media. We have become a generation of bricoleurs who admire the pieces we are gathering but are piecing them together in our own innovative ways.
Along with Mods and Machinimas, Fan Fiction and Fan Art are examples of how we are recreating by pulling from previous compositions to create personal opuses. Fan Art is artistic work that is created by people other than the artist of a particular work. It is created usually by fans of that work. For example, fans of the *Harry Potter* series may paint photos of the Leaky Cauldron or Ron Weasley depicting their interpretations. Similarly, Fan Fiction consists of people taking an author’s story and adding characters to it, creating subplots for it, altering endings, or making similar adjustments.

Twenty-six percent of teens on the Internet remix online content to create works of their own (Lenhart et al., 2007). New forms, genres, and opportunities to re/create continue to appear on the Internet, providing a possible stimulating environment for education. Remixed complicates the concept of authorship and re/creating content or using multimedia to create content does not equate to new knowledge creation. It blurs the boundaries of what can be considered “valid or legitimate or desirable” creations of new content (Buckingham, 2005, p. 149).

### 2.6.5 Sharing

Teens see the Internet as a place for interacting socially with their peers to share their creative work. Of 93% of online adolescents, 39% choose to publish their artwork, stories, videos and photos online, and 28 % maintain their own blogs or Web pages (Lenhart et al., 2007). It has never been easier to share resources, works of art, thoughts or other intellectual property as it is today. Youth have adopted this possibility and are regularly sharing music, video, and photo files. They are doing this not only with professionally created content, but
with content they themselves have produced. For example, users frequent YouTube not only to watch videos but to upload videos that they themselves have produced. They go to Flickr to find photos and to post them.

Ultimately, we have become “prosumers” (Tapscott & Williams, 2007). We are no longer consuming only the intellectual property available by an elite few; instead, we are producing our own intellectual property and consuming that which we have created. Another ideal example of this phenomenon is with SNS. Like with video sharing (e.g. YouTube) and photo sharing (e.g. Flickr), a large majority of the content on networks like Facebook and MySpace consists of information produced by the users and not the companies financially benefiting from the site, illustrating that we have become consumers of our own products.

2.7 School-Selected Internet Practices

The Internet is embedded in students’ daily lives (Media Awareness Network, 2005) for communication, entertainment, socializing, shopping, and learning (Lenhart et al., 2005; Lewis & Fabos, 2005). While on the Internet, students can play video games, download music, watch video clips, buy gadgets, chat, txt, blog, email, talk, display their art, join online communities, search for content, or partake in a variety of other activities. If schools ignore these stimulating environments, they risk severing student engagement as well. For example, students can feel removed from their textbooks because of depersonalized language and distant academic prose that is so different that the compelling environment of games (Gee, 2003). The findings from the work of the Digital Youth Project describe that youth are compelled with these digital activities because it gives them independence, provides opportunities to direct their own
learning, extends their social lives, and provides opportunities to experiment with new and creative forms of expression (Ito et al., 2008).

Donald Leu et al. (2007) assert that “the Internet is this generation’s defining technology for literacy and learning,” yet despite this fact, educators have not embraced Internet integration within their classrooms (p. 5). Often digital literacies are separated from schoolwork. Teachers refer to students “playing” on the computers, or give students permission to “play” on the computers when their schoolwork is done. They are referring to any non-school activity when uttering the word play, demonstrating a disconnect between self- and school-selected literacy practices (King & O’Brien, 2002).

Largely, students use the Internet not so much at school; instead, their Internet use happens outside of their classrooms, schools, and even school days and outside of their teachers’ supervision (Levin & Arafeh, 2002). Moreover, the ways in which adolescents engage with literacy practices in- and out-of-schools varies greatly in purpose and form (Tierney & Damarin, 1998). To help reconnect the self-selected literacy practices with the school based one, new and multiple literacies should be considered as valid literacies alongside the traditional notion of reading and writing as literacy (Hagood, Stevens, & Reinking, 2002).

2.7.1 Access versus Use

Our hopes for technology in schools has both exceeded and not nearly met our hopes (Bruce, 2003). Almost 100% of public schools in the United States and 99% of UK schools had Internet access by 2003 (NCES, 2005; DfES ICT in Schools Survey, 2003); however, little is known about what this access is being used for. For example, many schools even have one computer
per classroom but this computer may not be accessible to students because the teacher may have privileged details on it including student grades and contacts. It is not adequate to know such statistics without detailed understanding of it; it is more relevant to know who is making use of the available computers and the Internet and for what purposes. Is it just the teachers using it? Do students have access to it? Are the students only searching for information or are they analysing, synthesizing, and producing knowledge as well?

The simple addition of a piece of technological equipment or software will not necessarily instigate change and certainly not for the better. Cuban et al. (2001) did a qualitative study on two high schools in the Silicon Valley and found that access to hardware and software did not lead to an increased use of these technologies. Rather the teachers and students rarely applied the new technological materials for teaching and learning and when they did use them, it was to sustain their already existing practices rather than changing their practices. Similarly, Ertmer (2005) found that though teachers’ uses and competencies with technologies are heightening, they are mostly being used for low-level tasks such as Internet research and word processing as opposed to high-level tasks such as multimedia creation or information interpretation and analysis. A large scale Canadian study researching the perceptions and practices of teachers also found that teachers’ predominant incorporation of digital technologies in classes was for information seeking and expression through word processing (Wozney et al., 2006).

Since the early 1990s, US policy makers and school officials encouraged the incorporation of technology in schools and classrooms and supported this encouragement by
purchasing equipment; however, this movement did not lead to non-computer users or modest users to significantly increase their time on computers (Cuban, 2001).

Cuban (2001) offers two reasons why a discrepancy exists between the beliefs of policy makers that ready access to technology will improve teaching and learning and the reality of what is happening in schools. One reason is that the shift will eventually happen; it will just happen slowly. As the infrastructure becomes stable and teachers’ ideas about technology progress, then a natural shift in employing technologies in classrooms will occur. The second reason could be that fundamental changes in school infrastructure and organization, including teacher preparation and time allocation, are necessary for beneficial shifts to occur. Otherwise, “new technologies will, paradoxically, sustain old practices” (p. 830).

Another reason for limited Internet access in schools is that educators and policy makers attempt to protect students from the risks and dangers that crawl on the Internet. For example, Kevin Leander (2007) conducted a study at an all girls’ school where each student had her own laptop. The students at this school were seen in two ways. First, they were seen as independent tech savvy young women being prepared to excel in a male dominated world. Conversely, they were seen as young vulnerable girls who needed to be protected from the hazards of the Web. The first discourse was adopted by the school because they aimed to prepare well rounded students who could participate in a technological world and in the technological field that is dominated by men; the second discourse was subscribed to by the school to protect students from dangers like predators and also from information on sex, drugs, alcohol, and inappropriate language.
The expansion of Internet access within schools can help eliminate much frustration amongst students and staff, encourage its practice and consequently increase its use in novel ways. However, for this to happen, the above considerations need to be paired with increased access.

2.7.2 Bans and Barriers

Students face several barriers when using the Internet at school. Access to the Internet is often restricted by time and space (Levin & Arafeh, 2002). Only some rooms such as computer labs and libraries have Internet access and this access must be shared by all students and staff. Because district rules require faculty supervision, these rooms are only “open” during certain times such as regular school hours and 30 minutes before school, at lunch, and after school. This available time is lessening as teacher unions gain increased rights for their working conditions. For example, some computer labs are closed at lunch hour because teachers are allotted breaks during their lunch. Similarly, as teachers are not paid for activities outside of school hours, much of the time that they contribute to keeping labs, libraries or classrooms open before or after school is done on a voluntary basis. Other than educators, it is administrators and policy makers who maintain the controlling power over Internet usage in schools as it is they who decide the level of access that schools can have and which programs and websites will be accessible or blocked (Levin & Arafeh, 2002).

Students want better quality access to the Internet in their schools than they are currently provided (Asselin & Moayeri, 2008). They want quicker access with reliable features (Levin & Arafeh, 2002). Considering the limited amount of available computer time during
school hours, students need the time they do have to spend on the Internet to be quick and effective. Students and teachers often complain about technological glitches that would limit their computer use (Asselin & Moayeri, 2008; Cuban, 2001). Because of the infrastructure of institutions and union laws, it can take weeks or months to fix even small computer hitches as the channels needed to get a district IT person to the source of the problem can be a lengthy process.

In addition, students are frustrated by the social barriers that are placed on them. Some schools employ surveillance systems on the school computers, other schools ban certain applications and websites, and yet other schools require adult permission before going on to certain sites (Levin & Arafeh, 2002). Students lose the sense of autonomy which is a unique feature of the Internet. Permission asking also unintentionally teaches youth what is considered fun and what is considered work. Students want free and unrestricted access to easily accessible, content rich online sources (Levin & Arafeh, 2002). If as educators we neglect to provide this access, then youth with more cultural capital will turn to other arenas for this experience, while those lacking this capital will be left behind. Instead of limiting access, it would be less intrusive and more inclusive to teach students to approach the Internet with a critical lens.

2.7.3 Recommendations from Professional Organizations

Educational policy is beginning to reform its views by recognizing changes that are occurring around literacy in social and pedagogical settings and acknowledging the potential of digital literacies in enhancing student learning (e.g., Partnership for 21st Century Learning Skills,
2009; National Council of Teachers of English, 2008). Still though, new literacies are slow in finding their way into classrooms because literacies that expand or generate knowledge remain more difficult to integrate into classrooms than literacies that require only the accumulation and repetition of knowledge.

Another reason that new literacy instruction does not find its way into classroom teaching is because educators who are not as versed as youth in these new literacies may be reluctant to incorporate them into their practice (Chandler-Olcott & Mahar, 2003). This is unfortunate because it is a myth that teachers need to be experts in new technologies to facilitate their uses (NCTE, 2008). Rather, they can assist by providing critical literacy instruction, addressing information ethics, and broaching other such issues.

Another reason teachers give for not assigning work conducive to the Internet is that they want to be fair to students who do not have access to the Internet at home (Asselin & Moayeri, 2008). This is one barrier that may break down soon as access increases rapidly in North America and around the world.

The International Reading Association (IRA) (2002) recommends that teachers learn more about ICT by partaking in professional day workshops, reading the research and staying current in the ICT field, and taking part in listservs having to do with the instruction of ICT (to not only obtain ideas but to share tips as well). They further suggest that we integrate within our classrooms Internet resources that colleagues have posted on the Internet and to integrate ICT in thoughtful and engaging ways within the classroom. Also, they encourage teachers to
ensure equal ICT access in the classroom and to provide child safety strategies in the incorporation of ICT.

The National Council for the Teachers of English (NCTE) (2008) has provided a list of concrete suggestions for teachers for effective instruction in a 21 century classroom. They recommend strategies such as creating online spaces to extend classroom discussions, being aware of their technological strengths and weaknesses and soliciting student assistance where needed, exploring the technologies that they use outside of their teaching and consider ways to incorporate them in the classroom, and providing a plethora of genre and media options when teaching.

Because students want a greater connection between their self-selected Internet activities and their school assignments (Levin & Arafah, 2002), and because “youth yearn to use varied technologies in formal schooling” (Dede 2008, p. 9), educators need to get creative and find ways to incorporate the new available technologies within their classroom in innovative ways that would aid in the learning process. This focus would remain on learning and not on the new technology, but the key would be to discover how these new technologies could motivate and enrich learning experiences. Attention should be given not to use them in ways that enforce traditional assumptions about learning and knowledge (Bryant, 2007). These applications are not only new technologies, but new genres and new literacies and thus require new forms of contribution.

Students are not generally motivated by the assignments that are Internet based as a result of the poor construction and bland nature of the assignment (Levin & Arafah, 2002).
Students maintain partaking in digitally rich professional development would assist teachers in incorporating engaging assignments that included new technologies (Wozney et al., 2006; Levin & Arafeh, 2002). In 1999, only 6% of US school district technology budget was spent on professional development whereas the US department recommends that this be 30% (IRA, 2002, n.p.). North America lags behind many European countries in this area. Finland, for example, provides all teachers with five weeks of paid release time for professional development (Leu et al., 2009).

Professional development needs to focus not only on curriculum development and instruction, but also on logistical matters like classroom management and community building in new environments such as laptop classrooms. The teacher participants in Leander’s study (2007) found that communicating with laptops was damaging to the classroom and school environment. First, they distracted the students. Teachers complained about electronic note passing and about the students getting side-tracked by online activities such as shopping. Second, the laptops created a physical barrier. Teachers could not easily see their students’ eyes, mouths, and faces. Teachers showed their disappointment at losing the interactive social connection of the class that existed in days preceding the laptops when students would make regular eye contact and oral contributions (Leander, 2007). Therefore, workshops focusing on creating classroom communities conducive to learning would prove helpful.

2.7.4 New Literacies or Traditional Practices?

Teachers focus on print literacies over digital ones and it is, therefore, assumed that print literacy precedes multiple literacies (Luke, 2002). Students need not learn print literacy
before engaging in multimedia digital literacies (Semali & Pailliotet, 1999); they will learn the principles of print literacies while engaged in multimedia digital literacies (King & O’Brien, 2002). Teachers’ preference for print literacy may even lead them to not notice students’ competencies or incompetencies with digital literacies (King & O’Brien, 2002). Though the literacy discourse is expanding to include several modes and ways of learning, the practice in the field is not adequately supporting this discourse.

Even though image and multimedia are becoming increasingly prevalent, text still dominates especially in academia as vernacular literacy holds minimal value in schools (Barton & Hamilton, 1998). It is rare to see a theoretical piece in any form other than a traditional print paper. Even with attempts to incorporate new technologies and literacies in academic classes, as instructors we fail to employ these literacies in novel ways (Williams & Rowlands, 2007). Rather, we take an already existing genre and require the content to be presented with the new technology as its form rather than seeing the new technology as a new literacy or genre in itself. For example, when presenting with PowerPoint software we rely mostly on text formatted in point form. We rarely include visuals, audio, or video in our presentations.

Blogs are another technology that instructors incorporate in their classes to encourage curriculum based discourse outside of classroom walls. Paradoxically, we are approaching these blogs in the same manner as conventional essays. We still encourage our students to provide analytical text quoting literature with citations included. Formal conventions are encouraged instead of more conversational text that is the norm with blogs and the inclusion of visuals and multimedia is almost nonexistent. Furthermore, this type of activity is starting to replace grades
formerly granted for oral classroom discussion (Moayeri, 2010). Therefore, not only is a new literacy not being introduced, but, oral literacy (which formerly received a modicum grade) is starting to lose some of its value.

Traditional practices continue to be sustained with new technologies. In his laptop classroom study, Kevin Leander (2007) observed that the laptops were being used in ways that mostly did not require the Internet. Rather they were “simply offline practices being conducted in an online environment” (Leander, 2007, p. 28). One teacher participant commented that word processing consisted of 90% of the time spent on the laptops (Leander, 2007).

Pre Internet era, most technologies failed at changing the culture of schooling (Hodas, 1993). Technologies that thrive in schools—the blackboard, overhead projector, and photocopy machines—are technologies that assist teachers in communicating and reproducing materials and in maintaining their authoritative position (Hodas, 1993). The blackboard and overhead gather people around a common object/text and the photocopier provides the same text many times (Leander, 2007).

The computer on the other hand can dismantle the authoritative focus and disperse it amongst many. For example, Warschauer’s (2008) research team found that the reading of students in laptop classrooms differed from students in conventional classrooms in the following three ways: teachers used computers to aid with the scaffolding of their students’ learning; teachers used laptops for epistemic engagement by collaborating to deduce and generate meaning; and the students in laptop classrooms spent more time reading in digital environments than did students in classrooms without laptops.
In Cuban’s (2001) study of the implication of access to hardware and software, only four out of the 13 teachers found that the new technologies available to them assisted them in making the fundamental change of creating a student centered classroom where they acted as a facilitator instead of a lecturer. These same four teachers said that the access to the computer was an important additional tool for their practice and that it had modified their classrooms in significant ways. They implemented the technologies for communicating through email with their colleagues, to plan their lessons efficiently, and to gather information. Although the majority of teachers did not find the computer enhanced their teaching, it has still played some role in their practice. Teachers’ incorporation of computers for the classroom has started with them treating it as a personal tool for preparation and communication (Wozney et al., 2006; Cuban, 2001) rather than considering it as a learning platform for students.

2.7.5 Rapidly Shifting Literacies

It is impossible for any one individual to keep up with the rapidly shifting literacies that are appearing on the Web (Leu et al., 2007). It is, therefore, unfair to expect teachers to be current on the rapid influx of technologies. Instead, being digitally literate includes being able to distinguish which technological applications are appropriate for the intended need (Greenhow, Robelia, & Hughes, 2009).

Cuban et al. (2001) found that two reasons that teachers did not incorporate computers in their classrooms were that they lacked the needed time to find and evaluate software, and that the training offered at the district level was limited in time, convenience and topic. Time commitment was a reason for low student computer use even amongst teachers who regularly
used the computer for teaching and personal reasons. They commented on the time commitment needed to preview websites, to locate and scan photos for media projects and to advance their skills to stay current.

Similarly, Wozney et al. (2006) identified professional development along with other factors such as personal and demographic differences and administrative support as influencing teacher’s use of technologies. Even if teachers were capable of staying current and they did know more than the collective, it would be impossible to incorporate all the new forms of technology within a classroom. The point, however, is not to inundate the class with the new technologies, but rather to recognize them as new literacies worth consideration.

Schooling used to have as its goal to conform and regulate its students to assimilate in a manner that would best suit the industrial society. Today schooling often has the opposite goal where it invites students to have different mindsets, interests, and purposes and encourages original thought and direction (New London Group, 1996). For those who subscribe to this goal, the social technologies of Web 2.0 will allow them to educate accordingly.

2.7.6 Content over Form

To test the online potential to access information, I started off the venture of this study by making the decision to incorporate only digital resources for the compilation of my literature review. However, as I proceeded it became apparent that the digital realm is not separate from the non-digital one. Today we live in both virtual and real spaces and access information and communicate with one another through both these modes.
The Internet does not mean the end to the book. Conversely, book sales have increased in the age of the Internet and quite possibly as a result of the Internet. In 1999, for example, over one billion books were sold (Dembeck, 2000). One of the commodities most sold on the Internet in 2000 was the book (Hine, 2000). It is now easier and more convenient to purchase books than ever. We have the largest selection ever available at the mere click of a button. With little financial and time cost, we can browse through portions of them, read reviews on them, and see what other books would be recommended if we like certain books.

This convenience in accessing books is a result of the Internet. Therefore, books and other print resources are not separate from the Internet. And the search for information and knowledge cannot be attributed to one location. Therefore, to stay true to the theory that frames this study, it would be best to cite not only books and articles in both digital and traditional print format but to extend my investigation by drawing on videos, audios, slideshows, and podcasts. I should make references to blogs, wikis, novels, and other genres as well. I should include the opinions of both experts and the general public. However, taking this stance will meet with criticism. For example, in an attempt to publish a paper on adolescents’ Internet practices, my coauthor and I received criticism by peer reviewers for citing less traditional sources.

Moreover, to do so would require an increased time commitment. Therefore, I wrote about a dynamic medium through a static traditional source: the academic essay. So the tension between self- and school-selected practices continues even with graduate work on Internet literacy. You, as a reader have no easy outlet to contribute to this piece. You can’t
delete portions, add components, or edit it as you could have if it were in wiki format. You can’t start a discourse around it with other readers by leaving comments on it as you could have had I posted it onto a blog. You can’t watch it or listen to it. You can’t publicly rate it giving others an indication of its worth. You can’t ask me to be your friend because you share my opinions and you can’t subscribe to my future papers even though my area of research matches your own.

Some of these social practices have begun to find their way into traditional outlets with organization accumulating citation counts and Google searches making available articles that have cited a source. With the growth of RSS feeds and alerts, traditional papers have the potential to find wider distribution and allow for more discourse as well.

However, these practices may not be the aim of scholarly work where more static Web 1.0 structures of expert opinion are valued over the opinions of the general population. Social spaces don’t necessarily lead to a better quality research or valuable discussions; in fact, they could have the opposite effect of presenting watered down surface ideas without deep connection to the work. Until such practices are adopted more frequently by the academic community, it is unclear in which direction they will lead. Therefore, remembering that each genre has its own purpose will remind us not to displace existing genres with new ones.

2.8 Summary

This chapter reviewed the literature for this study by considering the topics of folksonomy, the digital divide, the two mindsets of learning, the dichotomies employed, and
students’ self- and school-selected Internet practices. The next chapter will review the research
design employed for the study bringing particular attention to the mixed method design and
the data sources that were used.
3.0 Research Design

3.1 Chapter Overview

The World Wide Web consists of both static and dynamic spaces and can be used in a plethora of ways for what seem like unlimited purposes. The objective of this study was to explore whether and how students and teachers are using the social Web in ways that may be seen as democratic, participatory, collaborative, distributed, and multimodal to enhance learning. This chapter describes the methods implemented for this study by doing the following: stating the objectives of the study; describing the mixed method case study design adopted; detailing the procedures of the study; specifying the data sources; reflecting on the ethical considerations; explaining the process for analysis of the data; assessing the integrity of the study; considering limitations of the study; and linking the researcher with the methods.

To protect the identities of the participants and to observe ethical guidelines, the names used throughout this dissertation, including participant names, places, and programs, are pseudonyms.

3.2 Research Objectives

My research objectives were to answer the following questions:

1a. How are the administration of Pacific Coast School District and the teachers at Stoneledge Secondary, a high school that had adopted its school district’s policy to incorporate digital literacy practices within the curriculum, using and encouraging the use of the social Web to support learning in different disciplinary areas?
1b. What tensions may arise as a result of the imposition of these uses on the traditional structures of schooling?

2. How are students using the social Web to assist their school content learning?

3. To what degree is this school district’s goal of mandating digital literacy within the curriculum being adopted by its students?

3.3 A Case Study Using Mixed Methods

This study uses a variation of the triangulation mixed method design (Creswell & Clark, 2007) to conduct a critical case study on the Pacific Coast School District. A case study can be a valuable design to unfold human behavior (Stake, 1995). It has been defined as an "intensive, holistic description and analysis of a single entity, phenomenon, or social unit" (Merriam, 1998, p. 27). It helps unravel multifaceted phenomena of day to day life (Yin, 2003). A critical case study investigates a proposed theory in order to “confirm, challenge or extend the theory” (Yin, 1989, p. 47). It is a case that is “particularly important in the scheme of things” (Patton, 1990, p. 174). The reason Pacific Coast School District was chosen as the case in this instance was that it is a district that has set as its goal to include digital literacies within its curriculum.

I used the tools of participant observation, interviewing, and surveys to derive data sources. I used purposive sampling to recruit district and school administrators and focal teachers from the school. I used multistage cluster sampling to select the student participants in grades 8 and 10 who automatically fell into the classes of the focal teachers. The study
consisted of two preliminary steps followed by two phases explained in detail in the next three sections.

3.3.1 Preliminary Steps

The preliminary steps of this research included identifying a site of study and creating and testing the instruments. Because the goal of this study was to explore how districts, schools, educators, and students were using social Web tools for learning, it was important to identify a district and school that was keen on implementing such practices. After exploring websites of several school districts and having informal conversations with colleagues, three districts were identified as including digital literacy (defined and labelled in different ways) as their main goal. A more in depth exploration of these districts led me to choose the Pacific Coast School District because the push to include digital literacy tools within the curriculum was being advocated in both a top down as well as a bottom up manner. For example, the superintendent was a strong advocate of social Internet tools and kept his own professional twitter account where he tweeted about district initiatives and activities, communicated with colleagues, and followed other educators. Similarly, in the past, there was a strong push from students and teachers to lift filters and bans on social sites such as Facebook and YouTube. These factors made the Pacific Coast School District a desirable site for this study.

The second preliminary step included testing the instruments that I intended to use for the study. My philosophy around studying the new literacies of the Internet included incorporating these same tools when collecting the data. Because some of these tools had never or rarely been used before for data collection, it was critical to test them out ahead of
time. Consequently, I designed a pilot study that allowed me to test the different instruments. This led me to eliminate two components and make adjustments to another. For example, using the instant messaging tool on Facebook to conduct interviews was eliminated because of ethical reasons and unpredictability of the tool and the wording of some questions on the surveys and interview protocols were changed to enhance understanding.

3.3.2 Phase I

The first phase of the research involved making initial contact with some participants and familiarizing myself with the workings of the school and district. The participant consent and assent forms are included in Appendix A. During this phase of the study, I met the superintendent, the assistant superintendent, the district Principal of Technology and Innovation and the three secondary school administrators of the district. I accessed and reviewed the information on the district’s public website, the district’s portal, and some of the Virtual Classrooms on the portal. I attended the presentations of district teachers who were demonstrating their new digital learning knowledge as part of a diploma program. I spent time at the focal school and read literature surrounding the school (e.g. website, newsletters, notices).

Next, I conducted individual in-person interviews with the superintendent, the assistant superintendent, the district Principal of Technology and Innovation, the three secondary school administrators, the teacher-librarian, and two other selected teachers who were identified as teachers who were incorporating Internet tools within their practice. I asked participants about their work related and personal Internet practices. Other questions included how they valued
the Internet for learning and what components they identified as drawbacks. The interview protocols are included in Appendix B.

I also emailed an online questionnaire (included in Appendix C) to the focal school staff. The questions focused on which Web 2.0 tools teachers incorporate in their teaching practice and in what ways the tools are used. The following are two sample questions:

1. When assigning work to your students, how often do you expect them to use the following resources: Textbooks, Handouts, Library Books, the Internet?

2. How often do you expect your students to use the following methods when presenting/sharing/submitting their work: Presentation Software, Poster or Collage, Paper, Online Application such as blogs, wikis, or websites?

3.3.3 Phase II

The second phase of the study involved an in depth examination of the three teachers’ practices and their students’ learning while they were using social Internet tools. I attended the classes of the three teachers I interviewed in phase one for a three to eight week span and observed and took field notes. This stage assisted in gauging the classroom atmosphere, seeing how teachers guided their classes and developed a sense for the types of work and assignments conducted in class. This occasion also familiarized me with the students and helped me understand their motivations.

The amount of time I spent in each class was dependent on two factors. First, I stayed long enough to observe the specific Web 2.0 based activities the teachers had mentioned.
during the interviews. Some teachers took longer than others to complete these activities and therefore, I observed for a longer time in their classes. Second, I wanted to ensure that I understood the general routines and characteristics of the classes. I continued observation until I felt satisfied that I had a strong understanding of the teacher and the class’s interactions. I confirmed my understandings through informal conversations with teachers and asked for clarification when misunderstandings occurred.

This second phase of the research also focused heavily on students’ use of the Internet for learning school subjects. Student data were collected in three ways: I surveyed students in grade 8 and 10; I conducted focus group interview of grade 10 students using blog technology; and I conducted participant observations of the students in classes. To ensure a high level of participation, the surveys were administered on paper and in class. Much of the focus of the questions was on students’ uses of Web 2.0 applications for self- versus school-selected reasons and for contributing to information versus accessing it. The following are the types of questions that were asked: When using the Internet for schoolwork, how often do you contribute information to wikis/blogs/sns and other social tools? When using the Internet for schoolwork, how often do you contribute information to wikis/blogs/sns and other social tools? When using the Internet for activities not related to schoolwork, how often do you access information from wikis/blogs/sns and other social tools? The questionnaire can be viewed in Appendix C.

The focus group interview consisted of a discussion on a blog and students were encouraged to participate on their own time. I conducted the focus group interview on a blog.
for two reasons. First, I hoped to solicit information from a larger group of participants than a
traditional in person focus group could. Second, I wished to use a Web 2.0 tool as the
interviewing instrument to assist me in learning more about students’ uses of such tools. Other
than learning from students through the answers they provided, I was also able to derive much
information from the way that they used the actual tool during the interview.

On the focus group interview blog, I encouraged students to post questions, respond to
questions, and comment on one another’s questions and comments. The following are some
example questions that I posted on the blog: How do you use the Internet to help you learn?
What recommendations do you have for teachers about ways to use the Internet that would
help you learn in school? In what ways do you contribute to the information on the Internet?
The interview protocol can be viewed in Appendix B. Finally, this second phase involved
observing teachers and students in class while they partook in Internet related activities. Table
3.1 outlines the phases.

Though the two phases of the study were mostly distinct, there was some overlap. It
was unavoidable to learn about and observe activities within the focal school during the first
phase of the study and I took advantage of opportunities that arose. Similarly, during the
second phase, I faced some hurdles that made it necessary to contact school district
administrative staff that consequently led to further observation of the district paired with a
key interview that led me back to the first phase.
Table 3.1

Data collection table

<table>
<thead>
<tr>
<th>Phases</th>
<th>Data Collection Method</th>
<th>Participants</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preliminary</td>
<td>Participant Observation</td>
<td>District and school staff and students.</td>
<td>Identified district as location for study.</td>
</tr>
<tr>
<td>Steps</td>
<td></td>
<td></td>
<td>Identified potential focal school. Familiarized myself with district, secondary schools, and staff.</td>
</tr>
<tr>
<td>Instrument</td>
<td>Participants from pilot study included students and teachers</td>
<td>Created and tested all study instruments</td>
<td></td>
</tr>
<tr>
<td>development</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>and testing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase 1</td>
<td>Interviews</td>
<td>Superintendent, Assistant Superintendent, District Principal of Technology and Innovation, three secondary school principals, and three teachers from the focal school</td>
<td>Interviewed key participants.</td>
</tr>
<tr>
<td>Participant</td>
<td>The teachers and students from the focal school and case study district.</td>
<td>Attended district presentations, spent time at the focal school, collected artefacts, read online and paper literature about the school, visited Virtual Classrooms.</td>
<td></td>
</tr>
<tr>
<td>Observation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Online Survey</td>
<td>54 teachers from the focal school</td>
<td>Teachers completed an online survey</td>
<td></td>
</tr>
<tr>
<td>Phase 2</td>
<td>Paper Survey</td>
<td>224 grade 8 and 10 students</td>
<td>Grade 8 &amp; 10 students filled out paper surveys</td>
</tr>
<tr>
<td>Focus Group</td>
<td>51 grade 10 students</td>
<td>Grade 10 students contributed to blog by answering and posting questions.</td>
<td></td>
</tr>
<tr>
<td>Continued</td>
<td>Focal teachers and their students</td>
<td>Observed classroom activities, environment, and general routines. Spent time at the focal school. Collected artefacts. Read literature pertaining to school (paper and online).</td>
<td></td>
</tr>
<tr>
<td>Participant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observation</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3.3.4 Rationale for Design

Several researchers agree that some instances make a mixed methods approach superior to using only qualitative or quantitative analysis and that using mixed methods compensate for disadvantages that each approach has when conducted singularly (e.g., Tashakkori & Teddlie, 2003; Creswell et al., 2003; Johnson & Turner, 2003; Greene & Caracelli, 1997; Brewer & Hunter, 1989).

Tashakkori and Teddlie (2003) draw attention to three advantages to mixed method research. First, some research questions can only be answered by using a mixed methods design. Second, researchers can generate stronger inferences using mixed methods. Third, a greater opportunity exists for offering differing interpretations.

The rationale for using a mixed methods design for this study was to amalgamate the strengths of both quantitative and qualitative data to assist in better answering the research questions. Using a mixed methods approach, I was able to determine whether or not a phenomenon was occurring through the findings of the quantitative analysis and then carefully detail the phenomena that were occurring using the findings from the qualitative analysis.

A classic mixed methods study is one that includes surveys with a case study: “One method gives greater depth, while the other gives greater breadth; hopefully, together they give results from which one can make better (i.e., more accurate) inferences” (Tashakkori & Teddlie, 2003), p. 16).
To be able to collect information from the large number of individuals within this case, it was necessary to survey the students and teachers. Furthermore, to get a broader understanding of how Web 2.0 tools were being adopted by the teachers and students of the school it helped to calculate frequency percentages and to compare means.

To be able to delve deeper into the attitudes, beliefs, and practices of the case’s participants, it helped to interview focal teachers and students and conduct in depth observations drawing detailed description of the case being studied. This design also allowed me to compare the data from two different perspectives and therefore triangulate the study’s results across multiple data sources.

3.4 Settings and Participants

To learn about how teachers and students were using the social Web, I identified school districts that had adopted similar goals and had infrastructures that allowed for these goals to be met. After exploring several districts in two Canadian provinces, Pacific Coast School District was selected for study.

Similarly, upon choosing the school district of study, I investigated the practices of the different schools by interviewing administrators and conducting field observations to select Stoneledge Secondary as the focal school for the research.

Upon interviewing the Stoneledge administrator, conducting preliminary observations of the school, and attending district and school meetings, I identified six teachers whose classrooms I wished to attend and practices I wished to observe. Out of the six teachers, I chose
three focal teachers because of their availability, their willingness, and the timeline in which they had planned on incorporating Web 2.0 applications within their classrooms.

Once these teachers were identified, I approached the students who attended these classes during class time to explain the objectives and steps of the research and invited them to take part in the study. I answered questions and addressed concerns that the students had. Next, I distributed consent and assent forms to the 113 grade 8 students and the 164 grade 10 students (16 of which were international students who took both grade 10 and 11 courses). I asked the 277 grade 8 and 10 students to partake in both a survey and a focus group interview.

One reason the focus group was conducted on a blog was to be able to interview as many students as possible. Because only five out of the 113 grade 8 students showed interest in participating in the focus group interview, this portion of the study was eliminated. However, the focus group interview did take place with the grade 10 students as there was a much higher response rate with 54 out of the 164 (31%) agreeing to participate. The following week, I attended a Parent Advisory Council meeting to describe the study to parents and addressed questions and concerns that they had.

3.5 District Overview

From a technology standpoint, Pacific Coast School District had striven to be on the leading edge. The district’s primary goal stated in their achievement contract was literacy and one of the literacy objectives was “to improve the digital literacy of all students.” This goal sometimes led to collecting technology such as purchasing computer hardware rather than
focusing on the implementation of new tools. However, steps were being taken to focus on application over accumulation. Two years ago the district decided to consolidate their technology by moving into a new platform. By September 2008, the district’s digital backbone was created and started providing to the end user Web-based access of several applications and exposure to information within the bounds of a safety net through a portal.

### 3.6 The Focal School

Within the Pacific Coast School District, Stoneledge Secondary School was identified as taking a particular interest in adopting the digital literacy goals of the district. Consequently, this school was chosen as the focal school where the majority of data was collected. The student population of Stoneledge was approximately 830 students who were enrolled in grades 8 through 12. Although a newer school in the district, it was quickly gaining a reputable name as a thriving academic and extracurricular institution. The school had a wide range of programs, electives, and extracurricular activities designed to offer students opportunities to explore various areas of interest.

The recently appointed principal was passionate about building school community and nurturing a progressive school that incorporated ideas for learning from emerging research. One of the goals of the staff was to incorporate digital literacies within the school. They had developed an Information Technology (IT) Committee that met monthly to discuss issues surrounding the incorporation of new literacies within the school.
Teachers who were pursuing higher education were enrolling in courses related to digital literacies. For example, the teacher-librarian took a digital literacy graduate course at one of the leading universities in the province and the technology teacher (who taught courses such as woodwork and metalwork) enrolled in a diploma program focused on teaching and learning in digital environments.

3.7 Data Sources

To collect the needed information to answer the research question, this study relied on participant observation, artefact collection, and interviewing techniques including individual interviews, a focus group, and surveys. These data were collected over a 10 month time span. I began data collection in April of 2009 when I searched for potential districts to conduct the study and I tested the instruments. The district and school were identified in May of 2009 and field work at the district and school started at that point. Data collection paused over much of the summer months of July and August as school was not in session. However, some data were still collected and analyzed including online documentation and two interviews with district participants—one who returned to work in late August and one who knew of the study and was willing to meet outside of work hours.

Data collection was also paused during the first three weeks of September as courtesy to the teachers and administrators who frequently find this time of year to be the busiest. Similarly, I was not at the research site during school breaks such as Winter and Spring Breaks and the two week break that was given due to a special event taking place within the city. I took the opportunity to organize and analyze data during such lulls.
The study timeline went far longer than originally intended and ethics approval was gained for this extension. Four factors contributed to extending the study timeline. First, it took far longer than anticipated for students to return their consent forms. Second, one of the focal teacher participants did not assign the activity that was to be observed for this study (creating of podcasts for a four stroke motor unit) at the original reported time. It took place months after the intended date. Because I was keen to observe this phenomenon, I extended the research timeline to include this activity. Third, during the collection of data, I learned about other relevant phenomena that were happening within the case study district and focal school. Therefore, I chose to interview more participants than originally outlined.

The final reason for the extension of the study was that one of the original methods of collecting data had to be removed from the study. I had intended to collect data of teacher Internet uses by using screen capture software. I had received ethics approval from both the university board and the school district to conduct this component of the study; however, during the setup process, I faced some unanticipated technical issues. I learned that these issues were caused because the school computers blocked software from being installed on them. To install any new software on school computers, it was necessary to access the assistance of the technical staff. Though the focal school principal and teachers involved were highly accommodating by assisting me in overcoming this obstacle, at the end the assistant superintendent phoned me at home and requested that I eliminate this portion of the study as it entailed involving the Canadian Union of Public Employees (CUPE) staff that already had their schedules full with setting up the new district infrastructure.
Overall, this hurdle became beneficial to the study for two reasons. First, it gave me a backstage view to the logistics and structures set up within the district and schools that could act as boundaries for digital developments for teachers and students. Second, it gave me unsolicited access to the assistant superintendent. During that conversation, I was able to secure an additional interview.

This setback, however, did cause me time and effort during the data collection process as it involved reassessing the research design and considering in what other ways I could access the needed information to answer my research questions. I concluded to spend much more time at the field site than originally intended to observe teacher practices. Because of these unanticipated outcomes, my data collection took me into April 2010.

### 3.7.1 Participant Observation and Artefact Collection

A component of this study was conducted using participant observations. My involvement with participants during the observation process was minimal. It included such tasks as talking to teachers about assignments and assessment, asking students about certain processes that needed clarification, and assisting students and teachers when solicited. Occasionally, I also provided unsolicited help to students.

Participant observation was done at both the district and school level and included all the study’s participants. It involved observing the teachers during district presentations, within their classes, at staff meetings, and at the district and school site; observing administrators within the school, at staff meetings, and at Parent Advisory Council meetings; and observing students within the school, classroom, and when on computers. The focus of these
observations always remained on the participants’ uses of the Internet, especially when on social Web spaces. I noted which tools they were using and promoting, how they were using these tools, what tools they seemed to value, and what sorts of obstacles arose during the implementation or pre-implementation process.

Furthermore, many artefacts were collected including district and school policy literature, booklets and pamphlets about district and school goals, school newsletters, teacher email correspondences, teacher handouts, and photos of items such as projected classroom Internet images, teacher chart paper notes, and mission statements framed in plaques. Most importantly, some main components of the data included information obtained online from the district and school public website as well as portions of its private portal along with individual teacher websites and administrator microblogging sites.

3.7.2 Interviewing Instruments

The major shift that has occurred with interviewing is that researchers are now able to conduct them online. The key reason for this shift when studying new literacies is the belief that the interview should be conducted in the environment that is being studied (Kazmer & Bo Xie, 2008). Shuy (2002) refers to this as contextual naturalness. In this case, the interview itself is a phenomenon that deserves observation (Kendall, 2008). Furthermore, the lack of a presence and increased anonymity of online interviews may help to elicit more sensitive materials (Murray & Sixsmith, 1998; Opedenakker, 2006).

The limitation of interviewing in an online environment is that the researcher will not learn about the participant through the physical space of the participant’s home or other
familiar area (Opelenakker, 2006). However, the researcher will learn through an online interview how the participant functions and thinks in an online setting. For example, I learned much about how students interact on blogs by interviewing using a blog as opposed to asking them in-person about their experiences using blogs.

More and more qualitative researchers are beginning to implement online tools for interviewing purposes using a variety of digital tools. Researchers can conduct public or semi-private interviews over the Internet and these interviews can be synchronous, semi-synchronous, or asynchronous (Mann & Stewart, 2002). Chat room interviews have been conducted by Davis et al. (2004) and van Eeden-Moorefield, Proulx, and Pasley. Online interviews using specially downloaded chat software have been conducted by Madge and O’Connor, 2002. One-on-one interviews using email have been conducted by Broad and Joos (2004) and group online interviews using listservs have been conducted by Gaiser (1997). This study included both online and face-to-face interviews. I conducted online interviews with the students and face-to-face ones with the district and school administrators and teachers. The reasoning for the instrument choices is explained in the next three sections.

3.7.2.1 In-Person Interviews

I conducted nine in person semi-structured interviews with the following participants: the superintendent, John Jennings, the assistant superintendent, Sarah Catella, the District Principal of Technology and Innovation, Liam Kailley, the three secondary school administrators, Paige Greyell, Tyler Carter, and Janice Granger, and three teachers from the focal school. The three teachers were the school’s teacher-librarian, Brook Jones, a science
teacher, Carl Bodin, and a technology education teacher, Ethan Laing, who teaches courses such as woodwork, metalwork, and power mechanics.

I chose to conduct in-person interviews as opposed to online ones with these participants because it was important for me to meet them to learn more about the educational setting being studied. Also, because there were far fewer participants, the logistics of conducting in-person interviews was far simpler.

Though the interview protocol was prepared ahead of time, the interview was semi-structured and therefore the questioning sometimes veered away from the scripted questions to pursue the matter being discussed. For example, when the superintendent brought up the issue of filtering information on websites, I pursued that line of discussion to learn more about his views. All interviews were recorded using two instruments: iTalk, a recording software on an iphone, and GarageBand a music producing software on a Macintosh laptop. Using GarageBand, these interviews were then slowed down and transcribed.

3.7.2.2 Focus Group Interview

Traditionally focus groups interviews are synchronous and conducted face-to-face. This was not the case for the focus group interview of this study. Rather, the focus group interview for this study was conducted asynchronously online using blog technology. Asynchronous interviews are when the interviewer and participant do not communicate simultaneously but rather at time intervals that are apart. Email and listserv interviews are examples of this.
I devised a new way to conduct a focus group interview for a portion of my study. With new Web 2.0 social software technology, it is now possible to conduct interviews applying new applications like blogs and wikis. Conducting a focus group interview through a blog held particular potential as participants could comment on each other’s points and see what others had posted before posting their own opinions. This acted more like face-to-face interviews than listserv interviews and created less organizational, scheduling, dissemination, and collection problems. I set up one blog directed to the students in Grade 10 of the focal school. Blogger was selected as the site to use as it proved the most user friendly and aesthetically simple of the websites tested during the pilot study.

All 164 students in grade 10 (including the 16 international students who took both grade 10 and 11 classes) were invited to participate in the focus group at the same time as I invited them to participate in the survey. A total of 51 out of the 164 grade 10 students (31%) agreed to take part in the focus group interview. All students who participated in the focus group had already completed the questionnaire. During the survey that took place in the classroom, I approached all focus group participants and explained the process of the blog. I gave them a half page instruction sheet to take home with them (included in Appendix D) and then followed up through email with the same information and a reminder to take part in the focus group interview. Five days after posting the questions on the blog, I sent one more reminder email to participants. In this email, I also encouraged them to respond to one another’s comments.
The purpose of the focus group was to gain a deeper understanding of the attitudes and motivations of youth surrounding their Internet practice. I posted six questions (available in Appendix B) on the blog and asked participants to respond to the questions and to comment on one another’s responses. The first five questions focused on students’ Internet uses mostly for learning. For example, one question asked, “What recommendations do you have for teachers about ways to use the Internet that would help you learn in school?” The last question invited students to post questions that they may have had. Wibeck, Dahlgren, and Öberg (2007) advocate for focus groups to be collaborative learning environments where open-ended and provoking questions are posed in order to elicit responses that are expressive. The blog had the potential of forming such a community that encouraged its participants to discuss issues that held importance to them by providing a non-threatening anonymous environment where opinions could be posted without the urgency of an immediate time limit.

Two major differences existed between a traditional focus group interview and this study’s focus group interview conducted through a blog. For one, as the interviewer, I played a far more invisible role as I was rarely probing participants during the process. Secondly, participants were able to jump around and answer questions in whichever order they chose. Nevertheless, the general structure, purpose, and rationale around adopting this interview method were constant with traditional focus group interviews.

One major advantage to asynchronous interviewing is that it is available in textual format and therefore needs no transcription (Kazmer & Bo Xie, 2008). This was also true of the focus group interview using the blog. Because all the participants’ answers were written in
textual format on the blog, it was easy for me to copy and paste them into a Word document to later convert and upload into a data analysis software program.

It is debatable whether any form of asynchronous interviewing constitutes a true interview. Because questions are sent to the participants and they have the opportunity to think about them and then textually respond to them, the interview becomes quite similar to a survey questionnaire. Asynchronous interviews allow participants to have limitless time to think out their answers and reread what they have written, deleting, adding and making edits to their comments, taking away from the spontaneity of the interview. A key difference between the questionnaire and asynchronous interview then would be how flexible the researcher would be with the questioning (Cohen & Manion, 2007).

#### 3.7.2.3 Online and Paper Surveys

Online surveys are becoming increasingly popular because of their low costs and because of their ease of dissemination, delivery, and data entry. In the first stage of the study, I used an online software program to survey the teachers of the focal school to assess if the district policy of digital literacy was being adopted by the individual teachers. This survey that focused on teachers’ personal and professional Internet practices is found in Appendix C.

In the last phase of the research, the grade 8 and 10 students of the focal school were surveyed to assess if the digital literacy policy had filtered its way down to them and if so, in what ways were the students using the social tools of the Internet. Ninety-one out of 113 grade 8 students (80%) and 132 out of 164 grade 10 students (80%) completed the survey. When it came to surveying youth in a classroom setting, it made logistical sense to conduct paper
surveys. Although filling out the survey itself provided the needed participant assent, it did not provide the necessary parental consent. Therefore, students first needed to take consent forms home to parents to be signed before completing the survey. Furthermore, because the classrooms were not set up with one computer per student, it made sense to distribute paper copies to the students within their classrooms rather than moving students to a computer lab or having them fill out the surveys at individual times.

3.7.3 Advantages of Instruments

Online surveys have considerable cost and time benefits. They are much cheaper to conduct because they do not require materials such as stamps, envelopes, paper, and photocopying fees. Consequently, they are a more ecologically sound technique to use as well. Furthermore, they do not require manual input of data and as a result save considerable time and diminish data entry error. These benefits, however, do not outweigh the limitations mentioned in the last section for surveying a school of students online. Therefore, both online and paper surveys were used.

The blog as an interviewing instrument held the following benefits. First, it allowed for a more balanced power dynamic between me, as the researcher, and the student participants since I was physically invisible. Moreover, the participants were encouraged to pose their own questions and therefore, were given some power over the direction of the interview. Second, it allowed me to learn about the manner in which the participants used one of the online literacies being studied. Third, it triggered questions from participants that may otherwise not have been asked. Fourth, the blog allowed me to interview a large number of students at the
same time; something that is not structurally feasible to an in-person focus group interview. Lastly, the blog was self-transcribing and therefore, saved time and money.

The online focus group interview had many logistical advantages as well. It cut down on cost and time. It alleviated travel cost and eliminated the need to travel to a particular destination to conduct the interview. It minimized transcription time and cost because the online interview itself provided a written record. Furthermore, it was convenient and as a result increases sample size. Those who would not have been able to attend an in-person focus group interview scheduled at one particular time were able to partake and those who would have been uncomfortable meeting face-to-face or openly sharing their opinions with their peers were more willing to participate. Also, as the researcher I did not have to deal with unpredictable factors like unexpected visitors or interruptions (Kendall, 2008). Lastly, the mediated interviews allowed both the participant and me to be in a safe physical environment where we felt most comfortable (Mann & Stewart, 2002).

3.7.4 Drawbacks of the Interview Instruments

Though the interviewing and participant observation instruments had been chosen based on their potential for conveniently and accurately collecting data, they did have limitations. The online focus group interview required access to the Internet and familiarity with the data collection tool of the blog. It had the potential of causing sampling bias if the research population was not literate or did not have Internet access.

Because the research was conducted in a district with a high SES, the sample did have access to the required tools. The online focus group interview required literate respondents
who felt comfortable reading and writing. It required digitally literate respondents who were at ease typing and occupying digital spaces. Though most respondents were digitally literate in the above ways, the survey data showed that the majority of students had never contributed to blogs before. This may have been one reason why blog posts were short and mostly one directional. Participants did not elaborate on their comments and rarely made comments on one another’s comments.

The blog resembled a survey just as much as it resembled an interview as respondents answered whenever they found the opportunity. Although this proved convenient for the respondents, it took away from the spontaneity of the interview. Also, on occasion, it was unclear which post a participant intended to address with their comment.

Some organizational and ethical issues arose with the blog interviews as well. First, the top posts received the most comments with fewer comments being posted for each subsequent question. Second, some comments were better suited to answer a different question than the one it was posted under and with some responses it was clear that an error had been made with the place to post the comment. Lastly, two participants posted inappropriate comments such as unrelated sexual comments or images (using symbols) and comments specifically directed at a peer or peer group. It was essential to monitor the comments carefully to ensure that inappropriate remarks did not get posted and to later take all the data including the ones not posted publically and organize them in a comprehensible manner for analysis.
Furthermore, like other asynchronous instruments, textual communication did not allow for the nonverbal cues of gestures, expressions, hesitations, tone or other hints that would enhance the richness of the data (Kendall, 2008). In her study, Markham (1998) was frustrated by lack of nonverbal cues such as body language, facial expressions, and participant demeanour. Tone of voice, inflections and other cues play a critical role in learning about a people and understanding their meaning. Worst of all, the lack of verbal cues may have caused misunderstanding. For example, often sarcasm can be mistaken for truth and it is unreliable to decipher the level of irony.

Because online communication is fraught with these limitations, people compensate for its shortcomings, and I found this to be the case in this study. For example, users applied words like “Argh!” with explanatory remarks to express their emotions. They manipulated text to express their tone. They applied new forms of language to communicate their point (e.g. LOL, cul8r). This is similar to what other researchers have found with asynchronous interviews, such as participants using emoticons like smiley faces to express their emotions (Kendall, 2008). The blog site I used did not allow for emoticons, photos, or text manipulation such as bold or italics. This, however, did not prevent students from using text to express their meaning. They still managed to use symbols to create emotions such as a colon and an open parenthesis to express a frown or the following symbol to show affection: <3.

Similarly, Kazmer & Bo Xie (2008) found that their study did not lack affective data. Conversely, they found that they not only collected that data in the form of emotional indicators but that they could trust the authority of these indicators more so than face-to-face indicator.
Researchers make assumptions about the affective nature of a response during face-to-face interviews (Kazmer & Bo Xie, 2008). For example, if a participant is smiling, they are pleased about a situation. This is a subjective inference and must be assumed as such.

With textual based emotional indicators, however, the researcher has a more objective account. If the participant indicates with a smiley face or other emoticon or explicitly states his/her pleasure in the text, then the researcher is more certain about the affective nature of the response. For example, I was able to pick up adequate clues for the affective nature of comments such as “when teachers show us YouTube videos : )” or “I hate doing research ($@%*!)).” However, these indicators are limited and the clues were not always obvious.

Young et al. (1998), Mann & Stewart (2002), and Opedenakker (2006) all warn that not everyone uses the same emoticons to say the same thing; nevertheless, this legitimizes the affective analysis of the data because it allows the researcher to present the emotion as the participant intended and not the way the researcher interpreted it (Kazmer & Bo Xie, 2008).

One major criticism of conducting interviews online instead of in-person is that there is a loss of social context cues that could add a level of richness to the data analysis. Research that dates even before the Internet illustrates this point through a computer conferencing system (e.g. Sproull & Kiesler 1986; 1991). However, when studying new literacies on the Internet, what we learn from the participants’ interaction with the instrument can be as important as social cues.
3.8 Coding, Analysis, and Inferences

The coding process began during the pilot study that tested the instruments and many of the same codes were adopted during this study. Though I approached both this study and the pilot study using a new literacies and new knowledge economy lens and intended to explore findings that pointed at practices that could be considered as such, I still employed a framework of grounded theory by approaching the analysis inductively (Glaser & Strauss, 1967; Strauss & Corbin, 1998b). Though it is implausible to approach a study without bringing personal experience, theoretical lenses, and background knowledge to it, especially in situations where a similar study was conducted ahead of time, it was important to try to approach the coding inductively to stay connected and true to the participants’ experiences and understanding.

The analysis of data does not take place at a distinct phase (Coffey & Atkinson, 1996); it can take place through all stages of a study. In this study, the analysis of data began when I was considering my research design. It included the process of searching for potential districts and schools to conduct the study and the process of creating and selecting instruments. It continued right through the final editing phase of this dissertation and will likely continue beyond this manuscript as I prepare the study for conference presentations and publications.

My main data sources included transcripts of the focus group and face-to-face interviews, observational notes from both physical and online spaces (e.g. Virtual Classrooms), artefacts such as district websites and school newsletters, and responses to the teacher and
student surveys. Onwuegbuzie and Leech (2006) offer the following seven step approach for analysing mixed methods data:

1. Data reduction: reducing quantitative data through statistical analysis and qualitative data through thematic analysis.

2. Data display: visually representing the data through graphs, charts, tables, and figures.

3. Data transformation: quantifying qualitative data and qualifying quantitative data. They use the terms quantizing and qualitizing.

4. Data correlation: finding connections and relationships in the data.

5. Data consolidation: making associations and merging the data.

6. Data comparison: comparing the data collected through both the quantitative and qualitative methods.

7. Data integration: combining the data together to create either one holistic component or two separate ones.

I partook in four formal phases of qualitative analysis and five phases of quantitative analysis and ended by correlating, consolidating, comparing, and integrating the two sets of data together. The first phase of qualitative analysis included the following: listening to all audio recordings, transcribing them, and re/reading the transcriptions; re/reading the online focus group interview, field notes, and archival data such as websites and documentation; taking notes on observations and interview transcriptions; and compiling and organizing
information. This gave me a general understanding of the data and the needed background knowledge to proceed further. At this point, I was able to assess holes in the data and restructure the research design to fill the missing gaps. For example, I scheduled an interview with a key participant after I had learned about his extensive role in digital literacy involvement during interviews with other participants.

The second phase of qualitative analysis involved data reduction. Here I eliminated information that did not provide the needed background information or did not assist to answer the research questions. Phase two also involved grouping similar responses together in a Word document.

The third phase of qualitative analysis involved data correlation, consolidation, and comparison. Specifically, it involved sifting through the data in the Word documents to identify emerging topics; converting the Word documents into rich text format files, uploading the data into Atlas.ti, and annotating the text using codes, quotations, memos, and other such tools available on the Atlas.ti interface; and finally collapsing codes into themes. Many of the codes emerged into the findings of the study.

For a code to be considered as a theme, it had to appear on several occasions and across data sources. For example, because traditional literacy practices were observed in several participants’ practices and brought up in interviews, it emerged into a theme. Therefore, quantifying the data occurred during this phase as well. The main codes that were used include: traditional literacy, new literacy, assessment, frustration, limitation, challenge, advantage, bans & filters, value of the Internet, available support, portal, infrastructure, future
directions, initiatives, background description, participatory use, democratic use, collaborative use, distributed use, multimodal use, contributing to information, accessing information, self-selected practice, school-selected practice, professional practice, personal practice, and recommendations.

I used many of these same codes first during the pilot study that tested the instruments. The findings of the pilot study were published in a peer reviewed journal and presented at conferences. Therefore, the analysis process that I used underwent peer review. This, along with the detailed description provided in the findings section, provides a level of reliability for the analysis. Table 3.2 provides a definition and examples for the codes I used.
### Table 3.2

**Definitions and examples of codes**

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<th>Codes</th>
<th>Definition</th>
<th>Examples</th>
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| Traditional Literacy| A practice that involves the acts of reading and writing without features that are associated with new literacy practices as defined below. | -Writing an essay on a word processor.  
- Cutting and pasting text created on a word processor onto a website |
| New Literacies      | New Literacies “include the skills, strategies, and dispositions necessary to successfully use and adapt to the rapidly changing ICT” (Leu et al., 2007, p. 1572). These can include traditional literacy components. | -Collaborating in creating and posting multimodal content using a new technology.  
- Using wiki software to collaboratively create content with others. |
| Assessment          | Formal evaluation of assignments that will eventually contribute to student grades                                                        | -A student receives 93% for the skilful video she produced and posted onto YouTube.  
- A student receives a C+ for contributing to the classroom SNS 10 times. |
| Frustration         | A feeling of defeat that hinders participants from reaching their goal.                                                                      | -A student cannot find a useful website for class project  
- A teacher abandons planned class project as a result of technical difficulties. |
| Limitation          | The drawbacks of a particular resource                                                                                                     | -Technical difficulties cause wasted class time.  
- Violent content or pornography veer students in undesired paths |
| Challenges          | Burdens that must be overcome to adequately use a resource.                                                                                   | -Learning an unfamiliar program  
- Managing time to implement new ideas |
| Advantages          | The benefits presented by resources                                                                                                          | -Quick access to information  
- Meeting needs of diverse learners |
| Bans and filters    | Prohibitions placed on access to information                                                                                                 | -Teacher cannot access SNS from classroom computer  
- Student is prohibited from playing a game on school computers. |
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<th>Codes</th>
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| Value of the Internet | The worth the Internet is given for education                              | - a student appreciates the ease in communicating with peers about a homework assignment  
|                     |                                                                             | - a teacher finds needed information of a class through an educator forum                                                                                                                               |
| Available Support   | The provisions offered to teachers and students                            | - the district provides funding for professional development  
|                     |                                                                             | - students can get assistance with technological problems from school staff                                                                                                                             |
| Portal              | The online gateway and vehicle used by the district to access all components of the Internet bound by the district according to its needs. | - students access classroom blog through the portal  
|                     |                                                                             | - teacher moves her website over from Weebly to the virtual classroom accessed through the portal.                                                                                                      |
| Infra-structure     | The underlying groundwork set-up to support technology                     | - software used by district to sustain the portal  
|                     |                                                                             | - the wireless system that has been set-up by the district                                                                                                                                            |
| Future Directions   | The impending goals of the district and school                             | - the principal wishes to set-up a txt based student announcement system  
|                     |                                                                             | - the superintendent wants to move away from purchasing technological hardware and move towards creating structures that are conducive to students bringing in their own wireless devices |
| Initiatives         | The plans and ideas set forth by the district, school, and teachers        | - the superintendent wants to move towards a distributed learning model  
|                     |                                                                             | - the teacher-librarian wants to encourage students to be critical consumers of information                                                                                                           |
| Background descriptions | Details given of the case study or focal school and classroom settings                | - the location of a classroom in relation to a computer lab  
|                     |                                                                             | - the availability of resources at a school                                                                                                                                                    |
| Participatory Use   | Allowing for active involvement on the Internet                            | - students rate the importance of a news story  
|                     |                                                                             | - teachers contribute lesson ideas on a forum                                                                                                                                                    |
| Distributed Use     | Wide spread circulation of ideas and information on the Internet           | - a student video is available on YouTube and accessible for a large audience to view  
<p>|                     |                                                                             | - the superintendents provides updates on educational developments through twitter                                                                                                                |</p>
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<th>Codes</th>
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| Collaborative Use   | A cooperative effort by a group of people to achieve a shared goal on the Internet | -students work together to create an online encyclopaedia of body systems using wiki software  
-teacher-librarians ally online to produce a document outlying the future direction of their role. |
| Democratic Use      | Internet use that allows for all users to contribute to it.                | -students can comment on a blog post  
-teachers can rate the usefulness of a Webquest lesson |
| Multimodal Use      | Internet use that includes several methods of expression.                 | -a student creates an online project using text, image, and sound  
-a teacher uses online videos to explain concepts |
| Contributing to information | Adding to the knowledge base on the Internet                           | -administrator posts educational strategies on a blog  
-student posts photographs on a SNS |
| Accessing information | Using the Internet to retrieve needed information                         | -student goes to Wikipedia to find information about motor systems  
-teacher goes to YouTube to find a video on DNA |
| Self-selected practice | An activity pursued on the Internet based on students’ own initiative that is not related to school | -student plays an online game for fun  
-student posts a video of himself skateboarding on YouTube |
| School-selected practice | An activity pursued on the Internet by students based on a school related activity. | -student goes to dictionary.com to get the definition of a word in a novel he is reading for school  
-student contributes to a classroom blog discussion |
| Personal practice   | An activity pursued on the Internet based on teachers’ own initiative that is not related to their teaching career | -teacher conducts banking online  
-administrator stays in touch with friends and family through Facebook |
| Professional practice | An activity pursued on the Internet by teachers based on a career related activity. | -teacher uses online materials as class text  
-teacher sets up a virtual classroom |
| Recommendations     | Suggestions offered for improvement                                      | -teachers recommend providing more release time for professional development  
-students recommend that teachers assign more projects conducive to Internet use |
The final phase of qualitative analysis involved interpreting the findings. I followed Yin’s (2003) strategy for interpreting findings by comparing findings to the literature in the field, considering alternative explanations to my interpretations, and describing the case in detail. This final phase also included data display. Creating figures, charts, tables, and maps assisted in identifying interrelated themes. With each step of analysis, I referred to my research questions to assist in identifying the information that most helped answer the questions. Though the phases of data analysis were dominantly directional especially at the start, they did not remain so. I quickly adopted Coffey & Atkinson’s (1996) notion that data analysis is cyclical and was making adjustments and additions to all areas. I not only found myself going back to the first phase, but bouncing back and forth from phase to phase.

The quantifiable data analysis consisted of five phases. The first phase involved recording the survey data into SPSS software. Just as transcription is a form of analysis (Poland, 2002; Ochs, 1999), so too can data entry be. This was especially true for open ended questions such as “Which website do you most frequent for school related reasons?” While entering the data, it became apparent which sites were the most popular and which could be grouped together. By inputting the data, an overall feel for participant responses was gained at an early stage of analysis. This stage also involved checking for data entry errors and revisiting data that proved suspicious.

The second quantitative analysis phase involved running frequencies and paired t-tests. I ran descriptive frequencies to get an overall sense of the data and paired t-test to compare
the means of the Internet tools used by teachers and students. The main point of comparison for teachers involved their professional versus personal Internet use and the main point of comparison with students involved their self-selected versus school-selected Internet practices. Also, paired t-tests compared the frequency in which both teachers and students use the social Web for accessing information versus contributing to it. To ensure the practical significance of the results, I calculated effect size for all comparisons using Cohen’s $d$ ($d = \frac{M_1 - M_2}{s}$) that is defined by the difference between two means divided by the data’s standard deviation (Cohen, 1988).

The third phase involved data reduction. After reviewing the research questions, assessing the data, and reviewing the questionnaires, it became apparent that some questions could not be used for this study. This was a result of issues such as low response rate, shifts in research focus and design, and responses that were not trustworthy because the question was difficult to interpret for the students. For instance, students had difficulty understanding the word ethnicity and identifying themselves with a dominant ethnicity. During the execution of the survey, several students asked for a definition of this word and then assistance in identifying their ethnicity. For example, one student told me that his mother was Greek, his father was Chinese, he was born in the United States but lived in Canada for the past ten years. I, too, had difficulties assisting many of these students respond to that question. Therefore, the question on ethnicity, along with other questions that posed problems were eliminated to help keep the usable data concise and organized.
The fourth quantitative analysis phase involved the data display. Creating tables, charts, and graphs assisted in organizing the data, giving it structure, and offering a visual representation that assisted in identifying trends and data distribution.

The final quantitative analysis phase involved interpreting the findings and qualifying the data by writing it out in prose. Though the quantitative analysis had a dominant directional structure that led me from phase one to phase five, like the qualitative analysis, I found myself bouncing back and forth from one phase to another throughout the analysis.

The data analysis model is displayed in Figure 3.1. After completing both the statistical and descriptive analysis, I took the final steps of correlating, consolidating, comparing, and integrating the two sets of data together. I looked at both sets of data and identified similarities and differences and considered interpretations for why the findings either matched or didn’t. Overall, the findings of the analysis complemented one another as often the qualitative and quantitative analysis assisted to answer different components of the research questions. By identifying connections and relationships in the data I was better able to make decisions about how to integrate the data. I decided to report the qualitative and quantitative analysis separately in the findings sections to assist with clarity and to establish transparency. However, in the final discussion chapter, I make inferences holistically by pulling from both sets of analysis. Because the data sets were complementary, this strategy worked best for answering the research questions, considering implications, and adding to the ongoing building of New Literacies Theory.
Figure 3.1. Data analysis model
3.9 Inference Quality

I ensured the quality (credibility/validity) of my inferences by employing several methods to gather information and by triangulating data sources. At the district level, this included interviewing key personnel from the district office and the three secondary schools, reading the published online and print literature, attending presentations, spending time and taking field notes at the secondary schools and following participants on the microblogging site twitter. At the school level, I surveyed and interviewed both the teachers and the students, attended staff and Parent Advisory Council meetings, had formal and informal meetings with the school principal, accumulated online and print artefacts, and conducted a lengthy participant observation.

For the descriptive analysis, I included many of the participants’ own words in the findings section as support. For the statistical analysis of the surveys, I employed an alpha level of .01 to minimize the risk of a Type 1 error and to enhance the study’s rigour. Also, because I made multiple comparisons, I kept the alpha level conservative.

Using several methods and being present at the school for 10 months allowed for confirmation of reliability, evidence, precision, and legitimacy. As Eisner (1991) suggests, “We seek a confluence of evidence that breeds credibility, that allows us to feel confident about our observations, interpretations, and conclusions” (p.110). As Wolcott (1990a) recommends, my intention through this study is to understand and not to convince.
3.10 Researcher as Bricoleur

As researchers studying new literacies, we must consider our question first and understand how it is framed within our field. Merely “applying existing theories and methods to the study of Internet-related phenomena is not a satisfactory way to build our knowledge of the Internet as a social medium” (Jones, 1998, p. x). It may be necessary then to build new theories, combine existing theories or embrace multiple theories. Only at this point can we take the methodology under consideration and ask ourselves the following questions: How might traditional methodological tools be applied in the study of new literacies and how might these traditional tools be altered to work in new “online social spaces” (Leander, 2008, p. 33)? The Internet itself is a bricolage pulling old materials in creating the new. Researchers studying this medium will have to be bricoleurs pulling from existing theories and methods to create new research paths.

3.11 Summary

This chapter reviewed the research design employed for the study by presenting an overview of the settings and participants, by describing the mixed methods design and critical case being studied, introducing the data sources, explaining the coding, analysis, and interpretation process, and outlining the steps taken to preserve the study’s validity.

Chapter 4 will present the findings that pertain to the school district under study. It offers an overview of the school district, introduces participants, expands on the existing and future structures that support the district’s technology initiatives and identifies advantages, drawback, and challenges of Internet incorporation within the school district.
4.0 Pacific Coast School District

4.1 Research Questions

The following research questions guided this analysis: a) How are the administrators of a district and the teachers at a school (who have set as their goal to incorporate digital literacies within the curriculum) using and encouraging the use of the social Web to support learning in different disciplinary areas? and b) what tensions may arise as a result of the imposition of these uses on the traditional structures of schooling?

I partook in four formal phases of qualitative analysis to derive findings from the school district. The phases included data recording, organizing, and reviewing; data reduction and grouping similar responses together; data correlation, consolidation, and comparison; interpreting the findings by comparing them to the literature in the field, considering alternative explanations to my interpretations, and describing the case in detail. The analysis process is outlined in detail in Section 3.8.

Using participant observation, artefact collection, and interview data from the district participants, this chapter presents the findings from the qualitative analysis conducted on the school district by providing an overview of the district; by introducing the participants involved in the study; by identifying advantages, disadvantages, and challenges of the structural set-up; by discussing the district’s views and practices on bans and filters; by describing the support provided at the school level from the district; by depicting the challenges that arose in providing this support; by recounting how the district values the Internet as a learning tool; and
by identifying what drawbacks have presented challenges in incorporating the Internet for learning.

4.2 Findings for the District

To be able to answer the research questions, it was essential to have an in depth understanding of the district and its goals. By doing so, it became easier to track the district’s goals and philosophies to the school level and observe if and how their policies were being adopted and implemented. This chapter explores how the district administrators and its secondary school leaders were implementing and using social Internet tools for learning.

I conducted in person one-on-one interviews with three district administrators and three school principals. I asked similar questions of each of the interviewees, but allowed the interviews to deviate from the original line of questioning for greater understanding of the interviewees’ reflections. From the transcripts of the interviews, thematic commonalities were identified using Atlas.ti software through narrow context searches of key expressions relevant to the questions posed during the interview, and further examined for relevance to the study research questions.

4.3 District Overview

Pacific Coast School District had 6500 students housed in seventeen schools. The students came from high social-economic backgrounds, and therefore, the district dealt with some unique pressures. For example, they dealt with high academic and professional expectations from their community and parents. Consequently, “the district strives to develop a
comprehensive and elite level of delivery from a broad education sense.” As described by the participants, they “have a vision of being the finest education system in the country.”

The board of trustees had a strategic plan that drove the district planning and most of the professional development. This strategic plan was the basis of the district Achievement Contract and helped target funds and energy. The main goal of the district stated in their Achievement Contract was literacy with one of the objectives of that goal being “to improve the digital literacy of all students.” Digital Literacy was defined as “the ability to locate, organize, understand, evaluate, use and create information using digital technology.”

The district gave the following rationale for adopting the goal of improving digital literacies:

1. they already had the necessary technological hardware including many laptop carts to be capable of meeting this goal.

2. the district wanted to move away from issues of hardware and resources and move toward supporting learning with digital tools.

3. data showed that the students scored below the provincial average on standardized test questions relating to computers for learning.

4. data showed that only 50% of parents believed that schools are preparing students for the future.
Furthermore, the district had a separate technology plan that was posted on their website. It stated that “research to date, on the impact of technology upon student learning, has been largely focused on the use of specific software applications and on information management. [Our district is] moving toward more Web 2.0 based applications through our portal initiative.” This was confirmed by the newly appointed Superintendent, John Jennings, whose personal interest rested in the potential of social media for learning.

4.3.1 District Digital Literacy Initiatives

The district was coming to the end of a three-year rebuilding of infrastructure where the main focus was in shifting systems. The district moved from a Novel system to a Microsoft system called SharePoint. This required them to change the majority of the applications they were using. For example, they moved from using LotusNotes email to Microsoft Outlook. One of the goals was to create a single point of sign-on that allowed staff and students to access all needed information by occupying the online environment set up by the district.

Also, much money was spent on purchasing hardware and software. Over the past few years many tablet PCs, laptop carts, desktops, and a plethora of software had been purchased for staff and student use. The assistant superintendent, Sarah Catella, said, “We’ve spent the past three years replacing defunct hardware for students and staff.” The district staff had come to the conclusion that the next important step to take was to shift the focus of time, energy, and funds to using the resources already in place to facilitate student learning.

Consequently, the district had just begun to implement a digital literacy committee that met to discuss high-level strategic plans, goals and objectives in order to support digital literacy.
across all secondary and elementary schools in the district. Part of the goal of this committee was to examine the terminology and concept of “digital literacy.” Liam Kailley, the district Principal of Technology and Innovation and head of the committee, defined it as “the ability to understand, synthesize, and analyze information through a digital context.” He saw that everything that had been communicated in the past was now taking on a digital form and therefore, it made sense to make “digital literacy” their encompassing phrase. It was from this viewpoint that the committee had been initiated and moved forth. Liam said, “Our bent is that technology and the digital side of things is infiltrating everything, it’s infiltrating assessment, it’s infiltrating instruction, it’s infiltrating curriculum.”

The committee planned to participate in new ways of communication such as using wikis instead of standing and delivering information. The idea was to actually contribute to the body of knowledge of digital literacy while discussing its pedagogical potential. Consequently, the district was trying to move away from the traditional structure of schooling that they had adopted. For example, their computer immersion classes were set up in computer labs where each student had one computer to work on at their desk. The superintendent said, “Because those one-to-one programs were created at a time where they were replicating what was going on in a normal classroom with technology in many ways. What I see at other schools is kids sitting in the hallways with their laptops—the computers go on the desks...and it’s very regimented.”

The district was looking toward changing these regimented structures by providing new opportunities. One discussed change was moving towards a blended learning system where
students were in their physical classrooms for a portion of the time interacting in face-to-face activities with their peers and teachers and taking part in online classrooms for the other portion. At the time of the study, there were 20 blended learning classes in the secondary schools of the district. The superintendent’s goal was to have all classes move towards incorporating some sort of online environment.

Many courses had set-up what the district referred to as virtual classrooms. These courses met for 100% of scheduled time in the physical classroom; however, the teachers had created online spaces using the district’s portal system to complement their teaching. The district staff and the secondary school administrators continually encouraged the teachers to take part in these virtual spaces. By taking part in such initiatives, the district managed to link two of its major goals of sustainability and digital literacy.

One point noted throughout the research process was that the Pacific Coast School District attempted to support the areas in which its teachers and students were keen to pursue. For example, because email had become the number one method of communication amongst its teachers, a new system that was supported by the district had been set up. The more people using and interested in an application, the more likely it was that the district would find a way to support it. Though they were trying to maintain a safe environment, they were trying to create a pedagogically sound one as well.

4.3.2 Future Plans of the District

The district had several future goals concerning the Internet. At the time of the study, the main focus was on developing an adequate wireless infrastructure for the district to
empower students and teachers to bring their own wireless devices to schools. They also aimed to grow their Web environment so they could expand what they do with it, especially from a collaboration perspective. Next, they hoped to eliminate voicemail and move toward incorporating VoIP or at least moving strictly to online modes of communication such as email. Lastly, creating a social Internet presence for the district was a particular goal of the new superintendent.

Every district participant interviewed made explicit mention that their main goal was to move to a strong and secure wireless structure. John Jennings said,

“We gotta go secured wireless now because that is going to get us to the next place which is personal devices. McCreary Adolescent Health Service, a provincial wide survey, said 98 percent of our kids have Internet access; 75 percent of them have two or more computers at home. I mean come on. It makes sense for the schools to have less equipment but a better wireless structure that allows students to bring in their own devices. So why don’t we just enable them in school...We won’t be able to keep replacing it or adding machines in time. But could keep adding access. It’s cheaper if we add access.”

The assistant superintendent commented on the challenges they faced in making this goal a reality: “It’s partly a matter of money that we couldn’t go faster, but it’s also a matter of manpower because our IT staff has been worked to the bone the last three years, when we did this whole roll-over, it meant moving everybody off the current systems.” Despite the challenges, all
participants agreed that the next big move the district should make, if they hoped to be leaders in digital literacy, was adopting a secure wireless structure.

By expanding the wireless structure, the opportunities to use the Internet in more Mindset 2 ways would increase. Liam explained the need to “move into more participatory ways of collaborating and communicating, so things like real time collaboration, Web meetings, the ability to stream a presentation to multiple sites” would become more prevalent. Then, there was the continued push to move toward more blended learning strategies or what Sarah referred to as “hybrid classrooms.” The superintendents’ vision was to have every class be a blended class or have a virtual classroom component in some way within the next five years. Their goal was to have a percentage of class time happen as face-to-face interaction so that they would have a strong in-class component. The district observed different models and noticed unsuccessful applications of online learning because of a lack of community building. Consequently, they aimed not to make the same mistakes. John Jennings described what they identified as a strong model: “You start off more in class and you can slowly go out for more as you build community and you build – the teacher builds relationships with students in the early part of the year. And you can go more online later in the year because you have already built those connections by the in-class face-to-face components.” He concluded by adding, “Students don’t all have to be in the same room at the same time for a dominant piece of the curriculum.”

The next goal was integrating their phone system into their computer system eliminating one less place for staff to have to check for information. A major frustration of teaching staff was that they had to check several places in order to communicate with peers,
parents, and students. For example, they received the same piece of information three times: once in their box, once on their email, and once on their voicemail. Similarly, if they wanted to disperse information to the staff, they had to prepare it in three forms (paper, email, and phone) in case some teachers neglected to use one of those outlets. Consequently, it had become necessary to move to one outlet of communication. Although an official plan had not been created, much discussion was ensuing around this issue with focus on incorporating VoIP.

The last shift that was on the horizon was mostly spearheaded by the superintendent, but had seen much support by other district staff, administrators, and teachers. John Jennings described himself as “a big social media guy;” therefore, as his superintendent role continues, one of the major changes that will occur is “that the district will have a far greater social media presence from a Facebook fan page to a district twitter account.” Even at the time of the study, a Facebook fan page had started and individual district and administrative staff were starting to flirt with twitter. John kept a professional twitter account updating people about the district’s initiatives and plans. Also, he had given several workshops around appropriate and inappropriate uses of Facebook, YouTube, and twitter. He had also given demonstrations on third party tools that students “are using and finding ways to integrate them into the classrooms.” Liam Kailley had also started tweeting about professional events. Even the Stoneledge administrator joined twitter.

Though there was a constant concern about the ways in which online presence can be troublesome, John had influenced other district staff in using social media sites in critical ways instead of fearing them. He commented on the importance of transparency in an educational
community: “I don’t care if people know what I’m doing; there are some things I do that are confidential, but, I don’t care if people see my calendar. Oh, you don’t want people to know what you’re doing or where you are? Why not? Like, I’m not embarrassed about what I do in the system.” Visibility, communication, collaboration, and participation were important aspects to John and he was encouraging the district staff to get on board with this view as well.

Overall, the district’s main goal was that they wanted to reach a point where technology was no longer a point of discussion because it was so well integrated that it had become a part of the culture. Liam explained this paradoxical point by saying “We want to make technology less and less a focus in our district because it’s more and more like air, it’s more and more like oxygen, it’s just what we have, it’s what we use, it’s what we do, if I can’t make that Pro-D presentation I know that I can watch it afterwards online, if I need to get my HR form, I know I can just go online and get it. It’s just what we do. It’s no longer going to be a conversation about technology.”

4.3.3 The District Portal

From a technology perspective, the district aspired to be on the leading edge with technology movements in education. This had sometimes led to collecting technology rather than knowing how they planned on implementing it. Two years ago the district decided to merge their technology and to centralize it by moving into a new platform. By September 2008, the district’s digital backbone was created. This provided a Web-based access of several applications and access to information within the bounds of a safety net. To accomplish this, they were using a Microsoft product called SharePoint.
The Portal system allowed users with a onetime login to sign on a secured environment that the district managed through user identities. Students, teachers, and staff received usernames and passwords, so when they logged into their computers, the computer and the district knew who they were. This allowed for conveniences such as printing to the correct printers and saving information to the correct folders.

Logging into the portal also gave access to different spaces within the district Web environment. Staff member had access to Human Resource payroll forms and other such business matters; teachers and students had access to field trip forms, the daily calendar, the daily announcements, and other similar information. Since the portal was a Web-based environment, it could be accessed from any location with an Internet connection including home, school, or mobile device.

The portal allowed for the creation of Virtual Classrooms and this was the direction in which the district was encouraging teachers to move when it came to creating their class websites. The software lessened the need for technical skill and made this process user friendly by implementing a wizard. By clicking on “create a new workspace” teachers could quickly and efficiently create their virtual classroom by choosing options including security and privacy settings that met their needs. Once the teachers had created the environment, they could invite their students to become members. All users would then access the virtual classroom by logging in using their username and password.

The virtual classroom environment had four main purposes. First, it was a place to manage information and this was the entry point for many teachers. They posted homework
assignments, daily tasks, calendar of events, and worksheets. This component was used in a traditional website sense. Furthermore, students were able to upload their assignments onto the website, eliminating the need to print and transport work.

The next three uses were more educationally focused and pedagogically supported applications that invited participatory involvement. They included a blog, a wiki, and a discussion board. Liam, the technology administrator, explained the thought process that went behind including these environments as part of the virtual classroom: “We’ve mapped out the instructional strategies that the teachers would typically use in their classrooms and tried to support them with how they can use the same instructional strategies but now use a different medium to engage the students both deeper and broader in their learning.” He described the space as the district’s own personal iGoogle. The technology allowed staff to take pieces that had a sound pedagogical role and pull them into their portal to create the precise space that best suited their district’s interests. The idea was to continue with this structure for the next four to seven years until newer technology would better suit the district’s goals.

Through the portal, the district was also using the blogs as professional growth plans for administrators. Administrators had a space called MySite which acted as their individual Webpage. Administrators placed their profile there and had access to their important dealings such as sites that they were following and emails with which they were dealing. Everyone had access to one another’s profiles. Therefore, some people were choosing to use the blog on the profile page as their professional growth plan instead of writing it on paper. This way others could access and comment on it creating more of a discourse around the growth plan. If this
process ended up being worthwhile for administrators, the goal was to filter it down to
teachers and then to students for their portfolios. This was the application that most resembled
a social network and with time, they hoped to have the ability to instant message, email, and
phone (using VoIP) one another through the MySite as well.

4.4 District Participants

4.4.1 The Superintendent: “I’m Interested in People Now”

John Jennings, the Superintendent of Pacific Coast School District, had several goals for
the district; however, his main initiative was to focus on digital technologies. This included
working on a paperless strategy with the trustees and conceiving digital plans specifically
focused on social media.

He was an avid user of social media himself for both personal and professional reasons.
Professionally he followed over 200 people on twitter including educators, politicians, and
reporters. He had a fairly large following and took advantage of this to exchange ideas and
articles. He said, “I just sent two articles to principals this morning. Both of them I got off of
people in my twitter network this week.” He had noticed that people had tweeted about his
presentation which he embraced as “the ultimate in accountability.” Figure 4.1 shows an
excerpt from his twitter feed.
An excerpt from John Jennings’s twitter feed.

Social media allowed him to change the way he thinks and communicates. For example, he mentioned that he used to subscribe to magazines, and then he switched and started to subscribe to ideas instead by searching for information that was relevant to him; now, he has switched again and instead of subscribing to either magazines or ideas, he subscribes to people. He said, “I used to be interested in assessment or I used to be interested in technology. I’m interested in people now, which has changed. I’m interested in what interesting people are thinking and talking about in education. I don’t want a journal on assessment, but I’m gonna
follow interesting people who often write about assessment. I’m also interested in what else they’re thinking about. And what I like about twitter is that—creating a network. I started with a few interesting people and I saw what they were interested in, and then you personalize. It is the ultimate in personalized learning. Twitter is my professional personalized learning.”

Twitter even helped John get hired on to Pacific Coast School District as a deputy superintendent. When he interviewed for the position, he was given an hour before his interview to prepare to answer the following question: “What will learning look like in the next ten years?” He was to then prepare his answer on PowerPoint to present to the committee. To help him come up with the answer to the question, he decided to post the question on twitter and ask his network for their assistance in answering it. Fourteen people responded to him during that time and he prepared his answer accordingly by embedding their answers and giving them credit for their suggestions.

The rationale he offered the hiring committee for his response was “It doesn’t matter what I say. What matters is I can find out what the best thinking is of what learning looks like in the next ten years and then pull that together and synthesize it. Because you actually don’t want to just hire me because of what I think. You want to hire me because I’m going find the best thinking and bring it to you.” John would like to see students tackle questions that they have in a similar manner—by connecting to each other and considering different points of views.

Social media allowed him more flexibility in his schedule and access to information that he would otherwise not have had. He described an online conference that he attended the
week prior to our interview that he would otherwise not have been able to attend as its physical setting was in Philadelphia. He described a portion of his attendance as such, “So if I want to jump into a presentation and watch part of it or archiving or the people that are presenting are blogging about. And so I can follow them because they’ve all tagged it.”

John was also a frequent user of wikis especially for presentation purposes. This allowed him to build his presentations in a more collaborative manner and make them dynamic over time. He said,

“Every presentation I do, I build in a wiki. When I do my professional presentations to other colleagues, so that other people can collaborate and then, we can use WikiSpaces. And we can use the discussion board that sits behind WikiSpaces. I do a new presentation, I just copy and paste my old one in and I give it a new url, and I make adjustments. And so I never do PowerPoints, I only do wiki presentations. And so I do live clicking as I do a presentation on the screen.”

John also advocated for podcasts a strong learning tool and listened to them himself for his professional growth. He subscribes to several educators’ podcasts: “I’m all over podcasts...professionally... I go to itunes and ... download from different conferences and save them to my ipod and hike them in my car and an hour and a half every day and that is part of how I spend my time.” This allowed what he otherwise considered wasted time as an opportunity to stay current in his field.
He was a great proponent of mobile technology and used it regularly to access information and to communicate with colleagues. He was attracted to the instantaneous nature of mobile devices and their ability to help him achieve many of his daily needs.

Though John considered the Internet as his “go-to for both personal and professional reasons,” and used it interchangeably, he did comment on a few personal uses that differed from his professional use including financial reasons such as banking and keeping track of stocks and taking part in social networks to share photos with friends and family. John had not yet found or seen a powerful use of Facebook for learning. He used it on a personal level to stay connected with his friends and family and even saw its relevance on a professional level for disseminating information and communicating with a particular group; however, he had not seen it used effectively to enhance learning.

4.4.2 The Assistant Superintendent: “Trying to Model Better Practice”

The District hired Sarah Catella, the assistant superintendent, ten years ago. She was hired specifically to redo the district’s tech plan: “it was mostly around what did we think kids ought to be learning, what was the role of the teacher-librarian in information literacy we were calling it then, and I started doing some things with the tech department.” A large portion of her job included teaching the district and school staff how to use educational applications with students. She was keen on focusing on the learning potential of the different tools and how they could be implemented in classrooms rather than teaching how to use the tool itself: “I won’t teach you Microsoft Office but I’ll show you why you’d use a spreadsheet in your math
class, you know, I won’t teach you KidPics so that you can just paint I’ll show you how kids
digital story-tell with KidPics.”

Like John, Sarah was an avid user of the Internet for professional reasons. She was
regularly on the district website not just to access information but to add it as well. Because she
had administrative access to make changes pertaining to her district, she frequently included
updates for parents on the site, assisted in developing and maintaining the technology page,
answered Frequently Asked Questions, and uploaded links to research and other resources.

At the time of the interview, Sarah was developing two wikis. One was being assembled
for superintendents across the province. The idea was to set up an environment around
curriculum discussion so that all ideas could convene in one area. She said, “I’m tired of
everybody trying to do everything by email and I said really just let’s throw [a wiki] together.”
She initiated the same type of plan for a group of Montessori public schools across school
districts. Her rational for this plan was that “we need narrative for teachers and administrators
to share practice about doing this in the Montessori setting. So there isn’t a place like that right
now, so I’m going to set that up.” She had success using wiki’s in the past, so felt comfortable in
continuing with the practice. For example, she developed a wiki for her district’s teachers to
use for professional development at a digital literacy workshop.

Other social media tools that Sarah used for her professional practice included blogs and
RSS feeds. She enjoyed reading certain education blogs and followed their RSS feeds. This
practice demonstrated her awareness of topical tools. Instead of going to websites to seek
information, she setup a system where the information she sought came to her. She recognized
the drawbacks of such a system and sometimes purposely abandoned the strategy: “I get distracted easily, so this limit to how much stuff I want coming in at me every day, I sometimes have to personally just choose to go there as opposed to it coming in, because it will take me off track.”

Even though, she did not create the videos herself, Sarah did identify key videos from YouTube and included them on the instruction services page of the portal allowing the district to run workshops virtually from the Internet instead of in a physical setting. When there was a pressing topic such as group strategies for engagement and collaboration, Sarah prepared materials around the topic to include on the portal. She prepared a type of Mashup from sources that she found and adjusted materials that she created from scratch and available public resources. She presented them in a multimodal manner by developing PowerPoint presentations, adding YouTube videos, re-creating documents, formatting them into PDF’s and subsequently posting them all online. She explained her rationale: “What I’m trying to do right now is email almost nothing, I mean I email just the link to where this stuff is... stop emailing attachments, it’s clogging up all the email, it’s in the sent and received box of umpteen people, so just trying to model better practice.”

Sarah’s professional Internet practices transferred somewhat into her personal life. She said, “Going home I’m probably still the assistant superintendent so I have to be really careful what I do...that’s one of the issues about teachers too...if anyone’s naïve enough to think they can go to a site ... and do something there and then say oh that’s my personal life, well not if the papers get hold of it.” Because Sarah did not see an authentic division between her life as
an assistant superintendent and her life outside of that capacity, she mostly aimed to use the Internet in professional ways outside of her career as well.

For this reason she did not embrace social networking. She did, however, use the Internet for other purposes such as learning about travel, finding recipes, and downloading music: “I love reading about travel, I read blogs of other people on a wide variety of topics, fashion travel, literature, cooking, I like cooking recipes, tons of that. I don’t buy a lot on Amazon, I do buy on iTunes, I do buy music, I’m old school, don’t steal the music, so I kind of model stuff I’m supposed to do on copyright.” As a public figure, she strove to set exemplary standards for the district staff and students and the community as a whole.

Sarah was a member of a choir that explored social media as a way to attract audiences to their events. They used tools such as Flickr and twitter to enhance their visibility and the group asked Sarah to take an active role in this capacity because of her knowledge. Though keen to help in ways that she saw fit, she hesitated to get involved in ways that she considered superficial. For example, she did not embrace the microblogging trend and was not keen on tweeting about the ensembles’ mundane routines, but was willing to provide a more detailed rhetoric through a blog: “I’m not interested in doing anything twitterish…‘now we’re practicing Mendelson’s blah-blah.’ So I would be happy to talk about the power of women’s ensembles, and a couple of topics like that, so I will blog on a couple of things like that, that I think have some meaning and depth, I’m not interested in water-cooler talk on the Internet.”

This was a concern that she noted professionally as well. The manner in which digital tools were being used could be time draining activities that provided only surface level
information contributing to superficial learning. Part of using these tools in educational settings had to do with demonstrating critical uses of them.

4.4.3 The District Principal of Technology and Innovation: “No One Person Can Know Absolutely Everything”

To meet the increasing technological needs of the district, in June of 2009, a new position was created for a district administrator to look over these matters. Liam Kailley was hired as the first person in this position and was given the title of District Principal of Technology and Innovation. He held four main responsibilities. The first two were administrative based tasks and included collecting data around student achievement and ministry requirements and supporting a provincial-wide student information system initiative.

His other two tasks were more closely related to technology. The third task involved him overseeing the technology team. This required a high level of technical expertise as it involved working with five Information Technology (IT) staff members that provided the technical support, the maintenance, and the deployment of the actual hardware, software, and infrastructure for the district. The final part of his involvement, which he identified as the part of his job which he most enjoyed, was the component that involved the innovation. This was where he had the opportunity to focus on the education side of the technology and consider questions like “so what” and “now what are we going to do?” In this fourth capacity, he worked with school-based administrators and teachers to understand what the digital classroom looked like. He then provided training, leadership programs, and Professional-Development around the
digital classroom. He also provided support both technically and pedagogically around how to use technology in the classrooms.

With the development of the portal system, Liam used wikis, blogs, and social networks through this system. A component of the portal worked like an SNS. Therefore, Liam had setup his own profile, connected and “followed” particular people and issues, and filtered his emails through this space. Others in the district could learn about him and his projects through perusing his profile. He wrote and updated his professional growth plan on the blog of the portal and occasionally contributed to a wiki through the same space.

Liam adhered to the viewpoint of the knowledge society that “no one person can know absolutely everything there is to know about your job,” so the Internet became his problem-solving tool. For his professional practice, he used the Internet specifically for three purposes: he accessed information, colleagues, or ideas. It managed his information, his email, his content, and his documents, so that he could access them from many machines at any place or time. Because his position required him to learn new information every day, he turned to the Internet as his main problem-solving tool. Despite his array of responsibilities, he was looking ahead by considering new tools that may help him in his professional growth. For example, he began using twitter and followed educational leaders, colleagues and others and started tweeting about district and school events and educational issues (Figure 4.2).
Liam’s personal use of the Internet mirrored his professional use of it. He used it to manage his information and to email his friends. Most importantly it acted as his first source of problem-solving. He used it for serious issues like finding out what might be the cause of his child’s illness to logistical matters like finding a phone number. His family no longer kept the White and Yellow Pages at their home. The only main difference between his personal and
professional use was that at home he used the Internet to manage and share his multimedia such as his photos and his music.

4.4.4 Secondary School Administrators: “Creativity, Community, and Constructing Meaning”

The three secondary school administrators interviewed were Janice Granger, Tyler Carter, and Paige Greyell, the focal school administrator. Because most of the students within the Pacific Coast School District aspired to go on to university, all three secondary school administrators aimed to develop their schools so that their students would be academically strong individuals with the needed competencies and skills to excel in university upon leaving high school. They also encouraged students to partake in a variety of extra-curricular activities to nurture their talents and help them become well rounded individuals.

The administrators all valued technology use for teaching practice and were particularly interested in the potential of the Internet to enhance student learning. They adopted the district goals and followed the district technology plan in developing their own school objectives. They supported the staff in these goals by providing them with the necessary equipment, setting up professional development opportunities to assist them in using new technologies, providing the necessary funds for the purchase of software, and by encouraging teachers to pursue technology based educational programs.

The majority of the classrooms in all three schools were set up with a teacher computer that was hooked up to a data projector making it possible to project the screen. Laptop carts and computer labs were available for student use. There was less than one student computer
available per ten students; however, the schools had not set as their goals to increase hardware purchase. Rather, all three administrators talked about moving to a stronger wireless structure that would encourage students to bring in their own laptops and mobile devices. The trend at all three schools was to stop spending funds and energy on purchasing more equipment: “We have lots of stuff in our schools. You know, the number of machines is just going crazy in terms of what we have and lots of laptops.” Instead, the focus has now been placed on how to optimally use the resources at the schools to support learning.

Much infrastructure needed to be put in place to support student Internet use. For example, when students had difficulty accessing wireless Internet, there was no one to assist them. There were no systems set in place to assist students with hardware or software difficulties especially on their own computers. Students were left to help one another or ask their classroom teacher or librarian for assistance. Although there was an IT support staff at each school, these personnel were kept busy with the larger infrastructure to be of help to students. Consequently, it was rare to see students bringing their own laptops to school.

Though the principals highly valued Internet use for learning and even considered ways to incorporate it at their schools, their busy schedules and long list of responsibilities did not allow them to spend too much of their time on it for their professional practice. The administrators’ main Internet uses included frequenting a highly secure Web based student data information system, conducting Google searches to locate needed information that often got passed on to the teachers; constant use of email to communicate with fellow administrators, parents, teachers, and others; and other sharing of information through the
school website and ebulletins. For example, on their school websites and internal portals, they posted important documents for staff and added events onto the school calendar for students. Their main use of a Web 2.0 application was posting their educational growth plan on a blog that could be shared amongst other administrators and the district staff.

One core and growing mode of communication between the administrators at all three schools (including the Vice Principals) and the district staff was instant messaging using mobile devices. All administrators in the district had Blackberries. They used Blackberry Messenger (BBM) to message each other throughout the day about situations that arose. Because the information exchanged was not stored on the district servers, this option was often favoured over email as it had a higher level of privacy.

4.5 The Portal and Its Advantages

The research participants showed an overall enthusiastic attitude toward the portal system—a system setup with the use of Microsoft’s SharePoint software to house the district’s online presence—and focused mostly on the advantages of employing such a system. They only brought forth its disadvantages upon my explicitly asking them and even then focused more on the advantages.

The advantages mentioned included the following. Using a platform that allowed for social software tools such as blogs, wikis, and discussion tools made the space a far more collaborative and participatory one than past systems they had used. Not needing to remember several passwords for different websites, but instead being able to login to use any application
with the same password helped with forgetfulness. The system worked together to integrate programs to promote learning as opposed to needing to learn many different programs and having to put the focus on the technology instead of the subject matter. Sarah said, “We’re putting it into where people use it as a tool for creativity, community and constructing meaning, as opposed to offering a lot of stand-alone software that’s a bit what I call drill and kill, you know it’s practice software.”

Having a common set of tools used by district staff allowed for greater support at the district level and allowed the teachers and students to become familiar with the tools over time. John Jennings said, “The value then is you can train on it, and kids then get used to it too. As we move through this in the next years, kids become very accustomed to its common technology. It’s not, well my grade 3 teacher was into all the Google stuff and my grade 4 was using this other wacky set of tools. And you spend, so much time learning the tools that they get in the way of learning the content.” Sarah concurred: “If the tools generally become common and kids just kind of know how to use them and teachers know how to use them, then we’re not talking about how you create the blogs. We’re talking about, well, why would you and, you know, how you write good comments and what does feedback look like and what does assessment look like if you’re going to use these kinds of tools, which are the conversations we seem to be having more of.”

The advantages continued with the Portal allowing for all software to communicate and mesh with one another allowing for simplicity and mobility. John said, “I can pull the district calendar off the portal. I can pull the individual school calendars if I wanted and line them up
with my own personal calendar in my Outlook, which synchs to my Blackberry, which I have with me all the time.”

Next, the system populated the virtual classrooms with the students of each class and adjusted the class roster taking account for those students who dropped and added classes, lessening the administrative task of teachers and allowing them to focus more on use. Furthermore, it allowed for one space to place all documentations like forms and allowed for assignments to be submitted or tasks to be posted. This particular advantage met another of the district’s main objectives—to embrace more sustainable practices. Liam Kailley said,

“In the next year we need to reduce the amount of printing devices we have by 20 percent. And reduce the amount of paper we have coming out by 20 percent. And so, that’s virtual classrooms. Because what we see with our computers so far is they’ve just created more paper. Generally people with computers just print – they’re ridiculous. Our computer labs are sort of our worse offenders for paper. So, you know, virtualizing forms, using virtual classrooms, hand in – virtual hand-in boxes, which is – our high school teachers love the hand-in box for those that are using it on the portal side.”

Lastly, the advantage emphasized most was the safety and trustworthiness of having a system that was not open to the public, where the content came from within the district. This lessened the need to survey student use and protected students from predators and other dangers.
4.6 Drawbacks and Challenges of the Portal

Although hesitant to do so at first, upon specifically pursuing the topic, the study participants identified several challenges and drawbacks of the proposed virtual classrooms operating through the district portal. Everyone commented on technical concerns such as the speed and capacity of the technology to manage the large numbers of staff and students logging in to the portal. The sustainability of financial and time resources for the technical management of the portal was another concern. Sarah said, “We made jokes for a long time. All we could’ve done was toured the server closet to show where the money went, and that wasn’t going to excite any teacher or board member, or anything like that, but we’re finally at the point now where they can see the value in what’s happening, and even our trustees are going paperless.” The concern of infrastructure and hardware overshadowing learning and using tools continued to be a legitimate concern for the district.

The technical ability of teachers to teach using an unfamiliar program posed challenges. The district administrators admitted that “it’s not as straightforward as we’d like. You sort of have to get used to the click-throughs,” and “SharePoint can be a bit clunky.”

The portal posed drawbacks for the more tech savvy teachers of the district as well. Those teachers who had already set up public Web spaces outside of the portal system preferred to keep their sites instead of moving over to the portal. In general, the move to the portal created disruption to many teachers’ current practices.
The focal teacher-librarian was the only participant who brought up serious concerns about moving to the portal system. She had reservations about this move because the portal was a closed system. She questioned whether this was the right direction for the district to take. As a supporter of critical literacy, she was keen on promoting an open system, using the many different components of the Web instead of pairing it down to components that would be accessible and viewed only by a select few. Though the other participants all highly valued critical literacy as well, they did not voice a discomfort with the move to a closed system.

4.7 Banning and Filtering

Somewhat of a paradox existed within the district’s philosophy and infrastructure. On one end, the district aimed to be on the cutting edge of digital literacy by promoting mostly unrestricted access to equipment, software, applications, and Web pages. During the lengthy observation period of this study, student cell phones were never confiscated, students were welcome to bring mobile devices and laptops to the school to use, no signs were posted in the school limiting access to websites or software use, and the librarian, administrators, and teachers never asked their students to cease their activities on a school computer because it was not deemed educational in nature.

As a matter of fact, such activities were sometimes even encouraged. For example, the focal teacher-librarian showed me an online game that all the students had been playing and then explained that one of the grade 10 students in the school had a hand in developing the game: “so how do we say, don’t play games in here, when it leads them to creatively creating their own games?”
On the other hand, the district moved to a closed portal system to enhance privacy, security, and function. Though the main reason the district moved to the portal system was to provide a safe environment for its students, it remained fairly open to allowing access to most websites. They did not ban or block any sites beyond what was already restricted through the Provincial Learning Network (PLNet). The PLNet is a province wide government network infrastructure for schools including post-secondary institutions that attempts to safeguard its community by preventing access to some websites including pornography and gambling sites. The assistant superintendent provided a humorous example during the interview by typing in “Seymour Butts” and showing me the message that would appear preventing the search. Beyond the PLNet, the district did not have added filters and, therefore, sites like YouTube, Facebook, and Hotmail were readily accessible to students and staff.

The district’s philosophy in this regard was explained by Liam Kailley:

“We’ve taken the approach that we want conversations above the table not below the table. And what I mean by that is that we’ve taken the approach that if we ban things, it doesn’t mean that they’re not going to happen, because kids will find ways to access them in different ways, we would rather have a conversation on the open and have an open network environment so that we can be leaders within it... We’d rather have the open network so that the kids aren’t hiding it and so that we can have the conversations if they are using it. You know why are they using it, what are they using, what are they
supposed to be doing instead. And is there any educational applications for some of these technologies.”

John Jennings agreed with this view by stating, “We’ve gone out of the banning business.” One of his main objectives when he arrived at the district was to have conversations with people about the importance of using technology in ethical ways and not chasing people off websites. Very soon after his arrival to the district, the social network Facebook, which was previously banned at the district level, was opened up. Though he recognized that some teachers had classroom management issues around its availability, he felt its benefits outweighed these issues. To his knowledge and that of the other administrators interviewed, no one complained about the lifting of the ban. He explained his rationale: “You block it, I’ll show you in five minutes how I can get around it, and I’m bad at technology. I just Google, ‘unblock Facebook at school,’ and I’m in. We can chase the kids around all day or we can have a conversation about using it.”

He compared new social media to former technology and the importance of learning from those who are already competent users of the technology: “We watch our parents on the phone and how they use the phone, and that’s how I learned to use it. Well, who’s teaching kids to used Facebook? Well, their friends are right now...Who’s gonna teach kids to use this ethically? Well their parents probably aren’t...There’s nothing better than the adults who they spend their time with in school modeling ethical uses of technology.” His philosophy was to model ethical and professional uses of technology and to encourage teachers to do so as well.
All the participants recognized that there were instances where restriction was needed. For example, reading a science text is an educational task, but an inappropriate action during a Math lesson. Therefore, purpose and focus were taken into consideration during class time. Furthermore, Sarah said that although the district “hasn’t banned any social networking sites or YouTube,” that the district still had administrative procedures around access because of issues surrounding space and speed. Sarah said, “It’s a bit of an issue around downloading video, because it sucks up bandwidth and we really want people to start using this as an instructional place; it’s got to be free for that to happen without people using it as a storage device, students or teachers. So that’s still work we have to do around that but banning hasn’t been the solution.”

All the school administrators agreed with the point of view that banning would not solve any of the school’s concerns and that banning could lead to even greater problems. Though by moving to a portal system, the district was creating a safer closed system for its staff and students (because it was not simultaneously closing the doors to the World Wide Web) it saw itself as a progressive district that encouraged openness and critical thinking: “We’re used to a gatekeeper model around technology. And so we’re kinda moving away from that.”

I asked John Jennings, why the district wasn’t embracing more open source models since they were keen to move towards less of a gatekeeper model. He acknowledged that a few different factors not related to student learning had to do with such decision. Stating that the district functions as a business entity, he said, “We’re a 60 million dollar company. And you have a corporate feel for that and there’s a clear nervousness around school districts going
open source.” He recognized the drawbacks of moving toward a business model: “Are we rearing our children to be future Microsoft buyers?” He also added that they did not have the internal knowledge to support an open source structure. Consequently, the district made the decision to move away from banning, but to provide closed spaces that allow teachers and students to still use some components of the Web in a safer more discrete manner.

4.8 Available Support for Internet Use

Although the district was ready to spend the funds on restructuring their current system and supporting Internet use, the manner in which they were proceeding raised questions of authenticity. The move to the closed portal system did not fully mirror a real life open environment. For example, Liam explained that the district was keen on supporting teachers and students with “some key applications and the creation of virtual classrooms so that they can have a secure, robust environment that’s supported by the district, it’s not going out and using Google, it’s not going out and using a third party Web-based application.” Technology that was being provided from the district level secured the online experience yet limited the online environment substantially.

The shift to the portal had not been fully established by the end of the study. Though the portal was ready and being used by some teachers, the option of using websites not supported by it was still available. Several teachers still used many such sites. Unfortunately, though, it was difficult for the district technology staff to provide support to teachers who were veering away from the portal. Liam explained some of the difficulties:
“If a teacher’s using a certain application that they found on the Internet, it’s very hard for us to provide any support to that teacher. We don’t know the technology, we don’t know if it’s working, it just is a difficult piece – by bringing it into our district, we’re able to actually support them, we’re able to answer questions, we’re able to go and do the professional development about how you would use these application and what should be the expected outcome.”

The district tried to incorporate new Web applications that had strong potential for education within its portal. For example, they had explicitly included discussion boards, blogs, and wikis onto the virtual classrooms to promote student collaboration and participation: “We’re trying to move away from tools that are more teacher-centric.” Many teachers across the district began conducting classroom discussions through the blog and discussion board options of the virtual classrooms. Teachers valued this option because it allowed for all students (even the most shy ones) to contribute their opinions to a discussion as opposed to a handful who would have the opportunity to orally contribute in class. Liam said, “There are a thousand anecdotal stories of discussion boards where kids that never raise their hands, that never participate in a verbal sense, all of a sudden have incredibly thoughtful, incredibly provocative comments that they put into discussion boards.” Part of Liam’s responsibilities included going to schools and giving workshops on the different components available through the virtual classrooms.
To support teachers in using these tools, Professional Development opportunities were offered through the district in a few different capacities including self-directed professional development that could be accessed through the portal system, school based professional development which was organized at the school level and based on staff needs, district based professional development sessions that were organized for anyone in the district, and provincial professional development which could be accessed at an autonomous level. Frequently, though, the schools scheduled their professional development sessions around particular themes that all staff members were encouraged to attend.

Another strategy that the district employed was to identify key positions of leadership within the district such as administrators, councillors, ESL and special education teachers, and teacher-librarians, and assisted them in strengthening their competencies with the new digital technologies. This was one way to filter the information down to others: “Our librarians are key pieces of all of this.” By assisting the personnel in these areas, the district hoped to create literacy and digital literacy leaders that would then be able to work closely with other staff and with students to share their skills. The librarians played a particularly important role as both teachers and students depended on them for literacy type help and frequented the library space to use the digital technologies. Therefore, this was a strong place to plant the seeds of digital literacy goals in the hopes that it would get disseminated.

Much support was available at the school level as well. The school frequently purchased requested hardware. For example, one of the high schools had an application process where teachers could apply to receive a tablet PC for their classroom by showing how they intended to
use it to improve student learning. They also provided teachers with needed software and ensured that the technical staff placed the software on the devices.

Other than financial help, the schools focused on training. They provided professional development opportunities where teachers who were competent with some applications put workshops on for other teachers who wanted to learn them. These were provided during regularly scheduled professional development days as well as after school. The focus of these sessions was to move beyond how to use the technological tools, and focus on how to use them to improve learning: “It really just leads to sharing of lesson ideas…It’s not about the computer and how to use it. It’s really spurring that conversation, the collaboration between the teachers.” Staff meetings and monthly optional “tech times” were also used as an opportunity to promote and discuss new digital developments: “We have once a month tech times after school where they say something like—‘come if you want to learn about wikis.’”

The administrators identified time as one of the main factors that prevented teachers from developing their technological competencies. Consequently, when possible, they provide release time for teachers keen on developing these requirements, “so that they can collaborate with each other as to how they can implement more technology within the classroom and also providing them with the training during that time in the school day as to how to set up their classes on the portal.”
4.9 Challenges of Supporting Internet Use

The major challenges that the district staff and administrators faced when it came to supporting Internet use were summarized concisely by Sarah: “money, resources, time and people”—all of which she considered to be lacking. Others echoed these same concerns homing in specifically on financial and time resources and how to budget these resources. The district staff found it difficult to provide equipment and professional development to the entire district and they were particularly concerned that the setup of the district was not able to meet the needs of early adapters of new digital tools. Consequently, many complaints arose around issues of access: “I don’t have a machine; I don’t have this software or that so I can’t get my lesson done. My computer doesn’t work. The Internet doesn’t work. Word doesn’t work.”

Another key challenge was getting teachers on board with using these social Web tools. Some teachers were not keen to incorporate new Internet tools within their practice for varying reasons. Some teachers were pleased with the current structure and strategies that they had in place and wished to continue on that same path without making changes, some teachers lacked the time and energy to implement new practices, and some teachers had philosophies that didn’t mesh well with integration of social Web tools. Therefore, they were not keen to adopt the new district direction to move toward the digital. Sarah noted that “teachers who are nervous about using the [digital] resources get bogged down in the why should we” and spend their energy fighting the changes rather than learning about them. Tyler Carter said, “You always have your 10 to 20 percent of your staff, where yeah, we'll love it. And you also have your 20 percent of your staff who it doesn't matter what it is, they're not going to do it. It
doesn't matter. It's getting that middle chunk. It has to be simple enough for them to use it and to get value right away.” Consequently, John Jennings suggested that sometimes it was necessary “to force practice a little bit.” He said, “We’ll keep doing it the old way because it’s easy, unless we’re forced to do it the new way.” Therefore, some district initiatives were mandatory.

Liam mentioned that the resistance to trying new technology was not as big a challenge in the Pacific Coast School District in comparison to the former districts at which he worked. In his former district, he found he had to spend quite a lot of time and effort convincing teachers to learn and use new Internet resources. In the Pacific Coast School District, he found that teachers were keen to learn the new technologies and ways to incorporate them into the classroom, so the conversation had taken a more proactive role.

Though the teachers in general seemed more willing to try new digital tools, they were in need of high levels of support to assist their practice. John Jennings noted a tension that existed between this view and the traditional structure of schooling: “The mindset of the old was you go to a workshop, you learn something, and then you try to implement a part of it. But technology doesn’t work like that.” He was frustrated that few teachers took personal responsibility to learn about new technologies that were introduced at the school level though they were capable of doing so. When it came to new digital tools, John Jennings explained, “You kind of just learn it and that’s hard for a lot of people to understand. They want to have workshops; they say ‘Well, when are we gonna learn this?’ You all have a Gmail account, but Google didn’t come out and do a workshop for you.” The district wanted to see teachers taking
on a more proactive role learning how to use and effectively implement the new digital tools for helping students learn.

The school administrators agreed with John’s point of view. They too were not experts on these new tools and had to take a proactive role in learning them. Tyler Carter said, “The other challenge is somehow we’re seen as the experts...we’re supposed to know it, and the training we get on it is exactly the same as they get. So we’ll have someone from the district come up and do a workshop. I’m watching exactly the same thing they are. So somehow we’re seen as the experts and we're able to help, and it's frustrating for them and for me.”

Another challenge was the difficulty that staff had in understanding some of the nuances of the new digital tools. For example, many looked at technology as a time saving tool and were frustrated when they found that it was not so. They anticipated that incorporating a particular tool would aid them in cutting time from their preparation or marking and were disappointed when this was not realized. John Jennings commented on this fear: “You're actually gonna spend more time engaging in commenting on kids’ blogs. So you might not be marking essays, but you’re gonna be reading and responding to blogs. And you’re actually now you have to find ways of managing – how you manage that. Because as kids create more, there’s that – also that fear that we have to mark more.” Most of the district staff acknowledged that over time they anticipated that issues around management would lessen. The more these tools become a part of the school culture, the more likely it is that strategies around their use are developed and shared amongst colleagues.
The last challenge mentioned was the difficulty in supporting the plethora of Internet tools available. The district did not have adequate funds, resources or personnel to support the inundation of Internet applications. Each teacher was using their preferred tools and no one person was able to support the enormous variety of tools. For this reason, the district participants felt that it was essential that at “some point we’ve got to agree on one set of tools.” This was another reason the district made the decision to move to the portal. With common tools, support becomes manageable.

4.10 Value of Internet in Helping Students Learn

All nine of the district and school administrators and teachers placed high value on the Internet for learning. Liam described the Internet as a lever for student learning: “it allows them to learn more and it allows them to learn deeper, it can move more, and that’s where technology is always fitting in, it makes us faster, it makes us more efficient. It makes learning more immediate, and it makes it more honed by an individual.” Jeannette emphasized the value of the Internet for learning by focusing on the dual advantages of information and communication: “There’s a world of information out there that students can access. And then it also allows them to connect with other people as well. So you can take it to connecting with the students in classrooms at other schools. It’s also an opportunity to get a lot of different resources that teachers can use in their classrooms for the students. And then there’re just so many activities that kids can do on the Internet to reinforce the concepts that they learn in class.”
Three of the focal district participants were particularly excited by the recent social media developments of the Internet: “Instead of just connection to information, we now are connecting to ideas and to people, or participating in a real-time environment with people.” They described the advantages of blogs promoting student ownership—“every kid has their own place, something they own, and others come in and comment”—and the “beauty of wikis—working together and collaborating in building, and new ideas emerging.” Though these types of activities were not the prominent use of the Internet amongst the teachers in the district, they were slowly creeping into classrooms promoting participation, collaboration and distribution of student work.

John Jennings identified Mashups as a valuable component of the Internet when it comes to learning that points to a shift in school culture: “We have this open community and people take other people’s stuff and they remash it and make it their own and present it. And that – it used to be cheating and plagiarism, and it’s not really anymore.” He gave the example of one district teacher who created a slideshow that has since been recreated and reconfigured by other teachers and used for different purposes.

Though the participants showed excitement for the learning potential of many of the social software tools, they also showed scepticism for some tools when it came to their potential value for learning. For example, John Jennings, the main advocate of social media in the district, was not impressed with Facebook as a potential learning tool. He said, “I think Facebook has almost no value in terms of learning. Facebook is about 90 percent personal tool and 10 percent professional tool. Where I think Facebook is valuable is everybody’s on it. So
when I bring together kids in multiple schools and multiple districts, I can push that information quickly—that has value.” Several participants saw Facebook as a key promotional tool to distribute information to a wide audience, but had difficulties conceiving potential learning value. John Jennings said, “I haven’t seen good examples of using Facebook for school. But I’ve seen it work well...for creating school groups for sharing newsletters, creating class groups if you want it, and a little bit for class discussions...but I haven’t found a learning connection in terms of contact learning that works through Facebook.”

4.11 Drawbacks of the Internet for Learning

Even though the research participants were all promoters of pedagogical Internet use, they also discussed its drawbacks. In describing the drawbacks, they brought forth many of the same points that they discussed as its main advantages. They described that the power and leverage of the Internet can be overwhelming for individuals because of the vast available information and the lack of knowledge on how to adequately find and filter this information.

They warned against the depth of learning that may not be happening despite the enormous information available. Tyler Carter cautioned that “not enough students are critical enough of the information they find.” All the participants worried that youth were not investigating, synthesizing, or applying the information in adequate ways because they were able to access information with ease or adequately understand and use it when it had been accessed. Tyler Carter said, “I guess it's the immediacy. So students now are used to being able to get immediate information. And so when that information doesn't appear immediately,
some students don't continue to look. There isn't that struggle for information. There's no, I need to read this chapter to find it.”

The inability to access reliable information efficiently leads to much wasted time. Furthermore, the inclination to focus on several tasks at the same time that technology seems to promote, may in fact be a time waster, and a hindrance to learning in general. Sarah said, “I think part of the teaching around the drawback of the Internet or any other digital device, anything like that, is how are you’re managing your time and do you know about yourself as a learner, and what do you know about what you need to focus on something deeper.”

Sarah was also concerned about issues surrounding multitasking and the Internet:

“Overall there’s a myth about multi-tasking, and there’s some current research out, I don’t know if you ever look at the Pew research on brain activity showing that basically there is no road deeper than brain activity for any age when you’re multi-tasking so I think adults get sucked into thinking that teenagers somehow are a new breed of thinking with a new brain, and they’re probably making connections in different ways, I mean it’s probably stuff to do with synapses and what’s happening, but are they thinking better and deeper when they’re whizzing through these things? No they’re doing what we all do, they’re just skimming the surface.”

If a percentage of focus was on several tasks, then that meant that 100% of the focus was not on any single task. Sarah said:
“The mentality that we think in sound bites or tweets [promotes Attention Deficit Hyperactivity Disorder]. I’m not saying you can’t tweet on something incredibly profound, but I think there’s also this ADHD kind of activity... think it’s the nature of how we’re allowing the technology to interrupt our thought processes and our work processes, and I know for me, you’ll notice I don’t have tweet-deck coming up, and I don’t have ‘you’ve got a new email’, because I know myself, you know I would have left you and been off mentally thinking about that other thing, so I have to close those things down if I’m doing something that’s really thoughtful, and I don’t think kids are any different.”

A main drawback revolved around the idea of digital tattoos and the concern that both teachers and students were unaware of the types of activities that may look badly on them and affect them in the long run. The district staff advised both teachers and students against blurring professional and personal boundaries online. They noted the importance of having such conversations with students and teachers and helped them understand that the information they post online could be easily accessible and is information with which others may form opinions on them.

In referring to both staff and students, John Jennings said, “You’re reporting to the world. You need to change your profile photos now. They’re ridiculous. And, you know, put your face up there. Stop putting a picture of you at the beach on there.” To help illuminate these issues, information was passed on at the school staff meetings to teachers and teachers
were encouraged to share ethical online practices with their students. During a staff meeting, the administration reviewed the documentation on blurring the boundaries published by the College of Teachers that highlighted issues surrounding social networking and friending students.

Also, teachers were reminded that during work hours and on school computers, they should not be using the Internet for reasons not related to their profession. For example, they were reminded that shopping on sites like Craigslist and eBay are activities that should be done outside of work time; whereas, they were encouraged to participate in professional online practices from school: “If you want to bid, do it from home, if you want to do a forum about how stressed you are as a mom, do it from home, if you want to do a forum about yourself as a teacher, you know belong to a forum about yourself as a Special Ed teacher or Primary teacher, you can do that from school.”

The importance of separating personal from professional information impacted privacy as well. Because all the information that passed through the schools’ computers was stored on the district servers, “there’s no real deep privacy.” This was the case even when information was deleted. Sarah said, “It doesn’t matter if you’ve deleted it, we’ve got it, I mean even when I delete mine, and I’m always cleaning it out, but they can pull it off the server.” The district therefore recommended that the teachers keep separate personal and work email accounts. Sarah explained that “anything that’s on district severs, if there was a reason to look at it, the district looks at it...if email is used inappropriately, then that will be when the unions are involved, and that becomes a bit of a disciplinary investigational; all we’re saying to people is,
read the College of Teachers article, we don’t want you ending up at the colleges as one of the cases.”

Privacy issues existed with information stored off the school server as well and the district staff wanted its staff and students to recognize potential hazards and become aware of the loss of privacy and blurring of boundaries between public and private information and space. John Jennings explained how easily he can access a plethora of information about district teachers:

“I do a search on Facebook for [Pacific Coast] School District and it brings up all these people who obviously list it as an employer. Well I can see almost everyone and I can get into their stuff and that means every kid can get in their stuff...They don’t get security settings and Facebook doesn’t help because they make it a little bit confusing with their security setting and how you actually lock stuff down... Anything you put anywhere on the Internet, you have to accept that it could be public.”

The final disadvantage brought forth by the district administrators was the lack of access despite the district’s high SES and logistical and technical issues which occasionally crept up such as not having immediate access to a wireless device or the Internet not functioning properly.
Though participants easily identified the described drawbacks of the Internet for learning, it was clear that the overall value of the Internet far outweighed the drawbacks resulting in them all being strong advocates of Internet use for learning.

4.12 Summary of Findings

I collected artefacts from the case study site, conducted participant observation, and interviewed in-person three district administrators and three secondary school administrators to learn about the goals of the district and their digital literacy initiatives. The district had set as a goal to improve the digital literacy of its students and aimed to be on the cutting edge of technology incorporation.

John Jennings, the superintendent, was particularly interested in the incorporation of social media tools within the district. He used many of the tools himself for personal and professional reasons. The assistant superintendent, Sarah Catella, was hired ten years ago with the purpose of redoing the district technology plan. Her job included teaching district staff how to use new application. She too used several Internet tools for personal and professional use. The district created a new position for a technology and innovations administrator and appointed Liam Kailley to that position. He overlooked the district’s technology initiatives and worked with schools to support their implementation. Liam was a keen Internet user himself and began using many of the tools in which he was responsible for supporting.

The three secondary school administrators all valued technology use for teaching practice and were particularly interested in the potential of the Internet to enhance student
learning. Therefore, they had all adopted the district’s digital literacy goals in some way and were attempting to support their teachers and students reach these goals.

This chapter presented the findings that pertained to the school district under study by providing an overview of the school district, introducing its participants, further examining the portal that is acting as the backbone of the district’s Internet initiatives, and identifying key advantages, limitations, and challenges of Internet use in educational settings.

The next chapter will present the findings derived from the focal school administrator and teachers. It provides the findings for both the quantitative and qualitative analysis. The quantitative findings emerged from a survey administered to the teachers at the focal school while the qualitative findings emerged from participant observation and interviews with three focal teachers and the school administrator.
5.0 Stoneledge Secondary

5.1 Research Questions

The following research questions guided this analysis: a) How are the administrators of a district and the teachers at a school (who have set as their goal to incorporate digital literacies within the curriculum) using and encouraging the use of the social Web to support learning in different disciplinary areas? and b) what tensions may arise as a result of the imposition of these uses on the traditional structures of schooling?

This chapter presents the findings from both the qualitative and quantitative analysis conducted on the focal school from the perspective of the educators. I partook in five phases of quantitative analysis and four phases of qualitative analysis to derive findings from the school through the perspective of the educators. The quantifiable data analysis consisted of data entry, running frequencies and paired t-tests, data reduction, data display in the form of tables and graphs, and interpreting the findings and qualifying the data by writing it out in prose.

The qualitative phases included data recording, organizing, and reviewing; data reduction and grouping similar responses together; data correlation, consolidation, and comparison; interpreting the findings by comparing them to the literature in the field, considering alternative explanations to my interpretations, and describing the case in detail. The findings for the two data sets are presented separately in this chapter. However, after completing both the statistical and descriptive analysis, I took the final steps of correlating, consolidating, comparing, and integrating the two sets of data together and presenting holistic
inferences in the final discussion chapter. The analysis process is outlined in detail in Section 3.8.

This chapter begins by providing an overview of the focal school. It proceeds by statistically analysing factors such as the demographic composition of the school, teachers personal and professional Internet practices, the manner in which teachers contribute and access information online, and the tools they use to communicate on the Internet.

Next, the chapter takes a closer look at the focal school by introducing the principal, describing the direction the school is moving towards, and identifying the challenges and drawback that the school is facing in incorporating the Internet into the curriculum. The chapter ends by detailing the focal teachers’ practices, describing the ways in which teachers value the Internet for learning, and identifying drawbacks and challenges faced by teachers when incorporating the Internet into their practices.

5.2 School Overview

Stoneledge Secondary was one of three public high schools located in the Pacific Coast School District. The population of the school averages at about 830 students from grades 8-12. According to the Fraser Institute (http://www.fraserinstitute.org/) it has one of the highest SES’s in the province. Most of the students aspired to go onto university and parental expectations were demanding. Consequently there was a lot of communication between teachers and students and teachers and parents. The administration constantly tried to look for different venues to enhance communication lines for all parties.
The school had set two major goals. One was to continue its focus on enhancing literacy by emphasizing the use of technology to assist in its improvement. The second goal was improving environmental sustainability by assessing how as a school they could lessen their carbon footprint by making ecologically responsible choices and taking positive action in this direction. Both these goals fitted directly into the enhanced technology and Internet use within the schools.

The school had two computer labs, a computer station set up in the library, and two laptop carts that could be signed out and used throughout the majority of the school. In the computer labs, teachers could control the screens, so if they wanted students’ attention, they could freeze the screens. Also, if they chose, they were able to monitor students’ screens and project a particular computer on a larger screen for sharing with the entire class.

The school received money from the enrolment of international students and some of that money was put into a technology budget. There was an ICT committee that comprised of teachers and administrators and they decided how those funds got allocated. Though new equipment was needed at the school, it was decided to use the funds to allow teachers release time to collaborate and learn how best to use the current technology already at the school and how to use this technology to enhance student learning. One idea that came about one of the release days was to organize strong readers to create podcasts of stories and novels. This allowed struggling readers oral access to these texts that they could download on their computers or listen to on their mp3 players or mobile devices.
The school administrators further encouraged teacher technology use by providing funding for equipment and professional development and by encouraging teachers to pursue technology based educational programs. For example, almost all classrooms were set up with a teacher computer that was connected to a data projector making it possible to project the screen. Two laptop carts had been purchased and tablet PCs had been acquired for a variety of teachers. At each staff meeting, a portion of the time was set aside for technology learning. Some example of covered material included how to create a group email without having to type in all email addresses each time and how to add content onto the Web based school calendar or other parts of the portal. They dedicated one of the professional development days to using technology in the classrooms and workshops were offered on different tools such as wikis and Google applications and teachers shared their different expertise.

Furthermore, the administration encouraged teachers to partake in technology focused graduate programs such as the Diploma in Technology and Innovation (DTI) program, available at one of the province’s universities. This program allowed teachers to explore new technologies and incorporate them in their classes. Lastly, one important support system set in place was the simple agreement and excitement of using technologies that may otherwise be banned. For example, while some schools ban the use of cell phones and mp3 players, Stoneledge Secondary welcomed its use for educational purposes. For example, when the Technology Education teacher approached the principal to get permission about using iPods in his woodwork classroom to record instructional Podcasts, the principal replied, “If you’re using
them that way, let’s get them in school more often… Let’s turn it into a learning tool instead of an irritation.”

Similarly, the administration supported student events by allowing untraditional ways of promotion. For example, the graduating committee promoted a variety of events by creating a Facebook Group and a Social Justice Club promoted the 24 hour famine in a similar fashion. The fact that students were allowed to bring their laptops and mobile devices to school and were not banned from accessing many of their favourite sites encouraged an atmosphere of trust and open learning.

Much infrastructure still needed to be put in place to support student Internet use. For example, if students had difficulty accessing wireless Internet, there was no one to assist them. There were no systems set in place to assist students with hardware or software difficulties especially on their own devices. They were left to help one another or get their classroom teacher or librarian’s assistance. Although there was an IT support staff at the school and district, this personnel was kept busy with the larger infrastructure to be of help to students. Consequently, it was still rare to see students bringing in their own laptops to school.

The school had an existing wireless structure with some challenges. First, the wireless access was unsecure, and second, it was difficult to access the Internet in many parts of the school, including the staff room, office, and the portables. Students at the school were welcome to bring their laptops, but this happened rarely. Though some filters have been set-up at the district level to prevent pornographic and violent sites, the school did not ban any
additional sites. During non-instructional time, students were free to navigate most sites including SNS and gaming sites.

The principal shared her philosophy in regards to banning websites:

“A lot of people I know want to shut things down and just not have access to certain things, and I actually believe it’s more important that we as an educational institute educate the students on proper use. I know that there’s discussion about blocking Facebook, just don’t let the kids use it while at school then it’s not your problem. Well, when the kids are bullying each other on Facebook at home, I think it’s still our problem. Therefore, rather than putting our heads in the sand and ignoring it, I think it’s something we need to put in front of everybody and talk about what is appropriate use, what is bullying, what is it like when you’re the one reading something that’s inappropriate about yourself on Facebook...or MySpace or any of the other ones. So I actually think that the school has a responsibility to educate people on the Internet, how to use it, and not just for the social aspects, but some of those Internet sites are absolutely wrong with information, and how, as a student, can you figure out ‘This website is reliable, the information is accurate,’ whereas as ‘This website – no, I can’t confirm that that’s correct, therefore I won’t use that as a resource.’ And recognizing that just because somebody blogs doesn’t make it true.”
The openness to SNS has not always been the case at the school. The principal said, “There was a time when things like Facebook and YouTube were not even allowed to be accessed because a red screen with ‘access denied’ would show up, but I think that’s been removed at the request of teachers who use some of those tools in the classroom.”

5.2.1 Virtual Classrooms

The participant observation showed that five teachers had started to use the virtual classrooms set up by the district to complement their teaching. Four out of the five teachers used the blog feature of the virtual classrooms. I observed that the use of blogs was to stimulate classroom discussion. Teachers would post questions about classroom topics and students would be required to respond to the questions. These discussions were mostly formal requiring students to provide evidence for their comments. For example, students from one class who were doing a novel study pulled quotes from the novel and cited the quotation using page numbers.

On two of the virtual classrooms, students were required to comment on one another’s comments whereas on the other two blogs students only provided answers with no discussion pursuing. The comments on the posts by the two classes that required this addition were much more informal than the original posts. They were more opinion based comments and did not include citations.

The other two tools available on the virtual classrooms were a discussion tool and a wiki. Only one teacher had used the wiki feature and it was still at its experimental stage. The discussion tool was used by two teachers and was used as a place to post announcements.
5.3 Findings from the Teacher Survey

5.3.1 Demographics

Fifty-four out of the sixty teachers at Stoneledge Secondary completed the survey. Of the teachers who participated in this study, 32% were male and 68% were female. From this sample of 54 teachers, the chi-square analysis of cross tabulations showed that there were statistically significantly more females with 4 to 7 years teaching experience ($\chi^2_{(12)}=56.7; p<.01$) than any other gender/experience associations.

5.3.2 Teachers’ Internet Practices

To determine whether the Internet was used to encourage learning and to assist students in school content learning, it was useful to understand teachers’ Internet practices. It was also helpful to know how teachers were using social media tools both for their personal and professional use and to compare these uses. This was based on the premise that the more comfortable teachers feel with a tool and the more they value it in their personal lives, the more likely it would be that they would incorporate it for their professional practice. Without access or opportunities to use these tools, the transfer of them to the classroom will not happen. I conducted paired t-tests to examine whether teachers use social Internet tools more frequently for teaching related practices or for personal use. Similarly, I conducted paired t-tests to examine the frequency that teachers contribute information to the World Wide Web versus the frequency that they access information. Four construct measures were computed as summations of the coded responses (0=never; 1=rarely; 2=sometimes; and 3=often). To present the results, I’ve divided the data in three sections: Contributing Information, Accessing
Information, and Contributing versus Accessing Information. I end by examining teachers’ online communication practices.

5.3.3 Contributing Information

The survey questioned teachers on how frequently they contribute information to the following social media sites for professional and personal reasons: wikis, blogs, SNS, forums or groups, video sharing, photo sharing, music sharing, social bookmarking, and virtual environments. The words “post” or “upload” were used on the questionnaire to assist in identifying contributions. Therefore, both words will be used synonymously with the word “contribute.” As indicated in Table 5.1, there were statistically significant differences in the frequency of usage of the Internet to post/upload information between activities related and not related to teaching for SNS only and this held a very large effect size.
Table 5.1

*Paired differences to contribute information for personal versus professional practices*

<table>
<thead>
<tr>
<th>Contribution (Personal vs Professional)</th>
<th>Personal</th>
<th></th>
<th></th>
<th>Professional</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>t</td>
<td>df</td>
<td>p</td>
<td>d</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wikis</td>
<td>0.28</td>
<td>0.65</td>
<td>0.62</td>
<td>0.99</td>
<td>-2.37</td>
<td>46</td>
<td>.022</td>
<td>-0.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blogs</td>
<td>0.32</td>
<td>0.73</td>
<td>0.36</td>
<td>0.76</td>
<td>-0.33</td>
<td>46</td>
<td>.743</td>
<td>-0.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SNS</td>
<td>0.91</td>
<td>1.18</td>
<td>0.26</td>
<td>0.61</td>
<td>4.01*</td>
<td>46</td>
<td>.000</td>
<td>1.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forums/Groups</td>
<td>0.32</td>
<td>0.66</td>
<td>0.23</td>
<td>0.56</td>
<td>0.85</td>
<td>46</td>
<td>.400</td>
<td>0.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Video Sites</td>
<td>0.64</td>
<td>0.90</td>
<td>0.62</td>
<td>0.99</td>
<td>0.14</td>
<td>46</td>
<td>.890</td>
<td>0.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Photo Sites</td>
<td>0.68</td>
<td>1.00</td>
<td>0.36</td>
<td>0.71</td>
<td>2.14</td>
<td>46</td>
<td>.038</td>
<td>0.63</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Music Sites</td>
<td>0.43</td>
<td>0.77</td>
<td>0.15</td>
<td>0.51</td>
<td>2.37</td>
<td>46</td>
<td>.022</td>
<td>0.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bookmarking</td>
<td>0.28</td>
<td>0.80</td>
<td>0.28</td>
<td>0.74</td>
<td>0.00</td>
<td>46</td>
<td>1.000</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Virtual Env</td>
<td>0.00</td>
<td>0.00</td>
<td>0.04</td>
<td>0.29</td>
<td>-1.00</td>
<td>46</td>
<td>.323</td>
<td>-0.30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* * p< .01

Overall, teachers rarely or never posted information on the Internet for their professional practice. By combining the values of *sometim*e and *often*, it became apparent that the space to which teachers posted most frequently for teaching related activities were wikis (23%) whereas the space they most regularly posted for personal reasons were SNS (33%). As illustrated in Figure 5.1, a high degree of similarity was seen between teachers’ personal and professional practices when it came to contributing to blogs, social bookmark sites, virtual environments, and content sharing sites, whereas little similarity was seen with wikis and SNS. This was not a surprising finding since it is anticipated that SNS are more conducive to personal use whereas wikis tend to have educational content and be useful in accruing information.
The fact that a small minority of teachers were using these tools translated to the fact that they were not recommending students to post on them either. Figure 5.2 displays the frequency that teachers assigned different types of outlets as possibilities for final projects. Only a minority of teachers (38%) sometimes or often expected their students to use an online medium to present their work. The majority of teachers preferred the options of presentation software such as PowerPoint (70%), posters or collages (62%), paper based assignments such as essays (72%), and oral presentations such as speeches (70%) over online presentation of work (38%).
The survey also questioned teachers on how frequently they accessed information from the same social media sites: wikis, blogs, SNS, forums or groups, video sharing, photo sharing, music sharing, social bookmarking, and virtual environments. I used the words “get,” “see,” and “download” on the questionnaire to explore the frequency in which teachers access information; therefore, these three words are used synonymously with the word access.

The frequency that teachers used the Internet to get/see/download information was statistically significantly different for activities not related to teaching than for activities related to teaching for the following subsets: SNS, forums and groups, photo sharing, and music.
downloading (see Table 5.2). Teachers used wikis, blogs, video sharing, social bookmarking, and virtual environment equally for their personal and professional use to access information. However, they used SNS, forums and groups, photo sharing, and music downloading statistically significantly more for their personal use to access information. A medium effect size was found for video and photo sharing sites while a very large effect size was found for SNS, forums, and music sharing. No tools were used more for professional use as seen in Table 5.2.

Table 5.2

**Paired difference to access information for personal versus professional practices**

<table>
<thead>
<tr>
<th>Access (Personal vs Professional)</th>
<th>Personal</th>
<th></th>
<th>Professional</th>
<th></th>
<th></th>
<th>t</th>
<th>df</th>
<th>p</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td></td>
<td>M</td>
<td>SD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wikis</td>
<td>1.23</td>
<td>1.09</td>
<td></td>
<td>1.45</td>
<td>1.04</td>
<td>-1.26</td>
<td>46</td>
<td>.215</td>
<td>-0.37</td>
</tr>
<tr>
<td>Blogs</td>
<td>0.72</td>
<td>0.83</td>
<td></td>
<td>0.62</td>
<td>0.87</td>
<td>0.76</td>
<td>46</td>
<td>.452</td>
<td>0.22</td>
</tr>
<tr>
<td>SNS</td>
<td>0.85</td>
<td>1.04</td>
<td></td>
<td>0.13</td>
<td>0.40</td>
<td>4.69*</td>
<td>46</td>
<td>.000</td>
<td>1.38</td>
</tr>
<tr>
<td>Forums/Groups</td>
<td>0.83</td>
<td>0.92</td>
<td></td>
<td>0.43</td>
<td>0.72</td>
<td>4.07*</td>
<td>46</td>
<td>.000</td>
<td>1.20</td>
</tr>
<tr>
<td>Video Sites</td>
<td>1.70</td>
<td>1.06</td>
<td></td>
<td>1.53</td>
<td>1.18</td>
<td>1.31</td>
<td>46</td>
<td>.198</td>
<td>0.39</td>
</tr>
<tr>
<td>Photo Sites</td>
<td>0.98</td>
<td>0.99</td>
<td></td>
<td>0.60</td>
<td>0.90</td>
<td>3.42*</td>
<td>46</td>
<td>.001</td>
<td>1.01</td>
</tr>
<tr>
<td>Music Sites</td>
<td>1.19</td>
<td>1.17</td>
<td></td>
<td>0.26</td>
<td>0.61</td>
<td>5.41*</td>
<td>46</td>
<td>.000</td>
<td>1.59</td>
</tr>
<tr>
<td>Bookmarking</td>
<td>0.36</td>
<td>0.74</td>
<td></td>
<td>0.40</td>
<td>0.83</td>
<td>-0.53</td>
<td>46</td>
<td>.598</td>
<td>-0.16</td>
</tr>
<tr>
<td>Virtual Env</td>
<td>0.04</td>
<td>0.20</td>
<td></td>
<td>0.09</td>
<td>0.35</td>
<td>-0.81</td>
<td>46</td>
<td>.420</td>
<td>-0.24</td>
</tr>
</tbody>
</table>

* p< .01

When combining the values of sometimes and often, the only social tool that the majority of teachers used for personal reasons was video sharing (67%). For professional purposes, the majority of participants used both video sharing (57%) and wikis (55%) in their teaching practice. Most of the other tools were rarely or never used. The least popular tools for
both personal reasons and professional practice included social bookmarks and virtual environment. A graph comparing the frequency in which participants accessed all the tools to get/see/download information can be seen in Figure 5.3.

![Graph](image)

**Figure 5.3.** The percentage of teachers who accessed information for personal versus professional reasons.

### 5.3.5 Access versus Contribution

Whether for personal reasons or professional practice, teachers spent far more time accessing information than contributing to it. Table 5.3 displays the frequency and percentages that teachers accessed and contributed to information for both teaching practice and personal reasons. I have shaded the percentages selected by the majority of teachers.
### Table 5.3

**Frequency distribution of teachers’ Internet activities**

| Internet Tool: | Professional Practices | | | Personal Use | | |
| --- | --- | --- | --- | --- | --- |
|  | Contribution | Access |  | Contribution | Access |  |
|  | N | % | N | % | N | % | N | % |
| Wikis: |  |  |  |  |  |  |  |  |
| Never | 32 | 68 | 12 | 26 | 43 | 80 | 17 | 31 |
| Rarely | 4 | 9 | 9 | 19 | 8 | 15 | 13 | 24 |
| Sometimes | 8 | 17 | 19 | 40 | 2 | 3 | 16 | 30 |
| Often | 3 | 6 | 7 | 15 | 1 | 2 | 8 | 15 |
| Blogs: |  |  |  |  |  |  |  |  |
| Never | 37 | 79 | 29 | 62 | 43 | 80 | 27 | 50 |
| Rarely | 4 | 8 | 8 | 17 | 5 | 9 | 16 | 30 |
| Sometimes | 5 | 11 | 9 | 19 | 4 | 7 | 10 | 18 |
| Often | 1 | 2 | 1 | 2 | 2 | 4 | 1 | 12 |
| SNS: |  |  |  |  |  |  |  |  |
| Never | 38 | 81 | 42 | 89 | 28 | 52 | 25 | 46 |
| Rarely | 7 | 15 | 4 | 9 | 8 | 15 | 11 | 21 |
| Sometimes | 1 | 2 | 1 | 2 | 10 | 18 | 12 | 22 |
| Often | 1 | 2 | 0 | 0 | 8 | 15 | 6 | 11 |
| Forums / Groups: |  |  |  |  |  |  |  |  |
| Never | 39 | 83 | 32 | 68 | 42 | 78 | 26 | 48 |
| Rarely | 5 | 11 | 11 | 24 | 6 | 11 | 13 | 24 |
| Sometimes | 3 | 6 | 3 | 6 | 6 | 11 | 14 | 26 |
| Often | 0 | 0 | 1 | 2 | 0 | 0.0 | 1 | 2 |
| Video Sharing: |  |  |  |  |  |  |  |  |
| Never | 31 | 66 | 14 | 30 | 31 | 57 | 10 | 18 |
| Rarely | 7 | 15 | 6 | 13 | 15 | 28 | 8 | 15 |
| Sometimes | 5 | 11 | 15 | 32 | 5 | 9 | 23 | 43 |
| Often | 4 | 8 | 12 | 25 | 3 | 6 | 13 | 24 |
| Photo Sharing: |  |  |  |  |  |  |  |  |
| Never | 36 | 77 | 30 | 64 | 34 | 63 | 25 | 46 |
| Rarely | 5 | 10 | 8 | 17 | 12 | 22 | 13 | 24 |
| Sometimes | 6 | 13 | 7 | 15 | 3 | 6 | 13 | 24 |
| Often | 0 | 0 | 2 | 4 | 5 | 9 | 3 | 6 |
When combining the values of *sometimes* and *often*, it became particularly evident that teachers went to most social media sites far more frequently to access information than to contribute to it for their professional practice (refer to Figure 5.4). This was particularly evident with wikis (24% posted information versus 55% got information) and video sharing (19% posted videos versus 57% that viewed videos).

<table>
<thead>
<tr>
<th>Internet Tool:</th>
<th>Professional Practices</th>
<th>Personal Use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Contribution</td>
<td>Access</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td><strong>Music:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>43</td>
<td>92</td>
</tr>
<tr>
<td>Rarely</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Sometimes</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Often</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Social Bookmarking:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>40</td>
<td>85</td>
</tr>
<tr>
<td>Rarely</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Sometimes</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Often</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td><strong>Virtual Env:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>46</td>
<td>98</td>
</tr>
<tr>
<td>Rarely</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Sometimes</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Often</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Figure 5.4. The percentage of teachers who accessed versus contributed to information for professional reasons.

This trend matched the frequency in which teachers’ used social media tools for their personal practice with some exceptions. In general, accessing information was far more prevalent than posting it (see Figure 5.5).
Figure 5.5. The percentage of teachers who accessed versus contributed to information for their personal use.

Paired sample t-tests (see Table 5.4) showed that this was particularly evident with wikis where a mere 6% of teachers contributed information as opposed to the 44% that accessed it. Similarly, only 15% of teachers posted videos as opposed to 67% that saw them. Both wikis and video sharing sites had a very large effect size. Additionally, as presented in Table 5.4, statistically significantly more teachers accessed information from forums and groups, photo sharing sites, and music sharing sites than they posted to them. These tools all had a medium effect size. The one tool that showed no statistical difference was SNS. When it came to personal use, teachers posted information on SNS as frequently as they accessed information (33%). This shows that SNS holds particular intrinsic potential where contribution is concerned.
There was no statistical difference found between social bookmarks or virtual environments because teachers almost never used these tools to either post or upload information for either their personal or professional practices.

5.3.6 Internet Tools for Communication

It was important to learn how teachers were using Internet tools for their personal use because professional and personal lives are highly connected. Once these tools are part of teachers’ home lives, it is more likely that they will make their way into their professional ones as well. This became particularly evident with the Internet tools that teachers used for communication purposes. As presented in Table 5.5, there was a high degree of similarity
between the frequency in which teachers used communication tools for personal purposes and for their professional practice.

Table 5.5

**Internet tools used for communication**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Email</th>
<th></th>
<th>Instant Messenger</th>
<th></th>
<th>VoIP</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Never</td>
<td>9</td>
<td>0</td>
<td>94</td>
<td>65</td>
<td>94</td>
<td>61</td>
</tr>
<tr>
<td>Rarely</td>
<td>6</td>
<td>0</td>
<td>4</td>
<td>20</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>Sometimes</td>
<td>20</td>
<td>9</td>
<td>0</td>
<td>7</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>Often</td>
<td>65</td>
<td>91</td>
<td>2</td>
<td>7</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>

As a tool becomes more popular for teachers’ personal practices and they begin to use it more frequently, it begins to find its way into schools, The “personal use of computers outside of teaching activities was the most significant predictor of teacher use of technology in the classroom” (Wozney et al., 2006). Figure 5.6 showed that 100% of teachers were using email for personal purposes (91% of participants used it *often* and 100% used it either *sometimes* or *often*).
Email infiltrated professional practice as well where 85% of teachers used it either *sometimes* or *often*. The tools of instant messaging and VoIP did not hold nearly the popularity of email especially for professional practice.

### 5.4 Taking a Closer Look

Though the survey showed that majority of the teachers at Stoneledge Secondary were not using Web 2.0 Internet tools, three teachers were identified as eager to implement such practices. The remainder of this chapter gives a detailed glance into the practices of these teachers and the school principal. Together they represent the focal participants of the focal school.
5.4.1 The Focal School Principal

Though Paige Greyell, the principal of Stoneledge Secondary, highly valued Internet use for learning and considered ways to incorporate it at the school to support students and teachers, other than the constant use of email, she did not spend too much time on it for her professional practice. She frequented BCE-sis, a highly secure Web based student data information system and she conducted Google searches when she needed to find out about a topic. To be consistent with her philosophy around Internet tools, she was starting to incorporate them more in her practice. For example, she recently opened a twitter account, but had yet to post any tweets. She started this practice by following some educators’ tweets.

Paige used the Internet frequently for personal reasons such as searching for places or people, shopping on sites like Craigslist or ebay, reconnecting and social networking with former classmates, and banking, and communicating with friends and teammates. Paige mentioned how her personal use of the Internet impacted her professional use. After her high school reunion she opened a Facebook account and consequently learned much about her students’ practices. It further lead her to realize that it made no sense to ban such a site for students, and had her think of ways to incorporate it in a school setting. Consequently, though she may not have been actively using the tool herself, her knowledge of it was having an impact on the direction in which the school was shifting digitally.
5.4.2 Future Directions

The principal had put into place several future plans for Internet use within the school which had started taking place during this study. She was keenly adopting district technology initiatives such as moving towards a district-wide portal system. For example, instead of sending information to people via email, she was posting announcements on the front page of the portal website. She encouraged the staff to post events such as fieldtrip dates, times, and places on the portal calendar. This way, there was an increased awareness of school activities that assisted with overall school planning and prevented double bookings of major activities. This shift was happening because of its benefits to the staff. For example, teachers had personal space on the district server, accessible from Web, so that they could access all of their school files safely from home or elsewhere.

An external system will be the next phase to be launched; this will allow parents to have a communication system in place. The principal will put resources like the Student Handbook and the calendar of events on the external system. Instead of doing a calendar for the parents, a calendar for students and a calendar for staff, she could go to one spot to enter all the information and select who has permission to see it. This information then gets sent out to the different systems. This could lessens both the administrations’ and the secretaries’ workloads.

One major advantage to moving to this portal system over the system the school was using in the past was that the workload and information sharing will be widely distributed instead of only being posted by the principal. With the former system, if teachers wanted information posted on the school site, they had to email it to the principal who would then post
it on their behalf. Instead the principal has the ability to give administrative permission to staff members to post information when they so choose. This will expedite the process of information sharing and take away the unintentional hierarchical and authoritative structure previously in place.

Next, plans were in action to create more virtual classrooms. During the time of the study, Planning 10 classes, which included career preparation, financial management, and personal development, followed a distributed learning model, where the students met twenty percent of the time face-to-face with the instructor and the rest of the course work was done online. Other courses such as Writing 12 and a new Journalism course were being set up to follow this same model. The philosophy behind this was to allow learning to happen beyond the fixed time and place boundaries of schools.

Lastly, the principal had considered current structures of the school that were not working and had come up with alternative practices to implement. For example, each day, information was relayed on the speakers for students, but according to the principal, these announcements “frequently fall on deaf ears.” Consequently, she was working with the District Principal of Technology and Innovation to see if there would be an effective way to txt message the entire student body since the large majority of students own mobile devices. This idea came about because of the lack of focus on school announcements coupled with a realization acquired during a school fieldtrip where txt messaging was used as a key communication tool.

She relayed her experience:
“I was on a field trip recently, where we took a group of Drama students to New York and it was phenomenal. And there are certain areas where you really can’t make students in grade eleven and twelve stand beside you all day even though you feel safer with them there. So what we did is use their cell phone numbers. All the kids’ cell phone numbers were in my computer and on my phone, and when it was time to meet or do something we did a quick txt, ‘reconvene now’ and they already knew where. So within a minute, everyone would show up. Or if something had happened that somebody couldn’t get there, they’d give a quick txt back, ‘I’m somewhere just purchasing, be there in two minutes,’ so that we would know where they were at all times. And as I was looking at that, and realizing the power that cell phones had, the kids said, ‘Don’t call me, Ms. Greyell; just txt me, it’s faster,’ when I realized that, I thought, why can’t we somehow get our announcements put into a txt format that goes out to the kids?”

The principal was a great champion of choice and wanted to offer students options for receiving information so she brainstormed ways to communicate with them through email, txt, or other forms. She said, “Not quite sure how to make it all work, but that is something I want to see down the road.”
5.4.3 Challenges

Though the administration had many ideas around technology incorporation, they were faced with challenges that prevented its immediate implementation. One challenge they faced was the infrastructure that was in place. For a plan to be implemented, steps needed to be put in place that involved many people at different levels including the district and the CUPE union. To implement sending announcements via txt messaging, the principal needed to run the idea past the District Principal of Technology and Innovation, check with the technical staff if it would be possible to do such a thing and have them develop the means to run it, meet with the IT committee to discuss the plan, present it to the staff, and introduce it to the parents and students. Such a change, therefore, could take an entire school year to implement.

A second challenge was inadequate funding. “I’d love to have every teacher with a Tablet PC in their hands but there’s the financial restriction of purchasing them,” Paige said. And the biggest challenge remained the ability to learn how to do something before being able to implement it. Both her learning curve and that of the staff was not nearly as fast as their desire to implement new ideas and technologies. This was a major concern she had with the use of the portal as well. Will teachers check the portal regularly for updates and announcements? Or will the shift from distributing information from email to portal create difficulties around disseminating information? Will teachers begin using it as a learning tool by creating virtual classrooms for their students? Or will the challenges of needing to learn yet another new technology create an obstacle too big for teachers to even consider weighing the educational benefits?
5.4.4 Drawbacks of the Internet for Learning

The principal identified the following drawbacks to the Internet that she had witnessed at Stoneledge Secondary: cyber bullying, students creating inappropriate groups, students mistaking inaccurate information for truth, the inability to handle the enormous quantity of information, intentional and unintentional plagiarism and being seduced by other activities during instructional time. She was a proponent of teaching students skills to avoid such drawbacks by encouraging information and critical literacy skills as opposed to blocking sites. For example, she shared her concerns around conducting online research:

“What the teachers have talked about expanding on is more information-gathering literacy, and a lot of that focus is around using the computers and trying to help students understand that cutting and pasting does not make it yours. That you actually have to take information and make your own notes, synthesize with other things and then produce papers. So one of our goals over this next year is to work on a bit of a scope and sequence for students to understand the different components of the computer, how to gather information from a variety of resources, including the computers, and textbooks. Some of our students forgot about books and forgot how to use them – and putting that information together in order to produce essays and papers and reports.”

The principal further addressed her concerns about privacy loss on the Internet and figuring out ethical ways of sharing information: “I’d love to be able to take the grad photos
from commencement, put them on the website so the kids can take a look and see it, but am I infringing on someone else’s right by putting their photo up on the website… where is that comfort level now because anyone out there can download that image and I don’t know that I’m comfortable with that.” She struggled with the tensions around visibility and privacy and recognized that there were no clear cut answers to guide her.

Furthermore, new classroom management problems had arisen since the growth of the Internet. It was becoming more common for students to be surfing the Internet instead of paying attention to a lesson. Though non-digital off-task behaviour had always been a concern in classrooms, the added ease of being able to do nearly any task virtually had aggravated the problem and some teachers were responding by requesting a removal of such devices from the classroom and even in some cases from the school. Though the Stoneledge principal was keen on supporting teacher needs, she did remind teachers that this action was similar to what was happening with adults as well:

“Students go to university, and I know of people who’ve done this even ten years ago, they’ve got their computer and they’re busy multi-tasking in the back of a lecture lab. And I know that when I go to meetings, you’ve watched people pull out their Blackberries in the middle of a meeting and they have a conversation with somebody else through the Blackberry. And, as much as I know some staff feels that it’s absolutely rude and inappropriate for a student to be on a computer when they’re doing a lesson, look in the business world,
and what happens is people are now multi-tasking, they’re using the technology to do more than one thing at a time.”

Therefore, it made more sense to the principal for the teachers to brainstorm ways to work with the technology than to constantly struggle with its presence in class. This may be a lifelong skill to teach. Can we focus on the material at hand, multi-task, and use our mobile devices to help us achieve both? By doing so, are we truly achieving or learning more or is our attention getting divided and in the long run causing more work and less focused output?

An unforeseen drawback was the increased amount of work that digital technology had brought forth. Other than the basics of spending time setting up the new technologies and learning them, a change in expectations by the school community had increased the workload for all. For example, the Principal realized that she was now on duty 24 hours a day. Two particular problems plague her. First, email technology had made some parents believe that they had constant and immediate access to the school and administration. Paige explained:

“A parent might send me an email Saturday morning, and then be irate by Sunday evening because I’ve not responded, and it’s because I don’t have Internet access but they don’t know that because everyone’s expecting you to have instantaneous response all the time. And that is a little bit amusing and frustrating...I actually had that not too long ago where I got in on the Monday morning and there was five emails from the same parent, you could see that they were getting progressively angry with the fact that I had not responded back, but I was actually staying somewhere where I had no Internet, so I
couldn’t have even checked. And why do they think that between Friday and Monday I should be doing that? And yet that seems to become more the norm, not just in Education but everywhere, that you’re now working twenty-four hours a day seven days a week.”

We have become a society of instantaneous access to one another and our expectations around response time and communication have radically shifted.

The second issue of concern around increased workload also had to do with the Internet opening schools 24 hours a day. If an issue arose over the Internet that involved students or staff at the school, there was an immediate link to the school and some sort of intervention was usually required. The principal described a few such situations:

“There would be something happening on a weekend where a kid would send a message to somebody else and call them names, or you’d get a group of kids that would put together a Facebook page ‘If this many people join this then so-and-so will leave our school’ sites like that, and, then there’s one that had a threat to one of my VPs on it so it was a ‘I hate such-and-such’ and a bunch of the kids had joined that site and a few of them had even said ‘Yeah I wanna kill him.’”

Such issues became of critical concern because they were linked to cyber bullying or threats; therefore, they required far greater effort and delicate handling to deal with it. Because of these actions, the school conducted a threat assessment to evaluate whether the threat was
real. Parents, students, and staff needed to be contacted and awareness around such issues needed to be planned. “They think that’s a private place for them to put stuff, it’s really no different than spray-painting those words on the side of the school. In fact it’s worse because more people coming up to the school will see it.”

The school had identified a few instances where student harassment through Facebook or MSN caused the bullied students to avoid coming to school because they feared facing their aggressor. These, too, were instances that required conversations with parents, students, and teachers where the administration would ask questions like: “Do you realize this is bullying?” From that point confrontation heightened where some parents and students refused to recognize the connection between what their children were doing off school grounds with how it influenced school culture: “You get some of the parents saying that it’s not happening at school so you can’t be involved, and us saying, ‘Well actually it’s impacting a kid at school, therefore we are involved’ and just trying to figure out the borderlines and the responsibilities and when does the school take over and when do the parents take over.”

Learning to deal with these new concerns added considerably to the job requirements of teachers and administrators and also influenced the curriculum. In response to these issues, students in grade 8 partook in a unit on cyber-bullying during their Health and Career Education class. These issues were further addressed at assemblies and special events for different grades. For example, a theater group performed a play on cyber-bullying that took place in a courtroom and ended with the audience of grade 10 students acting as the jurors and deciding the verdict.
The principal suggested that even further awareness was needed especially around understanding the power of the digital tattoo—or how information can follow you later in life and be taken out of context. In high school, students are worried about their reputation, but in a different way than when they become adults. They have a different sense of how they will be accepted by their peers. Therefore, they post pictures of themselves on SNS to win the approval of their peers. Paige gave some examples of this phenomenon:

“We’ve got students that are out partying on weekends and taking pictures of each other doing inappropriate things; a lot of it is staged for them to just laugh at the photos, but you know you’ve got a guy dressed in a short skirt and a stuffed bra that maybe is not really looking appropriate and then a picture of another guy whose face might be in an inappropriate place to make it look like they’re having oral sex, and then that picture goes on the Internet, and the kids think that this is amusing and funny.”

Paige feared that teachers were not that much more aware of their digital tattoo either and that more conversations needed to be had surrounding teacher use as well: “They’ve got the drink in one hand, they’ve got a doobie in the other, and they think it’s all cute and funny. And then they put it on Facebook and next thing you know the Internet picture is out there for everybody.” Concern continued to grow around balancing visibility with privacy and understanding the consequences of potential information out spill.
5.5 Teacher Practices

Many teachers at Stoneledge Secondary used the Internet in some way to support student learning. For this study, the practices of three teachers were observed: the teacher-librarian, a science teacher, and a technology education teacher who taught courses such as woodwork, metalwork, and power mechanics. I based my decision to select these three teachers on the following four factors. First, the principal identified them as teachers who used the Internet for teaching. Second, I identified them as teachers who incorporated the social Web in their practices when I attended DTI presentations and other district events. Third, they were willing to participate in the study. And forth, the teacher practices which I wished to observe where to take place during the timeline of the study.

5.5.1 Brooke Jones: “On the Side of Openness”

School library programs and teacher-librarians have the potential to play a significant role in supporting Internet literacy skills across the disciplinary areas. Brooke Jones, the teacher-librarian at Stoneledge Secondary, played a particularly strong leadership role in supporting digital literacies within the school and promoting it throughout the district.

The district had a library committee that met once a month. It was co-chaired by one secondary school teacher-librarian who was Brooke and by an elementary school teacher-librarian. During a monthly meeting it was decided that the district librarians should revisit their role as teacher-librarians and create a document outlining their roles. This decision came about particularly because of changes in information technology. To stay consistent with these changes, it was decided that new technologies would play a role in creating the document. Two
steps were taken in creating the document. They held face-to-face meetings and they set up a wiki allowing all teacher-librarians to offer their views. Fifty-five percent of the district teacher-librarians took the initiative to contribute to the wiki. The two co-chairs compiled all the information to create a draft document. The teacher-librarians were then invited to make any further comments or changes.

The final document stated that the teacher-librarians had three main responsibilities. First, they played an administrative role that had them organizing, managing, and maintaining both the print and digital collection and managing the physical and online space that constituted the library. Their second role was as literacy leaders who promoted reading in offline and online spaces. This role involved information, critical, and digital literacy responsibilities. Their last role, which the librarians described as their “chief role,” involved collaborating with colleagues in a teaching role to educate students. It was clear that Brooke had adopted these three roles into her practice as the teacher-librarian.

The Stoneledge library comprised 25 Windows based desktop personal computers. The library also housed the two laptop carts (containing 15 laptops each) that could be signed out and maneuvered to most classrooms. This mobility further complicated the librarian’s role. Brooke said, it “is a very interesting phenomenon because you can see what might happen is that the teachers will take the library to their classrooms, and so where does my area of expertise fit into that?”

Though the laptop carts had been in the school for only a year, they had already proven immensely popular. Brooke explained the general attraction to the digital resources: “They’re in
constant use; we’ve even had occasions in the library where we’ve had two classes, one at the twenty-five computers, stand-alone computers...and another thirty on tables in the library using laptops. So there’s no doubt about it, for libraries, the computers are the big draw.”

This had especially been the case in the past two years, since the school purchased new computers. Prior to that, it was difficult to maintain a productive work environment because it would take approximately ten minutes for the computers to boot and they would continue to be slow. Brooke said, “Talk about classroom management issues, chat, chat, chat, chat.” Brooke described the current library as a productive, dynamic, and collaborative learning environment.

Furthermore, the manner in which the computers were being used had changed. Brooke noted the different uses of the Internet.” She said, “You can use it as an information source, or you can use it as sort of creative area for students to make something...so information production as opposed to pulling it in.” As the teacher-librarian, Brooke engaged in both facets independently and in collaboration with classroom teachers.

Though these digital resources were readily available to the teachers and students, the dominant feature of the library was shelves of books. Despite the dominance of books, during my visits to the library, students and teachers spent almost exclusive time on the computers. I noticed very few individuals roaming the book shelves. The one instance were books were used was when the teacher-librarian had pulled thematic books off the shelves to include in piles for students during a specific classroom assignment.
I identified six levels of collaboration between the teacher-librarian and teachers. The most surface level included simple face-to-face or email contact to reserve the library space to access the computers, books, or other resources. Often teachers did not request any further assistance from the librarian; their main requirement being the goods available over the services.

The second level involved 100% teacher-librarian involvement and nearly no involvement from the teacher. This happened in scenarios where teachers wanted to segregate particular students from the rest of the class for various reasons. One instance of this involved eight English students who were sufficiently ahead of the rest of the class to join Brooke for some enrichment activities. She organized a plan for the students to take part in self-directed learning in the library, and she created a wiki from which they had to structure their lessons.

The students researched a topic on the self-selected theme of “change”, read broadly and informed themselves on the topic they chose, kept an online journal, recorded discussions on the wiki and then created the ultimate product which was an online magazine created on the same wiki. Brooke noted that this process unleashed the students’ creativity and abilities: “Within five minutes they had pulled down a YouTube video on their page on the wiki and when you opened their page on the wiki, music came –they’re so far ahead of us on the technology, give them that space, and they’re creating.”

This level also involved the librarian preparing activities or resources for teachers and students to access without anyone having approached her about them. For example, Brooke
vetted Webpages that link to other Webpages and created informal pathfinders that teachers and students could use without worrying about the reliability of information.

The third level involved a teacher-librarian initiative that included teacher participation. For example, Brooke did much work on website evaluation. She adapted a lesson called CRAPP Detection 101 around the trustworthiness of the Web (included in Appendix E). Here, students evaluate spurious and real websites to decide which is reliable and how they have made their decision.

The fourth level involved teachers who had an assignment in hand but sought Brooke’s expertise in assisting with the execution of the research or given assignment, or needed suggestions for technology use. At that point, she was able to recommend print and online resources and setup access to databases or distribute useful study aids. An example of this included a science teacher that took his students on a field trip to a park for a botany study. He wanted a suggestion for a place to host the photos of the flora and fauna that he and the students had taken and Brooke suggested that they post them on Flickr.

The fifth level involved teachers who approach Brooke with a vague idea or plan but wanted her to give them ideas about technological implementation. It then became Brooke who came up with potential assignments and ideas that teachers could implement. One example was an activity she worked on with the Comparative Civilization teacher where they incorporated digital art with wikis. The students went to the cemetery to investigate a local pioneer and compared their own lives in the community with that of the pioneer. They then
created a scrapbook presentation in a digital format which was later put on a wiki and displayed at the local museum.

The sixth and most in depth level of involvement was when Brooke collaborated with the teacher from the start before the assignment had even been conceived and worked with them through to the assessment stage. Together with the teacher, she considered the objectives of a lesson and constructed a project on the topic. She stayed involved throughout the process by team-teaching which included such activities as lecturing, assisting students one-on-one, distinguishing high quality resources, reviewing critical literacy skills, providing citation help and offering other needed assistance. An example of this level of collaboration was seen between Brooke and the focal science teacher, Carl Bodin, and will be described in detail in the next section.

Though much collaboration that involved Internet use was being conducted between the teacher-librarian and teachers, very little of the work was formally assessed. For one project, Brooke said, “I did not grade them. It wasn’t gradable, because it was not structured perfectly.” She recognized that many of the online projects they were doing were in “beta” format and they were just testing the waters. At the end of each collaborative unit, the teachers debriefed and with each term of implementation, the projects took a more structured shape. She said, “we have to structure this differently, last year we let them go fairly freely, this year we’re going to scalp it more, we’re going to have read what they will read, and make sure that it’s comprehensible to them, because that’s the folly of the Internet right? It’s wide open, and they’re not discriminating yet.” Consequently, assessment strategies frequently took
a back seat to more pressing issues like planning the core activities and identifying the tools to use.

Regardless of the assignment or the teacher with whom Brooke was collaborating, she tried to approach tasks with a critical lens. She was in the process of collaborating with the history teacher, Fred Besh, to write a scope and sequence with respect to plagiarism. They were basing this document on a study guide that Fred had already completed that included how to write an essay, how to cite sources, and where to go for information. Dealing with issues of plagiarism had become an increasing problem at the school with the ease of online information retrieval, and frequently this plagiarism was unintentional by students and unnoticed by teachers. Brooke commented on one of Carl’s students:

“His best student, for example, had blatantly cut and paste, cut and paste, cut and paste, and when I went and sat down with the student I said, ‘what we want you to do here is take notes, as opposed to cutting and pasting’, and what was interesting is the student felt that he had done that, and Carl was quite interested to know what process goes on when a student is asked to do research. And he was quite surprised to find out the degree to which students are pulling huge amount of information over rather than kind of synthesizing and digesting it.”

Together with Fred, she hoped to have a scope and sequence completed to assist teachers at each grade teach strategies that would help them avoid plagiarism and adopt note taking strategies.
Brooke found her role as a critical literacy leader to be one of the most important and aimed to make students critical users of knowledge. Therefore, she was currently struggling with the district’s decision to move toward the portal system that attempted to keep students safe by putting boundaries around information instead of embracing the entirety of the World Wide Web. She said,

“What’s happening is that you’re seeing schools create these portals, so that they can create these places to share information privately and safely. Those have another side to them, which is closing in access to information in a way. So what you’ve got is this is now safe, but it’s not open. We have to balance this responsibility; we have to make sure these kids are as safe as we can make it for them and still give them the opportunities and exposure to this bigger world; and you won’t necessarily get that through this closed system.”

Though she understood the need for student safety and was interested in exploring the possibility of a balance between privatizing information on the school portal and keeping it public on the whole World Wide Web, she leaned toward openness and public access. She said, “I don’t want my library website to be only available to the students in the [Pacific Coast District] because the most exciting aspect of the Internet is that you can share information broadly and find someone who’s got similar interests to you that you may not be able to find in your own community. So I’m kind of open, I’m on the side of openness.”

She was further frustrated with closed gateways as they had limitations not conducive to flexibility and openness. For example, the program they used to edit their website only
allowed eight people in the district on it at a time. Therefore, Brooke frequently could not get on the site to make the additions she wanted. Consequently, she found herself developing her site on WikiSpaces and only placing the link to the Wikispaces’ site on the district based site.

Moreover, she recognized the need to make accessing information as easy and convenient as commercial search engines if they were to keep students engaged with their school online environments. Consequently, she was an advocate of developing online spaces similar to Google in speed and ease to attract students.

Though Brooke is a great promoter of the World Wide Web and finding information through commercial search engines, she felt it was equally important to teach youth how to access library databases that could not be searched using commercial search engines. She said, "I teach students “how to conduct advanced Google searches, searching domains, searching for PDF files, narrowing results by doing that kind of thing,” but went on to emphasize the importance of other information such as using subscription databases:

“I do a lot of teaching on how to navigate around subscription databases like CPIQ, or this year I bought one called Global Issues. I’m trying to get them into those because students are attached to Google, and they choose not to go to the database, and even after I’ve taught it and shown them the really good quality information, they won’t use it. I can tell you right now, all kids will use is Google, you have to force them to go anywhere else and maybe you shouldn’t, I don’t know.”
She tried to balance traditional resources that she felt had great value with new tools and resources that were emerging. She was constantly looking at new ways to improve her practice by learning about upcoming popular tools with learning potential. For example, she was exploring Glogster to make online posters where students could incorporate multimedia such as sound and video.

Before incorporating new practices within the school, Brooke used them herself to assess their benefits. Sometimes she found that though the tool is a useful one, it may not be well received at the school and therefore held back on its induction. For example, Brooke used the social network LibraryThing and the social bookmarking tool Del.icio.us for her professional practice. She used them, however, on a private and not social or public level. She was interested to share the information on these networks with her colleagues and students but questioned whether they would access the information she posted and consequently, whether it would be worth her while to put in the extra time and effort to make the sites more public.

She said, “maybe that’s the way we should go to share information, but you know, who’s going to read it, you’ve always got to decide is all this work you’re doing actually being read?” For example, last year she compiled a reading list with reviews, ratings, tags, and photos on LibraryThing to share with grade eight parents and English teachers, however, she did not know if this time consuming task was of use to its intended audience. She therefore needed to balance carefully which tools to integrate.
5.5.2 Carl Bodin: “That’s Just Sexy Expository Teaching”

Carl Bodin had taught Science for 15 years; he also taught senior biology and leadership courses. When he started teaching, there were no computers in the classrooms or the library and he witnessed a major shift over this time in the use of technology. So much in fact that Carl decided to stop distributing textbooks to his classes and instead used a variety of sources that he pulled from the Internet. This allowed him to access the most relevant and current information.

Upon finding the reading resources he most wished to share with students, he copied the information from the Internet source and pasted them into a Word document that he then printed to distribute to students. He did this instead of asking students to access the information on the Internet itself. He did so because of his occasional frustration with lack of equipment and equipment failure. Also, this practice was reliant on his technological comfort level.

Carl did not own a cellular phone and had made the purposeful decision not to let “technology take over [his] life.” This held true even for his personal life. The only times he frequented the Internet for personal use were when he checked the weather, when he banked, or when he communicated with email. Even his personal email communications were sparse with only 10% of his emails being to and from friends and family. In all, he considered himself as “somewhat of a Luddite.” However, he decided to incorporate the Internet into his teaching practice for three main reasons. First, he saw it as a powerful learning medium. Second, he saw colleagues he highly respected using it in meaningful ways. Third, he recognized its multimodal
potential that he wished to capitalize on since he himself was a visual learner. He particularly found the use of Internet images to be a great supplement to his teaching. He frequently started lessons by showing pictures of botany or animal life that he located on the Internet.

Carl was excited about the potential of the Internet to bolster learning and was keen to use tools that encouraged students to think critically. He also recognized that it was an engaging learning environment that draws the attention of students. When assigning work that required supplemental research, Carl estimated that 99% of his students chose to do this research online instead of from print materials. Though he was keen to incorporate Internet tools within his practice, he did not deem himself competent enough with new technologies to use them without assistance. He said, “my knowledge is pretty low, so if I’m going to do it, it’s with support...I never book the computer lab and go down on my own, so that’s an example of how I’m not comfortable just going and leading this kind of stuff.” Instead, he would solicit the aid of Brooke, the teacher-librarian.

Carl’s strategies to make up for his lack of knowledge included learning from his students and collaborating with his peers. For example, his students taught him how Facebook worked and consequently, Carl created a Facebook page for his leadership class. The page allowed the class to communicate with one another and the school. Students frequently posted updates on it and Carl asked students to post announcement on his behalf. He was amazed at how much more effective this mode of communication was over publically announcing events using the loud speaker. Carl said, “I’m not monitoring it but I am using it as a conduit.” When learning about Facebook, Carl was particularly impressed with its multimodal nature. He felt
that part of the reason youth were highly attracted to the social network was because it went beyond text to include visuals, sounds, video, and animation.

Another example of student assisted learning was when Carl had students show him how to use YouTube. From that point he began regularly showing videos in class. For example, he found short clips on Hagfish and their slime to show his class. His incorporation of using video through YouTube was in line with his preference for the visual when he learns.

Similarly, to help him with incorporation of digital tools, he found himself frequently pairing up with the teacher-librarian to collaborate on Internet based projects that encourage critical thinking. He found these Internet-based collaborative efforts to be the most effective and engaging lessons of the year. There are two ways that Brooke and Carl had collaborated: they taught a critical literacy unit, and they assigned students a Wikipedia type body systems project (assignment outlines are included in Appendix E).

First, they taught a critical literacy unit entitled CRAPP Detection. The idea behind the assignment was to have students learn to critically examine websites. CRAPP stood for Citing the URL, Reliability, Accuracy, Purpose, and Presentation. Before teaching them these skills, they took students to sites such as Dyhydrogenmonoxide.org and gave them a worksheet to complete. Students believed the information presented was accurate before they realized that the Webpage was simply about water. Once they had been fooled by what seems like a genuine website and they were more willing to learn about ways to differentiate between them and using the CRAPP Detection worksheet, the teachers assisted students in identifying false information and differentiating between reliable and non-reliable sites.
After conducting this activity, both teachers found that students were far savvier when searching for information. According to both teachers, students started noticing when something was not reliable and were more likely to locate the author of the information and google them to find out more. Poor design, dead links and other indicators started to raise flags for them. Indeed during classroom observation, I heard students making comments about website reliability. For example, one student said, “Oh this one’s from the provincial museum, so this one’s probably a reliable site.” Brooke and Carl tried to teach their students to be “Internet detectives,” sleuthing their way through information to solve the questions at hand.

Second, Carl and Brooke collaborated on a wiki articles assignment that is similar to creating a Wikipedia for body systems. Carl wanted students to generate questions that genuinely perplexed them and then let those questions drive what information students were going to learn and write about. Therefore, at the start of the unit, Carl invited students to write down questions they had about the human body. The students brainstormed 120 questions that Carl then narrowed down to 30 questions. Example questions that the students composed included “Why do we sneeze?” “Why do farts smell?” and “What makes our hearts pump?”

The next step of the project included going to the library and working with the teacher-librarian to assess what makes a good encyclopaedia article, and then specifically what makes a good Wikipedia article. Once students had brainstormed their ideas, the teachers took them to the Wikipedia page (Figure 5.7) that listed what makes a strong Wikipedia article. Students noticed that the points they brainstormed were quite similar to what Wikipedia said.
Once the questions had been selected and students were aware of what constituted a strong article, they began to research the question that they had selected and eventually wrote an article on that question. Carl repeated this process with all four of his grade 8 science blocks that term. The same 30 questions were used in all four classes; therefore, one student in each class had the same question to investigate. Though each of the four students investigated the topic, only the students in the first class posted their articles on the wiki. The students in the next class had the responsibility of reading the articles that had been posted by students in the previous class, comparing them to their own articles, finding discrepancies between them, further researching those discrepancies to locate the correct answer, and then making the appropriate changes to the article based on the information they had researched.
The students in the third and fourth classed repeated the same process as the students in class two. Instead of posting their own article, they read what had been posted before them and made appropriate additions, deletions, and edits. The following were comments heard from the students in the second, third, and fourth classes as they went through this process: “We need to add a few lines,” “It’s not clear where this information comes from”, “see if you can find a reference for this,” and “I’m going to add a source here.” Together then, the students from the four classes created an online body systems encyclopaedia that went through several levels of editing. Before the publication process, both teachers edited students’ work and in most years, Brooke and Carl chose to keep the wiki accessible by only the class instead of making it public.

Because incorporating social Web tools like wikis was still quite new to Carl, he was still working out kinks and considering a variety of assessment strategies for future years. Therefore, during the study, the actual work done on the Internet was not assessed. Each segment of the different projects was beginning to be taken into consideration for the following year’s assessment process. Carl said, “The research time will be credited in the library, then handing in the article will be credited, and then them doing some of the references and the reflection, we did that thing what they learned today, will be credited.”

Overall though, the collaboration between Carl and Brooke in preparation for this project did not reach the assessment stage. This area remained a challenge for them both. At the end of each collaborative unit, however, Carl and Brooke did take the time to review the activity and their practices and they reflected on ways that they may improve upon it for future
years. They were keen on pursuing projects that truly assisted the learning process and eliminating activities that didn’t.

Carl recognized the difference between using technology for technology’s sake and using it for the sake of learning. He said, “It’s not a goal of mine to become an Internet expert but I just want my students to be able to be great thinkers and great readers.” He planned his lesson objectives ahead of time before deciding how he could best go about presenting his lessons, teaching the material, and creating assignments. Consequently, frequently a lesson had nothing to do with the Internet or technology. He said, “Having a jazzy PowerPoint is nothing for me because that’s just sexy expository teaching; it’s no different than say eighty years ago. So I haven’t gone that way, but that was a real big trend about five-eight years ago, but in terms of how can I get kids to think more, think deeper, think more critically, that’s why Brooke and I do different things” with the Internet.

Though Carl said that he only used the Internet when he had the opportunity to collaborate with Brooke, after closer inspection, it became clear that Carl did use it in her absence as well. For example, he assigned online readings and he pulled visuals such as images and videos to show in class. When he heard about a new application such as Facebook or YouTube, he asked his students to show him their purposes and how to use them and occasionally, he incorporated their uses as well. He also picked up other uses from colleagues and then made the decision whether he wished to continue using the application or to abandon it.
One example of an application that Carl abandoned because it did not suit his interest and because he did not feel comfortable with its use was a blog. One of his colleagues, Ethan Laing, assisted him in setting up a classroom blog to build an online discussion environment for his leadership class. He didn’t find the medium to be appropriate for his class purposes because he aimed to create a classroom full of critical discourse and he found that instead it lead to clerical types of discussions. Both Carl and the students ended up posting and commenting on logistical types of things such as “don’t forget to meet at lunch” or “don’t forget the field trip starts here.” Consequently, this idea fizzled out.

Just as Carl wished to instil critical literacy skills in his students, he practiced them himself. He recognized the downfall of the Internet, but did not want to let this lessen his use of it for learning purposes. Rather, he wished to balance its uses with traditional learning strategies and approach its use with care. He shared a metaphor he conceived for the Internet:

“If you think of the idea of fire, in terms of how it can be very destructive, but it can be very, very useful, it can bring people together, it can warm the soul; it’s multi-useful, you’d never go back, you can’t not have fire because it’s just so valuable. I mean, same thing with the Internet, we can’t go back, we’re not going to abolish it, it’s going to be there, now we have to learn how we use it in a way that’s going to make us better, but not be destructive.”

Because Carl adopted this critical framework, he tried not to ban sites but instead check first why it was that students wanted to frequent a site. For example, one student asked permission to access her Facebook account because she had uploaded material that she
needed the following day for school. Not only did Carl allow this, but he also asked her to show him how it was done. Instead of fearing the technology or wanting it banned because of his lack of expertise with it, he had chosen to learn what he could and used it in ways that would help his students.

5.5.3 Ethan Laing: “It Provides An Experience”

Ethan Laing had taught Technology Education, which included classes such as Woodwork, Metalwork, and Power Mechanics, at Stoneledge Secondary for 12 years. He was the only person in his department and, therefore, did not have too many opportunities to collaborate with colleagues. He was the one who made decisions about budget allocation and equipment purchase. Because Ethan had no other colleagues in his department from whom to learn or discuss classroom ideas, he actively sought out ways to improve his practice.

To compensate, he learned from and had educational discourses with colleagues in other departments and partook in professional development activities and educational programs. For example, last year, Ethan completed a diploma program in using new technologies in the classroom. Furthermore, Ethan used the Internet to stay current in his field by accessing sites that may have assisted him in lesson planning or teaching particular concepts.

The environment in which he worked was ideal for his needs and personality. The classroom workshop was located on the first floor adjacent to the cafeteria. Because the majority of activities needed to be built in class, students commonly needed to return to the workshop during breaks to complete work. Students frequently popped in and out of the workshop from the cafeteria during recess and lunch to work on their projects. A second door
led outside the school making it easy to test out projects such as mousetrap cars or bottle rockets in the outdoors.

Within the workshop was a small office where Ethan met with students, parents, colleagues or others in a quiet space away from the sound of machinery. Adjacent to the workshop space, Ethan had a traditional classroom where he took his students for non-workshop related activities. Most conveniently, one of the school’s computer labs adjoined Ethan’s classroom. He, therefore, had the opportunity to use the lab at whim or to allow students to do so. He said, “There’s a computer lab just off my classroom; we just zoom in there and we can sit down and I can give them an entire class or twenty minutes to research something.” He was capable of facilitating a class where some students were working on machinery, some were testing devices outside, some were at cafeteria tables collaborating, some were in the classroom brainstorming on the white board, and some were on the Internet researching, creating, or posting work. His work environment, therefore, was conducive to achieving goals that may not be available to teachers in other spaces.

Because of its hands-on and technical nature, Technology Education, upon first glance, would seem like a discipline that would not lead to Internet use especially through social media. Ethan, however, implemented the Internet into several of his classes including woodworking and power mechanics, and he did so in both Web 1.0 and 2.0 ways. He used the Internet in a way that involved accessing websites that would enhance the content he was teaching and he used it in a way that involved using participatory tools to assist with learning and presenting content. Usually he combined these two ways.
The following is an example of a research-based assignment that required the Internet for accessing information, but not for inputting information. Ethan directed his students to a website that demonstrated how to make mousetrap-powered cars. This website allowed students to access an array of information including different models, styles, and designs. It helped students derive their own ideas for projects and gave them the needed information to better their projects.

In this next example, the Internet was used for both research and participation. Ethan directed his students to a nearby city’s website. This city was rebuilding a bridge and the design proposal for the bridge was presented to the public through their website. The public was invited to vote on which design they visually liked best. Ethan had his students go onto the website and look at the proposals through a designer’s eyes and select the one they liked best. They then were to complete the online survey and give a justification for their design selection. Therefore, the students were involved in both accessing information and presenting it on the website by filling out surveys, voting, and commenting.

In this same bridge unit, Ethan sometimes used a blog to stimulate reflection and discussion and to encourage a higher level of work by making students’ work public. He had his students build balsawood bridges, and they discussed the types of structural stress that could affect the bridge before it breaks, determining the bridge’s efficiency. He wanted the students to do a reflection on what they had built to try and forecast how and where the bridge would break. They assessed the strengths and analyzed where the weaknesses appeared within their structure. The students then went to the class blog that Ethan had setup and posted their
analytic reflection on the blog. This allowed for all the students to forecast where their bridges would break before testing them out. Once these reflections were posted, students had the opportunity to view one another’s analysis and test out the bridges and make appropriate changes to the analysis. Ethan deemed the addition of the blog component to this yearly activity as a positive one. He said:

“I thought it was cool to give the kids a public forum that they could share their ideas and thoughts instead of standing and kind of fumbling away or writing down something that was just going to be something that I would see and no one else. I found the quality of their written work was much higher when they knew that peers were going to be reading it, and they seemed to put a little more thought and effort into their reflective piece knowing that it was going to be on a blog where basically the whole world could read it.”

The last digital literacy example observed in Ethan’s class also contains a mixture of both Internet use for research and participation. Students created podcasts explaining the functioning of a four-stroke motor. Ethan resolved to do this activity during a diploma program when he was given the task of exploring a compelling educational issue in the classroom. His issue concerned students’ low test scores and weak understanding of the four-stroke motor unit. All his students would continually perform very poorly in this unit and he wanted to conceive a new way of approaching the unit. The following is a description of Ethan’s plan in his own words:
“I got the students to break up into groups, I showed the kids what a rubric was, and I selected one aspect of the functioning of a four-stroke motor and created a rubric for that specific part. And then I had the students identify other systems within a four-stroke motor, like the exhaust or movement of the valves, or lubrication or whatever, all sorts of different aspects of it. The kids created rubrics based on the readings that they’ve done, things they found on the Internet, and we came up with a comprehensive rubric and we discussed each one as a class to see if they thought something was missing. And once we’d kind of gone through all of them, the kids, each group shared the rubrics they created with the other groups in the class, so what we had at the end of it, was every group had every rubric that had been created. From that, I had the kids write a script for a podcast that outlined the principals of four-stroke engine operation.”

At that point, Ethan directed his students who owned iPhones or iTouches to the iTunes store to download a free application called iTalk to allow them to record their podcasts. Some students chose to use laptops with Webcams instead and record vodcasts (video podcasts). Upon completion of the assignments, some of the podcasts were posted on Ethan’s class website for students to access. Depending on the quality of the podcasts, some semesters Ethan posted them and some semesters he chose not to. Though Ethan had not run statistical comparisons of the test results pre and post podcast activity, he found that students were
much more motivated during the four-stroke motors unit than they had been in the past. He said,

“They could demonstrate, without question, a clear understanding of what they were doing, and you know in years past they would call it the ‘thing’ that connected to the ‘thing’ whereas now they’re calling it the terminology that they’re actually supposed to use...when I would come around to them on their benches where they’re working on their motors, I could hold up a part and they knew what it was, they knew where it went, they knew its role, they knew what connected to it, and everything else.”

Though Ethan found this project to be one of the more valuable ones he did with his students, he still had not come up with an adequate assessment strategy.

Similar to Carl and Brooke, assessment was one component with which he struggled when it came to using the Internet for assignments. He was never quite sure what components of the project to grade or how to go about grading the technological components.

5.6 Value of the Web for Learning as Identified by Teachers

All the teachers interviewed recognized the value of the Internet for learning. Brooke said, “You can access so much information, including YouTube videos on how to do this and how to do that and how to do the other thing, you can store information with pictures...And I
think that there’s an interesting situation where you can share information broadly and learn about other communities and other worlds.”

Ethan gave a personal example of an instant where the value of the Internet particularly resonated with him. His young daughter who had started to play the piano wanted to know what Beethoven looked like, so Ethan began by describing the musician’s features and then realized that it would make more sense to simply show her a picture. They went onto the Internet and viewed a myriad of pictures, but it didn’t end there. He was then able to click on a link and let her hear “Ode to Joy.” Ethan realized then that the Internet “provides way more than an answer, it provides a whole experience that education didn’t provide before.” He knew that he could harness this same power for learning in his classroom.

It is mainly because of such views that the teachers had chosen to incorporate the Internet into their practice. Other incentives that brought on their practices included knowledge gained in formal educational programs, professional development days, or practices of their colleagues that they had observed. Furthermore, the constant quest to be an effective teacher who is motivational in the classroom also played a role. Ethan said, “I don’t want to be the stagnant guy who has cobwebs hanging off him, I want to do new things and try and keep the kids engaged, because if they’re engaged, then my job is so easy, and it’s also stimulating for me.”

None of the three focal teachers were born in the Internet age. None were familiar or comfortable with digital technologies or the Internet at the onset of their practice. They made conscious decisions to learn based on the degree to which they valued the potential of the
Internet to help their students learn and to help them improve on their practice. All three teachers attempted to push their practices to meet their students’ needs. Ethan said, “There are some teachers in the school who are petrified of technology and don’t want anything to do with it. I see a lot of the benefits of using technology and it’s not going anywhere, it’s going to be here and I feel a responsibility to give the kids the tools to use it for learning instead of just for gaming and other social networking.”

5.7 Drawbacks and Challenges Identified by Teachers

The teachers identified several drawback of the Internet that posed challenges in teaching. One was accessing misinformation or malinformation. Despite efforts to teach critical literacy skills, it was still difficult to sift through the mounds of information to find the reliable snippet needed. Second, plagiarism had become easier, unconscious, and therefore more prevalent. Carl and Brooke complained about students “moving around information without synthesizing it.” Ethan agreed that “it’s too easy to do the ctrl+c and ctrl+v and stick it on and claim it as their own.”

Third, technical issues arose. For example, teachers complained of missing or malfunctioning equipment: “a mouse was missing or someone’s network cable was missing so you couldn’t be doing the same thing all the time; that always leads to potential unrest.” These issues aggravated teachers especially because they set back class and wasted time. Carl said, “I couldn’t get the computer working so I said hell with it and I just dropped it because I’m not going to waste any time if it’s not working for me immediately right then and there.” Slow computers and Internet connections further aggravated the teachers and forced them to make
the choice of abandoning a planned Internet based activity for an alternative offline one in
favour of preserving class time.

Fourth, logistical problems arose. Because the labs and equipment needed to be shared
by all teachers, some conflict tended to arise for booking equipment. The supportive tone at
the school helped in facilitating teacher collaboration, so the issue wasn’t a pestering one.
Similarly, accessibility to computers at home needed to be considered. The teachers recognized
that although they teach at a high SES school, some of the families are still sharing one
computer. Therefore, when they assigned Internet based homework, they ensured to give a
few days for its completion. They also made sure that students had the opportunity to access
the school computers.

The fifth drawback was the new array of classroom management issues that arose.
Though they were similar to former disciplinary issues, they had taken on new forms with which
teachers were not practiced. All teachers complained about the unproductive time spent by
students surfing the Internet when the intended focus was supposed to be elsewhere. Carl said,
“If you don’t have a lot of discipline, it’s going to suck your time away...if you’re not doing what
you’re supposed to be doing it’s like you’re watching commercials...at the end of two hours it’s
like how much did I accomplish.”

All the teachers elaborated on this drawback by mentioning the enhanced tendency to
multitask and therefore pull attention away from the focus task. Ethan gave the example of
several students in his class going onto Facebook to partake in a farming game during
instruction time. He said, “They’re obsessed with that...I swear sometimes that the Internet is
responsible for attention deficit disorder, because there’s nothing keeping kids engaged on the
task. It’s so tempting and so easy to open up another tab and look on Facebook, open up
another tab and check your Hotmail, and the kids are kind of all over the show. I think the
challenge is it’s difficult to keep the kids focused on one thing when they’re doing something on
the Internet.”

A final challenge for teachers was the fact that the Internet was a new territory for them
and continued to be new territory as it grew and changed making it difficult to stay competent
and ahead of their students. Ethan said, “A lot of the teachers that are in the school here went
through a high school and university without the Internet, so it’s difficult to know how to teach
to kids who will be going through with access to all this information.” How do teachers teach
something that they themselves did not and have not learned?

Instead of simply giving up on Internet use because of the drawbacks and challenges,
the teachers had come up with strategies to address these drawbacks or had found that with
time some problems lessen. The teachers found that they were able to circumvent many
challenges as technology advanced. They didn’t have as frequent equipment failure issues as
they used to as the school replaced old computers and more robust structures were setup.
Software was available that allowed them to take control of the students’ computers when they
needed their attention or would like to demonstrate something for them to see. Therefore,
classroom management issues had lessened.

Their growth in the area also assisted in lessening the challenges. The more the teachers
learned, the more competent they become at troubleshooting either digitally or through
alternate methods. The design of the lesson also helped with dealing with some of the challenges of using the Internet. For example, offering exploratory time had not proved to be an effective strategy, whereas, giving short spurts of time to do specific online tasks had worked quite well. A strategy that Ethan has adopted was to allocate a little time for off task activities so that he could draw in students’ attention for the rest of the time. He said, “I actually try and provide an opportunity if you want to check your Facebook just for a quick second, so that way you’re not obsessed over it just so you can get back to what I want you to do, then if you have to do that, do it and then get back.”

Teachers were conceiving plans to assist students to deal with critical literacy issues by developing scope and sequences and conducting library workshops. Most importantly, they were collaborating with one another to tackle oncoming issues by sharing strategies. It was evident throughout the research that the teachers deemed the Internet far too valuable to cease its use because of its drawbacks.

5.8 Summary of Findings

I asked educators about their Internet practices both related to their teaching practice and their personal use. By knowing teachers’ personal practices, it allowed me to identify similarities between teachers’ Internet knowledge and their practices.

The findings of the quantitative analysis of the online teacher surveys showed that the majority of the sample was females with four to seven years of teaching experience. The study found no statistically significant difference in the amount of time spent using the Internet for
professional practice versus personal use. The findings further showed that statistically significantly more teachers used the Internet to access rather than contribute information for teaching related activities, with statistically significantly more accessing of information for personal use than for professional use. While most of the Internet tools listed on the survey were reported to never have been used by the participating teachers, the findings identified the more popular tools based on the proportion of teachers that sometimes or often used the tools. Findings also showed that all participants used email for communication for both personal use and professional practice, making it their preferred online communication mode.

Participant observation, collection of artefacts, and in depth interviews with focal participants allowed a closer look at the practices of teachers who were purposefully attempting to incorporate social media tools within their courses. The teachers at the focal school had the support of their administrator and district in implementing social Web tools in their practices. The school principal was a strong advocate of using digital literacies and considered new ways of implementing it within the school.

Even though the principal saw great value in the Internet, she recognized its limitations as well. She identified the following challenges that they had faced at Stoneledge Secondary: cyber bullying, students creating inappropriate groups, students mistaking inaccurate information for truth, students’ inability to handle the enormous quantity of information, students’ intentional and unintentional plagiarism, the loss of instructional time to a very seductive World Wide Web, and parents’ notions that the school is open 24 hours a day. The
principal promoted working through these issues by teaching critical literacy skills over implementing bans and filters.

This chapter presented the findings derived from the teachers and administrator of the focal school. It provided both the quantitative and qualitative analysis. The quantitative findings came from an online questionnaire administered to the focal school teachers and focused mainly on teachers’ social Web practices for teaching purposes. The qualitative findings were derived from participant observation, artefact collection, and interviews with the focal school principal and three focal teachers. In the final discussion chapter, I will make inferences and draw conclusions holistically based on both the qualitative and quantitative analysis after having correlated, consolidated, and integrated the two sets of data together.

The next chapter will present the findings derived from the students of the focal school. It, too, will provide the findings for both the quantitative and qualitative analysis. The quantitative findings came from a paper survey administered to students in grades 8 and 10 and the qualitative findings came from participant observation paired with a focus group interview conducted on a blog with students in grade 10.
6.0 The Students of Stoneledge Secondary

6.1 Research Questions

The following research questions guided this analysis:

1) How are students using the social Web to assist their school content learning?

2) To what degree is this school district’s goal of mandating digital literacy within the curriculum being adopted by its students?

I partook in five phases of quantitative analysis and four phases of qualitative analysis to derive findings from the school through the perspective of the students. The quantifiable data analysis consisted of data entry, running frequencies and paired t-tests, data reduction, data display in the form of tables and graphs, and interpreting the findings and qualifying the data by writing it out in prose.

The qualitative phases included data organizing and reviewing; data reduction and grouping similar responses together; data correlation, consolidation, and comparison; interpreting the findings by comparing them to the literature in the field, considering alternative explanations to my interpretations, and describing the findings in detail. The findings for the two data sets are presented separately in this chapter. However, after completing both the statistical and descriptive analysis, I took the final steps of correlating, consolidating, comparing, and integrating the two sets of data together and presenting holistic inferences in the final discussion chapter. The analysis process is outlined in detail in Section 3.8.
This chapter presents the findings from both the qualitative and quantitative analysis conducted on the focal school by statistically analysing factors such as the demographic composition of the students and their self- and school-selected Internet practices, and by delving deeper into the students’ values and beliefs about the Internet through reviewing the focus group findings.

6.2 The Findings of the Student Survey

6.2.1 Demographics

The population of Stoneledge Secondary consisted of 830 students from grades 8-12. Of the 830 students, 113 were Grade 8 students and 164 were Grade 10 students. Ninety-one of the 113 Grade 8’s (80%), 132 of the 164 Grade 10 students (80%), and one student, who did not identify grade, completed the survey for a grand total of 224 of 277 total participants (80%). Of the students who participated in this study, 51% were male and 49% were female. The majority of the participants were 15 years old (n=83, 37%) and 13 years old (n=74, 33%). Thirty-nine percent of students were in grade 8, 49% were in grade 10, and 11% were grade 11 international students who were taking both grade 10 and 11 courses. For the purposes of this study, I included these students as part of the grade 10 participants. Table 6.1 presents the demographic profile of the student participants.

Most of the participants’ homes had three or more computers (n=149, 67%), wherein 145 students had one computer for their sole use (65%). One hundred percent of student homes had at least one computer. Most of the participants also had high speed Internet access
at home (n=196, 88%). These statistics showed the high SES of the school community and student access to resources.

Table 6.1

*Frequencies and percentages of demographic profile of students*

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
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</tr>
<tr>
<td>12</td>
<td>7</td>
<td>3</td>
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<tr>
<td>13</td>
<td>74</td>
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<td>15</td>
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<td>37</td>
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<td>10</td>
</tr>
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<td>18</td>
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<td>2</td>
</tr>
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<td>1</td>
</tr>
<tr>
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<td>100</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
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</tr>
<tr>
<td>Male</td>
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<td>51</td>
</tr>
<tr>
<td>Female</td>
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<td>49</td>
</tr>
<tr>
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<td>100</td>
</tr>
<tr>
<td><strong>Number of Computers at Home</strong></td>
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<td>0</td>
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<td>1</td>
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<td>7</td>
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<td>2</td>
<td>59</td>
<td>26</td>
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<td>3</td>
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<td>28</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
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<td>100</td>
</tr>
<tr>
<td><strong>Computer in the home that is for your use only</strong></td>
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<td></td>
</tr>
<tr>
<td>No</td>
<td>79</td>
<td>35</td>
</tr>
<tr>
<td>Yes</td>
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<td>65</td>
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<tr>
<td><strong>Total</strong></td>
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<td>100</td>
</tr>
<tr>
<td><strong>High Speed Internet Access</strong></td>
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<tr>
<td>No</td>
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<td>11</td>
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<tr>
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</tr>
<tr>
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<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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<td>100</td>
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<tr>
<td><strong>Grade Level</strong></td>
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<tr>
<td>8</td>
<td>88</td>
<td>39</td>
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<td>10</td>
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<td>49</td>
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<td>11</td>
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<td>11</td>
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<tr>
<td><strong>Missing</strong></td>
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<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>224</td>
<td>100</td>
</tr>
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</table>
Figure 6.1 compares student Internet use in hours for school- versus self-selected activities. The majority of students used the Internet for school-selected activities within the range of 1 to 5 hours while the majority of the students used the Internet for self-selected activities within the range of 1 to 5 hours and 6 to 10 hours. However, as presented in Figure 6.1, more students tended to use the Internet longer for self-selected activities.

This study found that the large majority of students used a computer within their home for both school-selected (95%) and self-selected (97%) activities. For schoolwork, 73% of students also said that they sometimes or often used the school library computer and 48% said that they used the school computer labs.
6.2.2 Internet Practices

Students offered four specific reasons for using the Internet: to get information, to post information, to communicate, and to game. The next sections focus mainly on the frequency that students accessed and contributed information on the Internet for both self- and school-selected practices. It also touches on their communication practices. Gaming is beyond the scope of this thesis.

I conducted paired t-tests to examine whether the Internet was used more for school- or self-selected activities. Also, I conducted t-tests to examine the frequency that students contribute information to the World Wide Web versus the frequency that they access information. Four construct measures were computed as summations of the coded responses (0=never; 1=rarely; 2=sometimes; and 3=often).

6.2.2.1 Contributing Information

As seen in Table 6.2, the frequency of usage of Internet to post/upload information in the listed sites was statistically significantly different for activities related and not related to schoolwork for all practices except for social bookmarking and blogs. SNS, video sharing sites, photo sharing sites, and music sharing sites all had a large effect size, while wikis and virtual environments had a medium effect size. Only wikis were used more often for school-selected activities as compared to self-selected ones. The heightened use of wikis in school over personal use can be explained by the fact that the teacher-librarian frequently used the tool with the students at the school.
Table 6.2

*Paired difference comparing contributions for school- versus self-selected practices*

<table>
<thead>
<tr>
<th>Contribution (school vs self)</th>
<th>Self</th>
<th>School</th>
<th>t</th>
<th>df</th>
<th>p</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wikis</td>
<td>0.51</td>
<td>0.87</td>
<td>0.71</td>
<td>1.04</td>
<td>-3.29*</td>
<td>.001</td>
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<tr>
<td>Blogs</td>
<td>0.63</td>
<td>0.89</td>
<td>0.51</td>
<td>0.85</td>
<td>2.19</td>
<td>.030</td>
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<td>SNS</td>
<td>2.33</td>
<td>0.91</td>
<td>1.05</td>
<td>0.97</td>
<td>16.83*</td>
<td>.000</td>
</tr>
<tr>
<td>Video Sites</td>
<td>1.20</td>
<td>1.16</td>
<td>0.57</td>
<td>0.87</td>
<td>7.81*</td>
<td>.000</td>
</tr>
<tr>
<td>Photo Sites</td>
<td>0.80</td>
<td>0.95</td>
<td>0.41</td>
<td>0.80</td>
<td>6.25*</td>
<td>.000</td>
</tr>
<tr>
<td>Music Sites</td>
<td>1.17</td>
<td>1.20</td>
<td>0.35</td>
<td>0.70</td>
<td>11.04*</td>
<td>.000</td>
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<tr>
<td>Bookmarking</td>
<td>0.36</td>
<td>0.69</td>
<td>0.34</td>
<td>0.77</td>
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<tr>
<td>Virtual Env</td>
<td>0.50</td>
<td>0.84</td>
<td>0.25</td>
<td>0.67</td>
<td>4.90*</td>
<td>.000</td>
</tr>
</tbody>
</table>

* p< .01

Overall, students rarely or never posted information on the Internet for school-selected reasons. When combining the values of sometime and often, the three spaces to which most students posted were SNS (33%), wikis (24%), and video sharing sites (20%). As can be seen in Figure 6.2, far more participants posted or uploaded information for self-selected reasons. For example, the majority of participants (85%) said that they sometimes or often post information on SNS for self-selected activities. Though only a minority of students posted to other spaces (42% to music sharing and 38% to video sharing) for self-selected reasons, this was a statistically significant increase compared to uploading information for school-selected reasons.
Figure 6.2. The percentage of students who contributed to information for self- versus school-selected reasons.

Part of the reason that students did not contribute to the Web for either school- or self-selected reasons was because they had not had practice or had not been made aware of this opportunity in schools. Students reported that their teachers rarely encouraged them to contribute information to the Web. Figure 6.3 illustrates that when it comes to contributing information, 28% of students said that their teachers recommended that they edit wikis, 23% said that their teachers suggested they upload videos and 22% said that their teachers recommended writing blogs. Less than 15% said that their teacher recommended any of the other tools.
Figure 6.3. The percentage of teachers who recommended that students contribute information to Web 2.0 sites for their schoolwork as reported by the students.

6.2.2.2 Accessing Information

As presented in Table 6.3, the frequency of students’ usage of Internet to get/see/download information in the listed sites was statistically significantly different for activities related to and not related to schoolwork for wikis, SNS, and content sharing sites. Only wikis, with a large effect size, were used statistically significantly more often for school-selected activities as compared to self-selected ones. SNS, video sharing, and photo sharing were used significantly more often for self-selected practices, with SNS and video sharing having large effect sizes and photo sharing having a medium effect size. There were no statistically significant differences for blogs, social bookmarking, and virtual environments.
Table 6.3

**Paired difference to access information for self- versus school-selected reasons**

<table>
<thead>
<tr>
<th>Access (school versus self)</th>
<th>Paired Differences</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>M</strong></td>
<td><strong>SD</strong></td>
<td><strong>M</strong></td>
<td><strong>SD</strong></td>
<td><strong>t</strong></td>
<td><strong>df</strong></td>
</tr>
<tr>
<td><strong>W</strong>i<strong>k</strong>i<strong>s</strong></td>
<td>1.52</td>
<td>1.07</td>
<td>2.11</td>
<td>0.97</td>
<td>-8.14*</td>
<td>222</td>
</tr>
<tr>
<td><strong>B</strong>logs</td>
<td>0.88</td>
<td>1.03</td>
<td>0.85</td>
<td>0.96</td>
<td>0.46</td>
<td>218</td>
</tr>
<tr>
<td><strong>S</strong>N<strong>S</strong></td>
<td>2.20</td>
<td>1.03</td>
<td>1.07</td>
<td>0.95</td>
<td>14.53*</td>
<td>221</td>
</tr>
<tr>
<td><strong>Video Sites</strong></td>
<td>2.22</td>
<td>0.95</td>
<td>1.13</td>
<td>1.03</td>
<td>12.47*</td>
<td>222</td>
</tr>
<tr>
<td><strong>P</strong>hoto <strong>S</strong>ites**</td>
<td>0.99</td>
<td>1.14</td>
<td>0.69</td>
<td>1.01</td>
<td>4.14*</td>
<td>221</td>
</tr>
<tr>
<td><strong>M</strong>usic <strong>S</strong>ites**</td>
<td>1.95</td>
<td>1.15</td>
<td>0.51</td>
<td>0.91</td>
<td>16.62*</td>
<td>219</td>
</tr>
<tr>
<td><strong>Book</strong>marking**</td>
<td>0.37</td>
<td>0.74</td>
<td>0.42</td>
<td>0.81</td>
<td>-1.15</td>
<td>218</td>
</tr>
<tr>
<td><strong>V</strong>irtual <strong>E</strong>nv<strong>iron</strong></td>
<td>0.43</td>
<td>0.75</td>
<td>0.31</td>
<td>0.72</td>
<td>2.42</td>
<td>218</td>
</tr>
</tbody>
</table>

* p < .01

When combining the values of sometimes and often, wikis were accessed by 51% of participants to access information for self-selected reasons as opposed to 78% of students who used them to retrieve information for schoolwork. The large majority of wiki use was attributed to accessing information from Wikipedia. This information was derived by open ended questions from the survey, focus-group interviews and participant observations. After wikis, video sharing sites were the next most frequented social Web space for accessing information for school with 40% of students sometime or often accessing videos compared to 81% who accessed them for self-selected reasons.

All other applications were used more frequently for self-selected practices. Students reported accessing video sharing sites, SNS, and music sharing sites statistically significantly more frequently for self-selected purposes than school ones. Eighty-one percent of students
frequent video sharing sites, 77% frequent SNS, and 71% frequent music sharing sites to access information for self-selected reasons. Figure 6.4 shows the comparisons between self- and school-selected Internet use to access information.

![Bar chart showing comparison between self-selected and school-selected activities.]

**Figure 6.4. The percentage of students who accessed information for self- versus school-selected activities.**

Figure 6.5 shows that when it came to accessing information, 46% of students said that their teachers recommended that they use wikis, 28% said that their teachers suggested them frequenting video sharing sites and 25% said that their teachers recommended blogs. The other tools were recommended by 20% or less of teachers. Therefore, part of the reason that students did not frequent social Web spaces for school purposes was because assigned schoolwork did not lead to it and because teachers did not suggest it as an option.
Figure 6.5. The percentage of teachers who recommended that students access information from the Internet for their schoolwork as reported by the students.

Despite the fact that teachers rarely recommended the World Wide Web for accessing information for schoolwork, the Internet remained a popular tool with students to help them with their schoolwork. The Internet was the second most used resource to complete schoolwork with 88% of students saying that they used it. Students reported using only teacher handouts more regularly (90%). The majority of students (87%) also said that they used their textbooks for schoolwork whereas only 34% reported using library books (Figure 6.6), despite the fact that library books were the dominant resource available to students in the school library.
Figure 6.6. The percentage of students who used selected resources for completing their schoolwork.

6.2.2.3 Access versus Contribution

Whether for self- or school-selected practices, youth spent far more time accessing information than contributing to it. Figure 6.7 shows a comparison between students’ school and self-selected practices to access and contribute to information.
As seen in Table 6.4, when it came to school-selected practices, students used wikis, blogs, video sharing, photo sharing, and music sharing sites statistically significantly more often to access information than to contribute to it, with wikis, blogs, and video sharing sites having a large effect size and photo and music sharing sites having a medium effect size.

**Figure 6.7.** A comparison between students’ school- and self-selected practices to access and contribute to information.
Table 6.4

Paired differences for school-selected reasons to access versus contribute to information

<table>
<thead>
<tr>
<th>School (Contribution versus Access)</th>
<th>Contribution</th>
<th>Access</th>
<th>t</th>
<th>df</th>
<th>p</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wiki</td>
<td>0.72 1.05</td>
<td>2.11 0.97</td>
<td>-15.60*</td>
<td>222</td>
<td>.000</td>
<td>-2.09</td>
</tr>
<tr>
<td>Blogs</td>
<td>0.51 0.85</td>
<td>0.85 0.96</td>
<td>-5.96*</td>
<td>220</td>
<td>.000</td>
<td>-0.80</td>
</tr>
<tr>
<td>SNS</td>
<td>1.03 0.97</td>
<td>1.07 0.95</td>
<td>-0.62</td>
<td>221</td>
<td>.536</td>
<td>-0.08</td>
</tr>
<tr>
<td>Video Sites</td>
<td>0.57 0.87</td>
<td>1.13 1.03</td>
<td>-8.98*</td>
<td>222</td>
<td>.000</td>
<td>-1.21</td>
</tr>
<tr>
<td>Photo Sites</td>
<td>0.41 0.80</td>
<td>0.69 1.00</td>
<td>-4.78*</td>
<td>222</td>
<td>.000</td>
<td>-0.64</td>
</tr>
<tr>
<td>Music Sites</td>
<td>0.35 0.71</td>
<td>0.51 0.91</td>
<td>-3.74*</td>
<td>221</td>
<td>.000</td>
<td>-0.50</td>
</tr>
<tr>
<td>Bookmarking</td>
<td>0.34 0.77</td>
<td>0.41 0.81</td>
<td>-1.98</td>
<td>220</td>
<td>.049</td>
<td>-0.27</td>
</tr>
<tr>
<td>Virtual Env</td>
<td>0.25 0.67</td>
<td>0.30 0.72</td>
<td>-1.67</td>
<td>219</td>
<td>.096</td>
<td>-0.23</td>
</tr>
</tbody>
</table>

* p< .01

Youth equally contributed and accessed information for both self- and school-selected SNS, social bookmarking, and virtual environments. However, only SNS held practical significance because the large majority of students used it for self-selected reasons as opposed to social bookmarking and Virtual environments where 85% of students *never or rarely* used them for either self- or school-selected purposes.

As demonstrated in Figure 6.5 earlier, one of the reasons attributed to low Internet contributions was traced to low opportunities provided for such practices in schools. Few students said that their teachers suggested for them to upload their work to the Internet with the largest percentage being 28% of students saying that their teachers recommended them posting to wikis.
At school, there were few opportunities to upload or post work on the Internet as this was rarely an option for projects. Only 23% of students reported either *sometimes or often* posting work to online spaces like wikis, blogs, traditional websites, or video sites. Figure 6.8 shows that other forms of final project preparation were far more prevalent. Eighty-three percent reported completing paper assignments such as essays, paragraphs, and answers to questions, 68% reported completing slideshow presentations using presentation software such as PowerPoint, 66% reported creating posters or collages, and 62% reported performing some sort of oral presentation like a speech or play.

*Figure 6.8. The percentage of teachers who expected students to use different outlets when presenting their schoolwork, as reported by students.*
These findings confirmed students’ low use of the Internet to contribute to information and linked this low use to the lack of opportunity presented to them by their teachers.

6.2.2.4 Internet Tools for Communication

Beyond information practices, this study was also concerned about students’ online communication practices. As can be seen in Table 6.5, students favoured email and instant messaging equally for their personal communication whereas email was the preferred method for school-selected practices.

Table 6.5

Internet tools used for communication

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Email</th>
<th></th>
<th>Instant Messenger</th>
<th></th>
<th>VoIP</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Self</td>
<td>School</td>
<td>Self</td>
<td>School</td>
<td>Self</td>
<td>School</td>
</tr>
<tr>
<td>Never</td>
<td>3 %</td>
<td>9 %</td>
<td>10 %</td>
<td>27 %</td>
<td>41 %</td>
<td>68 %</td>
</tr>
<tr>
<td>Rarely</td>
<td>18 %</td>
<td>18 %</td>
<td>14 %</td>
<td>24 %</td>
<td>19 %</td>
<td>18 %</td>
</tr>
<tr>
<td>Sometimes</td>
<td>35 %</td>
<td>29 %</td>
<td>22 %</td>
<td>24 %</td>
<td>21 %</td>
<td>7 %</td>
</tr>
<tr>
<td>Often</td>
<td>44 %</td>
<td>44 %</td>
<td>54 %</td>
<td>25 %</td>
<td>19 %</td>
<td>7 %</td>
</tr>
</tbody>
</table>

In Figure 6.9, I combined the frequencies of sometimes and often to more clearly view the number of students using each of the tools and to be able to see the discrepancy between school and self-selected practices.
Paired t-test analysis (p-values<.01) showed that statistically significantly more students use Instant Messaging, \( t(215)=9.94, \) p-value<.01, \( d=1.36 \) and VoIP \( t(211)=9.80, \) p-value<.01, \( d=1.35 \) for self-selected practices over school-selected ones. Both of these statistical differences had large effect sizes. There was no statistical difference found between self- and school-selected emailing, \( t(216)=1.69, \) p-value=.093, \( d=0.23 \).

*Figure 6.9. The percentage of students who use online communication tools for their self- and school-selected practices.*
6.3 Focus Group Responses

To receive more detailed responses about their Internet practices, I invited students to participate in a focus group interview conducted on a blog. I posted six questions onto the blog and asked students to respond to the questions and comment on one another’s responses. I asked questions such as how students use the Internet to learn and what recommendations they have for their teachers about ways to use the Internet to help them learn. To learn what points interested students, I further encouraged them to post their own questions as well. The interview protocol is available in Appendix B.

The blog was open for two weeks and students could comment at any point during those two weeks. During the analysis process, I quantified student responses by sorting similar responses together to identify which were the most prevalent themes. In presenting the findings of the focus group interview, I use the pseudonyms that students chose for themselves when posting on the blog.

6.3.1 Technology Prevalence in Students’ Lives

A total of 51 out of the possible 164 grade 10 students (31%) took part in the focus group interview. Of the 51 students, 43 (84%) mentioned using some sort of device to access the Internet as one of their top uses of technology. The other two main technologies used by students were cellular phones with 53% and ipods with 43% mentioning the importance of its use.

Only 18% of students brought up TV as a technology they frequently use, and even then its use did not seem purposeful. They watched it when there was nothing else to do. It was a
form of entertainment that helped prevent boredom: “The TV is just something to do when I’m bored” (T). The time spent on the Internet, however, was purposeful even when it was for entertainment purposes. Students would actively seek out a particular game, song, show, or information. In general, there was indication that TV viewing is moving to the Internet. Students said, “If I really like a TV show, I'll watch it online” (Rufina) and “I use the Internet on a daily basis, mainly for downloading files (such as movies and music) via uTorrent” (Sean).

The ways in which respondents used the Internet included retrieving information, posting information, and communicating with friends and family for both school- and self-selected practices. This percentage of use, however, shifted considerably depending on the purpose. Self-selected Internet use was dominated by time spent communicating with peers whereas school use was dominated by searching for information.

In general, computer use was valued for speed and efficiency. Misa said, “Using computers we could collect valuable information. It's a simple way of getting things done in a short amount of time.” Stanky Left-Hand Forty Sippa said, “I regularly use my laptop, iPod and cell phone. I feel that these technologies are very important because they get information across quickly and easily.” THE Himme said, “I also use this magical box called ‘Computer’ to do homework that would take me ages to write out by hand.”
6.3.2 The Internet as a Learning Tool

The Internet was favoured over using books and other forms of offline text for learning and doing schoolwork. One student said, “I usually use the Internet for all of the information that I use in projects or essays. I rarely use books (excluding textbooks) or newspapers.” Some of the reasons given for favouring Internet use were that students did not feel capable of finding the needed information on their own without the assistance of a search engine, the fact that it required less effort than searching for information offline, and their comfort with the technology. A few students went as far as saying that they used the Internet every time they did schoolwork. Another student explained that she used the Internet over offline resources “because it gets [her] information faster, and from places [she] wouldn’t ever think to look.” Jess said, “The Internet has unlimited different resources to help everyone with educational reasons, sparknotes for instance summarizes main important points of novels, and Google and other search engines define terms and lead to other possible helpful sites which can provide me with different ideas in things such as essay writing and test preparation.” Ted said, “Question and solution problems like: ‘what to do when this happens?’ are all over the Internet and can aid you in finding a wide array of solutions while looking for an idea or different options on how to do (or in some cases–not do) something.”

Only two students made mention of the Internet not being their preferred information source. Xhimme disagreed with the idea that the Internet was an unlimited resource and gave weight to the importance of books. He said, “the Internet Is NOT an unlimited source, if it was books would become obsolete...The Internet is helpful, but there are some really specific things
in life, whether it’s for homework or just for fun that you can’t find on the Internet, and that’s when you gotta use books too.” Similarly, J. Thomas esteemed books: “I use the Internet only if I really need to. I use the Internet mostly when I’m working on a project and I like getting some of my information from books. The Internet has a lot of information and not all of it is correct.”

Those who highly favoured the Internet were able to see the drawbacks of it as well. The main drawback brought forth was the ease in which students could get distracted once on the Internet, pulling them away from their initial purpose of schoolwork. Hezaddison said, “I often get distracted when it comes to Internet and my schoolwork but I try to use it mostly for schoolwork. Facebook is a big distraction, I must say.” Ted said, “In the instance of recreational reasons it stands to quite possibly be the easiest place for me to get distracted, due to all the different things you can do (especially how many different things are connected in Webs—one thing leads to the next).” Geelda said, “At times these small things can make it difficult to concentrate on what you’re trying to work on that is school related since they are from the same source. What needs to be worked on is to learn to not get distracted by certain things that AREN’T homework related until the job is finished before moving on the games or other things.”

The main way that students indicated that they use the Internet for learning was to look up information that they did not know. They did this mostly using search engines (especially Google) and by going directly to sites they knew (especially Wikipedia). Seventy-five percent of students said that they used Wikipedia as a source to help them learn by looking up information that they are not familiar with or to include in school projects.
The reason search engines and Wikipedia were so highly favoured included their ease of use, their quickness in locating the necessary information, and the adequacy of information received. Jellytot said, “I use Wikipedia for mostly everything I have to research because it gives me the information I want without much struggle to find it, and it usually is specific enough to find the information I need.” Rufina said, “It’s also very efficient because it’s quicker than flipping through your textbook.” Barnes said “I like google or yahoo to get to other links because it’s a lot faster and i have a lot more information than just looking through books.” Lauren said, “I usually use websites like google or yahoo to get my information. Though a textbook is usually more correct, the Internet is just faster and easier.” Misa said, “The Internet has a lot of information and it is very easy and fast to find what you need.”

Other sites students used to find information included YouTube to see “How To” videos, and online dictionaries and encyclopaedias as references. One student said, “I always go to youtube to see some videos that about physic question,” while another said, “I use youtube for its great and easy how to videos.” Only three students mentioned going to question and answer sites like answers.com and only two people mentioned going to the school website to check missed homework. Anonymous said, “I agree with maggie. I use the schools website and check for some missed homework (some of the teachers don’t post them though!!).”

The Internet was also used by English as a Second Language students for assisting in translation by using translation sites, communicating with individuals that would be able to assist students with concepts they did not understand, and using websites that have practice
tests to assist in preparation for examinations. VWP said, “I use the Internet to communicate with other people that may be more knowledgeable on a topic than I am.”

6.3.3 Self-versus School-Selected Internet Practices

There was very little overlap between how students used the Internet for school- and self-selected reasons. Students used the Internet for school reasons to complete assignments and learn school subjects. The main reason for school Internet use was to find information needed for an assignment. Internet school use was dominated by time spent Google searching information and pulling information from the result pages of Google and by going to Wikipedia to find information. Therefore Web 1.0 ways dominated for school use with students merely seeking out information to then incorporate in their work. No one mentioned posting or altering work onto the Internet during this focus group question.

On the other hand, students’ self-selected Internet practices were far more participatory and social. They were using the Internet for recreational purposes mostly to socialize on Facebook, watch clips on YouTube, communicate through various applications, and game. For example, Mina said, “Facebook . Facebook . Facebook!!! It has games, it has pictures, it has applications. I can FB chat with my friends. I can even use it as mail when I inbox confidential letters to friends. I can view status updates. It’s perfect.” Even the more passive acts like watching YouTube videos involved rating and reviewing clips and “favouriting” them or adding them to lists: “I watch and rate videos on youtube and leave comments when I like something I see.”
Another main difference between self- and school-selected practices given was the enjoyment level. Students found the schoolwork to be dull and passive as opposed to the fun that recreation brings. For example, Ian Grimes said “At home I play games and do other fun stuff. At school it’s all work and no play.”

Other than the fact that recreation in its very nature is equated with pleasure as opposed to learning which is equated with work, the students found the fact that the topics are assigned at school as opposed to individually chosen lessened their level of enjoyment of school-selected practices over self-selected ones. For example, Mike said, “School is usually all factual. Recreation is communicating and experiencing. I do occasionally look things up/research but they’re much more interesting than the stuff we learn in school.”

This led to another main difference: at school students took part in the common goal of learning the same topics as opposed to outside of school where each person pursued his/her own interest. Because the school topics are initiated by the teachers, students frequently ended up on the same sites with little opportunity to explore. This differed from self-selected practices where Internet use was quite exploratory. Jorgé Sanchez II said “I tend to use the Internet for recreation mainly by going to whatever sites have that interest or entertains me at the time. However, with school you’re usually supposed to go to a given site and are given a more linear approach by the teacher, which I tend to follow. Basically, with school I go to certain sites while with recreation I end up just about anywhere.”

Pédro Gonzalez agreed with this view and said, “As far as recreation goes on the Internet I would go to whichever website interests me at the time. Compared to school work
where one is told where to go for websites.” Misa took this point a step further by mentioning certain restrictions placed on students in schools: “Well, at school we are not supposed to use some certain websites due to whatever reasons. At home, we have our own needs and search for different variety of info's. At school it's strictly about schoolwork and our certain websites we need to visit.”

Though some teachers directed their students to particular websites to access needed information, some students still felt unfamiliar with the more educational Internet environments. They were unclear as to what sites to frequent for needed information, they relied on very few “go to” sites, and once on a site, they were not sure if it met their purpose. This differed from their personal Internet use that led them daily to sites they trusted and enjoyed. For example, E.D. said, “When I do school work, I often go to websites that are unfamiliar to me and they're like random websites. But when I go on websites that are not school related, I can do sort of stuff like Facebook chatting, tagging people, etc...”

6.3.4 Recommendations for Teachers

The focus group students had five suggestions for their teachers about ways that they could use the Internet to help students learn in school. First, students asked that teachers provide them with reliable suggestions for websites to frequent for information so they are not aimlessly searching. For example, T said, “when given a project it would be helpful to get a list of websites that have valid information that is quick and easy to use.” Several other students agreed with this view because it would assist them in rapidly accessing reliable information. DW
said, “If teachers gave us a list of useful websites to use for research this would be helpful, as some sites are not always accurate.”

Some students felt that the practice of providing a list of useful websites would be helpful even if they chose not to use those websites. Having suggested websites would at least give them a starting place, a point of comparison for other sites they chose to visit, and a sense of the type of website that they should be frequenting for the intended project. ka.lee said, “I would like teachers to give us a list of valid and reliable websites/Internet sources to find our information when working on a project. We may not use those websites, but it would be really nice to have some sense of what direction we’re going.”

The second suggestion offered to teachers was providing assistance in learning how to find more useful information. For example, Callum said, “I recommend that teachers teach their students how to find proper information on the Internet.” This included teaching tricks to find required information quickly, strategies for pulling the required information from the overabundant content, and having a general sense of places to begin a search. Linked to this suggestion was the recommendation that teachers themselves learn adequate searching techniques so that they could pass it on to students. For example, NG said, “they can’t really help us, if they don’t know how to do it themselves.”

Similarly, the third suggestion was linked to teachers themselves learning adequate uses of the Internet. Students recommended for teachers to choose and use websites more wisely for teaching. Pédro Gonzalez said, “A recommendation I would give would be for the teachers to use the Internet to pull experiments or lessons off of.” Other students recommended that
teachers post homework, exam reminders, lessons, resources, and project ideas on class websites. Several students recommended the use of YouTube. J. Thomas said, “It would be good if more teachers used youtube.com because it is also a visual aid and an effective way of communicating. Several other students including Xhimme agreed: “Teachers can find video clips that are relevant to the subject they are teaching.” Daytripper also agreed with this view but cautioned against using random videos that lacked the necessary content and engagement level. He cautioned, “Stop using unreliable videos found on YouTube and get better Internet videos if you really want to show us videos and animation.”

The above recommendations all led to the fourth suggestion which was a request to teachers to remember that students are knowledgeable as well, especially where the Internet is concerned. Students were sometimes capable of doing more online than teachers or know of different resources or applications. Jorgé Sanchez II complained, “They don’t have to tell us how to do everything, in fact we know how to do some things better than them.” Jellytot said, “To sum it up in a couple words. Get with it. We don’t need some 50 year old [teacher] who just learned how to use the computer herself to come and tell the most basic things we already know.” Rufina said, “Please don’t repeat everything over and over and over again every time we enter a computer lab/library.”

The fifth suggestion for assisting learning with Internet use was simply to allow for more time to use the Internet and to assign more projects that are conducive to its use. It was suggested that this would assist with learning, Internet and computer proficiency, and engagement. Alice said, “We should use computers and Internet more often in class, for stuff
like research, cause in class we often just sit in desks for an entire 75 minutes either listening to
the teacher's lectures or doing work.” Osama Mohammed said, “They should let us do a lot
more projects via the Internet to increase our proficiency in these areas.” The Crow said,
“Issuing a project using the computer can be funner, more challenging and lets the students get
used to using a computer a bit more for when they are older.”

Though the majority of students indicated their preference for using the Internet over
books for completing school project, not all students shared this view. A few preferred what
they referred to as “the old fashioned way.” Lauren said, “Teachers should suggest using the
textbook for information first, rather than using the Internet for the whole assignment.” Megan
Fox Lover #1 said, “I think that we should stick to the good old fashion ways.....thank you.”

The rationale the students gave for preferring traditional strategies such as using pen,
paper, and books over the Internet was that it is easy to get distracted on the Web, it is difficult
to know where to go to find the precise information needed, it is the learning style that better
fits some students, and that it is less complicated and onerous to complete work using books.
Misa said “I actually prefer using books and studying by the traditional ways because it's kind of
troubling to go to a website to do your homework. I like when we bring books and paper and
write things down and not do anything more.” Caitlin said, “I personally don't mind working in a
classroom as opposed to a computer (I know many people would disagree) because I find that I
don't get as much work done on the computer because of all the distractions.”

It was of particular interest that some of these same students who preferred to use
traditional study strategies over digital technologies were keen users of the Internet for self-
selected practices. They browsed Internet sites for entertainment, socialized using communication applications like instant messaging and took part in social networks like Facebook. The main reasons given for not enjoying its use for school were that it’s simply easier and quicker to complete work without the Internet if the resource is given to the students. For example, if a worksheet can be completed by reading section 3 of chapter 5, it is far more straightforward than browsing the Internet to try to find sites that may have the answers to specific questions. It was easier and more efficient when all the questions came from one source and students were able to answer them using that same source. When students were not competent at searching for, or critically evaluating information, they found it difficult to do so and preferred a more straightforward textbook approach.

6.3.5 Using Social Media to Contribute to the Web

Though few students mentioned ways in which they contribute to the knowledge on the Internet, throughout the focus group interview, when the question was explicitly asked, many contributions were brought forth.

Students mentioned a variety of contributions including commenting, editing, reviewing, tagging, and acknowledging while on the Web. Mike mentioned rating news articles through the application digg, editing wikis, and contributing to forums: “I digg things I like which means other people are more likely to see them. Sometimes I edit wiki’s. I comment on forums and articles.” This type of contribution was more prevalent and preferred to contributing original work because of comfort level and confidence in the level of work produced. Caitlin said, “I comment on things once in a while, but I don't usually add information.” Commenting on
other’s content was a particularly popular practice. Daytripper said, “I tend to leave a crap load of comments on other’s posted material.”

Though the main site that students visited for accessing information for school projects was Wikipedia, most did not contribute to it in anyway. In fact, they found the process to be onerous and a waste of their time. Jasmine said, “I don’t change websites that are wrong, don’t have time and it is not interesting to me at all its boring and no point to it.” Abdullahi al Mutuber said, “I don’t really change false things on the Internet. I just think it’s a waste of time.” The Crow said, “I do small stuff like [posting on facebook] though nothing like editing a Wikipedia page.”

Only three students mentioned making edits to Wikipedia articles when they find errors or see a lack of information. Maggie said, “On Wikipedia, so if there's spelling errors, I'll fix it.” These same students along with two more took the practice further by contributing information to other websites as well. UALPilot said, “I always find ways to contribute to the World Wide Web. If I can add information to websites from my background knowledge, create sites to post my information or advise others of my information. The Internet is a great tool! There are many ways to spread the information, and by simple clicking a button, millions can be informed in a matter of minutes, if not seconds.”

Some students did take risks in posting their original work and they did so with the anticipation that others would respond to it. Mina M said, “I put up a lot of my photography work on different websites. It brings smiles to people who have interest in the same field. It’s another way of having people to criticize my work as well.” The notion of having an audience
beyond the teacher was welcomed. Anonymous enjoyed the notoriety he was receiving by making contributions to an Internet game: “I post on a game called free rider 2 and I’m pretty worldwide famous (Spongolese) I love it and I can post comments on other peoples track.” Simon, too, decided to take risks with his creative work by uploading videos “onto a video-sharing website once in a while.” J. Thomas writes articles online on helium.com in the hopes of making some money or having his work recognized. Osama Mohammed Al Allah creates websites to promote his views and inform others about his beliefs. He said, “I like to create website depicting my religion and giving information to visitors.”

This creative posting of work was only done by a small minority of students. The majority contributed by uploading information onto their personal profile pages on Facebook and by commenting on the information that other people had posted about themselves. T said, “I don’t add videos to YouTube or add to the Wikipedia website however I use it for personal use like on Facebook. Adding photos and updating status information.” DW said, “I don’t really post any information or upload any information onto the Internet. However, I may add things for personal use like Facebook.” Callum said, “The only thing I really contribute too on the Internet is Facebook, and I’m not sure that even counts. Sometimes I make comments on things I read on the Internet but that's it.”

Even with students who did contribute to the Internet, it still remained a small percentage of their Internet use which was mostly dominated by seeking information or reading what others had posted and most of these practices were for self-selected purposes. Jorgé Sanchez II said, “I post on certain sites involved with things that interest me like modding
games but I mainly am a lurker. That's pretty much the only contribution I make other than rarely asking a question on wikianswers.”

6.3.6 Questions Posed by Student Participants

In staying in line with the view that the participant may know most about the topic being studied, I ended the focus group interview by asking if there were other questions that I neglected to ask that they felt would benefit the study. The following questions were offered: “What sites do you spend the most time on/ how much time on what site,” “Why do you think people use the Internet for personal reasons more than school related sites,” “Do you think you spend more time on the Internet for personal use, or for school work,” “How do you think your life or your school life would be if the Internet didn’t exist,” “Do you think there are any problems with using the Internet as a learning source?” “How helpful do you think the Internet is on a scale of 1-10?” “What do you think the main purpose of Internet being created is for? How does this differ from the main reasons you are using it,” “In your opinion, how would things be different without the Internet,” “How do you think your life or your school life would be if the Internet didn’t exist,” “Do you learn from people over the Internet? (If so how much/how often/how important to you?)” “Other than using the Internet to learn through researching a specific topic and just searching facts to learn, do you learn from the Internet in a different way?”

I posted the last three questions on the blog to elicit student response. The following are the reasons for posting only three questions. First, I aimed to stay in line with the time commitment indicated on the consent forms and granted by the ethics board. Second, the
response rate was dropping off and was not nearly as high as with the original questions posed. And third, I wanted to avoid repetition with other questions.

Participants responded to the question “How do you think your life or your school life would be if the Internet didn’t exist,” by saying that they thought that lives both in and out of school would be much more difficult. Krystal said, “My school life without the Internet would be a lot harder. Instead of just going on Wikipedia or other resources, I would have to look through the library for one specific resource.” The Crow said, “School work would become harder because I wouldn’t have the ability to use Internet databases like Wikipedia or use Google, I would need to use a physical Encyclopedia from a library.” UALPilot said, “My life would be different because useful information cannot be found easily to include in projects, degrading the quality of work, and making it much more time consuming.” Alice’s comment encompassed others’ points of view. In commenting on life without the Internet both in and out of school, she said, “Both lives would be horrible. There would be no Internet research, or social networking. And I think life would be harder without those two.”

Only ten students responded to the question about learning from other people over the Internet—“Do you learn from people over the Internet (If so how much/how often/how important to you?).” All of the students mentioned communicating in some form over the Internet to ask questions about homework. They did this using email, instant messaging, and Facebook. One student said, “I use MSN when I’m doing homework, so when I’m stuck, I can ask my friends.” Another student said, “I email my tutor if I need help.”
Only five students responded to the question about learning in ways other than researching on the Internet: “Other than using the Internet to learn through researching a specific topic and just searching facts to learn, do you learn from the Internet in a different way?” Four of the five students mentioned that the Internet has given them a space for their artistic endeavours. They mentioned composing and posting music, writing and posting poetry or fiction, and manipulating and posting photography. One student said, “I can learn to be an artist by submitting my work online. Having the work critiqued helps you learn about yourself.”

6.4. Summary of Findings

Two hundred and twenty-four students in grades 8 and 10 completed the survey while 51 grade 10 students took part in the focus group interview. All students had at least one computer within their home. The quantitative analysis employed descriptive frequencies and paired sample t-tests to determine the following: whether the Internet was used more for school-related activities or for non-school related activities; whether the Internet was used more for accessing information or contributing to it; and which Internet communication tools were most used. The qualitative analysis extracted a more detailed understanding of the students’ Internet practices.

The study found that students contributed to information on SNS, content sharing sites, and virtual environments more frequently for self-selected practices than for school-selected ones. Only wikis were used more often for school-selected activities as compared to self-selected ones. No differences were found between blogs and social bookmarks.
The study further found that students access information from SNS and content sharing sites statistically significantly more frequently for self-selected practices rather than school-selected practices. Blogs, social bookmarking, and virtual environments were used equally but rarely to access information. Only wikis were used statistically significantly more often for school-selected activities than self-selected ones.

The focus group interview allowed for a more in depth view of students’ Internet practices. The central way that students used the Internet for schoolwork was to search for information. They did this in two main ways. They either conducted a simple Google search or they went to a website with which they are familiar (usually Wikipedia) to look for the information. These methods were favoured because of their ease of use, their quickness in locating the necessary information, and students’ assessment that the information received was adequate.

Other popular Internet tools for learning purposes included YouTube to view “How To” videos and reference sites like dictionary or encyclopaedia sites. The school and library websites were only brought up by two students.

The participants offered teachers five recommendations to help students learn using the Internet: provide students with reliable sites, provide searching strategies that would make navigation easier, become more competent on the Internet, remember that students are knowledgeable on the Internet, and allow more class time on the Internet and assign more Internet based projects.
Despite their enthusiasm towards Internet use, youth capably identified some of its drawbacks. The main drawback that concerned them was that the Internet can be a distracting place that pulls focus away from a selected task.

This chapter presented the findings for the case study school as derived from the students of the school. The responses of the survey administered to the grade 8 and 10 students were used in the quantitative analysis while a focus group interview conducted on a blog was used to cultivate more detailed description for the qualitative analysis findings.

In the next chapter, I will make inferences and draw conclusions holistically based on both the qualitative and quantitative analysis. I will answer the research questions, consider the implications of the study, suggest a shift in school culture, extend new literacies theory, consider further tensions, reflect on the study’s limitations, and look forward to potential future research.
7.0 Discussion

7.1 Contributions to Literacy and Learning

Expanding literacies for learning include skills for creating and publishing content (Ito et al., 2008; Luckin et al., 2009; Samuelsson, 2010). The ways in which schools respond to these literacy needs can enforce traditional mindsets about learning and knowledge, or can extend into mindset 2 (Lankshear & Knobel, 2007) ways of thinking. This study set out to see if a district and a school, that had expanded their definition of literacy, were incorporating these new literacies in mindset 2 ways.

This chapter will answer the research questions, draw conclusions from the findings, discuss the implications of the study, suggest a shift in school culture, extend the developing theory of new literacies, highlight further tensions, consider the limitations of the study, and suggest potential future research. Throughout the chapter, I make inferences holistically by pulling from all data sources including both the qualitative and quantitative analysis.

7.2 Addressing the Research Questions

Though the research questions are interrelated and work with one another to add to the understanding of each question, I have started by separating them into four sections to provide an overview of the summary of findings. I end by combining the findings of the research questions by highlighting the most important conclusions drawn.
7.2.1 Research Question 1a

How are the administrators of a district and the teachers at a school (who have set as their goal to incorporate digital literacies within the curriculum) using and encouraging the use of the social Web to support learning in different disciplinary areas? To assist in answering this question, I interviewed the following district participants: the superintendent, the assistant superintendent, the Principal of Innovation and Technology, and the three secondary school administrators. These district administrators had all adopted the district’s digital literacy goals in some way and were attempting to support their teachers and students reach these goals.

Though all the administrators were keen to implement and support new digital tools within their school, all but the superintendent only intermittently used these tools for their personal or professional use. The three most popular tools used were blogs, wikis, and instant messaging.

Much excitement revolved around the initiation of the district’s new portal system. The launch of the portal came about partly because it was implausible for the district to support the limitless amount of available tools and the growing number of new daily tools. The portal encouraged the use of a set of consistent tools and made supporting staff and students with use of these tools much easier. The district tried to support digital literacy use in other ways as well. They provided funds for needed equipment, resources, and learning; they promoted and provided professional development; and they provided release time to allow for collaborative learning.
The district faced several challenges in providing the needed support for their staff. Specifically, they lacked the needed money, resources, time and personnel despite their high SES. Another important challenge was coming up with ways to encourage the staff to use the new tools that the district had adopted. The majority of the district staff was willing to implement the new proposed tools, yet wanted to receive instruction on them before implementation. The district staff on the other hand encouraged staff to take a more proactive role in learning the new tools through trial and error.

All the district participants highly valued the Internet for learning purposes and identified several of its advantages like making learning immediate, allowing instant access to information, and promoting student ownership of work. They did not see pedagogical value in all tools and promoted different tools for different purposes.

The participants brought forth limitations and challenges of Internet tools as well, many that stemmed from the reasons they valued it. For example, they feared that the vast amount of available information can be overwhelming and that information may not be adequately synthesized and only viewed at a surface level. They also brought forth the challenges of access, staying focused on one task, and being aware of one’s digital tattoo.

To get a more detailed understanding of the case study, I administered a survey on Internet practices, delimited mostly to social Web uses, to 54 teachers at the focal school. Despite strong advocacy from both the district and school administrators, most teachers had not adopted social Web tools for either their personal use or professional practice. When they did use these tools, it was mostly to access information and rarely to contribute to it.
Even though the majority of teachers did not use the Internet in Web 2.0 ways for either their personal use or their professional practice, three teachers from the focal school were identified as incorporating these tools more regularly. I conducted participant observation in these teachers’ classes and interviewed each teacher in turn. The teacher-librarian worked closely with a science teacher to teach critical literacy skills and to complete a unit on body systems using a wiki, while the technology administrator assisted his students in creating podcasts on a four-stroke motor unit. All three teachers used the Web in other social ways to promote learning as well.

The teachers valued the Internet for the following reasons: it provided a plethora of information that was ready to access, it was a multimodal medium, and it had great potential for learning. They identified limitations and challenges of the Internet as well. These involved accessing misinformation and malinformation, rise of new classroom management issues, rise of intentional and unintentional plagiarism, being faced with technical and logistical issues, and having to navigate unchartered territory. Nevertheless, they chose to pursue social Web use because they believed in its innate potential for learning and because they wanted to stay current in their practices. For these teachers, at times the Internet had become seamlessly incorporated into their practices without them even really noticing it. All teachers forgot to mention many of their uses until asked specifically about a particular application.

7.2.2 Research Question 1b

What tensions may arise as a result of the imposition of these uses on the traditional structures of schooling? I identified four major tensions that arose as a result of the imposition
of using social Web tools on the traditional structures of schooling. First, the educators struggled between wanting their students to be critical learners yet at the same time wanting to enclose them in a safety net where they would not need critical literacy skills. Second, they struggled with balancing the potential of the Web to provide boundless information with the need to harness that information so that it would not be distracting or overwhelming. Third, tensions arose between balancing existing literacy practices with new ones. Forth, teachers struggled with the planning and assessment process when incorporating new literacies within the curriculum.

First, the district research participants showed enthusiasm about the district portal system because it held several advantages, a main one being that the boundaries of its safety net protected students from predators and other dangers. The district staff was keen to protect their students, but at the same time wanted to be on the cutting edge of technology. Confusion arose between creating safe spaces and competently being able to access the world and having a visible presence. To assuage this tension somewhat, the district made the decision to move away from banning, but to provide closed spaces that allowed teachers and students to still use some components of the Web in a safer more discrete manner.

The next major tension was the need to balance the bounty of information available on the Web with the distraction that it had caused. All participants including students themselves commented on the power of the Internet to woo them away from a focused task. Even when capable of staying on task, the overwhelming amount of information available on the Web made it difficult to narrow searches.
Third, tensions arose between traditional literacies, where print-based text was valued as the primary and most important way to express oneself, and new literacies, where multimodal expression had the ability to incorporate text along with an array of other media. Some of the educators and student participants who were strong advocates of traditional literacies feared its value lessening over time as more and more focus is put on different modes and new literacies emerge, or existing literacies are identified as new literacies. To diffuse this tension, educators will need to approach literacies in a way not to value one form over another, dispel any literacy, or deem it valueless when it stands alone. Rather, it may serve us better to include different modes, genres, and practices to the array of what we already have identified and valued.

With the growth of new literacies in everyday life and within the district and school, other new tensions and challenges emerged. All teachers faced such struggles. For example, Brooke and Carl had difficulties in developing assessment strategies around their wiki body systems assignment and Ethan had difficulties in deciding which components of the podcast to grade. The teachers had not set out a detailed plan nor created rubrics for evaluation. Therefore, in Brooke and Carl’s case, the project that consisted of a large portion of their first semester did not “count” as part of the students’ final grade and they found themselves lacking enough data to give students a representative grade at the end of the semester.

This was one instance that highlighted the continued tensions between incorporating new literacies and sticking to traditional ones in classroom settings. Teachers had to balance their existing practices with their new ones and make decisions as to whether or not these new
practices held adequate advantages to continue using over former teaching strategies that held their own incentives. Because there were very few opportunities for these teachers to learn more about such practices or network with fellow teachers, it is possible that they may abandon these practices.

However, because they were at a school where the administration was in support of new literacies, it was likely that they would find the funds and time needed to expand their learning to develop their new practices if they sought the assistance. The deciding factor for the direction they choose to go might quite possibly be how they perceive these tensions and if they value the new literacy enough to develop it instead of abandoning it for a former traditional practice that better suits the traditional structure of schooling in which they currently teach.

7.2.3 Research Question 2

How are students using the social Web to assist their school content learning? To answer the following research question, I administered a survey to 224 students in grades 8 and 10 and followed up with conducting a focus group interview with 51 students in grade 10.

The study found that little overlap existed between students’ self- and school-selected Internet practices. Web 1.0 dominated students’ school-selected practices as they mostly went onto the Internet to find needed information. Students’ self-selected Internet practices were far more participatory, social, distributed, and multimodal. Self-selected practices were also more exploratory as opposed to school-selected ones where students tended to frequent the same sorts of spaces regularly.
Students reported that teachers rarely gave opportunities to either present work through online means or suggested accessing online information. Nevertheless, when it came to accessing information, students used the Internet as frequently as their textbooks. Whether for self- or school-selected reasons, more students accessed information than contributed to it for the majority of the tools. The main exception was for SNS where students contributed information as frequently as they accessed it for both self- and school-selected reasons.

Lastly, the study explored students’ online communication practices and found that students used email and instant messaging equally for self-selected practice, but preferred email to other online communication modes for school-selected practice.

The students in Grade 10 that partook in the focus group interview indicated that they used the Internet more than any other technology including their cellular phones, music devices, and television. Part of the reason for this was that the Internet could be used to achieve all the tasks of the other devices. For example, participants watched TV and movies, downloaded and listened to music, and communicated on their computers.

For their self-selected use, participants mostly used the Internet to communicate with their peers, whereas the time spent on school-selected practices was dominated mostly by searching for information. The Internet was favoured over using books and other forms of offline text for learning and doing schoolwork. Computer use was highly valued by the youth because of its speed and efficiency.
Some students preferred to stick to offline practices for the following reasons: it is easy to get distracted on the Web, it is difficult to find the precise information, it is not conducive to some learning styles, and assignments can be more quickly and easily completed using books. Many of these same students who preferred using books to the Internet to complete schoolwork actively used the Internet for their self-selected use. They simply found the process of finding necessary information to answer specific questions easier and more efficient through books.

Though accessing information was much more prevalent for both self- and school-selected practices, participants were also contributing information to the Internet. Their contributions came in small ways such as rating, commenting, and editing already existing content. A few students took the step of making larger contributions and did so in the hopes that others would view and comment on their work. The one space to which many students made larger contributions was Facebook. In general, most of the contributions regardless of size were made for self-selected reasons.

7.2.4 Research Question 3

To what degree is this school district’s goal of mandating digital literacy within the curriculum being adopted by its students? The schools had adequate resources but inadequate structure or equipment to meet their digital literacy objectives. A key goal at the district and school levels was to create a robust wireless structure that would eventually lead to students bringing in their own laptops and mobile devices instead of continuing to purchase equipment.
However, students rarely brought their own devices to school because of the poor wireless structure and because little support was available to them.

Furthermore, students reported that teachers rarely gave opportunities to either present work through online means or suggested accessing online information. Most teachers preferred students to submit assignments and projects in the form of papers, oral and PowerPoint presentations, and posters and collages over Internet outlets. The majority of the work in class was not conducive to Internet use.

However, the district’s goals were beginning to filter down in some ways. The administrators at the secondary school were implementing some tools such as blogs, microblogs, and instant messaging in their practices. Furthermore, they were open to allowing their staff and even encouraging them to incorporate the new tools available on the virtual classrooms and on the Internet in general. Both at the district and school levels, professional development and funding were provided to teachers that sought to learn more about digital technologies. Lastly, the district encouraged teachers to pursue continued education in the field of digital literacy and technology education.

As a result, some of those teachers that did partake in the professional development sessions and/or did pursue higher education courses in those fields were beginning to incorporate new digital literacies within their classrooms. Accordingly, more students had the opportunity to interact with these tools. Lastly, the move toward virtual classrooms is pushing more teachers to use online spaces as part of their course work and consequently directing students to those spaces.
7.2.5 Major Conclusions Drawn from Findings

This study found that although the district and school self-identified themselves as places where digital, Internet, and new literacies were highly valued and implemented, in fact, the majority of teachers and students were not using social media tools for learning purposes. Teachers were using social media tools far more often for self-selected practices than school-selected ones and they were using social media far more to retrieve information than to contribute to it. Furthermore, the large majority of teachers did not assign work that was conducive to preparing or presenting with social Web tools. The most frequent form of assignment was still completed on paper. Consequently, similar to the findings in previous studies (Cuban, 2001; Leander, 2007; Lankshear & Knobel, 2007), the majority of students were not using the Internet in participatory, democratic, collaborative, distributed, and multimodal ways for learning purposes.

This being said, there were a handful of administrative staff and teachers who purposefully made an effort to incorporate new Internet tools within their classrooms to assist in student learning and increase motivation. These administrators and teachers who were attempting to incorporate new tools within the district were highly valued by their superiors. The reason for valuing these individuals stemmed from two opposite reasons. One reason they were valued was because the people in positions higher than theirs were unfamiliar with these same tools and therefore valued having their expertise within the district. As with the stance of the new knowledge economy, they valued the ability of their staff to learn from one another and teach them as well. Conversely, they were also valued by those superiors who held the
expertise themselves because they were eager to have these tools implemented within the
district and expand on the initiatives that they had started.

I considered the focal teachers and administrators in this case study as digital literacy
leaders because they looked to implement new technologies and practices within the schools
and curriculum. They were constantly learning about new teaching and learning tools and
attempting to incorporate them into their practices. All nine of the district and school
administrators and teachers believed that it was important for students to be familiar with new
online environments and worried that if they did not provide the opportunity for them to
partake in these environments in a school setting, that those students who would not partake
on their own accord would be disadvantaged in society. Furthermore, all these participants
identified social Web sites as motivational tools that had the potential to get students excited
about learning.

Similar to Lankshear and Knobel’s (2007) view, the focal teachers implemented social
media tools, not solely for the sake of the tool itself or its motivational value, but because of
their belief that the particular tool, beyond being a new technology, was a literacy that held
enormous potential for expression and learning. Therefore, they had begun to adopt the new
literacies perspective.

Multimodality became an important concept for the teachers. Just the same way as we
teach our students to write or at least allow them the opportunity to do so, we might consider
allowing opportunities for students to express themselves using images, video, text, sound,
hyperlinks, and other modes. Connecting these modes and understanding the relationships that
they hold with one another and with learners and providing opportunities for students to use them in spaces that allow for collaboration and distribution make learning more active.

The focal teachers began using these tools because they wanted to improve their practices and stay current. Also, they wanted to use new resources that might be beneficial in student learning. They were particularly interested in enhancing student motivation and creating respectful classroom environments.

Though the focal teachers had genuine aims in using Web 2.0 tools and were using them in an attempt to improve learning and increase motivation, not all the practices met this goal. Similar to Kevin Leander (2007) and Cuban’s (2001) studies where teachers sustained traditional practices with new technologies, the teachers of this study didn’t always use the social Internet tool in their capacity of being participatory, distributed, democratic, and multimodal. For example, the majority of teachers including the focal teachers did not assign work that was conducive to preparing or presenting with social Web tools. The most frequent form of assignment was still completed on paper. They did, however, put focus on the collaborative nature of the tools and did value the other components especially its multimodality.

Some repeating motifs that inhibited social Web tools from being implemented in classrooms were lack of non-instructional time to learn the tools, lack of instructional time to implement new ideas, lack of understanding of the tools, and lack of money, resources, and programs to learn to implement new tools. These same issues plagued teachers who were implementing the tools and inhibited them in using them in more dynamic ways and fitting
these new practices in the traditional structures of their classrooms. The focal teachers, for example, had difficulties with assessing online work that involved social media tools.

The lack of money, resources, and programs is of particular concern considering that the study took place in a high SES community and school where resources are much more available than in districts and countries with less financial means. This raises major implications for districts and helps explain one reason why implementation of new literacies or any change takes a long time to permeate schools.

The lack of focus on Internet tools was in direct contrast with students’ preferences. As Williams and Rowlands (2007) found, the Internet was the students’ primary source of information for personal and schooling reasons. The majority of students favoured Internet use over offline text for retrieving information to assist with their schoolwork. For example, the Internet was highly favoured over library books for completing schoolwork. Some of the reasons given for favouring the Internet over offline resources included its ease and efficacy in locating information, the fact that it required less effort than searching for information offline, students’ comfort with the technology, and their perceived incapacity to find similar needed information on their own without the assistance of a search engine. Though students preferred to use the Internet as a resource to assist with their schoolwork, they identified it as a highly distracting place that lured them off task.

Furthermore, this study found that the Internet is a highly engaging medium for students. The study was in line with previous research (Synovate, 2007) that found that the
Internet was students’ main form of technology use for entertainment, communication, and learning. They used it more often than the television and the telephone.

The focal teachers’ personal and professional Internet practices were very similar. They frequently mirrored each other. Their main Internet use for both personal and professional use was to retrieve needed information. Students’ self- and school-selected Internet practices, on the other hand, were not similar. The students’ self-selected reasons were linked mostly to entertainment and communication while their school-selected reasons were linked mostly to retrieving information.

Moreover, students’ self-selected Internet practices were far more participatory and social. They used the Internet for recreational purposes mostly to socialize on Facebook, watch clips on YouTube, communicate through various applications, share music, and game. Students’ school-selected Internet practices were far more passive. For example, the Web 2.0 tool most popular with students for retrieving information for school-selected reasons and learning in general was Wikipedia. It was a highly valued information source. However, like Luckin et al. (2009) found, the majority of students in this study never or rarely contributed to information on Wikipedia. They used it only as an information source to gather the data they needed.

Wikis, however, were the only tool that students were using more frequently for school-selected reasons than self-selected ones for both retrieving and contributing to information. This fact was partly contributed to the fact that the teacher-librarian was an advocate of wikis and frequently used them with students and teachers. Therefore, this one practice did filter down from district mandate to teacher practice to student use.
Students valued Wikipedia for accessing information for self-selected reasons as well. They frequented it regularly to find answers to questions they had. The self-selected practices, however, did not translate to contributing to wikis. In addition to Wikipedia, student participants visited YouTube frequently to retrieve information. Other than using YouTube for entertainment purposes, many students frequented it to watch how-to videos to learn a specific task.

Students are using social media tools far more to retrieve information than to contribute to it. The Web 2.0 tool most popular with students for contributing information was Facebook. However, this was a self-selected practice that did not translate to school.

Overall, students’ contributions to the Internet happened in small ways. Very few students made large contributions like uploading original videos, photos, music, or articles. Most did contribute in smaller ways, however, by commenting, editing, reviewing, tagging, and acknowledging while on the Web. This finding was contradictory to Lenhart et al.’s study (2007) that found that many teens chose to share their creative work online.

7.3 Implications of the Study

This study has several implications for the field of Literacy Education as well as for policy makers, administrators, board members, teachers, and teacher education programs.

7.3.1 Implications for Policy

Research has the capacity to shape policy. As research continues to expand the definition of literacy, it becomes neglectful not to include the variety of literacies within the
As the Power Framework presented by Warschauer & Ware (2008) in Chapter One suggests, economic, social, and cultural equity play a large role in our approach to learning and the pedagogical and purchasing decisions we make. Until less traditional and undervalued literacies such as multimodal and Internet literacies are recognized by policy makers as relevant and important, they will continue not to be incorporated into schools and consequently widen the digital gap that has already begun to form between youth who engage in these practices on their own initiative and those who don’t.

This study suggests that new tools like wikis, blogs, and podcasts have the capacity to be used in traditional ways or be seen as new literacies. Similar to Leander (2007), Ertmer (2005), and Cuban’s (2001) findings, this study found that new social tools are rarely being used in schools and even when used they are frequently being used like traditional literacies instead of new literacies. Both the Learning and Change Frameworks, presented in the theoretical framework of the study, adopt the view that the technology itself does not automatically improve learning or life. It is the manner in which the technology is used that will benefit users. Therefore, though it is a genuine attempt to move towards broadening literacies in classrooms by incorporating these tools, it is not adequate to integrate them without considering the tool as a genre in itself that has the capacities beyond traditional literacies. Some reasons that attributed to these new tools being used in traditional ways during the study included a lack of understanding of the tools, their newness (especially in schools), and teachers’ lack of time to learn how to use them and incorporate them into their practices. These considerations need to be addressed for policy to have an effect at the school level.
In this case study school district, digital literacy was mandated, but not taken up by the majority of its staff. Nevertheless, it did penetrate its way into the schools and classrooms by way of policy combined with the interests of administrators, teachers, and students.

**7.3.2 Implications for Administrators and Boards**

Some paradoxes existed between the goals of the district and its practices. The district had removed the majority of online bans and filters, but was moving towards a closed model of Internet access. Similarly, they valued the Internet because of its vast opportunities, but were encouraging their staff to work within limited boundaries that were being set through the portal. They highly valued critical literacy, but were encouraging students to stay within the new closed boundaries to help prevent predators and other online dangers.

Using a limited online space such as the portal created several problems. First of all, legitimate interested individuals did not have access to many of the district spaces. For example, as a researcher wanting to find out more about the district’s practices, I had limited supervised access to the portal. Parents, too, who had a distinct interest in their children’s schooling, were not granted access. Colleagues from different districts, or even colleagues from within a district or school, were unable to see what fellow teachers were doing, to learn from their practices or offer suggestions for improvement. Students could not share the information they had posted with those at other schools or even other classes. The district was able to track unfavoured behaviour taking place within these boundaries. Even though this was done with good intentions, it raised serious ethical questions.
Such contradictions needed reconsideration and prioritization. Though the district wanted to balance the safety of children with their growth and learning, it also needed to take a stance based on its philosophies. The complexities of online environments and their place in schools required attention and debate to help iron out its complexities.

These paradoxes continued at more logistical levels as well. For example, the district and focal school had a digital literacy initiative as a part of their mission statement, but didn’t have the wireless structure in place to support such an initiative. Similarly, the district was eager to move to a blended model of learning, but had not set up the adequate structure or culture within their district to make such a change work.

However, shifts in infrastructure and philosophy have begun to take form to make way for alternative directions of schooling. For example, the district and focal school recognized that they needed to move away from spending funds on equipment and focus funds instead of creating a robust structure that supported district wide Internet access. This brought up issues of the physical structures of schools as well. With the move to more robust wireless structures and blended learning systems, how might the physical environment of schools change? Similarly, funds were being budgeted for professional development purposes instead of for purchasing more hardware or software. This district shift to consider technology as a way to restructure social systems was similar to the views of Lanshear & Knobel (2003), Street (1995), and Warschauer & Ware, 2008.

A shift in culture was slowly beginning to be implemented as digital literacy initiatives began to surface, as bans began to be lifted, and as staff began to be more open to Web 2.0
environments. It was clear that this change would take some time and had several phases to go through before any tangible change would become apparent. This one point was most clearly seen with the notion of multimodality. Although the district and teachers stated that they highly valued multimodality, the large majority of student assignments were still produced in textual format. This showed that a shift in belief does not automatically translate to a shift in practice. Any substantial change takes time and consequently continued attention needs to be given to new pedagogical theories, practices, and research by administrators and boards.

Perhaps one way to ease into such practices might be to emulate student practices by starting to contribute to websites by commenting, editing, reviewing, tagging, and acknowledging and by linking these practices to critical literacy notions.

Lastly, a major implication for administrators and boards is that for them to expect change in the structure or culture of schooling to occur, they need to model such changes for others to emulate. By being leaders in their communities and engaging in these same practices, they demonstrate that they value such practices and consequently make the implementation of such tools more genuine. Through example, they show the usefulness and purpose of the applications. The implementation of social Web tools by some of the higher level administrators in this case study was apparent.

7.3.3 Implications for Teachers

According to Mark Prensky (2001), the focal teachers at Stoneledge Secondary would be considered digital immigrants. I would argue that instead they are digital pioneers leading their students and their colleagues into unchartered territories. I prefer using the term digital
pioneers over digital immigrants as it is mainly those born before 1984 who are the ones building the digital applications and the ones perceiving novel ways for them to be used. It is these digital pioneers who are paving new frontier of possibilities.

Furthermore, the notion of a generation gap between teachers and their adolescent students is more of a perception than a reality as many new educators are quite close in age to their students and are part of the same generation and have many of the same cultural interests. The generation gap develops rather as a result of the identities that each party ends up forming because of the place they have taken in society (Lewis & Finders 2002).

Just as it doesn’t ring true to believe that teachers are all knowing and must fill the empty vessels of students with their knowledge, it is important that educators do not dismiss themselves as unsuitable candidates to teach new technologies and assume that their students are all knowing or even that they know more about digital tools than they do.

I perceived the focal teachers in this study, regardless of their ages, as new literacy leaders within their schools and community because they were keen to learn new technologies, implement them within their practices, and share their knowledge with others. In many areas, such as information and critical literacy, they were significantly more knowledgeable and skilled on the Internet than their students. Consequently, they were capable of assisting their students.

Nevertheless, greater focus on digital tools is still required. This study highlighted the importance of revisiting terms like literacy and technology, gaining a deeper understanding of each and balancing their importance into classroom settings. For example, at Stoneledge, it was clear that teachers found great value in new technologies as tools to aid learning. Teachers
were beginning to adopt different forms of technology in some way into their classrooms. Very few teachers, however, used these technological tools as new literacies. Some of these new technologies are not just tools, they are new genres, new literacies. Keeping this in mind, it may be advantageous to expand the manner in which we use these technologies/literacies.

As more and more new technologies surface, it becomes increasingly difficult to keep up with them or to incorporate them into classrooms. As Gee (2002) suggests, in this time of new capitalism where shifts happen rapidly, it is more productive to collaborate and share knowledge with one another than to approach it by ourselves. Therefore, instead of teachers spending their time learning about new tools and figuring out how to use them and preparing instruction for students, it may be more productive to create an environment where students are learning from one another. This also diminishes the top-down system of teaching criticized by researchers such as Gee and distributes power and knowledge from the perceived “expert” to a classroom of students whose total knowledge, as the New London Group (1996) suggests, would surpass that of the teacher.

An alternative approach would be for teachers to select one or two tools and to use them in the curriculum as a literacy to learn and a literacy that helps learning. This step involves recognizing the innate features that new literacies have and considering how to optimize on these features. At Stoneledge Secondary, very few teachers were implementing new literacies in distributed, participatory, democratic, collaborative, and multimodal ways. Only one or two of these characteristics played a part during assignments. By deliberating the purposes of integrating such tools ahead of the actual implementation, we might come up with practices that value them more and consequently incorporate the many facets.
This conveys the importance of regularly refining our practices by exploring new tools and partaking in professional development workshops that demonstrate ways to incorporate these tools to assist with the learning process. Also, it reminds us that valuing new forms of literacy can be empowering to students.

Teachers must constantly unravel how to balance regular effective classroom practices with new developments and pressures from administrators, policy, and research. It is not necessary to pit new practices against traditional ones, but rather to assess which might be most fitting for our current students and their future needs. By learning more about vernacular literacy and its connection to new literacies and by seeing the need for critical literacy skills surrounding navigating such territories, the likelihood of valuing such practices and consequently implementing them would increase.

Students identified specific ways that their teachers could help them learn using the Internet. They recommended that teachers ameliorate their own Internet practices so that they could better assist them yet at the same time remembering that students are knowledgeable and capable especially in the field of digital technology. Furthermore, students requested that teachers provide them with reliable sites to frequent for needed information and to assist them in finding more useful information on the Web. Lastly, they recommended allowing more in class time on the Internet and assigning more projects that would be conducive to Internet use.

The challenge for teachers rests in capturing the energy and enthusiasm of popular culture and vernacular literacies without colonizing students’ personal motivations for the sake
of critical development, and the consequent sabotage of that enjoyment that fuelled engagement in the first place.

7.3.4 Implications for Teacher Education Programs

This study raised some important implications for teacher education programs. Though many teacher candidates are close in age and in the same generation as their students, this does not mean that they are active or competent users of social Web tools. Like the students that they will be teaching, they too lack new literacy skills. Therefore, it is unlikely that they will enter schools with the necessary tools to assist their students become digitally literate individuals who will be ready to become members of the new knowledge economy.

Consequently, teacher education programs must play a more active role in assisting teacher candidates prepare for these changing digital spaces and learning structures that are linked to these new environments. The development of courses that introduce and teach new technologies is one avenue worth investigation. However, a more impactful option may be to adopt a view of technology integration in all courses.

This approach has three benefits. First, when content is infused throughout practice, it will likely be better learned. Teacher candidates will become more competent with new tools if they are a component of several of their courses as opposed to being reviewed in just one class. Also, because many of these new digital tools involve highly transferable skills, even when different tools are used in different classes, this will lead to an overall greater skill set.
Second, teacher candidates will have examples of how different digital literacy tools can be used across a wide range of courses. This will assist them in adopting the ideas emulated by their instructors and stimulate an array of other ideas for implementation in their own classrooms.

Third, by integrating digital literacies within courses, instead of having a course dedicated to it, teacher candidates will begin to understand the importance of focusing on content using new technologies over simply incorporating the technology for technology’s sake. If these concepts are introduced in teacher education programs, it is more likely that they will make their way into schools with new teacher candidates as they start their careers.

7.3.5 Theoretical Implications

Web 2.0 tools are not being used in highly distributed ways as teachers fear the dangers that the boundaries outside school walls might hold for students and because teachers still do not know how to make work more distributed. Like Leander’s (2007) laptop study, where the faculty was concerned with protecting its students from online predators and other dangers, one constant worry of educators in this study was the fear of exposing their students to dangers by making their work visible to the world. Although the Internet is a public space that allows for greater distributed potential and provides accountability to the public, it is important to realize that content posted by most students on the Internet will probably only be seen by a select few and buried in the deep Web unless contributions are made to highly visible sites.

School Internet practices are not particularly multimodal either as teachers put a higher value on text than other forms of literacy and are more competent in teaching that form over
other forms like video. Though incorporating multimodal content such as song, video, and images to complement content being taught is enhancing, the practice of using these same modes to create projects is still not prevalent. Also, using different modes as a complement to text does not necessary make a practice multimodal. The interplay between the modes that creates the narrative or argument has far more impact.

Web 2.0 tools are, however, being used in much more collaborative ways as students begin working together to create their vision. For example, Ethan Laing’s students worked together to create their podcasts and Brooke Jones’ and Carl Bodin’s students collaborated on the wiki assignment. However, teachers face difficulty in evaluating collaborative work and sometimes find themselves piecing assignments apart to grade them.

These social Web tools are no more participatory than other activities. Teachers’ main suggestion for students frequenting the Web was to access information and not to contribute to it. Even for the focal teachers who had begun to take this step, they often stopped short of encouraging publication of student work because they didn’t deem it of high enough quality to be posted online for a wider audience. For example, Carl and Brooke’s wiki stayed offline throughout the whole process and was published only after having been edited by the teachers. In past years, they had chosen not to publish the wiki at all.

Similarly, in the past, Ethan had students create podcasts and vodcasts, but not taken the final step of having students upload them onto the Web, deeming that the work was not strong enough to be made public. Castells (2002) suggests the lack of opportunity to contribute to today’s networked society is damaging as it excludes individuals from the culture and
economy. Without incorporating the knowledge creating component of the Web, we risk excluding our students from the new knowledge economy.

As Jenkins (2006) and Lankshear and Knobel (2006) suggest, Web 2.0 applications enable participation, invention, and knowledge-building and as a result are associated with empowerment. Until teachers begin encouraging the online contributions of student work by making it far more participatory and distributed, this empowerment will lack and it therefore makes it difficult to see these tools as democratic either. Though the venue exists for students to have voices, teachers are not willing to give them the broader voice yet. They are however beginning to show them these tools which will allow them to further explore them on their own accord and use them in ways that are meaningful to them. The key concept to continually return to is that it is not so much a particular tool or mode that holds value, but the manner in which that tool or mode is used that can enrich learning and content creation.

7.4 A Shift in School Culture

If the culture of pedagogy remains unaddressed and unchanged, only surface changes will occur at the school level. Making shifts to school culture may be the most effective way to make core changes. One recommendation is to move to a more participatory culture—a culture that is distinguished by the promotion of civic engagement and artistic expression (Jenkins, 2006). This is a culture where members feel like their contributions count, where more experienced members share their expertise with the less experienced, where social connections are valued and creations are shared.
Therefore, it is a distributed culture as well where work is seen by others in the community. Most importantly, “[p]articipatory culture shifts the focus of literacy from one of individual expression to community involvement” (Jenkins, 2006, p. 4).

This then encourages a highly collaborative culture where members of the community work together in the creation process. As suggested by the knowledge economy perspective, a focus on collaboration can dismantle a reliance on hierarchical structures. Students can be empowered to make significant decisions about their learning.

Binding well with this participatory, distributed, and collaborative culture is the addition of a multimodal culture where a variety of modes are valued as highly as printed forms of text for learning and expression. Literacy is not only about reading and writing. It encompasses listening and speaking. It goes into the visual realm to include seeing and understanding images, colour, spacing, structure, movement, and more. A concept can be explained through an image, a movie, an essay, a poem, a play, a lecture, or other form. Expression in these forms has existed for decades and in some cases for centuries, but never had schools had the opportunity to partake in them with more ease and efficiency as in the Internet era.

Unfortunately, though, the recognition of these different forms of literacy appears only on a surface level. For example, the main focus of literacy associations and conferences continues to be on reading and writing and provincial and state exams almost exclusively assess reading and writing skills. When students learn content from one another instead of reading a text, or when they listen to an audio recording of a book instead of reading it, society considers
this as cheating. If we truly valued different forms of learning and recognized them as important literacies, then they would be more apparent in practice and not just in theory.

The NCTE (2008) recommends that the “use of different modes of expression in student work should be integrated into the overall literacy goals of the curriculum” (n.p.), and that these uses should go beyond complementing textual work as through illustrations. When combined with the participatory, distributed, and collaborative culture, a multimodal culture encourages the creation of artistic and academic work that could include text, physical movement, painting, drama, speech, and much more. This involves complex processes including critical thinking, ethical consideration, artistic skill and academic understanding.

Together the contexts of a participatory, distributed, collaborative, and multimodal school culture have the potential to move schools towards a democratic culture where all modes and opinions are valued, where individuals have a voice and choice. The Internet, as a potential democratic medium, can provide an environment conducive to such uses. Youth already communicate using the social Web in creative ways that are suitable for learning and consequently they deserve attention within the educational setting. Instead of banning such features within classrooms, schools, districts, and libraries, the option exists to encourage their use in conscientious ways. Perhaps instead of posting warnings that read no texting, no instant messaging, no chatting, no Facebook, no twitter, we can post notices that read know texting, know instant messaging, know chatting, know Facebook, know twitter.

When incorporating new tools in schools however, it is important to distinguish whether these tools are being used in new ways or only as technologies that mimic more traditional
literacies. For example, if a wiki is being used by one person to post static information with no visuals or video, then it does not warrant to be categorized with wikis that are collaborative and multimodal works. Just as with print we have different textual genres, online contributions, too, have characteristics that distinguish them. Implementing new technologies such as wikis, blogs, and SNS without considering the manner in which they are being used will not contribute to changing school culture. Rather, each instance needs to be regarded and assessed individually for its potential impact.

Although the Internet is already prevailing, it is still in its infancy with growth spurts still to come leading to the possibility for considerable shifts in the ways that it is used. In schools, the Internet is being used mostly in the same ways traditional texts are being used—for acquiring, memorizing, and parroting information. With a shift in school culture, the Internet instead has the potential to be used in collaborative, participatory, democratic, distributed, multimodal, and knowledge creating ways.

7.5 Extending New Literacies Theory

I aim to extend the ongoing discourse around the new literacies theory in two ways. First, I recommend that no one form of literacy supersedes or holds more value than another. Second, I suggest that we take care not to devalue existing forms of literacy when we begin to integrate new forms.

No form of literacy is more important than another. Rather, literacies have different uses and purposes and play different roles in the educational context. For example, though
tensions do arise between new and traditional literacies, new literacies, in fact, offer a relief to traditional classroom practices as they allow us to value an array of modes that can assist in the learning process. I suggest that instead of placing a hierarchical value on different literacies, we aim to see literacy through a folksonomy lens where the hierarchy of literacy practices are flattened and can connect to one another through a variety of possible connections or be enjoyed individually through its innate characteristics.

For example, a textual poem in itself is a beautiful art form and a valued form of literacy. However, as a genre, is it more or less valuable than a song, picture, essay, or a film? This comparison need not be made. In fact, a poem has the potential to interact with other genres. For example, combining text with a visual can create a shape poem. If in schools, we flatten the hierarchy of literacies so text holds no more importance than other literacies, then the potential for new literacies to form and grow expands. And more student voices will have avenues for expression.

Secondly, when extending the theory surrounding new literacies, we must take care not to devalue existing forms of literacy in exchange for new forms. Oral literacy, especially in the form of discourse, may be diminishing because of the manner in which we are using social Web tools. We see this shift in society where emailing, txting, and instant messaging are replacing some previous oral communication practices like speaking face-to-face or over the telephone. Similarly, using new social Web tools to encourage written discourse around classroom topics has the capacity to suppress the oral discourse that may have taken place otherwise.

Regardless of which tools are adopted by educators, I suggest that it is the manner in which those tools are incorporated that determine their usefulness for learning and whether
they hold the necessary “ethos” (Lankshear & Knobel, 2007) to be considered a new literacy. Also, it is important to assess whether other forms of literacy are being suppressed as a result of incorporating these new literacies in the classroom.

7.6 Limitations of the Study

I gathered much of my information through interviews, questionnaires, and participant observation. Therefore, the access, availability, and willingness of the participants limited the research. Furthermore, the study depended on the limitations of the data collection instruments detailed extensively in section 3.7 of this dissertation. The main data collection concerns involved using a new interview instrument in the form of a blog, facing resistance from the district to using screen capture software to collect observational data, and making several amendments to ensure the preservation of ethics.

Secondly, this study was conducted in a district and school that are situated in a community with a high SES. This factor, along with the point that the study was not an experiment, means that results cannot be generalized across districts. Rather than aiming to make generalizations, this study was exploratory in nature and sought to gain an understanding of how districts and schools are using Web 2.0 tools and dealing with the tensions that arise. Therefore, despite the limitations, the results can be used to make connections with other studies (Maxwell, 1992).
7.8 Future Research

This study was conducted within a high SES community. Consequently, resources, funding, and opportunity were at their height. This was a purposeful choice for the study as the goal was to identify a district and focal school where the use of digital literacies played a ubiquitous role. Computers, the Internet, and Web 2.0 tools are so prevalent in North American culture that their use is increasingly seen in all schools. Therefore, investigation into social media uses in communities with lower SES will show the manner in which all schools would be capable of implementing Internet tools to support learning.

Further research is also needed to learn if students’ self-selected Internet practices are changing based on the information that they are learning in schools and whether this learning is assisting in lessening the digital gap. Other connections that can be made between self- and school-selected Internet practices would assist in understanding student motivation and the value of certain tools. This is not to suggest that pedagogizing self-selected practices are a solution to enhancing student motivation or learning. Rather it is the other direction that may hold more importance. How can school-selected practices assist youth’s opportunities outside of school?

This study focused on new literacies and the changing nature of literacy as the Web evolves into more participatory environments. Therefore, the study confirmed that the widening digital divide is of growing concern (Hargittai & Walejko, 2008; Helsper & Enyon, 2010). Future studies could attempt to establish different types of digital divides and their
extent. For example, in what ways do different cultures, genders, and generations differ in their practices.

Furthermore, the study highlighted the importance of contributing to the networked society in order to be included in the culture and economy (Castells, 2002). By learning more about the literacy processes used to construct and transform knowledge, and learning how we can assist adolescents with these processes, we can move our schools toward a knowledge-building and participatory culture.

Lastly, though this study was conducted in a school district where the incorporation of digital literacy was a major goal and the funding was mostly available to support this goal, few individuals had adopted social Web tools in their practices. Of those who had, they were only beginning to experiment with different possibilities of incorporating them into pedagogical practice as well as for their own personal use. Consequently, it would be of interest to explore the practices of individuals who have adopted social Web tools for several years and are using them in more collaborative, distributed, participatory, democratic, and multimodal ways than the participants of this study. As schools begin to change their structure and culture to meet the changing digital landscape and as these social media tools grow in popularity and begin to be recognized as valuable pedagogical tools, it will be particularly relevant to explore the manner in which schools are using them.
References


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June 15, 2009
CONSENT FORM: (District Staff and School Administrators)

The Internet as a Teaching and Learning Tool

Principal investigator: Dr. Marlene Asselin
Department of Language and Literacy Education, UBC
Tel: (604) 822-5733

Co-investigator: Maryam Moayeri, PhD student
Department of Language and Literacy Education, UBC
Tel: (604) xxx-xxxx

PURPOSE
This study will examine the Internet skills and strategies that adolescents practice when doing schoolwork, and explore their views on how teachers can integrate Internet literacy into the curriculum to make learning school curriculum more meaningful. The study further examines how teachers are using the Internet in a knowledge creating manner by using Web 2.0 applications such as wikis, blogs, social networks, podcasts, video/photo/music sharing, and machinima within their classrooms.

PROCEDURES
We would like to start this study by interviewing you as the [ ] of the district/school to learn about the different types of activities that you, the district staff, and the students are involved in. We are also interested in knowing your thoughts about the value of the Internet when it comes to learning and the direction that you see your district going. With your permission, this interview will be recorded for audio, but not video.
DURATION
The interview will last approximately 60 minutes and will be conducted by Maryam Moayeri at a time convenient to you.

CONFIDENTIALITY
Your identity and that of your district will be kept confidential. Participants will not be identified by name in any reports of the completed study. Pseudonyms will be used in all reports and presentations. Data will only be made available to the co-investigator or investigator. Paper data will be stored in a locked filing cabinet, within an alarmed office in the Faculty of Education at UBC. Digital data including the audio recordings will be stored on a password protected hard drive in the Faculty of Education. All information will be destroyed five years after the work is published.

DISSEMINATION OF RESEARCH
The results of this study will be published in a PhD dissertation and journals and presented at scholarly conferences.

REFUSAL
Participation in this project is optional. You have the right to refuse to participate or to withdraw your consent to participate.

INQUIRIES
We will be happy to answer your questions about the research. Please do not hesitate to contact us either in person, by email, or by telephone.

CONCERNS
This study has been approved by the UBC ethics board and the West Vancouver School District. If you have any concerns about your rights or treatment as a research participant, you may contact the Research Subject Information Line in the UBC Office of Research Services at (604) 822-8598. If you have any questions about the study, contact the principal investigator, Dr. Marlene Asselin at (604) 822-5733 or at marlene.asselin@ubc.ca or the co-investigator, Maryam Moayeri at (604) xxx-xxxx or at name@server.ca.
CONSENT

Your participation in this study is completely voluntary and you may refuse to participate or withdraw from the study.

Your signature below indicates that you have received a copy of this consent form for your own records.

I consent/I do not consent (circle one) to participate in this study.

Please check the box and sign:

[  ] I consent to be audio taped in this study

[  ] I consent for the data of this research to be presented at scholarly conferences

Your name (please print):

_______________________________________________________________

Signature:                                              Date:

__________________________________  ____________________
June 1, 2009  
CONSENT FORM: Case Study (Teachers)  

An Examination of the Internet as a Learning Tool  

Principal investigator: Dr. Marlene Asselin  
Department of Language and Literacy Education, UBC  
Tel: (604) 822-5733  

Co-investigator: Maryam Moayeri, PhD student  
Department of Language and Literacy Education, UBC  
Tel: (604) xxx-xxxx  

PURPOSE: This study will examine the Internet skills and strategies that adolescents practice when doing schoolwork, and explore their views on how teachers can integrate Internet literacy into the curriculum to make learning school curriculum more meaningful. The study further examines how teachers are using the Internet in a knowledge creating manner by using Web 2.0 applications such as wikis, blogs, social networks, podcasts, video/photo/music sharing, and machinema within their classrooms.  

PROCEDURES: Over a period of two weeks, we will collect two types of information about your Internet practices related to teaching activities: a) a record of your Internet use each time you are working on activities related to teaching (this will be recorded by an Internet monitoring device); b) a videotaped “think aloud” log where you will orally explain your thought process and how you work on the Internet. We will install a software on your computer that will capture your interaction with the computer and record your face and voice as you talk about your process (you will maintain full control over when this recording starts and stops). It is not possible for anyone to view these recordings on the computers as they are in a format that is not viewable. We will have at least one practice session with you before beginning the designated two-week period and we will be available throughout the data collection period to answer any questions.  

We will use these recordings to find out such things as how you selected websites, what links you chose to follow, and what information you chose not to look at on websites. We are
also interested to see what types of Internet spaces you use for you teaching. Are you instant messaging, going to blogs or wikis, frequenting social networks or forums for school reasons?

At some point before the two week session, you will participate in an interview where you will respond to questions and prompts about how you use the Internet for teaching purposes. The interviews will be conducted either over the computer using Skype (a free voice over Internet protocol software) or in person. These interviews will be recorded for audio, but not video.

Lastly, we will attend your classes for a three week period to observe you and your students while you conduct projects or activities that include the use of the Internet.

DURATION: The record of Internet activities and think aloud log will take place over a period of two weeks. We will ask you to record yourself each time you use the Internet to do work for teaching related activities. The interview will last approximately 60 minutes. The interview will be conducted by Maryam Moayeri at a time convenient to you. The observations will take place during a three week time span.

CONFIDENTIALITY: Your identity and that of your school and district will be kept confidential. Participants will not be identified by name in any reports of the completed study. Pseudonyms will be used in all reports and presentations. Although video recordings will be shown during presentations, these will not include your face (it will be solely of the computer screen and your voice). Data will only be made available to the co-investigator or investigator. Paper data will be stored in a locked filing cabinet, within an alarmed office in the Faculty of Education at UBC. Digital data including the video recordings and the Skype audio recordings will be stored on a password protected hard drive in the Faculty of Education. All information will be destroyed five years after the work is published.

DISSEMINATION OF RESEARCH: The results of this study including video recordings of Internet use will be published in a PhD dissertation and journals and presented at scholarly conferences.

REFUSAL: Participation in this project is optional. You have the right to refuse to participate or to withdraw your consent to participate at any time.

INQUIRIES: We will be happy to answer your questions about the research. Please do not hesitate to contact us either in person, by email, or by telephone.

CONCERNS: If you have any concerns about your rights or treatment as a research participant, you may contact the Research Subject Information Line in the UBC Office of Research Services at (604) 822-8598. If you have any questions about the study, contact the principal investigator, Dr. Marlene Asselin at (604) 822-5733 or at marlene.asselin@ubc.ca or the co-investigator, Maryam Moayeri at (604) xxx-xxxx or at name@server.ca.
CONSENT:
Your participation in this study is completely voluntary and you may refuse to participate or withdraw from the study at any time.
Your signature below indicates that you have received a copy of this consent form for your own records.

I consent/I do not consent (circle one) to participate in this study.

Please check the box and sign:

[ ] I consent to be audio taped in this study (during the interview and Internet observation)

[ ] I consent to be videotaped in this study (during the Internet and classroom observations)

[ ] I consent for the data of this research including audio and screen capture of the computer screen to be presented at scholarly conferences

Your name (please print):

__________________________________________________________

Signature:  

Date:

___________________________________  _____________________
October 27, 2009
CONSENT FORM: Survey & Blog (Parents of Student)

The Internet as a Learning Tool

Principal investigator: Dr. Marlene Asselin
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Co-investigator: Maryam Moayeri, PhD student
Department of Language and Literacy Education, UBC
Tel: (604) xxx-xxxx

PURPOSE
This study will examine the Internet skills and strategies that adolescents practice at school, and explore their views on how teachers can integrate Internet literacy into the curriculum to make learning school curriculum more meaningful.

PROCEDURES
We are interested to see what types of Internet spaces your child uses while doing schoolwork. Is your child instant messaging, going to blogs or wikis, frequenting social networks or forums to discuss schoolwork? We also want to know why your child is going on to the Internet. To find out such information, this study will involve your child in two ways.

1. Your child will complete a survey about his/her Internet practices.
2. Your child will participate in an online group discussion consisting of other students in his/her class. Several open-ended questions will be posted on a blog and student participants will be encouraged to answer the questions and to comment on each other’s answers. We would also like it if they posted some questions that would contribute to the study. This will take place at a time and place most convenient to your child.
DURATION
1. The survey will take approximately 30 minutes to complete and will be conducted at
school during class time.
2. We encourage students to spend a total of 60 minutes contributing to the discussions
on the blog. They will do this over the span of three weeks and can spread out their
contributions over several days or weeks.

CONFIDENTIALITY
Your child’s identity and that of his/her school and district will be kept confidential.
Participants will not be identified by name in any reports of the completed study. Pseudonyms
will be used in all reports and presentations. Data will only be made available to the co-
investigator or investigator. Paper data will be stored in a locked filing cabinet, within an
alarmed office in the Faculty of Education at UBC. Digital data will be stored on a password
protected hard drive in the Faculty of Education. All information will be destroyed five years
after the work is published.
We encourage all participants in the blog discussion to refrain from disclosing the
contents of the discussion outside of the group; however, we cannot control what other
participants do with the information discussed. Your child may choose to participate using
his/her real name or a pseudonym.

DISSEMINATION OF RESEARCH
The results of this study will be published in a PhD dissertation and journals and
presented at scholarly conferences.

REFUSAL
Participation in this project is optional. Your child has the right to refuse to participate
or to withdraw from the study.

INQUIRIES or CONCERNS
If you have any concerns about your child’s rights or treatment as a research participant,
you may contact the Research Subject Information Line in the UBC Office of Research Services
at (604) 822-8598. If you have any questions about the study, contact the principal investigator,
Dr. Marlene Asselin at (604) 822-5733 or at marlene.asselin@ubc.ca or the co-investigator,
Maryam Moayeri at (604) xxx-xxxx or at name@server.ca.
CONSENT

Your child’s participation in this study is completely voluntary and you may refuse to allow your child to participate or withdraw from the study at any time without jeopardy to his/her education. Your signature below indicates that you have received a copy of this consent form for your own records. Your signature also indicates your consent for your child to participate in this study and for the results of this study to be published and presented at academic conferences.

Please have your child return this page to his/her teacher.

I consent/I do not consent (circle one) to my child’s participation in this study.

Please check the box and sign:

[ ] I consent for my child to partake in the survey portion of this study

[ ] I consent for my child to partake in the blog portion of this study

Your child’s name: __________________________________________________________

An email address where we can send your child a link to the blog:

__________________________________________________________________________

Parent or Guardian Name (please print):

____________________________________________________________________________

Parent or Guardian Signature:

________________________________________ Date: ____________________
Oct 27, 2009

**ASSENT FORM: Focus Group (Student)**

**An Examination of Adolescents Using the Internet as a Learning Tool**

Principal investigator: Dr. Marlene Asselin  
Department of Language and Literacy Education, UBC  
Tel: (604) 822-5733

Co-investigator: Maryam Moayeri, PhD student  
Department of Language and Literacy Education, UBC  
Tel: (604) xxx-xxxx

June 1, 2009

Dear Student:

We would like your assistance in learning about how young people like you use the Internet at school and explore how this use differs from your personal Internet use. To find out this information, we need your help. We have set up a classroom blog and would like you to contribute to this blog for a total of one hour over a three week span in the following ways: a) by answering questions that we have posted, b) by posting your own questions that you think would help shed light on young people’s Internet practices, and c) by commenting on other people’s posts and comments.

Your identity and that of your school and district will be kept confidential. You will not be identified by name in any reports of the study. We encourage you and all other students partaking in the blog discussion not to talk to others about what was said during the interviews. However, we cannot control what other participants do with the information discussed. You may choose to participate using your real name or a pretend name. The results of this study will be published in a PhD dissertation and journals and presented at scholarly conferences.
Participation in this project is optional. You have the right to refuse to participate or to withdraw from the study at any time and rest assured that your participation or refusal to participate will in no way impact your grade.

If you have any concerns about your rights or treatment as a research participant, you may contact the Research Subject Information Line in the UBC Office of Research Services at (604) 822-8598. If you have any questions about the study, contact the principal investigator, Dr. Marlene Asselin at (604) 822-5733 or at marlene.asselin@ubc.ca or the co-investigator, Maryam Moayeri at (604) xxx-xxxx or at name@server.ca.

Please complete this form and give it to your teacher.

Thanks for your help,

Maryam Moayeri

I consent/I do not consent (circle one) to participate in this study.

Name (please print):
____________________________________________________________________________

Signature:
____________________________________________________________________________

Date: ______________________________________________________________________
Appendix B: Interview Protocols Including Blog

Interview Questions: District Staff

1. Can you start by giving me a general description of your district, the school, staff, and students?

2. What are some of the main goals of the district?

3. Do you have a mission statement and other things of the sort (goals, philosophies...)?

4. Do you have literature or copy of the mission statement for me to keep as an artefact?

5. What types of IT initiatives are in place in your district?

6. Could you tell me a bit about the movement toward the portal system? What is it exactly? What brought it about?

7. What do you consider to be the major advantages of moving to the portal system?

8. Are there any disadvantages of moving toward the portal system?

9. What do you believe about the value of the Internet in helping students a) to learn generally and b) to learn school subjects?

10. What do you consider to be some drawbacks of the Internet for learning?

11. How do you use the Internet to assist you in your practice as a superintendent/administrator?

12. What future plans do you have for the use of the Internet within your district?

13. Do you encourage the district staff to incorporate the Internet in their teaching and administrative practice? If so, how? If not, why not?

14. In what ways are you able to support the schools (the staff...) in their Internet use (for example, are funds allocated for equipment and pro-d).
15. In what ways are you able to support the students in their Internet use (for example, are funds allocated for equipment).

16. What challenges do you face as the superintendent/administrator when it comes to supporting the Internet use of staff and students?

17. Many school districts have strict privacy levels to accessing the Internet and ban certain websites. What sites does your district ban? Why do you or don’t you ban sites?

18. I understand that in the past you banned sites like youtube and facebook. What happened that this ban was lifted?

19. Do you see the move to the portal system as a way to regulate Internet usage in a similar way as banning?

20. In what ways that you are aware are the teachers in your district incorporating the Internet a) to support their teaching practice and b) to support their students’ learning of the curriculum? (Please provide some examples of novel practices of which you are aware?)

21. What opportunities does the district afford to teachers to increase their Internet skills and knowledge?

22. Does your district have a budget set aside for Internet allocation? If so what is it?

23. How do you use the Internet for your personal use? And how is this different from the way you use it for supporting your staff and students.
24. Are you familiar with the below and how do you incorporate your practice as a superintendent/administrator.

a. Wikis (e.g. Wikipedia, pbwiki)

b. Blogs (e.g. Blogger, Mashable)

c. Social networks (e.g. Facebook, Nexopia)

d. Forums or Groups (e.g. Yahoo or Google groups)

e. Video sharing (e.g. YouTube, Photobucket, Google Video)

f. Photo sharing (e.g. Flickr, Creative Commons, Ofoto)

g. Social bookmarking (e.g. del.icio.us, furl)

h. Virtual environments

i. Email (Hotmail, Shaw, Telus, Yahoo, Google)

j. Instant messenger (MSN, Yahoo messenger, AIM)

k. Voice over Internet Protocol (Skype, Gizmo Project)
Interview Questions: School Principals

1. Can you start by giving me a general description of your school, staff, and students?
2. What are some of the main goals of your school?
3. What do you believe about the value of the Internet in helping students a) to learn generally and b) to learn school subjects?
4. What do you consider to be some drawbacks of the Internet for learning?
5. How do you use the Internet to assist you in your practice as an administrator?
6. What future plans do you have for it? (For example, you mentioned texting announcements).
7. Do you encourage your staff to incorporate the Internet in their teaching practice? If so, how? If not, why not?
8. In what ways are you able to support your staff in their Internet use (for example, are funds allocated for equipment and pro-d)?
9. In what ways are you able to support the students in their Internet use (for example, are funds allocated for equipment).
10. What challenges do you face as an administrator when it comes to supporting the Internet use of your staff and students?
11. How and why was the IT committee formed? Who’s initiative was it?
12. What types of things does the IT committee discuss?
13. Why is the IT department labelled IT and not ICT or other such thing?
14. Many school districts have strict privacy levels to accessing the Internet and pan certain websites. Are you aware of any sites that are banned by your school district?
15. What websites are banned by the school? Why do you or don’t you ban sites?
16. In what ways are the teachers at this school incorporating the Internet a) to support their teaching practice and b) to support their students’ learning of the curriculum? (please provide some examples of novel practices of which you are aware? e.g. library, shop, math).

17. What opportunities does your school provide to increase teachers’ Internet skills & knowledge?

18. Does your school have a budget set aside for Internet allocation? How about the district?

19. How do you use the Internet for your personal use? And how is this different from the way you use it for supporting your staff and students.

20. Are you familiar with the below and how do you incorporate your practice as an administrator.
   a. Wikis (e.g. Wikipedia, pbwiki)
   b. Blogs (e.g. Blogger, Mashable)
   c. Social networks (e.g. Facebook, Nexopia)
   d. Forums or Groups (e.g. Yahoo or Google groups)
   e. Video sharing (e.g. YouTube, Photobucket, Google Video)
   f. Photo sharing (e.g. Flickr, Creative Commons, Ofoto)
   g. Music uploading/downloading & sharing (e.g. Jukebox Alive, the mp3 host)
   h. Social bookmarking (e.g. del.icio.us, furl)
   i. Virtual environments
   j. Email (Hotmail, Shaw, Telus, Yahoo, Google)
   k. Instant messenger (MSN, Yahoo messenger, AIM)
   l. Voice over Internet Protocol (Skype, Gizmo Project)
Interview Questions: Teacher-Librarian

1. Describe your role as a teacher-librarian?

2. How do you collaborate with teachers?

3. Are the ways that you collaborate with teachers conducive to using the Internet?

4. In what ways are the teachers at this school incorporating the Internet a) to support their teaching practice and b) to support their students’ learning of the curriculum? (Please provide some examples of novel practices of which you are aware? e.g. library, shop, math).

5. Describe an assignment that would require Internet use and detail how a student would need to use the Internet in completing the assignment.

6. What do you believe about the value of the Internet in helping students a) to learn generally and b) to learn school subjects?

7. Tell me about the ways you have your students use the Internet to support their learning of the curriculum.

8. In what ways are you able to support the students in their Internet use (for example, is there adequate allocation for equipment; do you have the needed skills).

9. In what ways are you able to support your staff in their Internet use (for example, do you run workshops, do you offer to co-teach).

10. What challenges do you face as a teacher-librarian when it comes to supporting the Internet use of fellow teachers and students?

11. What challenges do you face in integrating the Internet into teaching the curriculum?

12. What are some drawbacks of the Internet for learning?
13. How does your knowledge and expertise toward the Internet affect your use of it for classroom assignments?

14. How about your attitudes toward it.

15. How do you use the Internet yourself to assist you in your teaching practices?

16. How do you use the Internet for your personal use? And how is this different from the way you use it for teaching purposes.

17. What websites are banned by in the library? Why do you or don’t you ban sites? What about other technologies such as cell phones or game consoles?

18. Are you familiar with the below and how do you incorporate them in your teaching practice.
   a. wikis (e.g. Wikipedia, pbwiki)
   b. blogs (e.g. Blogger, Mashable)
   c. Social networks (e.g. Facebook, Nexopia)
   d. forums or groups (e.g. Yahoo or Google groups)
   e. Video sharing (e.g. YouTube, Photobucket, Google Video)
   f. Photo sharing (e.g. Flickr, Creative Commons, Ofoto)
   g. Music uploading/downloading & sharing (e.g. Jukebox Alive, the mp3 host)
   h. Social bookmarking (e.g. del.icio.us, furl)
   i. Virtual environments
   j. Email (Hotmail, Shaw, Telus, Yahoo, Google)
   k. Instant messenger (MSN, Yahoo messenger, AIM)
   l. Voice over Internet Protocol (Skype, Gizmo Project)
Interview Questions: Teacher

1. What types of homework do you regularly assign to students?

2. Are these assignments conducive to using the Internet?

3. Describe an assignment that would require Internet use and detail how a student would need to use the Internet in completing the assignment.

4. What do you believe about the value of the Internet in helping students a) to learn generally and b) to learn school subjects?

5. Tell me about the ways you have your students use the Internet to support their learning of the curriculum.

6. What challenges do you face in integrating the Internet into teaching the curriculum?

7. What are some drawbacks of the Internet for learning?

8. How does your knowledge and expertise toward the Internet affect your use of it for classroom assignments?

9. How about your attitudes toward it.

10. How do you use the Internet yourself to assist you in your teaching practices?

11. How do you use the Internet for your personal use? And how is this different from the way you use it for teaching purposes.
12. Are you familiar with the below and how do you incorporate them in your teaching practice.

a. wikis (e.g. Wikipedia, pbwiki)

b. blogs (e.g. Blogger, Mashable)

c. Social networks (e.g. Facebook, Nexopia)

d. forums or groups (e.g. Yahoo or Google groups)

e. Video sharing (e.g. YouTube, Photobucket, Google Video)

f. Photo sharing (e.g. Flickr, Creative Commons, Ofoto)

g. Music uploading/downloading & sharing (e.g. Jukebox Alive, the mp3 host)

h. Social bookmarking (e.g. del.icio.us, furl)

i. Virtual environments

j. Email (Hotmail, Shaw, Telus, Yahoo, Google)

k. Instant messenger (MSN, Yahoo messenger, AIM)

l. Voice over Internet Protocol (Skype, Gizmo Project)
Interview Questions: Student Focus Group Blog

1. Tell us about the kinds of technology you use regularly and the purposes you use them for. What is it about these technologies that make them such a part of your everyday life?

2. How do you use the Internet to help you learn?

3. Describe the ways that you use the Internet for recreational reasons compared to how you use it for school.

4. What recommendations do you have for teachers about ways to use the Internet that would help you learn in school?

5. In what ways do you contribute to the information on the Internet?

6. What other questions should we ask to find out how the Internet can help you learn?
Appendix C: Surveys

PART A. NON SCHOOL RELATED INTERNET PRACTICES: The following questions relate to your Internet use for activities that are NOT for schoolwork.

1. When using the Internet for activities NOT related to schoolwork, how often do you post/upload information on the following?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>wikis (e.g. Wikipedia, pbwiki)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>blogs (e.g. Blogger, Mashable)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Social networks (e.g. Facebook, Nexopia)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Video sharing (e.g. YouTube, Photobucket, Google Video)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Photo sharing (e.g. Flickr, Creative Commons, Ofoto)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Music uploading &amp; sharing (e.g. Jukebox Alive, the mp3 host)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Social bookmarking (e.g. del.icio.us, furl)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Virtual environments (Teen Secondlife, The Sims Online)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Others (please specify): ____________________</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

2. When using the Internet for activities NOT related to schoolwork, how often do you go to the following places to get/see/download information?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>wikis (e.g. Wikipedia, pbwiki)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>blogs (e.g. Blogger, Mashable)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Social networks (e.g. Facebook, Nexopia)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Video sharing (e.g. YouTube, Photobucket, Google Video)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Photo sharing (e.g. Flickr, Creative Commons, Ofoto)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Music downloading &amp; sharing (itunes, Zune, Napster, Rhapsody)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Social bookmarking (e.g. del.icio.us, furl)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Virtual environments (Teen Secondlife, The Sims Online)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Others (please specify): ____________________</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

3. When using the Internet for activities NOT related to schoolwork, how often do you use the following to communicate?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email (Hotmail, Shaw, Telus, Yahoo, Google)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Instant messenger (MSN, Yahoo messenger, AIM)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Voice over Internet Protocol (Skype, Gizmo Project)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

4. When using the Internet for activities NOT related to schoolwork, how often do you use the following?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>A computer within your home</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>School library computer</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Public library computer</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>School computer lab computer</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other (please specify): ______________________</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
5. How many hours per week do you use the Internet for activities *NOT related to schoolwork*? (choose 1 answer)

- 0
- 1-5
- 6-10
- 11-15
- 16-20
- More than 20

6. Please list three websites you go to most regularly for activities not related to schoolwork.

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

7. Please take a few moments to tell us what other ways you use the Internet for activities *NOT related to schoolwork*:

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

PART B. SCHOOL RELATED INTERNET PRACTICES: The following questions relate to your Internet use when you are doing activities that *ARE related to schoolwork*.

8. When using the Internet for *schoolwork*, how often do you *post/upload* information on the following?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) wikis (e.g. Wikipedia, pbwiki)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) blogs (e.g. Blogger, Mashable)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Social networks (e.g. Facebook, Nexopia)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) Video sharing (e.g. YouTube, Photobucket, Google Video)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) Photo sharing (e.g. Flickr, Creative Commons, Ofoto)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f) Music uploading &amp; sharing (e.g. Jukebox Alive, the mp3 host)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g) Social bookmarking (e.g. del.icio.us, furl)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>h) Virtual environments (Teen Secondlife, The Sims Online)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) Others (please specify): ____________________</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. When using the Internet for *schoolwork*, how often do you go to the following places to *get/see/download* information?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) wikis (e.g. Wikipedia, pbwiki)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) blogs (e.g. Blogger, Mashable)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Social networks (e.g. Facebook, Nexopia)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) Video sharing (e.g. YouTube, Photobucket, Google Video)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) Photo sharing (e.g. Flickr, Creative Commons, Ofoto)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f) Music downloading &amp; sharing (itunes, Zune, Napster, Rhapsody)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g) Social bookmarking (e.g. del.icio.us, furl)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>h) Virtual environments (Teen Secondlife, The Sims Online)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) Others (please specify): ____________________</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
10. How often do your **teachers** suggest that you go to the following places to **post/upload** information?

<table>
<thead>
<tr>
<th>Place</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) wikis (e.g. Wikipedia, pbwiki)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>b) blogs (e.g. Blogger, Mashable)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>c) Social networks (e.g. Facebook, Nexopia)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>d) Video sharing (e.g. YouTube, Photobucket, Google Video)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>e) Photo sharing (e.g. Flickr, Creative Commons, Ofoto)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>f) Music uploading &amp; sharing (e.g. Jukebox Alive, the mp3 host)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>g) Social bookmarking (e.g. del.icio.us, furl)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>h) Virtual environments (Teen Secondlife, The Sims Online)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>i) Others (please specify): __________________________</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

11. How often do your **teachers** suggest that you go to the following places to **get/see/download** information?

<table>
<thead>
<tr>
<th>Place</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) wikis (e.g. Wikipedia, pbwiki)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>b) blogs (e.g. Blogger, Mashable)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>c) Social networks (e.g. Facebook, Nexopia)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>d) Video sharing (e.g. YouTube, Photobucket, Google Video)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>e) Photo sharing (e.g. Flickr, Creative Commons, Ofoto)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>f) Music downloading &amp; sharing (itunes, Zune, Napster, Rhapsody)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>g) Social bookmarking (e.g. del.icio.us, furl)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>h) Virtual environments (Teen Secondlife, The Sims Online)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>i) Others (please specify): __________________________</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

12. When using the Internet for **schoolwork**, how often do you use the following to communicate?

<table>
<thead>
<tr>
<th>Communication Method</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Email (Hotmail, Shaw, Telus, Yahoo, Google)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>b) Instant messenger (MSN, Yahoo messenger, AIM)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>c) Voice over Internet Protocol (Skype, Gizmo Project)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

13. How do you find websites that you frequent?

<table>
<thead>
<tr>
<th>Method</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Using a search engine and clicking on the desired result</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>b) Choosing external links from other websites</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>c) Getting recommendations from peers</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>d) Getting recommendations from teachers</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>e) Getting recommendations from parents</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>f) Other (please specify) __________________________</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
14) When doing schoolwork, how often do you use the following resources?

<table>
<thead>
<tr>
<th>Resource</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Your textbook</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Teacher Handouts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Library Books</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) Newspapers &amp; Magazines</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) Video tapes or DVDs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f) Audio CDs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g) CD roms</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>h) The Internet (including online movies, newspapers, etc.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15) When you complete a school project, how often do you use the following to present your final product?

<table>
<thead>
<tr>
<th>Method</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) PowerPoint, Keynote or other presentation software</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Poster or collage</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Paper (essay, paragraph, answer to questions)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) Online (wiki, blog, website, youtube, etc.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) Oral presentation (speech, play, etc.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f) Making a Video tape or DVD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g) Making an audio CD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>h) Others (please specify):</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

16. When doing **schoolwork** on the Internet, how often do you use the following?

<table>
<thead>
<tr>
<th>Type</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) A computer within your home</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) School library computer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Public library computer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) School computer lab computer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) Other (please specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

17. How many hours per week do you use the Internet for schoolwork? (choose one answer)

<table>
<thead>
<tr>
<th>Hours</th>
<th>O 0</th>
<th>O 1-5</th>
<th>O 6-10</th>
<th>O 11-15</th>
<th>O 16-20</th>
<th>O More than 20</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

18. Please list 3 websites you go to most regularly for **school related information**.

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

19. Please take a few moments to tell us what other ways you use the Internet for schoolwork:

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

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PART C. GENERAL QUESTIONS:

20. How old are you? ____________

21. Are you O Male O Female

22. What is your ethnic background? ____________________________

23. How many people live in your house? ______
   i) father or male guardian_____
   ii) mother or female guardian_____
   iii) sisters ____ (indicate how many)
   iv) brothers ____ (indicate how many)
   v) others (e.g., grandmother) ______________________ (please specify)

24. How many computers do you have in your home?
   O 0 O 1 O 2 O 3 O More than 3

25. Do you have a computer in the home that is for your use only?   O Yes O No

26. Do you have high speed Internet access at home?   O Yes O No

27. What is your name? __________________________________
   (Your name will not be used in any documentation and this survey is confidential)

Thank you for taking the time to complete this questionnaire. Your participation is greatly appreciated and will assist me in my research!
June 17, 2009

Dear Teachers:

We would like your assistance in completing an online questionnaire. To participate, select the following link or copy and paste it into your browser’s address bar: link was inserted here. This questionnaire is part of a study that aims to examine how the Internet is being used in schools. This study has been approved by the UBC ethics board, the West Vancouver School District and your principal. The questionnaire will take approximately 30 minutes to complete.

Your identity and that of your school and district will be kept strictly confidential. You will not be identified by name in any reports of the completed study. Data will only be made available to the co-investigators. The results of this study will be published in a PhD dissertation and journals and presented at scholarly conferences.

Participation in this project is optional. You have the right to refuse to participate or to withdraw from the study before submitting the survey. Completion of the questionnaire assumes your consent for this part of the study.

If you have any concerns about your rights or treatment as a research participant, you may contact the Research Subject Information Line in the UBC Office of Research Services at (604) 822-8598. If you have any questions about the study, contact the principal investigator, Dr. Marlene Asselin at (604) 822-5733 or at marlene.asselin@ubc.ca or the co-investigator, Maryam Moayeri at (604) xxx-xxxx or at name@server.ca.

Sincerely,

Maryam Moayeri
Department of Language & Literacy Education
University of British Columbia

Survey link: link was inserted here
1. When using the Internet for activities **NOT related to teaching**, how often do you **post/upload** information on the following?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) wikis (e.g. Wikipedia, pbwiki)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) blogs (e.g. Blogger, Mashable)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Social networks (e.g. Facebook, Nexopia)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) forums or groups (e.g. Yahoo or Google groups)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) Video sharing (e.g. YouTube, Photobucket, Google Video)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f) Photo sharing (e.g. Flickr, Creative Commons, Ofoto)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g) Music uploading &amp; sharing (e.g. Jukebox Alive, the mp3 host)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>h) Social bookmarking (e.g. del.icio.us, furl)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) Virtual environments (Teen Secondlife, The Sims Online)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>j) Others (please specify): ___________________________</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. When using the Internet for activities **NOT related to teaching**, how often do you go to the following places to **get/see/download** information?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) wikis (e.g. Wikipedia, pbwiki)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) blogs (e.g. Blogger, Mashable)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Social networks (e.g. Facebook, Nexopia)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) forums or groups (e.g. Yahoo or Google groups)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) Video sharing (e.g. YouTube, Photobucket, Google Video)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f) Photo sharing (e.g. Flickr, Creative Commons, Ofoto)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g) Music downloading &amp; sharing (iTunes, Zune, Napster)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>h) Social bookmarking (e.g. del.icio.us, furl)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) Virtual environments (e.g. Teen Secondlife, The Sims Online)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>j) Others (please specify): ___________________________</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. When using the Internet for activities **NOT related to teaching**, how often do you use the following to communicate?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Email (Hotmail, Shaw, Telus, Yahoo, Google)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Instant messenger (MSN, Yahoo messenger, AIM)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Voice over Internet Protocol (Skype, Gizmo Project)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. When using the Internet for activities **NOT related to teaching**, how often do you use the following?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) A computer within your home</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) A computer within your classroom</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) A Computer within a public library</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) A computer within the school library</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) Other (please specify) ___________________________</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5. How many hours per week do you use the Internet for activities NOT related to teaching? (choose one answer only).

- O 0
- O 1-5
- O 6-10
- O 11-15
- O 16-20
- O More than 20

6. Which three websites do you frequent most regularly for activities not related to teaching?

___________________________________
___________________________________
___________________________________

7. Please take a few moments to tell us what other ways you use the Internet for activities NOT related to teaching:

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

PART B. TEACHING RELATED INTERNET PRACTICES: The following questions relate to your Internet use when you are doing activities that ARE related to teaching.

8. When using the Internet for teaching, how often do you go to the following places to post/upload information?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) wikis (e.g. Wikipedia, pbwiki)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) blogs (e.g. Blogger, Mashable)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Social networks (e.g. Facebook, Nexopia)</td>
<td></td>
<td></td>
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<tr>
<td>d) forums or groups (e.g. Yahoo or Google groups)</td>
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<td>f) Photo sharing (e.g. Flickr, Creative Commons, Ofoto)</td>
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<td>i) Virtual environments (Teen Secondlife, The Sims Online)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>j) Others (please specify):</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
9. When using the Internet for **teaching**, how often do you go to the following places to **get/see/download** information?

<table>
<thead>
<tr>
<th>Place</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) wikis (e.g. Wikipedia, pbwiki)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>b) blogs (e.g. Blogger, Mashable)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>c) Social networks (e.g. Facebook, Nexopia)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>d) forums or groups (e.g. Yahoo or Google groups)</td>
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<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>e) Video sharing (e.g. YouTube, Photobucket, Google Video)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>f) Photo sharing (e.g. Flickr, Creative Commons, Ofoto)</td>
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<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>g) Music downloading &amp; sharing (itunes, Zune, Napster)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>h) Social bookmarking (e.g. del.icio.us, furl)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>i) Virtual environments (e.g. Teen Secondlife, The Sims Online)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>j) Others (please specify): ____________________________</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

10. When using the Internet for **teaching**, how often do you use the following to communicate?

<table>
<thead>
<tr>
<th>Method</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Email (e.g. Hotmail, Shaw, Telus, Yahoo, Google)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>b) Instant messenger (e.g. MSN, Yahoo messenger, AIM)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>c) Voice over Internet Protocol (e.g. Skype, Gizmo Project)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

11. How do you find websites that you frequent?

<table>
<thead>
<tr>
<th>Method</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Using a search engine and clicking on the desired result</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>b) Choosing external links from other websites</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>c) Getting recommendations from peers</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>d) Getting recommendations from teacher resources</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>e) Using social bookmarking sites (delicious, diigo, furl)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>f) Other (please specify) ________________________</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

12) When assigning work to your students, how often do you expect them to use the following resources?

<table>
<thead>
<tr>
<th>Resource</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Their textbook</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>b) Teacher Handouts</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>c) Library Books</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>d) Newspapers &amp; Magazines</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>e) Video tapes or DVDs</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>f) Audio CDs</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>g) CD ROMs</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>h) The Internet (including online movies, newspapers, etc.)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
13) How often do you expect your students to use the below methods when presenting/sharing/submitting their work?

<table>
<thead>
<tr>
<th>Method</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) PowerPoint, Keynote or other presentation software</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>b) Poster or collage</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>c) Paper (essay, paragraph, answer to questions)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>d) Online (wiki, blog, website, youtube, etc.)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>e) Oral presentation (speech, play, etc.)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>f) Making a Video tape or DVD</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>g) Making an audio CD</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>h) Others (please specify): ___________________________</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

14. When preparing teaching activities on the Internet, how often do you use the following?

<table>
<thead>
<tr>
<th>Method</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) A computer within your home</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>b) A computer within your classroom</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>c) A computer within a public library</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>d) A computer within the school library</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>e) Other (please specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15. How many hours per week do you use the Internet for teaching related activities?

<table>
<thead>
<tr>
<th>Hours</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1-5</td>
</tr>
<tr>
<td>6-10</td>
<td>11-15</td>
</tr>
<tr>
<td>16-20</td>
<td>More than 20</td>
</tr>
</tbody>
</table>

16. Which 3 websites do you frequent most regularly for teaching related information?

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

17. Please take a few moments to tell us what other ways you use the Internet for teaching:

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

18. What are your thoughts about the value of the Internet in helping students to learn in your content area(s)?

____________________________________________________________________________________
____________________________________________________________________________________
19. What challenges do you face in integrating the Internet into your teaching practice?

____________________________________________________________________________________

____________________________________________________________________________________

PART C. GENERAL QUESTIONS:

20. Which subjects do you teach? ___________________________________________________________.

21. Which grades do you teach? O 8 O 9 O 10 O 11 O 12

22. Are you O Male O Female

23. How many years have you been teaching?
   O 0-3 O 4-7 O 8-11 O 12-15 Search O 15-19 O 20 or more

Thank you for taking the time to complete this questionnaire. Your participation is greatly appreciated and will assist me in my research!

If you are incorporating the Internet in novel ways within your classroom and would be willing to participate in this study in a larger capacity, please contact me at name@server.ca.

Sincerely,
Maryam Moayeri
Appendix D: Blog Instructions

Grade 10 blog Participant

Thank you for agreeing to participate in this study. We are interested to learn about your thoughts on Internet use for education. Please go to the following site and answer the questions by clicking on the comment button:

http://grade10Internet.blogspot.com

When commenting, you are welcome to use your real name or a pretend name. We ask only that you use the same name each time you comment. Please comment on as many questions as you can and as many times as you would like.

Feel free to email me at name@server.ca or phone me at xxx-xxx-xxxx if you have any questions.

Thanks again,

Maryam Moayeri
Appendix E: Assignments

CRAP DETECTION 101

Clues from the URL
What kind of site is it? - (org, .com, .gov, .edu, .ca, etc.)
Restricted domains include .edu, .gov, .gc.ca,
Unrestricted domains include .org, .net, .com
Personal sites often have the following symbols in them: ~ %.
Do you recognise the name in the URL?

Reliability
Who sponsors the website?
Click on "Home," or "About". Or truncate the URL.
Who is the author? Are details given to convince you that the author
is qualified? Is a contact supplied?

Accuracy
Is the information comparable to other sources?
Is the information documented with links to other sources (do they
work?), or with citations?
Is the information current? Is it dated?

Purpose
Was the information put on the Web to
Inform
Persuade
Sell a product
Make a Joke?
Does the purpose match your need?

Presentation
Is the information presented in a way that is
Understandable?
Well Organised?
Appealing
Does the content match your need?
CRAPP Detection 101 – How did it go?

Name: ________________

How many books and/or websites did you consult to complete your assignment?

Books _____  Websites _____

1. List the title of each website you used and provide the domain name* (see explanation below).

   Website Title: ______________________  Domain Name: ______________________

   Website Title: ______________________  Domain Name: ______________________

   *Note that the domain name part of the URL comes after http:// and ends with .org/.com/.edu/.net/.gov/.ca. For example, the URL (web address) for our school library catalogue below. A box is drawn around the domain name:

2. Which website was most helpful to you as you completed the assignment?

   Title: ______________________

3. Which elements of CRAPP detection did you use to ensure that the website was reliable:

   Clues from the URL (Explain what clues you got from the URL below)

   ___________________________________________________________________

   Reliability (what made you believe the site was reliable?)

   ___________________________________________________________________

   Accuracy (what made you think the information was accurate?)

   ___________________________________________________________________

   Purpose (what was the purpose of the site?) ____________________________

   Presentation (circle the elements of the presentation that made this site work for you).
   easy to read  well organised  provided most of the answers I needed

   ___________________________________________________________________
Integrating Information Literacy Skills into the Science 8 Program

1. You Be The Riddler  (Three Lessons)

Skills: Web Evaluation (especially reading URL's); Note Taking (keyword and summarising); working bibliography

Lesson One: Thursday Sept. 17 (day 1) during period #2 and Friday Sept. 18 (day 2) during period 1,2,3

- Crap Detection 101 – Introduce web evaluation criteria by having students evaluate a bogus website
- Students establish criteria for evaluating websites.
- Students use the criteria to evaluate two pre-selected websites on copepods using Crap detection criteria. (This year we skipped this part, deciding to integrate the critical evaluation into the sites students choose for authentic research on their assigned organism).

Lesson Two: Monday Sept. 28 (day 1) during period #2 and Tuesday Sept. 29 – period 1, 2, 3

- Note taking Skills – Provide students with part of pre-selected article on copepods that has been copied into an online note taking sheet.
- Students note key words and phrases and then summarise article in one or two sentences. (The note taking template mirrors the template provided on Noodle Bib. I hope to get students into Noodle Bib later in the year).
- Working Bibliography for Websites—provide students with working bibliography sheets for websites. (Place a column in these sheets for the question: was this resource useful for your research? Why?). Show students where to find publication information on websites (website sponsor)
- Remaining time left for students to research in their content area.

Lesson Three: Wed Sept. 30 period 2, and Thurs. Oct. 1 periods 1,2,3.

- Using Indexes in Books – two minute lesson
- Working Bibliography for Books and Encyclopedias: Demo where to find publication information. (Students are keeping a working bibliography at the top of their note pages. Formal bibliographic citation to be taught in a later unit).
- Students use this class to conduct research
2. Wiki Project on Body Systems (Four Lessons)

Employing wiki technology, students will write collaboratively to create an online encyclopedia of body systems.

Students Will
- **Identify** criteria for the content of an encyclopedia article
- **Apply** Wikipedia content criteria to the articles they contribute or revise:
  - Neutral Point of View - factual and balanced
  - No Original Research – the articles report the published research of reliable sources
  - Verifiability - sources must be cited so that readers can verify their accuracy
- **Evaluate** their own work and the work of others based on the above criteria
- **Employ** wiki software to write collaboratively
- **Reference** sources in text (informally) and create an accurately formatted Works Cited List

Note: It is essential that students have already learned note taking skills. If not, time must be provided.

**Lesson One:**

Using a prescribed note taking organizer, students conduct research to answer a specific question related to the Body Systems unit. (The teacher has vetted the questions to ensure student success: Is there adequate time available to answer the question? Does the student have adequate background knowledge? Is the question too broad or complex? Too narrow? Are there information resources appropriate to the students’ reading level available in the library?)

Tell students that they will be creating articles for an online encyclopedia of Body Systems. Today they are taking notes. Next day they will write their articles based on agreed upon criteria.

- Review note taking skills (reading for purpose/organising notes: provide template/referencing notes to source).
- Provide overview of pre-selected resources available.
- Students conduct research

**Lesson Two:**

- Students create criteria for a good encyclopedia article.
• Students go to the Wikipedia website and read and compare their criteria with the Wikipedia criteria. Students should look at a Wikipedia article to see these criteria applied. Place particular emphasis on the Works Cited List.

• Students write articles based on the established criteria.

• Students create a works consulted list using an online citation maker.

Lesson Three:

• Posting content onto a wiki. (First group sets the structure of the article. Second group edits for content, documenting each edit in discussion area and entering a reason for it).

• Citation Skills (Note that second and successive groups will add to list of works consulted)

Lesson Four:

• In text citation skills (informal): students will place a number beside any information in the article that relies on the work of others.

• Works cited: students will learn how to organise their in text citations into a works cited list.

• Revising and re-writing if necessary.

• Meta Cognitive Piece: students enter one final reflection on the process in discussion tab.

To Do

Refining the Question

Filtering Resources

Timeline

Image scavenger hunt