

**New Media, New Policies:
The Ambiguous Role of Popular Online Media in British
Columbian Classrooms**

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ABSTRACT

In BC's education system there is ongoing debate regarding the role of the internet and popular digital media within school environments. This is reflected in the extreme disparity of online resource integration in various school districts. It is the objective of this study to profile these practices, compared to both the progressive curricular mandates outlined by the province as well as a cohesive and inclusive definition of digital literacy cultivated from a representative understanding of digital youth culture. In profiling the perceived limitations and opportunities offered by the use of online resources within the classroom, it is argued that substantial pedagogical and infrastructural changes are required in some of the more regressive districts. These school boards in particular could benefit from opening a dialogue with more technologically advanced districts, in addition to cultivating a more purposeful and nuanced understanding of digital literacy imperatives.

Keywords: digital literacy; media education; digital youth; techno-literacy; internet literacy

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Introduction

In March of 2009, the principal of Port Hardy Secondary School on Vancouver Island grew so exasperated with students sneaking in cell phones despite a blanket ban that he purchased a signal jammer from China, which blocked all cellular access in the building. After receiving an emailed notice informing him that such practices were illegal as per the Radio Communications Act, he sheepishly disabled the instrument. He still claimed, however, that the incident only further demonstrated that "some people are attached to their cellphones and no wonder we have a problem...I'm going to wait for regulations to catch up with reality so we can use it" (Steve Gray, qtd. in McCulloch, 2009). Meanwhile, over on the mainland at Point Grey Secondary School in the Vancouver District, students are allowed to have cell phones at school, provided that they respect teachers' rules surrounding their use in class. Some teachers have even integrated them as a teaching tool, particularly as having so many students with 3G enabled devices allows them to circumvent the limitations of the district's archaic, wired-only internet access. This district, however, has chosen to limit student and teacher access to popular websites such as Facebook and temporarily YouTube, citing them as being distracting, potentially dangerous and overused in a vein of argument similar to Mr. Gray's. Five kilometres away, the Coquitlam School Board embraces the use of cell phones, personal

communication devices and even the beleaguered social networking sites Facebook and MySpace. Certain schools in the district boast blazingly fast fibre optic enterprise network connections, projectors in all classrooms, and laptop computers for each teacher. The disparity between the technological infrastructure and pedagogical mindset concerning the integration of online resources in BC schools is enormous, and it is difficult to believe that such contrasting practices can coexist within one province.

It is the aim of this study to provide an initial examination of the state of integration of online resources in BC secondary schools, particularly in regards to the striking incongruity between districts. Select school boards and educators are featured throughout the analysis in order to outline the key limitations and opportunities at the administrative, policy and teaching levels, focusing on how and why certain popular resources are either banned or extolled within various districts. This study consists of interviews with all levels of educators, from district officials to principals and classrooms teachers, as well as emphasizing the student perspective gathered from focus groups and a distributed survey. In addition, observational case studies were conducted in two districts with very different technology policies, located in New Westminister and Vancouver respectively. Using these methodologies, I assemble a set of district profiles that begin to illustrate how and why technology and digital literacy implementation strategies differ so widely within the province.

In order to situate these practices in a broader context, I outline three framing parameters of youth internet use in the first chapter, focusing on online

representation, content production and information retrieval. I examine these categories from the 'celebratory' perspective, as represented by the optimistic and empowering narrative that is characteristic of researchers extolling the virtues of 'Web 2.0.' I then contrast this view with the more pessimistic or cautionary rhetorical position that views adolescents' online practices as primarily superficial, distracting and a waste of time. I argue that a balanced and more complex understanding of these narratives is required, as internet resources offer ample pedagogical opportunity to guide youth in their navigation of online space. This overall approach, which recognizes both the opportunities and limitations surrounding the use of internet resources in formal school settings, is represented by a cohesive definition of digital literacy that reflects both the offerings and drawbacks of online culture. The definition of the often ambiguous term "digital literacy," which draws upon other research studies and the curricular guidelines set out by the province, provides direction in guiding the successful implementation of digital literacy outcomes within BC at the secondary school level.

In the second chapter, I detail the methodology and aims of the study, profiling the in-class case studies in addition to providing a breakdown and analysis of the student survey results. Using material gathered primarily from interviews with educators from a range of backgrounds, I present a comparative outline of seven different school boards from varying locations in the province, investigating each districts' policy, pedagogy and teaching practice surrounding the use of online resources. In general, I find that both the infrastructure and

pedagogical mindsets vary significantly between school districts, which greatly affect the perceived role of the internet in teaching and learning practice. Schools that ban or limit access to popular resources such as social networking sites or video streaming tend to have the least progressive digital literacy practices in place, exacerbated by lack of teacher training and infrastructural limitations.

Throughout the third chapter, I examine the reasons behind these disparate approaches, concluding that infrastructure and pedagogical mindset are two key components that often stand in the way of successful integration of online technologies. Infrastructural limitations, however, often exist because of an underestimation of the importance of cultivating a more advanced system of digital access, in addition to decreased opportunities for teacher training. This also includes a lack of dedicated techno-literacy positions at the district level, professional development opportunities, and a general support structure comprised of software and personnel. Progressive districts such as Coquitlam exemplify that successful integration with limited financial means is indeed possible, and I explore as to why other districts are so far behind in terms of both access and pedagogical approach.

In general, regressive practices often seem to result from an inaccurate understanding of adolescents' informal relationship to digital technology, a poor integration of the multimodal literacy outcomes advocated by the provincial curriculum and finally an insufficient emphasis on the role schools should have in encouraging a sense of critical navigation of online space. These three components of digital literacy are required in order to adequately educate

students within 21st century society, including developing key competencies that are demonstrated to be lacking within their informal use of online space. It is the goal of this study to illustrate these shortfalls, demonstrating how dialogue, dedicated professional development and a clear pedagogical sense of digital literacy imperatives are integral components of modern public education.

Chapter One: Digital Youth, Digital Schools - Review of Literature

Section One: The Digital Generation

With the introduction and proliferation of digital technologies, the nature of our social, political and professional experience is dramatically changing. So too is the nature of childhood and adolescence, and countless news articles, blogs, professional reference books and research studies have been undertaken with the goal of profiling this “digital generation:” those who cannot remember life without the internet.

Today’s adolescents have been labelled as everything from lazy to creative multi-taskers, as commentators struggle to make sense of a generation of youth who are abandoning television for computer screens, and whose technological ‘savvy’ often far surpasses the abilities of their parents and teachers. Throughout both the academic and popular commentary concerning today’s youth, there are two main narrative arcs that tend to be emphasized. In one perspective, which I will term the more ‘celebratory’ position, digital technology is understood to be an emancipatory and productive resource that fosters increased creativity and participation among young people. In contrast, critics who further what I will refer to as the ‘cautionary’ position argue that such participation is largely superficial and potentially dangerous. As Buckingham

(2007) suggests, “popular discussions of the internet veer between celebration and paranoia: on one hand, the technology is seen to create new forms of community and civic life, and to offer immense resources for personal liberation and empowerment; on the other, it is seen to pose dangers to privacy, to create new forms of inequality and commercial exploitation, as well as leaving the individual prey to addiction and pornography” (p. 31).

Although both of these narratives have merit, they tend to depict an overly simplistic vision of the character of youth internet use today. These conflicting accounts are also present in the media, however, and as a result, parents, educators and administrators are regularly confronted with widely divergent accounts of what it means to be a youth in the 21st century. In this chapter, I consider the benefits and drawbacks of these polarized views in order to develop a more helpful depiction of the overall character of today’s “digital youth.” Through this analysis, my aim is to complicate each narrative in a way that questions the idealism inherent in the first view as well as the suspicion and confusion that leads adherents of the latter perspective to disregard the productive aspects and potentiality of youth internet use. In doing so, my objective is to illustrate both the educational opportunities and limitations surrounding adolescent online habits, in order to illustrate the role schools might have in fostering a more complex and critical use of online resources by youth. In subsequent chapters, I then focus on how internet tools are used in British Columbia secondary schools as a way of examining some of the challenges and

possibilities that are shaping the way schools and educators support a complex form of digital literacy in BC.

Regardless of the nature of the commentary, I have found that most youth online activity can be divided into three areas: online representation and social interaction, production and creative contribution and information seeking practices. In order to investigate the contradictory narrative arcs that describe youth digital media practices today, I will examine each position in relation to these three frames. In doing so, I illustrate how a cohesive understanding of the two perspectives, which simultaneously recognizes the opportunities and limitations of adolescents' relationship with online space, is an ideal perspective from which to develop digital literacy imperatives in schools. In the latter section of this chapter, I investigate and define this ambiguous concept of 'digital literacy,' setting up the contextual framework for the case study of internet use in BC schools.

1.1 Facebook, Twitter and the Changing Notions of Social Space

In the mid 1990s, technology sociologist Sherry Turkle (1995) argued that virtual space "gives people the chance to express multiple and often unexplored aspects of the self ...mak[ing] possible the creation of an identity so fluid and multiple that it strains the limits of the notion" (p. 12). At this time, many descriptions of the internet's potential as a space for identity negotiation were breathlessly hopeful, as commentators envisioned a democratic forum in which users were freed from the constraints of age, gender and sexuality that dominate 'real life.' Since then, this idealism has waned and has given way to a more

nuanced understanding of the potential of cyberspace. Even so, many youth researchers (cf: Subrahmanyam, Greenfield & Tynes., 2004; Schmitt, Dayanim & Mattias, 2008) continue to argue that online environments do offer reduced risk spaces in which adolescents can undertake the identity exploration and social negotiation that is characteristic of the age group. The claim of reduced risk is attributed to the virtuality of a space where youth can engage in identity negotiation, particularly in terms of exploring sexuality, in an environment that does not present the same risks or context for embarrassment as physical interactions. In the 2008 white paper summarizing the three-year MacArthur Foundation research project on 'Digital Youth,' it is further argued that the "ready availability of multiple forms of media, in diverse contexts of everyday life, means that media content is increasingly central to everyday communication and identity construction... [In this sense,] the term 'hypersocial' define[s] the process through which young people use specific media as tokens of identity, taste, and style to negotiate their sense of self in relation to their peers" (Ito et al., p. 14).

The pervasiveness of online social networking and virtual self representation is thus a central aspect of adolescents' contemporary lives, as has been noted by numerous studies. The 2005 phase of the "Young Canadians in a Wired World" project undertaken by the Media Awareness Network and commissioned by Industry Canada, for instance, found that "young Canadians are more connected than ever...An astonishing 94 percent of young people access the internet from home, with students as early as Grade 4 beginning to rely on the internet to explore social roles, stay connected with friends and

develop their social networks” (“Key Findings”). The 2007 PEW internet and American Life study found further that 55% of teens have posted an online profile on a social networking site (Lenhart & Madden, p. ii), a number that has undoubtedly grown with the explosion of social networking applications in the last two years. Given this, it is often argued that social interaction on websites such as Facebook, MySpace and Twitter has been virtually naturalized as an integral part of the social process for contemporary adolescents, as “these sites [have] developed significant cultural resonance amongst American teens in a short period of time” (boyd, 2007a, p. 1).

In contrast to the early notions of a liberated, fragmented identity in the realm of cyber space, however, these current trends suggest that adolescent use of the internet as a medium for identity and social exploration actually closely reflects their ‘real life’ conceptions of self and social roles, although many researchers argue that it does offer a relatively novel realm for impression and representational management:

Identity formation among Digital Natives is different from identity formation among predigital generations in the sense that there is more experimentation and reinvention of identities, and there are different modes of expression, such as YouTube and blogging;...[At the same time], studies of online identity formation consistently suggest that despite the difference noted above, young people tend to express their personal and social identities in ways that are consistent with their identities in real space (Palfrey and Gasser, 2008, p. 21).

This is evident in the staggering popularity of social networking sites such as Facebook, on which youth provide and display information about themselves that reflects their offline lives. In fact, most adolescents seem to view their online and

offline selves as indistinct from one another; “young people do not see the Net as a distinct entity or environment. It is simply one more space in which they live their lives... [Furthermore, they] use their social skills online primarily to participate in and extend their real-world social networks” (Media Awareness Network “Trends and Recommendations”, 2005, p. 2, 8).

As such, many current researchers suggest that contemporary adolescents are generally not using the internet to ‘escape’ from real life or to create alternate versions of their personal identities; instead, online space is becoming an increasingly important medium for socialization, impression management and representation. In her research on social networking sites and adolescents, for instance, danah boyd (2007a) notes that “the choice of photos and the personalized answers to generic questions [on Facebook and similar sites] allow individuals to signal meaningful cues about themselves” (p. 11). In this way, she argues that adolescents are quite conscious of representational strategies that may enhance or reinforce social roles. In fact, “teens are inclined to present the side of themselves that they believe will be well received by their peers” (Ibid, p. 13). Contemporary youth are thus using the internet as an extension of conventional adolescent processes of identity exploration and socialization. They are doing so not in an anonymous, fragmented fashion, however, but are turning to websites and applications that build on their real life identities through the disclosure and purposeful organization of personal information. As Palfrey and Gasser (2008) summarize, “this disclosure can be understood as a means of developing personal identity and a means by which

that personal identity evolves...Digital Natives are using networked public spaces as crucial environments to learn socialization as well as identity development” (p. 21, 26).

According to this more celebratory position, online representation and social networking sites have undoubtedly emerged as an essential space for youth to explore their sense of self, including cultivating a set of social cues and signifiers. However, some commentators (cf: Gross et al, 2004; Lenhart et al., 2007) have expressed concerns with the motivation and amount of information youth provide about themselves online, both in terms of self representation and privacy; “there is reason to believe that young people systematically underestimate the risks of disclosure” (Palfrey and Gasser, 2008, p. 24). In contrast to the above depiction of a holistic environment promoting identity exploration and self discovery, some argue that there are very real concerns within these spaces that may overshadow the benefits.

The past few years have witnessed the veritable explosion of online social networking, with the rapidly growing popularity of sites like MySpace and Facebook. This increase has been accompanied by concerns surrounding privacy and disclosure of personal information online. For example, there have been countless news articles published describing how employers are using social networking tools to screen prospective employees. Evidence also suggests that employers are even going as far as to terminate current employees whose social networking profile displays undesirable information. In November of 2008, a New England Patriots cheerleader was fired for being tagged in drunken

Halloween pictures that associated her with offensive graffiti (Lamont, 2009, p. 10). Earlier in the year, a Ryerson University student faced expulsion for creating a study group on Facebook (Brown, 2008, n.p.). In 2007, eleven Catholic high school students in Ontario were suspended for posting negative comments about their principal on the same social networking site (CBC News, 2007). Profile monitoring is on the rise, in other words. and an independent study conducted by CareerBuilder.com found that “22% of all hiring managers have combed through social media profiles to help evaluate potential hires, up from just 11% two years ago” (Kee, 2008).

These stories, and countless others that have circulated in the past few years, illustrate the traceable power of the internet, the blurring line between private and public conduct, and adolescents’ naïveté concerning online privacy. Most importantly, it seems to indicate that teens are not giving critical consideration to how they are representing themselves online. Boyd was accurate in her assessment that social networking sites are an important part of youth impression management, then, but she does not consider the risks posed by this practice, in addition to the quality of participation. In actual practice, teens seem to use these sites to portray themselves as cool, popular or attractive; they are quick to ‘untag’ themselves in photos in which they feel they do not look their best, while at the same time are inclined to post pictures showing themselves partying or rebelling. This has led many critics to dismiss adolescent social networking as superficial or harmful, a practice that should be discouraged,

largely because they state that it poses problems for youth identity negotiation and representation.

The volume of information that adolescents are providing online about themselves is also a potential cause for concern, particularly if they are unaware of the proliferation and impact of providing this data. A 2007 PEW study found that 82% of teens with online profiles provide their first name; 79% have included photos of themselves; 66% have included the name of their city or town and 49% have included the name of their school (Lenhart and Madden, 2007, p. iii). The researchers argue that teens are actively managing online privacy, as “two-thirds (66%) of teens with an online profile say they restrict access to it in some way” (Lenhart et al., 2007, p. 13). However, even if some adolescents have enabled some privacy settings on their profiles, it seems apparent many are in fact unaware of the various ways in which their personal information is collected online. The “Young Canadians in a Wired World” study found, for instance, that “ninety percent of the top 50 sites have registration procedures in which kids are asked to identify themselves, typically by first and last name, age, gender and email address” (Media Awareness Network, “Trends and Recommendations”, p. 17). Youth seem to be more than willing to do so to access their favourite sites, which results in an increasing tendency to provide more and more personal information online. Additionally, “Sophos PLC conducted a study that showed that 41 percent of Facebook users were willing to give up personal information to a complete stranger – even to a person who was completely made up” (Palfrey and Gasser, 2008, p. 61). In other words, children and adolescents are not aware

of the extent to which their personal data is available online, both as a consumer dossier to be bought and sold by companies, and as a source available to school administrators, potential employers and peers. As Palfrey and Gasser (2008) summarize “at their best, [youth] show off who they aspire to be [online] and put their most creative selves before the world. At their worst, they put information online that may put them in danger, or that could humiliate them in years to come” (p. 20).

Finally, while adolescents have begun to adopt a certain etiquette surrounding conduct in online spaces (Ito et al., 2008, p. 18), many argue that there continues to be little ethical accountability online, leading to behaviour that one would refrain from in offline space. This ranges from the increasing prevalence of cyberbullying to deciding what to post on one’s personal profile. Jenkins et al. (2006) argue that this new media landscape is creating new and unexplored demands in terms of shifting ethical standards, particularly pertaining to personal information disclosure. These transforming standards are often not fully considered or understood by adult internet users, let alone by the youth population. Youth are often unaware of notions surrounding privacy and personal representation, and many indicate that they require more guidance in this area; the Young Canadians in a Wired World study found, for instance, that “young people are concerned about their online privacy. Two-thirds of respondents say they would like to learn “how to protect [their] privacy on the Net” in school, [and only] half of students say they “sometimes” (44 per cent) or “always” (five per cent) read privacy policies on the Web sites they visit” (“Key Findings”). In

general, youth would benefit from the opening of a dialogue concerning online conduct, accountability and responsibility. As Jenkins et al. (2006) conclude, “no established set of ethical guidelines shapes the actions of bloggers and podcasters, for example. How should teens decide what they should or should not post about themselves or their friends on Live Journal or MySpace” (p. 17)?

1.2 From the Mundane to the Magnificent: Youth, Creativity and Participatory Culture

Adolescents’ virtual presence is not limited to social networking and personal representation, however. Creative production, remixing and streaming of content are also extremely popular online activities among contemporary youth. For example, in 2002, a phenomenon occurred online that is referred to in popular culture as “the *Star Wars* kid.” The subject of the two-minute long video was a 14-year old Quebec high school student who had used his school’s camera equipment to record his enactment of a light sabre fight from the film *Star Wars*, using a golf ball retriever as his weapon. Some of his classmates inadvertently found the tape, and decided to distribute it on various file-sharing applications to mock the boy. The video clip characterized and arguably initiated the phenomenon of “going viral;” it was downloaded several thousand times within two weeks and by late 2006, it was estimated that the video had been viewed over 900 million times (BBC News, 2007). Interestingly, the clip did not circulate only in its original form. Rather, countless people took the footage and modified it to varying degrees, from adding light sabre and sound effects to fully integrating digital opponents for the boy to fight. This example is paradigmatic of

one of the current dominating characteristics of the internet: people, particularly adolescents, are utilizing it as a space to create, remix and distribute content.

For some, the interactive and participatory nature of “Web 2.0,” the current incarnation of the internet, is making it easier than ever for young people to contribute to cultural production. Unlike broadcast media such as television and radio, the internet provides a forum for creative production and low-cost contribution and distribution. The most notorious ‘viral’ video clips often begin on consumer level computers, using non-professional editing software. Most importantly, the bulk of these contributions are being made by those under 30. According to the 2007 PEW study “Teens and Social Media,” for instance, approximately 64 percent of online teens have created some sort of content on the internet, including creating personal blogs/homepages or artistic creations that are shared online (Palfrey and Gasser, 2008, p. 112; Lenhart et al., 2007, p. i). Given this apparent level of activity, some suggest that while adolescents are no doubt sharing day-to-day occurrences and video clips with their friends, others are using online platforms and resources to express their personal, political and cultural opinions, as will be explored below. Parodying and remixing popular culture media is extremely popular amongst youth, as evidenced by the numerous offshoots of the “Star Wars kid” video, in addition to countless mashups of consumer films, advertisements and television shows posted online.

In addition to these practices, some researchers (cf. Oates, Owen & Gibson, 2006) also argue that youth are using the internet today to express political or social opinions. This practice was perhaps most evident during the

2008 US Presidential campaign in which President Obama made extensive use of Web 2.0 technologies to tap into the youth vote (and youth influence). In turn, the viral video for Will.i.am's song "Yes We Can," the youth rallies organized through Facebook and the popularity of ring tones on the barackobama.com website all point to the growing awareness and impact of youths' productive presence on the internet (Leberecht, 2008; Scola, 2008). Another example is the website www.amplifyyourvoice.org, a youth-driven effort to engage and mobilize other adolescents who are "dedicated to changing society's dysfunctional approach to sexual health issues" ("About Amplify", 2009). The site is comprised of a list of issues and events that youth can become involved in, as well as a thriving community forum in which both virtual and physical activism is organized. There are resources available on how to mobilize a campaign on subjects ranging from body image to abortion, including providing tips on using blogs, Twitter, Facebook and other social networking tools to further a cause.

Another example furthering the argument that youth actively take part in online participatory culture is the "One World" phenomenon, begun by YouTube contributor MadV. Wearing a Guy Fawkes mask, the celebrated online persona urged members to contribute videos in which they write a message to the world on their hands, stating that "this is an invitation to make a stand, to make a statement." MadV began the trend, displaying his palm with the words "One World" written in black ink. After the responses flowed in, MadV edited the footage together to create one video, which is quite powerful to view. Over haunting music, a series of clips are shown in which young people (mostly

teenagers) are shown composing a message on their hands; the palms are then revealed to display such thoughts as “tolerance,” “equality,” and “speak up.” MadV’s original video has been designated as the most responded-to clip of all time, as hundreds of thousands of people responded to his call to make a simple statement (Lange, 2008, p. 375). Stories such as these have prompted some theorists to argue that adolescent internet use is inherently democratic in nature as “youth are more than just consumers of digital content; they are also active participants and creators of this new media culture, developing content, designing personal web sites, and launching their own online enterprises” (Montgomery and Gottlieb-Robles, 2006, p. 132).

Often heralded as a democratic medium, digital proponents argue that the internet now offers a space where youth feel they can make some sort of contribution or mark on the world, a sentiment that has led to the explosion of youth blogs, video contributions and a boom in remixes and mashups (cf: Donnelly, 2008; Serazio, 2008). At its best, this online creative production and contribution enables youth to explore, rethink and analyze cultural, political and social conventions. According to Palfrey and Gasser (2008), production and remixes “allow Digital Natives and others to interact with cultural objects in a way that affects how cultures develop and are understood” (p. 115). In this way, today’s youth are often said to be more creative, politically engaged and socially minded than any other generation. According to Don Tapscott, a well known exponent of what he terms the Net Generation, today’s youth “are savvy, self-reliant, analytical, articulate, creative, inquisitive, accepting of diversity, and

socially conscious” (Tapscott, 1998, paraphrased in Buckingham & Willett, 2006, p. 6).

In this overwhelmingly positive depiction, the internet represents, to some degree, a creative playground for youth wherein they can remix symbolic cultural references, participate in the democratic process and partake in creative contribution. However, as Jenkins et al. (2006) and others argue, while the internet holds vast potential as a participatory medium, it is also clear that there are a number of significant limitations and barriers to the full realization of this potential. First and foremost, while many enthusiastic commentators have extolled the virtues of the participatory nature of Web 2.0, they often leave unexamined the fact that, like many creative endeavours, this realm of participation and production is often limited to those children who come from more privileged backgrounds. Although the vast majority of teens in North America now have “access” to the internet in some form, the quality and type of access dictates how the medium can be used. Adolescents that do not have internet access at home, or have access of very limited nature, for instance, do not experience online interaction in the same way as their peers. Yet participatory culture requires both the experiential tools to navigate the technology in addition to the availability of leisure time to ‘play’ with and explore the offerings of participatory space. Many studies have described this participation gap, which is increasingly dividing young people “into those for whom the internet is an increasingly rich, diverse, engaging and stimulating resource of growing importance in their lives and those for whom it remains a

narrow, unengaging, if occasionally useful, resource of rather less significance” (Livingstone and Barber, 2005, qtd. in Jenkins et al., 2006, p. 12-13). As I will argue in this study, the lack of adult appreciation for the value of this time spent ‘hanging out’ or ‘tinkering’ also serves to widen this gap, particularly in an academic environment:

Sporadic, monitored access at schools and libraries may provide sufficient access for basic information seeking, but is insufficient for the immersed kind of social engagements with networked publics that are becoming a baseline for participation on both the interest-driven and the friendship-driven sides. Adult lack of appreciation for youth participation in popular culture has created an additional barrier to access for kids who do not have internet access at home. (Ito et al., 2008, p. 36)

This point is particularly relevant to the current study of internet access in BC schools, as some districts demonstrate a marked disregard for popular use of online tools, resulting in the banning of many websites and placing limitations on access in educational settings. In doing so, educators are failing to recognize the significant teaching opportunities that these realms offer, including their role in fostering new forms of literacy. Limiting student access and curbing educational initiatives surrounding the use of popular online materials overlooks the integral role schools can have in developing digital literacy skills which can enable forms of economic, cultural and social capital (Bourdieu, 1984), particularly for those youth without robust internet access in their private lives. Seiter (2008), in particular, notes this and emphasizes the importance that these implicit forms of digital literacy can have on adolescents’ future capabilities in the workforce and society. In the end, she argues that access to and familiarity with the immersive online environments some youth experience is integral to the development of the

capital youth require to gain meaningful employment and participation in information-based economies.

Beyond the problem of the digital divide, it has also been argued that the quality of youths' online contributions may not be as sophisticated as more celebratory scholars suggest of the digital generation. Even amongst users with regular access, meaningful participation may be the exception rather than the rule. While the story of MadV's call for contributions described above demonstrates an ideal use of participatory culture, in many ways it is a unique case amidst countless submissions and comments on YouTube and other social networking spaces that demonstrate bigotry, bad taste or lack of reflection (Buckingham, 2007, p. 10). As Palfrey and Gasser (2008) state, "many digital natives are offering up contributions that fall somewhere between the mundane and the magnificent" (p. 112). While many adolescents' submissions may be seen as mundane (such as posting a blurred camera-phone video clip of a night partying with friends), some may even border on being offensive. For example, many of the clips or links that do reach a 'viral' status amongst youth tend to be of a mocking nature, whether it is a video of someone falling, being injured or otherwise humiliated, as in the "Star Wars Kid" viral video wherein the boy was mercilessly mocked by millions of viewers. And while some adolescents may keep up blogs that present reflective insights on culture, society and their personal experiences, many others' are filled with obscene statements and/or banal comments about their daily activities. Unfortunately, however, many proponents of digital culture do not make this important distinction about the

quality and purpose of participation; in fact, many digital youth proponents over idealize the individual voice, and seem to herald whimsy rather than critical engagement with texts (Alexander, 2006 p. 45).

In general, then, the picture of participatory democracy depicted by proponents of the celebratory position is often disputed by theorists who view such use to be the exception rather than the rule. For example, although adolescents may engage with creative production in the form of remixing and posting 'mashed up' content, they often do not reflect on the ethical implications of their activities regarding creative license, particularly as such regulations are very unclear at the moment. Indeed, some researchers have argued that youth, as well as the majority of online creators do not regularly consider notions of copyright and distribution of content that was originally created by another person or company, as the collaborative and remix culture of virtual space often precludes conventional notions of creative license and ownership (cf. Bruce, 2004).

It is also of note that online youth culture may not be as democratically-oriented as the more celebratory researchers suggest. For example, theorists such as Seiter (2008) point out that such spaces are often more exclusionary in nature. She cites the evolution of Facebook as an example, noting that it was originally only accessible to university students, and later grew to categorize members by geography and level of schooling. She (2008) argues that this "illustrates the ways that youth can be strongly invested in keeping social networks exclusive...[based on the] continued importance of socioeconomic and

geographic location as determinants of access to social networks” (p. 39).

Similarly, boyd (2007b) has found a striking social divide to exist between users of the previously dominant MySpace social networking site and Facebook. She states that ‘hegemonic’ or mainstream teens have abandoned MySpace, which they view as being junky-looking or immature, while ‘subaltern’ adolescents, comprised of minority teens on the fringes of society, continue to make use of the older site. Boyd (2007b) has found that both groups tend to disregard the worth of the other, each with a system of values concerning aesthetics and socialization that bifurcate the groups.

1.3 Let’s Google It: Youth as Online Information Seekers

Beyond creative production and online identity negotiation, the 2007 PEW research study on teens and social media revealed an important and somewhat surprising fact about adolescent internet use: “while content creation is an important and growing online activity, the two most popular internet activities among teens...have to do with information gathering rather than communicating” (Lenhart et al., 2007, p. 25-26). Although it is generally assumed that the majority of teens’ time online is spent engaged in instant messaging, profile updating and creating media forms, it has been found that many adolescents in fact spend a good amount of their time online searching for information. According to the MacArthur Foundation’s Digital Youth project (2008), for example, “the growing availability of information in online spaces has started to transform young people’s attitudes toward the availability and accessibility of information” (Ito et al., p. 21). With this in mind, anecdotes abound in my own research wherein

parents have watched in disbelief as their teenager simultaneously looks up a movie review, show times, theatre location, online ticket sales and forum feedback on a film, tabbing quickly between the various screens. In this sense, “adults born before the personal computer boom of the 1980s stand in awe of children today and find our children’s superior comfort with and mastery of computers to be stupefying” (Seiter, 2005, p. 7). Some digital proponents argue that this dual character of multitasking and reliance on the Web as an information source is one that truly marks the younger generation, who are often extremely comfortable in online spaces, and exhibit a sort of informational dependency that is unique to their cohort. As I will explore below, however, the disparity between information retrieval and knowledge development is quite important, a differentiation that overly optimistic accounts do not always take into consideration.

Critics have argued that today’s youth are subsisting on superficial information and are less informed than previous generations, although many researchers have stated that this does not seem to be the case. John Palfrey and Urs Gasser (2008) suggest, for instance, that “there is no evidence to suggest that [youth] are learning less than their grandparents did, or that they are more superficial in their learning. In fact, Digital Natives are quite sophisticated in the ways that they gather information” (Palfrey and Gasser, 2008, p. 241). They go on to describe adolescents’ informational seeking strategy of ‘grazing’ and ‘deep diving,’ wherein they scan numerous resources in order to decide what is of most use to them, examining those sites with more depth that seem most useful. It is

also argued that youth tend to make frequent use of feedback loops (such as discussion forums and member commentary) to judge whether information sources are reliable or not. In doing so, they often develop a sense of appropriate conduct or tactics in a given environment; “they intuitively modify their practices and often share good hints on best practice with their friends” (Drotner, 2008, p. 172). Most importantly, many youth also contribute to these feedback loops, as they view them to be an essential component of online information resources; to them, “peer-based learning is characterized by a context of reciprocity, where participants feel they can both produce and evaluate knowledge and culture” (Ito et al., 2008, p.39). It is important to note, however, that most of these practices take place in an environment of leisure as opposed to more academic or civic participation; youth most often participate in feedback loops, for instance, in the context of online gaming or social networking. Nonetheless, this general argument resonates with the notion of the participatory and interactive nature that is said to characterize online space, particularly in terms of youths’ usage patterns; “many Digital Natives perceive information to be malleable; it is something they can control and reshape in new and interesting ways” (Palfrey and Gasser, 2008, p. 6).

This perceived trend is reflected in youths’ purported growing reliance on the internet as a source of information and news. The 2005 “Young Canadians in a Wired World” study found, for instance, that “when students are asked how they like to get their information for school assignments, the Net is the clear winner over books from a library. Sixty-two per cent of Grade 4 students prefer

the internet, while 38 per cent choose the library. Ninety-one per cent of Grade 11 students prefer the internet, with only nine per cent choosing the library” (Media Awareness Network, “Key Findings”). Furthermore, 87% of teenagers report using a search engine to retrieve information at least once a week (Ito et al., 2008 p. 21) while a 2005 PEW research study found that “76% [of teenagers] get news online. That represents about 16 million people and signifies growth of 38% in the number of teens getting news online since 2000” (Lenhart et al., 2005; p. i;). Given this exposure to news information, some (such as Don Tapscott, referenced above) argue that today’s youth are more socially and politically aware than ever before. This is due to the greater amount of youth participation and engagement online, as they frequent and contribute to blogs, comment on news sites and create issues-related virtual groups on social networking applications. For example, in 2005, clothing chain Abercrombie & Fitch began selling a shirt with the slogan “Who needs brains when you have these” in reference to girls’ breasts. Using online social networking tools, “teens formed a “girlcott” by organizing a campaign that circulated their protest to...67 regional newspapers, 4 national newspapers, 8 international newspapers, and 23,000 stories on the Web, plus hundreds of e-mails in support” (Reilly & Robison, 2008, p. 99).

As outlined above, internet-savvy youth often have an uncanny ability to quickly retrieve desired information, often looking up several items at once, whether it is movie show times, video game reviews, facts for a school report or the weather forecast. However, there are a number of researchers who suggest

that adolescents' information seeking behaviour can be highly unsound. Indeed, it appears that the way teenagers retrieve 'facts' is often superficial and uncritical. Information is accepted at face value, for instance, and even when teenagers do approach sources with a degree of skepticism, they are often unsure of how to ascertain whether or not it is factual or reliable (Media Awareness Network, "Trends and Recommendations", 2005). Moreover, as Palfrey and Gasser (2008) caution in their research, "even the most astute Digital Natives often can't tell whether information deserves to be ignored, rejected or forgotten" (p. 192).

Although modern adolescents are very adept at multitasking, in other words, it may in fact be the case that this hinders their ability to critically assess the information they are retrieving, as they cursor quickly through various windows. Furthermore, they often look to only one source to briefly retrieve an answer to a query, sometimes not even clicking past the initial search engine results; as Palfrey and Gasser (2008) found, "in our research, what struck us as most important is the extent to which so many young people have come to rely upon Wikipedia as a source of information" (p. 120). Jenkins et al. (2006) concur and conclude in their report for the MacArthur Foundation's digital media and learning initiative "Confronting the Challenges of Participatory Culture: Media Education for the 21st Century" that youth largely do not critically reflect on the information they obtain from the internet, which often comes from a single source (p. 15).

In general, then, many researchers have found that a sense of critical skepticism is often absent or limited when you search online for information, as

“access to information, of course, does not automatically lead to a critical ability to understand, analyze, use, and question that information” (Alexander, 2005, p. 41). Palfrey and Gasser (2008) significantly conclude from their research that “in most cases, it appears that they do not care about the question of accuracy” (p. 161). I concur, and in my experience instructing youth, particularly within media education initiatives surrounding video production and editing, this seems to be very much the case. A brief Google search or Wikipedia entry on a given subject is typically taken at face value, for instance, often standing as the only source consulted.

Some have argued that these concerns are particularly important given that factual information is difficult to verify in online spaces. Although search engines are becoming more precise and powerful, for instance, to many the internet can still seem to be an unwieldy ‘information glut.’ Consequently, “information overload limits the ability of young people to make good decisions in some contexts. One study confirmed this limiting effect on cognition among Web-surfing students between the ages of fourteen and sixteen years old” (Palfrey and Gasser, 2008, p. 192). Above all, adolescents require guidance in order to develop a much needed criticality when collecting and assessing online information, in addition to being encouraged to see the positive potential of collaborative information resources. Youth themselves have expressed this need for instruction; the “Young Canadians in a Wired World” study found, for instance, that “young people recognize the drawbacks of getting information online. When students are asked what internet-related subjects they would like to learn about

in school, the top choice for 68 per cent is ‘How to tell if information you find on the Net is true or not’” (Media Awareness Network, “Key Findings”, 2005). While teenagers may astound older generations with their ability to quickly locate information online while multitasking, then, there is a demonstrated need for parents and educators to guide youth in both the navigation and assessment of the vast body of online information.

1.4 Summary of the Two Perspectives: Recognizing Opportunities and Limitations in Educational Environments

As demonstrated within these two opposing narratives, the perspectives present an often conflicting view of the character of adolescents’ use of digital technologies. Both views, however, tend to forward an overly simplistic depiction of today’s digital youth. The ‘celebratory’ position ascribes a level of competence, forethought and participatory action that at best can only describe a tiny minority of adolescent internet users. On the other hand, the ‘cautionary’ position, with its protectionist aims, tends to underestimate the complex forms of literacy at work in everyday adolescent internet use, in addition to dismissing the value of ‘hanging out’ time and socialization. My aim, then, is to complicate these two narratives in a way that recognizes both the opportunities and limitations present in digital youth culture, as related to the cultivation of an overall sense of digital literacy. As I will maintain, this more complex understanding of digital literacy involves the recognition that youth bring to bear a highly developed set of competencies and capabilities with them to formal learning environments that cannot be ignored. At the same time, much of their use of online space can be

characterized as superficial, or even harmful, and it is the work of educators to push young people to critically reflect on their own internet use and the greater social context of the proliferation of online environments. In short, adolescent internet use is not inherently dangerous, superficial, or a waste of time, as suggested by the more cautionary narrative. Youth can have a meaningful participatory and social role in online space, just as they can become critical and able consumers and producers of information. At the same time, these ideals are not an innate part of growing up online; educators and parents have a distinct role in ensuring that youth evolve into conscientious and critical producers and consumers of online media. This role is vague, however, and those propagating the more simplistic celebratory or cautionary narratives often fail to recognize the importance of educational guidance in youths' lives on the subject of digital media use.

One central difficulty is what Jenkins et al. (2006) term the “transparency problem,” referring to the observation that youth are rarely as critically informed or reflexive about their use of digital media as is sometimes assumed. In this regard, the level of ‘digital savvy’ teenagers possess is often overestimated, and as such, “the challenges young people face in learning to see clearly the ways that media shape perceptions of the world” are ignored (Jenkins et al., 2006, p. 3). For example, Bruce (2004) emphasizes that adolescents require guidance in obtaining “the socioethical competence in the codes of practice for using and publishing both print and electronic material. This includes knowledge of issues concerning copyright; plagiarism; the rights and responsibilities of system access

and security; and standard social conventions regarding defamatory, obscene or offensive material” (p. 62).

Of course, any effort at fostering a sense of digital literacy must bear in mind the productive and constructive elements of adolescents’ internet use. For instance, there is strong evidence to suggest that youth are using social networking environments quite prominently, and that such spaces are a vital, though not novel, extension of identity negotiation in the teen years. At the same time, adolescents often do not consider privacy, etiquette or representational concerns to the degree that they should, given the public nature of the internet and changing social codes and expectations. Given this, it seems important that educators recognize and use the familiarity of these sorts of popular online resources in order to foster a learning environment that adolescents can relate to and invest interest in. In addition, a dedicated effort must be undertaken in order to account for the observed shortcomings in youth internet use, particularly regarding privacy considerations and issues related to youths’ online representation.

We have also seen that creative production and online participation has a complex position in youths’ lives today. While some adolescents seem to be seizing the opportunity to create and contribute to blogs, wikis and multimedia sites in a thoughtful and meaningful way, many others are either just consuming online material, or are contributing to online spaces in a superficial or even derogatory way. In this sense, a significant opportunity is present for educators to influence this use, as these often free, open source online tools allow teachers to

foster an interactive, participatory environment within the classroom.

Furthermore, formal learning contexts can be used to guide students away from more mundane forms of participation in order to foster a critical awareness of the democratic potential inherent in the medium, in addition to encouraging them to investigate issues surrounding ethical responsibility (including copyright and ownership) and civic participation.

Finally, and perhaps most saliently, online information retrieval is an approachable and easily actionable subject of pedagogical attention. As is evident from the above arguments, youth are very much accustomed to searching and retrieving information online; they are competent at multi tasking and quickly finding data. However, adolescents often only superficially search for information, frequently looking to only one source that is often not peer reviewed or professionally edited. This has resulted in increasing concern surrounding plagiarism and the lack of critical ability to combine different sources of information to produce knowledge. Instead of considering and creating ideas, then, today's youth seem to be more caught up in parroting data. Schools have already begun to address these concerns by offering workshops on information and resource seeking, but a greater effort needs to be woven into everyday curriculum. Teachers can use adolescents' ability and eagerness to conduct quick searches and multitask while guiding them to look to many resources, or to critically analyze the sources they commonly use, such as Wikipedia. In the end, it is only through a more balanced and nuanced understanding of both the potential and critical limitations of youths' relationship to digital technologies that

a pedagogical approach can be developed that best guides students in their navigation of the online world.

Section Two: Realizing Potential While Recognizing Limitations – Striking a Pedagogical Balance

2.1 The Pedagogical Use of Online Resources: Challenges and Limitations

The virtual realm, then, exists as a site of opportunity for children and adolescents in all areas of their lives, from social and individual identity negotiation to civic participation, creative production and knowledge development. This ideal of a ‘participatory culture,’ in which members of a society actively contribute to social knowledge and understanding, is a central tenet of the opportunities offered by “Web 2.0,” where ordinary users have a level of control over the content and distribution of information and media. Many have argued that this user-driven environment allows for an unprecedented level of civic, informational and creative contribution in the face of a broadcast media models and consumerism (cf: Wesch, 2007; Jenkins, 2006; Andersen, 2007). However, as illustrated above, there are many barriers that prevent people, particularly children and adolescents, from realizing this potential. Given this, schools and other institutionally mediated learning environments are crucial sites for nurturing these opportunities and as such “educators must work together to ensure that every young person has access to the skills and experiences needed to become a full participant, can articulate their understanding of how media shapes perceptions, and has been socialized into the emerging ethical standards that should shape their practices as media makers and participants in online

communities” (Jenkins et al., 2006, p. 4). Moreover, as expectations in the work force, social realm and in everyday life increasingly revolve around proficiency and familiarity with digital media, it becomes more important than ever that internet resources are a focus of teaching practice in school curricula. This is becoming an increasingly popular perspective, as more and more national and regional curricular mandates are independently concluding that this expanded notion of digital literacy, including an emphasis on socio-cultural understanding and contextualization, is a key pedagogical vision in the context of 21st century education.

While many countries, states and provinces (including BC) have created a reformed curriculum that attends to an expanded notion of digital literacies, the actual practice and integration of new forms of media into existing teaching and learning practices are rife with difficulties. Most importantly, no specific set of approaches has emerged regarding how to integrate digital media forms into the classroom and coursework, particularly when many teachers themselves are less than familiar with the technology. Technological ability and lack of exposure to digital culture are two central challenges to the integration of digital media in the classroom, as “teachers worry that they are out of step with the Digital Natives they are teaching, that the skills they have imparted over time are becoming either lost or obsolete, and that the pedagogy of our educational system cannot keep up with the changes in the digital landscape” (Palfrey and Gasser, 2008, p. 8). As I will explore in the case of the BC curriculum, national and provincial learning outcome mandates all contain a media literacy component that includes

educating kids with and about online resources. However, the curriculum is often vague on how to specifically integrate these goals into teaching practice, resulting in great uncertainty and lack of direction in terms of implementation strategies.

In addition, many schools have begun to express concerns with privacy, e-bullying and appropriate scholarly resources and consequently have chosen to ban or limit access to websites that have been deemed to exacerbate these issues or have no educational value (cf: Notley, 2008; Shariff, 2006). Most commonly, the websites that are restricted are social networking sites, YouTube and other video sharing applications. This attempt to draw a line between educational and personal internet use, however, hinders many opportunities to educate youth on privacy, self representation, civic participation and informational navigation. As demonstrated above, there is a very real need to both educate and acclimatize youth to life in a digitally-dominated society, and banning the most popular access sites only serves to curb distraction while sacrificing an essential pedagogical opportunity. As Palfrey and Gasser (2008) summarize, “instead of automatically seeking to ban the technologies, we need to focus on the root causes of the problems that are posing these real risks to our children... Young people need guidance from their parents and teachers to learn to navigate the digital landscape and to protect their personal information” (p. 110, 63). Furthermore, blocking websites often ironically serves to exacerbate the very thing that it is attempting to reduce – distraction. Internet savvy teens are quickly able to find and develop workarounds to website bans, including the

popular practice of using proxy servers; “in response to [school] regulations, most teenagers develop...ways to subvert institutional, social, and technical barriers to hanging out” (Ito et al., 2008, p. 13). Akin to sneaking out of a bedroom window, teenagers are finding ways to circumvent instituted technological barriers, while important pedagogical opportunities are being limited because of both the actual and conceptual bans on popular internet resources.

Unfortunately, a great deal of the popular media coverage of adolescent internet and digital media use is more pessimistic in tone, particularly regarding privacy concerns, which contributes to the notion that ‘hanging out’ online is either a waste of time or a dangerous practice. As a result, many school-based programs and media initiatives seem to be taking a protectionist stance that is based only on the ‘cautionary’ narrative presented above, evidenced by the popularity of internet safety workshops and privacy seminars, as I will later explore. Although there are real threats present on the internet, I have found that both media coverage and reactionary educational programs often serve to caricature and exaggerate dangers, and often oversimplify youths’ complex understanding and relationship with online space. Furthermore, parents and teachers often express that children and youth are spending too much of their time in front of ‘screens,’ conflating television consumption with the more interactive nature of computer use. As Jenkins et al. (2006) indicate, “these accounts do not appropriately value the skills and knowledge young people are gaining through their involvement with new media, and as a consequence, they

may mislead us about the roles teachers and parents should play in helping children learn and grow” (p. 11).

Clearly, the integration of digital media into the classroom as both a resource and site of study faces significant challenges, then, particularly as the internet itself is a relatively new but increasingly important medium. At the same time, adolescents require guidance in many fundamental areas concerning their internet use, particularly in terms of developing a sense of criticality when navigating and participating in online space. As such, any truly successful program will have to acknowledge the significance of digital media in youths’ lives while at the same time paying heed to the shortcomings of children and adolescents’ use of networked technologies. In doing so, educating youth about the value and opportunities of a truly participatory culture will allow this generation and future adolescents to access the opportunities that collaborative online space has to offer, “including opportunities for peer-to-peer learning, a changed attitude toward intellectual property, the diversification of cultural expression, the development of skills valued in the modern workplace, and a more empowered conception of citizenship” (Jenkins et al., 2006, p. 3).

2.2 Digital Literacy: Opportunities and Approaches

Towards this end, the successful pedagogical use of digital media and internet resources in schools depends on several key factors. Beyond recognizing the impact and importance of digital culture in adolescents’ lives, traditional educational strategies such as the ‘teacher as gatekeeper of information’ model must shift to a more interactive, student-driven approach. This

is due to the fact that one-directional educational tactics are becoming increasingly irrelevant in a context where both youth and adults are accustomed to collaborative meaning making and learning by exploration and discovery. Today's adolescents operate in a space with constant feedback loops, from the user-defined structure of Wikipedia, to comment forums on YouTube, and Facebook social 'walls.' Given this, emphasis should be placed on peer-based learning and a feedback approach in learning practice "characterized by a context of reciprocity, where participants feel they can both produce and evaluate knowledge and culture" (Ito et al., 2008, p. 39). The notion of pedagogy as defined by a model of reciprocity and collaborative meaning making stands in stark contrast to more traditional learning models, wherein outcomes are measurably defined by an accumulation of discrete knowledge and accompanying capacities.

The question, then, becomes how to reform current teaching and learning practices in a way that is both feasible and reflective of the vastly changing extracurricular forms of learning that adolescents are accustomed to. The most important step in the cultivation of an approach which reflects this new social and cultural climate is the development of a specific and applicable set of outcomes and definitions outlined at the policy or curricular level. The approach as advocated in this study is one that takes up a paradigm of recognizing and fostering "digital literacy." Although ambiguous, this term generally refers to the recognition that social and economic demands placed on 'reading' and 'writing' have expanded beyond conventional notions to include literacy proficiency in

digital and electronic resources. Contemporary pedagogy has long since recognized that the notion of 'literacy' extends far beyond the functional ability to read and write text; a student who is literate in any medium will also have developed the ability to abstract themes, underlying meaning and context from a textual piece. This includes the ability to critically reflect on the messages imbued in a medium in terms of a contextual understanding that extends beyond the simple comprehension of the words. As stated in the BC English Language Arts IRP (Integrated Resource Package, 2007), literacy in general refers to a "process of making meaning (not just receiving it) and negotiating it with others (not just thinking alone). It is fundamentally constructive" (Brown, as qtd. p. 18). The notion of digital literacy specifically, however, is a relatively new concept that is only ambiguously defined within both academic research and teaching practice.

The definitions themselves are often conflicting, mirroring the dichotomous relationship of the celebratory and cautionary positions outlined above. As Sefton-Green et al. (2009) elucidate in their overview "Reviewing Approaches and Perspectives on Digital Literacy," for instance, there is an often bifurcated understanding of digital literacy, characterized by the "top down" and "bottom up" approaches. In the first understanding, digital literacy is defined by government initiatives or school policy in terms of identified key competencies that students must acquire to successfully function in the workforce and society. These competencies are often based around the civic aspirations of inclusion and access, in which all students are to be given the ability "to participate in technologically mediated forms of public life" (p. 108). The top down approach

revolves around the idea that students must be adequately prepared for successful social participation as adults by encouraging the development of both technical skills and social understanding of the role of technology in modern society.

Conversely, the bottom-up, or more 'informal' understanding of digital literacy is characteristic of ethnographic research, which observes youths' actual digital practices in order to develop a sense of what the definition of digital literacy entails. In this approach, proponents state that changes in school curriculum and approaches to teaching practice must begin with a well-developed understanding of how youth use digital technologies outside of school, and work to integrate these existing trends into the curriculum. In their research, Sefton-Green et al. (2009) have found that "there is clearly a relationship between what might be called the "formal" and "informal" conceptualizations of digital literacy, but it is our contention that there is a difficult relationship between these two domains" (p. 110). It is this tension between the two rhetorics that can be observed in the struggle to implement a cohesive and applicable definition of digital literacy into contemporary curriculum. While the top-down approach seeks to "use technology as a tool to "enhance" learning across school subjects" (Ibid, p. 114), the latter understanding evokes the need to shift conceptions of literacy in a way that acknowledges and integrates the less formalized forms of literacy that develop in adolescents' lives outside of school. As demonstrated above, for all of its shortcomings, many of today's youth have informally developed a set of competencies that allow them to navigate online space with familiarity and skill.

Policies that adopt a top-down approach, however, rarely integrate these new forms of cultural and social literacy; “typically, the curriculum is related to school activities and does not view learning or literacy as broader cultural activities, nor indeed does it reflect how everyday experiences and concepts could be further developed and challenged in school-based settings” (Ibid, p. 120).

As such, the definition of digital literacy that will be advocated in this study is one in which the transference of competencies and capacities to and from informal realms of learning is paramount in the effort to ensure contextual relevance and the development of critical reflection on personal and social practices, which extends far beyond a ‘drill and skill’ pedagogical model. Drotner (2008) posits a similar position, noting that “young people’s digital practices promote the formation of competencies that are absolutely vital to their future, in an economic, social, and cultural sense. Adults need to recognize the validity of these practices in the spirit of democratic participation” (p. 165). She goes on to argue that while adolescents’ informal literacy practices revolve around curiosity, collaboration and interest-driven pursuits, school environments focus on the cultivation of discrete or abstract bodies of knowledge as opposed to emphasizing the process itself. However, adolescents’ non-linear learning style and tendencies towards collaboration are mirrored in the competencies required by modern society, which demand a similarly flexible sense of reflexive negotiation of meaning. As a result, Drotner (2008) suggests that conventional forms of compartmentalized learning through repeated training in formal learning environments are “clearly challenged by the demands made by these societies.

Naturally, this prospect does not invalidate schools, but it does change the basis on which they may define their teaching and hence the learning obtained by their students. In this process of redefinition, considering the means of learning involved in young people's digital engagements offers an obvious route to follow" (Ibid, p. 172).

The goal, then, becomes the reconciliation of these two notions of 'digital literacy' into a working curricular definition that acknowledges both the formal and informal aims surrounding changing understandings of what it means to be literate. As suggested by Sefton-Green et al. and Drotner, emphasis on the notion of transferability is integral to these aims. In this approach, literacy is defined not just through the development of a set of competencies or performance-driven outcomes, but emphasizes the transference "of underlying skills and knowledge from one domain to another. Here, the argument is that digital literacy (like some models of print literacy) might facilitate particular cognitive and social behaviours, and perhaps even change the ways in which children think and process information" (Sefton-Green et al., 2009, p.120). This can be observed in curricular approaches that emphasize the concept of multimodality, which draw attention "to how digital literacy operates across forms, media platforms, genres and modalities" (Ibid). This is particularly relevant to English Language Arts curriculum in British Columbia, which has been reformed to include emphasis on this notion of multimodality and its application/transference to students' own mediated experiences.

As such, it is becoming quite clear that schools need to recognize and integrate the new forms of literacy that students bring to the classroom in order to arm them with a relevant and transferable set of digital literacy skills that they will bring to bear on their experiences outside of the classroom. This opens the door for perhaps the most important element of any literacy initiative, digital or otherwise: the development of a sense of critical reflection and contextual understanding of texts. As previously examined, youth largely do not develop a sophisticated sense of critical understanding or reflection on their digital practices on their own, resulting in online conduct that can range from superficial to unsafe. Schools have an integral and unique role in encouraging critical reflection on these environments in that they can promote the distancing of online space to some degree as a site for textual analysis. Most adolescents, and many adults for that matter, are wholly immersed in their digital environments in a way that rarely results in the consideration of the technology as a medium in and of itself. In other words, youth rarely ‘step back’ from their daily immersive use of the technology in order to question their digital practices, including the larger contextual role of the internet and other new media in a social, economic or political sense. Formal learning environments have a crucial and unique role in encouraging the development of practical and critical competencies in young people, as youth require “systematic training and development, so that insights gained from one particular experience or problem may be transferred and applied to other issues and situations” (Drotner, 2008, p.180).

This includes the fostering of a contextual understanding and interrogation of digital media as textual sites of study, wherein youth remove themselves to some degree from their generally uncritical immersion in these technologies to consider both their personal practices and the larger social, economic and political role in the dedicated context of learning and discovery. In order to achieve this goal, schools have a responsibility to encourage students to engage in critical reflection of digital technology in a way that recognizes and embodies the non-linear, collaborative and process-based learning style that characterizes more informal forms of learning. They must work to “develop inclusive contexts of learning at school, contexts that balance dialogue and monologue, security and risk, communal and individual aspects of learning” (Drotner, 2008, p. 177) in order to push students to critically engage with multimodal resources so as to fully develop the digital literacy competencies required by modern society.

In order to achieve this, teachers’ roles must shift from those of information authorities to knowledge facilitators, wherein educators promote a collaborative, dynamic learning environment where all members are co-producers of knowledge (Ibid, p. 179). Teaching pedagogy and practice is integral to the development of this form of digital literacy defined by transference, context and criticality, as schools are uniquely equipped as formalized learning spaces to promote the acquisition of abstract, conceptual and contextual forms of inquiry and understanding. In this way, teachers can encourage students to consider how meaning is produced, shaped and altered on the internet and in

doing so encourage the development of a critical perspective that youth would ideally bring to bear on their extracurricular mediated experiences.

The question, then, becomes what these formalized teaching and learning practices should look like, given that “our challenge is to help [young people] make sense of these new contexts and new meanings, and to think synthetically and critically, rather than letting them lose their way” (Palfrey and Gasser, 2008, p. 253). One specific set of problematics that could be used as a framing piece to guide digital literacy initiatives revolves around emphasis on context, perspective and bias. As indicated, one of the central concerns with digital youths’ independent online practices is that they often do not consider the context of their internet use, revealed in their lack of understanding or appreciation of broader privacy concerns, as well as their tendency to disregard the sources of information they retrieve online. Educators have a responsibility to encourage students to consider the multiple ways in which meaning is made and negotiated on the internet, including how youth as consumers and producers are part of this process. This includes, but is not limited to, learning to investigate and understand where information comes from online, and how certain sources may be limited or biased. Conversations concerning the role of perspective are essential to digital literacy initiatives, particularly as the internet is a space in which many different contributors are presenting information from a multitude of perspectives, with specific motivations and intents. Youth notoriously overlook the roles of perspective and bias within the information they consume,

particularly on the internet, and it is the responsibility of educators to encourage critical reflection in this regard.

In terms of addressing changing social and representational expectations, tools like Facebook could be used successfully both as a pedagogical resource and a site of study. Adolescents are already turning to the site as a space for school-based discussion by organizing study groups and collaborative sessions. In like fashion, “teachers should be encouraged to take advantage of young people’s familiarity with the online world and to give them assignments that make better use of their online abilities” (Media Awareness Network, “Trends and Recommendations”, 2005, p. 22). In order to examine adolescents’ online representation and identity management as a textual site of study, it is essential that teachers promote reflection and assessment of the ways in which their students are representing themselves, including what personal information they are disclosing online. Youth do need guidance in order to fully appreciate and become critically aware of online privacy, digital niche marketing, and the accessibility of personal information. Indeed, the “Young Canadians...” Trends and Recommendations report emphasizes that “education on privacy should also be part of the curriculum...older kids need the skills to protect their privacy, particularly as they explore social networking sites” (Ibid, p. 21).

In addition, while the participatory capacity of online space includes the promotion of creative production and the development of a sense of civic, social and political involvement and investment, adolescents need to be encouraged to both recognize and use the tools available online in order to realize this potential.

One way to develop meaningful application and reflection on these resources is to use them as a resource in the classroom or as part of assignments. For example, the 2007 PEW report on teens and social media found that “some schools are now incorporating blogging tools into their curriculum. In school, students may be asked to post their papers to a blog before class to allow other students to read their writing and post feedback online that can be incorporated into the class discussion” (Lenhart et al., p. 8). Strategies such as these both acknowledge digital culture as being an important part of youths’ lives while also allowing students to experiment with and learn from new forms of media production. Similarly, Palfrey and Gasser (2008) recommend that a useful tactic “for any class that involves writing of some sort, is to put digital technologies to work as a feedback loop for students to comment on the material they are studying or on the ideas of their peers” (p. 248). Students could also be encouraged to post creative contributions (such as videos or a photo journal) or design a website, with emphasis on the evaluation of others’ work online.

Finally, it is crucial that students learn to critically assess the specific online resources they use for information retrieval. For instance, Jenkins et al. (2006, p. 43) outline a unit in which students create, evaluate and contribute to Wikipedia or a Wikipedia-like environment. This allows them to learn the class material in a familiar context, in addition to examining the genesis of information posted in a collaborative environment as well as assessing its validity. In this way, students are empowered as knowledge contributors while utilizing familiar tools to learn about new subjects. At the same time, they are also cultivating a

more critical and reflective approach to the gathering of information online. As described above, information recovery and evaluation is one of the most important areas where youth require guidance in an educational setting. Palfrey and Gasser (2008) express that “through education we need to pass along a healthy scepticism when it comes to any information, whether online, on the television, or accessed through any other media...they must develop the skills they need to analyze and cross-reference information before they rely upon it in any way that matters” (p. 181).

In this way, any approach to integrating a digital literacy framework in schools, as mandated by both national and provincial curriculum, must include the understanding and integration of popular online resources and practices that define adolescents’ understanding of digital technology. Digital literacy, then, revolves around the following key concepts: the transferability of teaching practice and learning outcomes from and to students’ personal experience with digital technology; the fostering of a sense critical reflection on these practices; and finally, the acknowledgement of changing definitions of literacy, including the cultivation a multi-modal approach. Schools are uniquely equipped to foster the outcome of critical reflection and contextual understanding that is the express outcome of digital literacy; many, however, seem to be failing to recognize this potential. Using this framework of digital literacy, BC policy, curriculum and teaching practice regarding online technology will be examined in the proceeding chapters, particularly as related to the opportunities and limitations within the

classroom that are perceived to exist by administrators, teachers and students themselves.

Chapter Two: Research Context and Key Findings

Section One: Introduction and Contextualization of Research

1.1 Brief History of Media Education in Canada and British Columbia

Throughout the relatively recent development in media education and media literacy initiatives, Canada has arguably been a forerunner in terms of progressive curricular efforts. The formalized development of media education in North America is often thought to originate in 1978 with the formation of the Association for Media Literacy (AML) in Ontario, although its roots can be traced back the late 1960s efforts at preliminary 'screen education' courses in schools in Ontario and British Columbia (Duncan, Pungente & Anderson, 2002). The association, founded by internationally recognized media literacy leader Barry Duncan, was established with the goal of uniting "teachers, librarians, consultants, parents, cultural workers, and media professionals concerned about the impact of the mass media on contemporary culture" (Association for Media Literacy, "About Us"). The push for critical education on the subjects of media and popular culture was seen by many educators as being particularly essential for Canadian students, due to "critical concerns about the pervasiveness of American popular culture" (Duncan, Pungente & Anderson, 2002) in addition to the increasing demand to develop new and more progressive educational paradigms.

The AML flourished in the 1980s, as media education initiatives were enthusiastically taken up by Canadian educators across the country, and members of the association came together to produce the “Media Literacy Resource Guide” in 1989. Published by the Ontario Ministry of Education, this document offered ten key strategic categories and associated teaching techniques to “guide the implementation of media literacy in language arts in Ontario high schools” (Duncan et al., 1989). This key concepts model has been at the root of the progressive development of media education in Canada, and by 2000, media education became a nationally mandated component of English Language Arts curriculum (Duncan, Pungente & Anderson, 2002). This was largely due to the collective efforts of the Western and Northern Canadian Protocol for Collaboration in Education (WNCP) and the Atlantic Provinces Education Foundation (APEF), which “resulted in media education being granted official status across the country” (Ibid).

While Ontario served as a hub for early development and implementation of media education initiatives, British Columbia has been similarly progressive in Western Canada in its concerted efforts at developing cross-curricular media education components. In 1991, BC educators and media professionals from the western provinces formed the British Canadian Association for Media Education, an organization that was contracted by the Ministry of Education in 1994 to produce a cross-curricular Integrated Resource Package (IRP) and complementing Language Arts curriculum that would contain a strong media literacy component (Media Awareness Network, “Media Education in British

Columbia”). The final document, "A Cross-Curricular Planning Guide for Media Education" saw BC become the first of the western provinces to mandate a media literacy imperative in its newly released Language Arts curriculum in 1996 (Duncan, Pungente & Anderson, 2002). This progressive cross-curricular approach, which has become paradigmatic of British Columbian media education, differentiates the integrated ‘media education’ approach from the specifically targeted tactics of media studies. “Media education deals with key media concepts and focuses on broad issues such as the history and role of media in different societies and the social, political, economic, and cultural issues related to the media. Instead of addressing the concepts in depth, as one would in media studies, media education deals with most of the central media concepts as they relate to a variety of subjects” (Media Awareness Network, “Media Education in British Columbia”).

As I will outline below, these imperatives have been developed at greater length in the most recent English Language Arts IRP (2007), which mirrors the progressive and experience-based relevancy approach that characterizes Canada’s historical media education efforts. It is the aim of this study to place the provincial curricular imperatives in relation to broader definitions of media and digital literacy, in addition to profiling how actual district policy and teaching practice compares to the ambitious mandates of the province. It has been noted that, along with all individual provinces, “British Columbia has still to develop the resources to put into effect these changes [advocated at the national level]. There is a major need to address the question of teacher training in media

education” (Duncan, Pungente & Anderson, 2002). In my research, I have found this statement to resonate widely, as a large gap seems to exist between progressive provincial curriculum and actual practice within the province. In this chapter, I will explore the widely varying practices amongst BC districts, demonstrating how many regions seem to be falling short of realizing the digital literacy goals set out by the provincial curriculum.

1.2 Media Education in Present-Day British Columbia

In British Columbia, there are two central components comprising the provincial curricular mandates that affect the way media and technology is approached in teaching practice. Most directly, there is a media education imperative woven into curriculum in a number of subjects, although the English Language Arts curriculum and Social Studies in all grades (K-12) both have the strongest media education components. For example, the Social Studies curriculum clearly justifies its integration of media education imperatives, stating that “much of the information that the public receives about issues and events is received through media messages – in newspapers and magazines, on television and radio, and on the internet...[Media education] allows students to think critically and independently about issues that affect them” (Ministry of Education, “Social Studies 10”, 2006, p. 11-12). Cross-curricular efforts are encouraged, revolving around the integration of multimedia and print-based resources as textual sites of exploration. Media education as a concept is often broadly interpreted, and can be manifested in numerous ways. For the British Columbia curriculum, media education is framed as encompassing the following

three themes: media products (looking at purpose, values, representation, codes, conventions, characteristics and production); audience interpretation and influence (examining various ways of interpreting messages, influence of media on audience and the influence of audience on media); and media and society (who has control, what is the scope and context) (Media Awareness Network, “Media Education in British Columbia”). As part of the provincial learning mandates, teachers must integrate these elements into their teaching, particularly in the areas of Language Arts and Social Studies.

Another important aspect of the overarching provincial learning outcomes is the redefinition of literacy and its goals, including an expansion of traditional interpretations of what it means to be literate. This has included a revision of the Language Arts IRP, with an overall emphasis on multiple forms of literacy woven into its mandate. The “buzz word,” as reported by a Richmond district official, is “multi-modal,” as curriculum designers urge Language Arts teachers to move beyond associating literacy with the static, book-oriented written word and expand their emphasis to include reading and analyzing a variety of texts, from television and computer screens to music and newspapers (Ministry of Education, “English Language Arts 8-12”, 2007, p. 15). The curriculum overview highlights four key aspects which represent the overall literacy goals of BC Language Arts education: the emphasis on the link between literacy and thinking (the importance of generating ideas, not just information), metacognition in literacy learning (self-reflecting to understand one’s own learning process), multiple literacies (expanding definitions of ‘text’ and ‘reading/writing’) and critical

literacy (the analysis of context and negotiation of meaning) (Ibid, pp. 18-21). The third aspect, a focus on multiple literacies, is a new curricular emphasis. The IRP states that “multi-modal forms of literacy include print texts, spoken texts, visual texts and what are commonly referred to as new literacies, which are often based in technology...Each form of text has its own codes and conventions, which students need to learn to read, negotiate and craft” (Ibid, p. 20). Similarly, the final emphasis on the cultivation of critical literacy calls for teachers to encourage students “to discover how texts position them as readers and viewers and also to become more self-consciously aware of how their own textual practices work in the world to represent, position, and potentially silence others” (Ibid, p. 21). These literacy goals are very much in line with more progressive and inclusive models of media education and critical literacy, which revolve around notions of learning about the media and developing both a critical understanding and active participation/negotiation of mediated environments, including online space. Noted educational theorist David Buckingham (2003) espouses this view, defining media education as “the process of teaching and learning about media; media literacy is the outcome – the knowledge and skills learners require...It enables young people to interpret and make informed judgements as consumers of media; but also enables them to become producers of media in their own right. Media education is about developing young people’s critical and creative abilities” (p. 4).

1.3 Overview of Research Questions and Purpose of Study

While the integrated media education learning outcomes and progressive redefinition of literacy set the stage for encouraging new forms of teaching and learning in a 21st century environment, it is not entirely clear that this paradigm transfers to innovative teaching practices that produce a sense of student criticality regarding mediated environments. Although ambitious, the curriculum is often ambiguous in terms of explicitly recommending specific ways of achieving these goals, and most importantly where attention should be focused. As a result, I have observed that many teachers seem to fulfill curriculum requirements by concentrating only on one or two elements, often turning to a unit on film studies or multimedia to satisfy this component. Similarly, while many teachers accept and acknowledge the broadened definition of literacy, new forms of technology and interaction, particularly in an online environment, seem to be underemphasized in actual practice. In more extreme cases, these technologies, particularly the ones viewed as 'popular,' are seen only as a distraction and are consequently deemed inappropriate for an academic environment. Bans on cell phones and popular websites are very common in BC, although this move seems to contradict both the media education and literacy learning outcomes set by the province. Regardless of school policy, teachers everywhere in the province seem to struggle with how to successfully incorporate technology and online resources into their teaching practice, and no clear parameters have been set to structure this process. As a result, the use of online resources in the classroom is very much a grassroots movement, and consequently widely varying practices have sprung up district to district, school to school.

This context provides an ideal research opportunity in which to map out the various practices and policies in BC districts, with the intent of examining which routes and methods seem to be most successful, and which appear to falter. As indicated by both the curricular mandates concerning media education and the broadened definition of literacy by the province, encouraging the development of timely and appropriate media-related skills and a critical approach to media environments by students is paramount. Many barriers arise, however, when attempting to enact this vision, particularly as infrastructural limitations prohibit the unfettered use of internet resources. The purpose of this study is to elucidate how BC teachers, administrators and policy makers are dealing with these challenges, in addition to gaining a better understanding of the overall opinion regarding the role of popular online media resources in schools. In doing so, the goal is to produce an approachable and realistic overall vision of successful practice that realizes the dual mandate of preparing students for a life outside of school with 21st century tools, in addition to fostering a sense of criticality and reflection that they will bring to bear on their personal mediated experiences.

In order to produce a representative depiction of the various district practices in BC, research areas were grouped into the following three categories, with the derivative research questions falling under the headings:

Policy and Technological Approach

- What is the perceived role by educators of online media within the school environment - to what extent is the internet recognized as a pedagogically important resource?
- Are certain popular technologies and websites banned? If so, who directs these decisions and for what reasons? How is computer/ internet use policy decided upon at the school/district/provincial level?

Teaching and Learning Practice

- How are internet-related resources actually being used within the classroom - to what extent are teachers integrating popular digital resources into their teaching?
- What are the perceived drawbacks and limitations of utilizing popular online tools in the classroom?

Adolescent Perspective

- How do youths perceive their relationship with digital media and the internet?
- How do they feel about the integration (or lack thereof) of technologies into formal education - to what extent do they think that media education courses/units apply to their own lives?

Section Two: Research Methodology

2.1 Research Design: Participant Groups and Methodology

In order to address these areas of inquiry in a way that would benefit the scope of this study, I made the decision to concentrate on select representative districts that would include emphasis on Lower Mainland practices but also incorporate analyses of Interior, Northern and Island-based districts. Primarily, my goal was to profile the various perspectives on the role of internet resources in schools, in addition to assessing teaching and learning practices and policy

mandates. As such, I chose to focus my methodological approach primarily around interviewing and self-reporting, supplemented by two in-depth observational case studies within the classroom environment. In order to include the student perspective, I also elected to distribute a survey inquiring about online habits and overall views regarding the role of internet in schools, in addition to conducting focus groups with students themselves.

Recruitment was largely based on criterion sampling (those who were identified as coming from more or less technologically progressive districts) and snowball sampling based on recommendations and voluntary participation. A recruitment email was sent out to a teacher mailing list belonging to Dr. Stuart Poyntz, and several teachers volunteered to take part in either an interview or observational case study. From this initial contact, additional recommendations of different educators to approach resulted in the recruitment of the remainder of the participants. Furthermore, as a high school English and Socials teacher, my partner was able to offer his classroom as a site for one of the case studies, in addition to providing access to various other teachers and administrators at his school. Student recruitment was achieved in two ways: first, through the voluntary participation of the case study classroom subjects, and second, through anonymous online recruitment of survey participants via advertising on the popular social networking site Facebook.

As stated, interviewing was the prevalent mode of data gathering in this study, and consisted of semi-structured interviews ranging from a duration of 20 to 75 minutes. Interviews took place both in an in-person setting and over the

phone. Eleven individual teacher interviews were conducted, and questions revolved around their own practices, the pedagogical stance regarding internet resources in their respective schools and their own beliefs surrounding the use of internet technology in an academic setting. Seven of these teachers work in various districts in the Lower Mainland (Richmond, Vancouver, Surrey, New Westminster and Coquitlam), two teach in the North/Interior (Bulkley Valley and West Kootenays) and two work on the island (Victoria and Saanich). Four interviews were conducted with administrators (either principals or vice-principals), and similar questions were asked, with greater emphasis placed on policy decisions and technological priorities regarding funding. Three interviews were conducted with district officials, all in the Lower Mainland, and one teacher-librarian was interviewed from the Vancouver School Board.

2.2 Research Design and Overview: Case Studies

While self-reporting and interviewing were perhaps the most integral data collection strategies used in this study, I also found it essential to gain some insight into actual in-classroom practices. As such, I chose to conduct two three-week case studies in comparable learning environments in order to observe in-class use of online resources. I elected to study two grade nine Socials classrooms in two different Lower Mainland districts in order to gain an on-the-ground understanding of the various opportunities and limitations present in districts with very different policy and pedagogical mandates. Relatedly, I chose teachers with similarities in their experience and teaching styles; both are relatively young teachers with a progressive stance on media education and

literacy imperatives. They are both males in their mid 30s; the teacher at New Westminster Secondary, who I will refer to as Mr. Irwin, is white, and “Mr. McLean” at Point Grey is of mixed ethnicity. Mr. McLean has approximately ten years of teaching experience in Film Studies, English and Socials, while Mr. Irwin has been an educator for seven years and primarily teaches English; at the time of the study he was in his second year teaching Socials.

The first case study took place at a Point Grey Secondary School in the Vancouver school district, with a population of approximately 1300 students in grades eight to twelve. Point Grey is situated in the neighbourhood of Kerrisdale, an affluent suburb of Vancouver. The observed class was comprised of 28 students and was male dominated; there were only seven girls in the course, although this was only due to random distribution. The majority of the students (at least two thirds) were of Asian descent (primarily Chinese), which reflects the overall demographic of the school.

The duration of my case study at Point Grey covered a unit entitled “Revolutionary Change,” a project designed by Mr. McLean within the ‘revolutions’ learning outcomes set by the provincial grade nine Social Studies curriculum (“Social Studies 8 to 10”, 1997, p. 7). This was a work unit, where students were required to research and prepare group presentations on a selected project. Class time was devoted to preparation and organization of the material, with a series of check points and meetings with the teacher. During the first class, students had to assemble into groups and choose a topic that would

“focus on one specific aspect of the modern world that has experienced a revolutionary change in the last 50 years” (Assignment Handout, Mr. McLean).

The class brainstormed a list of possible subjects, and the topics that were eventually chosen ranged from the history of television to the genesis of music players and personal computers. The ensuing two weeks were devoted to research, planning and teacher consultation. The groups had to include a strong multimedia component, including a PowerPoint presentation, photographic images, handouts, video/film clips, news clips and primary/secondary evidence. During the final four days, each group unveiled their 30 minute long presentations, which varied widely in terms of quality. While the text of almost every groups' PowerPoint presentations looked suspiciously similar to the Wikipedia entries on the selected topics, some groups were very innovative and produced satirical interviews, mock commercials and informative websites. The groups were evaluated primarily on their use of multimedia in the presentation, followed by their time management and level of audience engagement; content knowledge was deemphasized in the evaluation process. Principally, my role was observational in this scenario. I sat in on the group meetings with the teacher, listened to group discussion during the research and planning stage, and observed all of the presentations.

In general, the students seemed to provide relatively superficial information during their presentations, consisting primarily of data gathered (sometimes verbatim) from sites such as Wikipedia. They were required to list their sources at the end of their slideshow presentations, and every single group

listed only websites; no print resources were used. Overall, groups elected to divide the work into segments, with each member being assigned a different job. Generally, one or two people would function as the 'multimedia' designers, while the others generated the content for the presentation. The students seemed to enjoy using a variety of media; Mr. McLean conducted a brief survey of the class when the unit was complete, and all but one (96%) indicated that they would rather put together a multimedia piece on a given subject than write an essay. The presentations themselves ranged from mediocre to quite engaging, with most groups doing a moderate job that satisfied but did not exceed requirements. The presentations were fairly formulaic, and revolved around relatively uninspired PowerPoint slides. The students seemed enthusiastic about putting together video interviews or surveys, and often featured humour as an element to engage their audience. Perhaps the most effective presentation was one that featured the transition from analogue to digital television, wherein the group members put together an impressive "60 Minutes"-style video comprised of interviews, information segments and even advertisements. Both Mr. McLean and I felt that this group had the best critical grasp on their subject, which was revealed through their highly creative and insightful media products. In general, however, the students did not seem very engaged in their topics, and tended to recite off cue cards in a manner that indicated a lack of comprehension/consideration of their topic to any depth.

The second case study took place at New Westminster Secondary School, the only high school in the small district of the Greater Vancouver

suburb. This is the largest school in BC, with a population of approximately 2800 students. NWSS has an extremely varied catchment area, with many students coming from a working or middle class background. The ethnic makeup of the school is also extremely diverse, with no one ethnicity dominating the demographic. The observed Socials 9 classroom reflected this variation, including students with Indian, Bulgarian, Chinese, Aboriginal and Canadian backgrounds. This class was also comprised of 28 students, although with a reversed gender breakdown; just over two thirds of the class was comprised of girls. As previously noted, this case study took place in the classroom of my partner, Mr. Irwin. I elected to conduct research in his classroom because it provided me the opportunity to have more of a direct role in designing the exercise/project that accompanied the unit. In doing so, the overall goal was to cultivate a more purposeful understanding of how a specifically targeted media education exercise would succeed or not succeed in the context of using popular internet resources.

At the time of my research, the class was about to begin the series of 'revolutions' units, beginning with the American Revolution and eventually progressing to the Industrial Revolution. At the onset of the unit, we decided to run an augmented workshop based on the combination of two media education learning activities posted on the Media Awareness Network website. One was a lesson entitled "ICYouSee: A Lesson in Critical Thinking," in which students "use a Web-based activity to help them think critically about how to determine the quality of Web resources". The second activity was titled "Hoax? Scholarly

Research? Personal Opinion? You Decide!” with the goal of helping students authenticate and validate information retrieved on the internet. The goal of these preliminary workshops was to encourage the students to consider where they retrieve information online, and particularly to analyze how it is constructed and negotiated. We also engaged the class in a discussion about the popular resource Wikipedia as an information source, and asked them how they thought the articles are generated and maintained. In general, the students thought that Wikipedia was mostly a reliable source of information, although they were quick to say that they were not often permitted to use the site for schoolwork, as “teachers don’t really see it as an accurate resource, they would rather we use books” (male Grade 9 student). The overall opinion was that articles are typically posted by a small group of experts, and only occasionally edited. Mr. Irwin introduced them to the dynamics of a “wiki” oriented site, including showing them the edit, discussion and history tabs using the SmartBoard and projector. Most (approximately 75%) of the students were surprised to see that the site was so transparent, and that the average user could easily contribute or change articles. They were then introduced to the planned activity, where they would be contributing to various Wikipedia entries on subjects related to the American Revolution.

From a list, students were to select one aspect of the American Revolution and come up with the most important/salient points they could think of in relation to their topics. We then held a class in the computer lab, wherein students were to access content about their subject on Wikipedia. They were required to alter

the article by either contributing a new point or changing the current entry in some way. Before they began their work, Mr. Irwin gave them five minutes to check email and go on Facebook, to “get it out of your systems” (Mr. Irwin). Interestingly, this tactic seemed to work, as the students were quite dedicated to the task at hand afterwards, and only began looking to other sites when they had completed, or nearly completed, their work. In general, the students were able to locate an aspect in their subject’s Wikipedia that they felt they could contribute to. As a few problems cropped up and we had to pause the activity and do a brief workshop on appropriate tone in different online settings, as the students began to realize that “you need to write it well, like you know what you’re talking about – you have to make it sound like a real dictionary or someone is going to erase it” (male grade 9 student). We also chose to instruct them on how to properly cite a source within the entry itself, as several students independently inquired about this after they found that “if you give a footnoted source, it makes it look more accurate” (female grade 9 student).

Over the next several days, we monitored the changes to their entries while Mr. Irwin continued his multimedia oriented lessons on the American Revolution using a SmartBoard. This was perhaps the most valuable aspect of the activity, as several of the entries were changed almost instantly. The students began to realize how closely Wikipedia is monitored by various users, and we discovered together that certain subjects have ‘volunteer gatekeepers’ who act as authorities on a given topic. Many of the entries were erased, with reasons such as “redundant” or “poorly explained” being given by other users, which the

students both expressed acceptance and outrage over. This led to a rich conversation surrounding audience, tone and ethical considerations within collaborative environments. Some thought that one user in particular who kept changing back entries was exercising undue control over the particular subject, and we explored ways in which this could be addressed. One female student ended up being quite embarrassed when it turned out her entry had been removed, as the source she had footnoted was another Wikipedia entry. Although this was rather humorous, it opened up a well rounded discussion about the use of multiple, diverse sources to cultivate a strong argument. One student concluded that “I’ll still use Wikipedia for information, but I’ll also make sure somewhere else that the information is true; I know now to look at the history to make sure someone hasn’t change it as a joke or temporarily.” In general, the activity seemed to give the students a much more thorough understanding of the dynamics of online collaborative resources, ideally encouraging them to both become better researchers as well as showing them that they too can collaborate to online environments.

Section Three: Report of Findings – Adolescent and District Profiles

3.1 Survey Overview and Adolescent Profiles

In order to gain a better understanding of students’ perspective on the role of technology in the classroom, in addition to getting a clearer picture of their online media habits, I conducted two focus groups with students selected to participate by Mr. McLean and Mr. Irwin. Additionally, I designed a 30-question

close-ended survey, which was intended to measure adolescents' digital habits as well as their perceptions surrounding their experience with the internet in their English and Social Studies classrooms. The students were required to have a permission form signed by their parents/guardians to complete the survey, and those with the required signatures took part in the questionnaire. As it turned out, the response rate was lower in the Vancouver class (30%) because they were given the survey to take home, as opposed to the New Westminster class (83%) where in-class time was used to administer the survey. In-class participants accounted for 23% of the total survey respondents.

In terms of the overall data set, the majority of the submissions (125 adolescents) occurred online, in response to a recruitment advertisement targeting 13-19 year olds in British Columbia on the social networking site Facebook. The total survey sample size ended up consisting of 163 adolescents. While this sample size is not large enough to generalize to the extended population, it does help establish general trends in students' online habits and perspective regarding internet use in schools. The central aim of the inclusion of a quantitative survey was to have a measurable set of indications to supplement student interviews and focus groups, in addition to explicitly identifying key differences between districts.

As indicated, the total number of survey respondents included 163 cases; 102 resulting from the first phase of online recruitment via Facebook in February 2009, 25 from the second phase in May 2009, 23 from the New Westminster Secondary case study and 12 from the Point Grey Case study. In terms of the

respondents' demographics, the average age was 15.5 years, and 64.8% of those surveyed were female. Regarding location, 72.2% of the respondents live in the Lower Mainland, 16.7% reside in the interior or northern regions of BC, and 8.0% live on either the Gulf or Vancouver islands. In terms of the featured districts, 21.6% attend school in the Vancouver School Board, 17.9% live in Richmond or Surrey, 16.0% attend NWSS, and 3.1% reside in the Coquitlam school district. 87.7% of the adolescents have lived for most or all of their lives in Canada, with 77.7% having been born here. Approximately half of these students are second generation Canadians, with 53.1% of their mothers and 48.2% of their fathers having been born in another country.

In terms of their access at home and time spent online, the majority (64.2%) of the youth have two to three computers in their household, and 98.8% have internet access at home. This statistic is somewhat skewed due to the online recruitment methods, as will be explored below, but this finding reflects the 2005 report by the Media Awareness Network, which found that "access is almost universal. Ninety-four per cent of young people say they go online from home" ("Key Findings"). A slight majority (53.7%) of respondents have computers in their room with internet access, and this was seen to be proportional to age: while only half of kids aged 14-15 had internet access in their bedroom, 70% of 17-80 year olds had private computers in their rooms. Most of the adolescents (82.1%) spend the vast majority (either "all" or "almost all") of their time online for personal use (as opposed to spending time on schoolwork).

In terms of online habits, Facebook was by far was the most popular site for adolescents in this study; 98.1% had Facebook accounts, as compared to 27.2% who have memberships on the flagging social networking site MySpace (please note, however, that the results will be skewed as the majority of the recruitment was through Facebook advertisements). Other popular membership-based websites or applications among study participants include Microsoft Messenger (92.0%) and YouTube (26.5%). The number of youth keeping up blogs, contributing to Wikipedia or gaming was fewer, although nearly a third had accounts with Wikipedia and almost 20% keep up online blogs. Interestingly, few adolescents (11.7%) seemed to participate in the new phenomenon of Twittering, although the difference between the earlier sample (February 2009) and the later sample (April/May 2009) was qualitatively significant: in the first sample, only 8.8% of the youth had Twitter accounts, but three months later, 18.8% were Twittering. This was a striking indication of the rate at which new applications and websites become popularized.

In terms of social networking, the aspects that the teens valued the most were keeping in touch with old friends and day to day interactions, while the ones they valued the least were planning events, 'creeping' others' profiles and joining groups/adding applications. Regarding their use of Wikipedia, only 7.4% reported using it all of the time and contributing, while 74.7% said that they use it all or most of the time as a source of information, but do not contribute. Only 3.1% stated that they never use Wikipedia. The majority of the respondents (58.0%) stated that the internet was either extremely or very important to them, while

nearly 70% said that they thought the internet was either the best place (17.3%) or a very good place (50.0%) for the average citizen to make a difference or contribute to society.

In terms of their online access at school, approximately half of the students reported that they go on the internet frequently at school, in some of their classes and/or spare time. Only 6.8% indicated that they never use the internet at school. Access was lowest in the Vancouver School Board, with just over one third (34.3%) reporting that they go on the internet in some of their classes and spare time. In Surrey and Coquitlam districts, well over half of the students access the internet either frequently or somewhat frequently (at 64.7% and 75% respectively) for either class assignments or recreationally in their spare time. Regarding the banning or blocking of specific websites, half of the survey respondents also reported that Facebook and MSN are banned at their school, with 21.6% stating that access to YouTube was blocked. This also varied by district; over three quarters of the respondents in Vancouver stated that Facebook was banned, as compared to 16.0% in New Westminister and 25.0% in Coquitlam. Interestingly, in districts that claim not to ban any sort of popular website (Surrey and Richmond), 23.5% and 45.5% of students respectively perceive a block on Facebook to exist. Affirmative responses were also higher in Vancouver when students were asked about YouTube bans, with 21.9% claiming that the site is blocked at their school (it is not). New Westminister, Surrey and Coquitlam districts all had less than 10% of students claiming that YouTube is banned. Again, paradoxically, a greater number of students in Richmond (18.2%)

reported that YouTube access is blocked at their school, contradicting district and teacher reports.

One pivotal measure of the study investigated the adolescents' perspective on the extent to which English and Social Studies teachers are using internet resources in the classroom, and which resources appear to be most popular. The students were asked to reflect on their most recent English or Social Studies classroom experience, and almost three quarters of respondents reported that their teachers use the internet in some capacity, with just over half stating that their teachers use it quite frequently in class and in assignments. Wikipedia (42.6%), search engines such as Google (49.4%), online media resources (such as a collection of images or files on a website – 42.6%) and video streaming (38.3%) were the most popular internet teaching resources, illustrating that much of the use seems to revolve around looking up facts, definitions or explanations. The least popular online media resources were social networking sites (6.2%), collaborative editing programs (9.3%) and teachers' blogs (11.7%). Educators seemed somewhat more likely to create wikis for their classes, as 16% of students reported that their most recent English or Social Studies teacher had used one. Interestingly, the percentage of teachers reported as using internet resources in the classroom did not significantly vary across districts, nor did the types of resources being used. Only 21.6% of students stated that the subject of personal internet use was discussed occasionally or frequently in class.

Another set of questions in the survey revolved around students' experiences with media studies courses or units within other courses. The definition of "media studies" was left up to the interpretation of the respondents, to investigate what they perceived to be related experiences. Just over 40% of students stated that they had taken such a course/unit, with 21.6% claiming that they did not think such courses or units were available at their school, although they are an integrated province-wide component of the curriculum for both English and Social Studies. One reason for this result is that such initiatives are often integrated into existing classes, without being purposefully defined by teachers as a "media studies" component. Of those students who had taken a unit in media studies, two thirds found media education to be "interesting," and just over 50% stated that it caused them to look at their mediated environments in a different or new way. Slightly fewer (42.5%) claimed that these programs allowed them to look at their personal internet use in a new or different way, although almost 10% felt that it did not reflect their experiences with media and online space. Many (40.9%) said that they enjoyed media education units more than their other classes or units, while only 3% stated that they liked them less. In terms of overall reported impact, media education units seemed to most greatly affect students' perceptions of news media, with nearly half saying that these courses/units affected them in this regard. Comparatively, only 18.2% said that it affected their personal use of the internet. Almost a quarter (21.6%) stated that media education courses/units did not affect their external lives at all. Correspondingly, nearly three quarters stated that these units strongly or

somewhat affected their views on society and social roles. The reported prevalence or impact of media education did not seem to vary significantly across districts.

Two questions regarding media education courses or units were addressed to all respondents, regardless of whether they had taken such units or not. First, they were asked if they thought media studies had the potential to encourage students to look at their social worlds in new or different ways. Two thirds agreed that it does, stating that it either strongly or somewhat has this potential, which should be encouraged. Interestingly, this result varied significantly between those who had not taken media education units and those who had. The vast majority (80.3%) of those with media education experience stated that it had constructive potential to affect beliefs or attitudes regarding one's social world, while just 58.5% of those without similar experience agreed. Next, the students were asked if they thought personal internet use should be a subject of exploration in media education; nearly half (45.6%) said that it was an either extremely or somewhat important component; 14.2% claimed that it should have no role whatsoever. Again, this response significantly varied between the two response groups; almost two thirds (63.6%) of those who had taken a media education course/unit said that personal internet use was an important component, while only one third of those without similar experience stated that it had a significant role. This seemed to indicate that actual exposure to media education units produces a far greater appreciation for the function of this sort of learning in schools.

Overall, a few other areas seemed to stand out as yielding significant trends. Although the districts did not vary considerably in a number of respects, there was a notable difference regarding students' overall opinion on Wikipedia corresponding to the district they attended. When asked about Wikipedia, the response indicating a more sophisticated view of online informational resources was that they do use Wikipedia occasionally, but look to other sources as well. Students attending school in the VSB were less likely to choose this response (37.1%) as compared to students in New Westminster (53.8%) and Surrey (47.1%). Perhaps most significantly, students' perceptions of their teachers' use of internet technology in the classroom seemed to correspond to some degree with the districts' decision to ban one or more popular websites. In districts where students reported that Facebook access was blocked, only 45.9% of students stated that their English/Social Studies teacher uses internet resources frequently while 66.7% who reported no similar bans indicated that their teachers use the internet frequently. Similarly, far fewer (38.7%) students reported that their teachers use internet resources frequently or quite a bit in districts where YouTube was perceived to be banned, as compared to the positive response rate (60.4%) in districts where there was no perceived ban on the site.

While student perception and opinion was integral to this study, the resultant data set from the survey functioned primarily as a framing set of indicators early in the development of the overall research aims and interviewing text. As a result, the specific outcomes will be used largely in an implicit manner and in conjunction with the case studies throughout the analysis undertaken in

the preceding chapter. As such, it forms the basis of the adolescent perception that is discussed at greater length in relation to teaching practise and pedagogy in various BC school districts.

3.2 District Profiles: Policies, Practices and Pedagogical Mindset

In this section, I will present a consolidated profile of each of the featured districts using the accumulated information collected during teacher, administrator and district official interviews. I concentrated on several Lower Mainland school boards, as they illustrate the wide disparity between policy and teaching practices even in a small geographical zone; I will also briefly outline two non-mainland districts, one in the West Kootenays and the other in Northern BC (Bulkley Valley). In laying out the district profiles, one can begin to see how widely practices differ, which will allow further examination of the various pedagogical approaches. This will then prompt further exploration in the third chapter in terms of how BC practices both realize and fall short of the goals outlined by the digital literacy mandates set out by the province.

i. Vancouver School Board

Previously the largest district in the province, the diverse and well established Vancouver School Board has perhaps the largest challenges to the modernization of both infrastructure and teaching practices. Faced with declining enrolment, older school structures that inhibit both wired and wireless technology and an incredibly diverse program base that uses up the majority of funding allocation, the VSB seemed to be significantly less evolved in terms of digital

literacy and the use of productive technology in the classroom as compared to its Lower Mainland counterparts.

In terms of internet policies, the IT department at the district level made the decision to block all access to Facebook, MySpace, and a host of other popular websites within the last two years. Educators largely did not have a final say in this decision, nor has it been heavily contested, with the exception of the overturning of a temporary YouTube ban in 2008. The majority of the schools are equipped with only wired access, which was down for several weeks in January when a virus infected the system, a virus that had been inadvertently introduced when teachers attempted to bypass the strict limitations put on the network in order to use online resources as a teaching tool. Most schools are equipped with a moderate degree of equipment; each secondary school has at least one computer lab area (often in the library), with one computer for each teacher in most classrooms. During my time at Point Grey Secondary, however, Mr. McLean regularly could not access even the wired network, due to the structural limitations of his section of the building.

At the district level, a position for a dedicated technology consultant/coordinator does not exist, according to the official interviewed . Several members belong to a District Technology Committee, including the district interview subject, although they feel as though they have no real impact on technology-related decisions, as their requests have gone largely unheard by the school board. The interviewee (a district consultant) noted that online resources do not go through the rigorous process of resource approval or

removal from the school. She felt that this double standard needs to be addressed, as “we’re lagging behind in providing this exact same process to electronic tools and resources... it’s contrary to what we do, we provide the access to information and the skills to allow kids to be able to work with it.” Instead, it seems as though decisions are made rather arbitrarily by the IT department with little teacher input. It is interesting to note that this department used to be formally categorized as Learning and Information Technology and had more of a teaching and learning focus, but this aspect was eliminated due to funding shortages and is now restricted to dedicated IT services. Perhaps most striking is the fact that a widespread amalgamated report of teacher opinions regarding how internet technology concerns should be approached in the district was commissioned, with enthusiastic response and approval from the board of trustees. However, it was deemed by a director that there “was no appetite for it,” despite the fact that “teachers in every single sector in the creation of that plan had been consulted; teacher groups, administrator groups - everybody had been consulted in the creation of that plan” (VSB district official). Aside from the technology committee, there is no structure in place in terms of providing professional development for teachers (although there is a “technology” module in their annual Pro-D day). The interviewed district official did state that “there used to be technology mentors who came into schools, but with cutbacks those were lost.”

The vice-principal interviewed in this district felt that the parameters set by the district were fair, and that the sites that were blocked had no educational

value, particularly as he felt that the students are already spending an excess of time on them at home. He was emphatic that any internet use at school must have an explicit educational purpose, stating that it does have a relevant and important role if used properly as a tool to supplement curriculum; “if media use is framed in the context of goals, it can be excellent when it’s well thought out and justified...Schools must adapt to changing media environments.” He generally felt that adolescents are oversaturated with computer technology, however, and that it is a potentially “dangerous form of communication,” citing privacy and e-bullying concerns. When asked about the responsibility of schools to guide students’ learning and values in this respect, he stated that it was largely the role of the parents to monitor the use of popular online sources, and the school has in place curriculum, such as Health and Career Studies, to guide students in lifestyle issues. This vice-principal’s views regarding the role of the internet in secondary schools reflect a position characterized by uncertainty and fear that I noticed in many schools which limit access or do not prioritize the integration of online resources. This seemed to indicate a general wariness regarding the new technology, an unease that was reflected in a more negative and protectionist pedagogical stance.

As with every district, there is an extremely wide variation across VSB in terms of teacher mentality concerning the use of internet resources in schools. In all districts, older teachers generally stuck to methods that they were accustomed to, while younger educators tended to integrate technology and online sources more readily into their everyday teaching practice. Because of the policy-based

and pedagogical limitations, many teachers have adopted a “maverick” style within their schools, as a district official explained, which tends to go unnoticed or ignored by administrators. Some have purchased unauthorized routers to access material that was limited (as observed at Point Grey), or have given their students exercises and activities to do outside of school. Some teachers, including both Mr. McLean and Mr. Irwin, would purchase their own hardware, including a laptop and projector, in the attempt to overcome some of the infrastructure shortcomings in their schools. Those with a more technologically-oriented agenda (which ranged widely across departments) were often frustrated by both the physical and ideological limitations that existed; one teacher expressed that he often finds valuable online resources, but always has to wonder “if I’m even going to be able to open up a site because maybe the internet’s down again today – it’s that lack of reliability.” Sure enough, one entire day of the presentations had to be postponed at Point Grey because the students could not access online aspects of their presentations as the internet was down. In general, there are a wide variety of innovative practices going on throughout the district, from the use of blogs and social networking tools to critical analysis of news media websites, although they are isolated in pockets of grassroots effort. As the interviewed VSB district official concluded, “constraints have been so rigid, the constraints of lousy technology, lousy wiring. But there have been some really innovative and quite clever people who did things like drill holes through walls and set up bypasses. So the system is held together with some

fairly innovative educator practise, which is completely contrary to setting up a secure system that allows people to do all sorts of innovative things.”

ii. New Westminster School Board

In contrast to the VSB, New Westminster is one of the smallest school boards in BC, having only one secondary institution. Because of this, their practices are somewhat different from larger districts; as it has not presented itself to be an issue or challenge, there is very little overarching policy or pedagogy concerning the role of the internet in the classroom according to the teachers interviewed. NWSS has placed no blocks or bans on any websites, other than those blocked by the Provincial Learning Network, which limits access to pornographic or hate-oriented sites. The district has placed a fair amount of emphasis on technology as a teaching and learning tool, and the school recently acquired three SmartBoards to be used in classrooms. There are also several projectors available for teachers who bring in their own laptops, or would like to stream video or other content while teaching.

In general, the administration supports the use of technology in the classroom, although there is no overall mandate concerning its role in the school. They do provide financial support to access technology at the school, including the purchase of four SmartBoard teaching tools and workshops related to their use. Overall, the administration permits teachers to have relatively unrestricted access to online resources, and have not chosen to intercede and ban any websites. At the same time, the use of online resources has not been set as a

priority in order to cultivate a cohesive approach to internet use or digital literacy, and most teachers are left to their own devices within their classrooms.

Consequently, as with Vancouver, teaching practice in New Westminster has evolved in pockets of innovation and experimentation. It is getting increasingly common to see many English and Socials teachers using projectors, laptops and video streaming in the classroom during their lessons, and the various workshops offered on the new SmartBoard technology has resulted in an eager adoption of the learning resources. Teachers do use internet within the classroom, but the wired-only access occasionally makes it difficult, and students often observe online resources instead of interacting with them themselves as in-class access is very limited. There are two reserveable Mac labs for class use, but these tend to be monopolized by a few teachers throughout the school year, in addition to being somewhat cumbersome to have the entire class traipse across the school for one period in the lab. Overall, teachers are eagerly looking for ways to integrate technology into their teaching, although there is no cohesive vision across the school, and development exists at a very grassroots level where a few noted 'experts' are consulted for advice.

iii. North/Interior: Bulkley Valley School District and West Kootenay Region

In order to ensure representation of non Lower Mainland districts, teachers were consulted from interior and northern regions of the province. I have chosen to highlight Bulkley Valley and West Kootenay (Arrow Lakes), because they truly represent the enormous disparity observable between districts, and in this case, outlying regions with smaller populations. The northern

district of Bulkley Valley is comprised of the small towns of Smithers, Telkwa, Quick and Houston, collectively with under 40, 000 inhabitants and two secondary schools. The demographics within the district are constituted primarily of “Canadian-born” residents, with a substantial minority (10%) self-identifying as aboriginal. The West Kootenay profiled district, Arrow Lakes, has only one physical school which provides both in-class and distance learning services with an enrolment of almost 600 full time equivalent students. This region is largely comprised of working class families in a rural setting, with a largely homogenous Caucasian ethnic background.

Within the Bulkley Valley School District, student access to YouTube, Facebook, Hotmail and other popular internet resources is blocked, according to an interview conducted with a secondary school English teacher, who is also the literacy coordinator for her school. Teachers may access these sites when given a special password, but it is a difficult process that results in many teachers feeling that they do not have access to the technology in the way that they would like. One teacher outlined the frustration of the apparent ‘security-related’ banning of Hotmail; access is still available for all other forms of webmail, so it seems that the decision was rather arbitrary. Unfortunately, most of the students have a Hotmail account, which prevents them from easily sending and accessing their personal documents at school.

The district does have a technology principal who has a very “techno-literate” focus and pushes teachers to integrate online technology in their classrooms, yet the teacher I spoke to stated that he had a “Moodle Agenda”

(Moodle is a software suite that hosts blogs, discussion forums and other interactive components), and would only provide support for this closed environment that does not make use of the many blogs, wikis and streaming resources that teachers prefer to use in the classroom. Many teachers view this closed environment as limiting their pedagogical preferences, as some feel that the open-access quality of the sites is integral to their teaching goals.

Unfortunately, only teachers that share this agenda are given both technological and professional development support; “those teachers were given laptops and projectors, and so teachers who weren’t open to Moodle didn’t have access to that technology” (Bulkley Valley teacher).

There are some infrastructure issues as well, as only some parts of some schools are able to receive a wireless signal. Furthermore, the teacher I spoke to stated that although she had access to a laptop and projector, she had been given no professional development on either technology and was at a loss as to how to work them successfully into her teaching. In essence, the district seems very conflicted; in some ways, it is very progressive in its pedagogical goals in its ready adoption and endorsement of online sources such as Moodle, but at the same time it does not integrate teacher opinion in its decisions concerning its vision, and as a consequence the resources that are in place are not being used as effectively as they might be. A Bulkley Valley teacher summed up the situation in the district very astutely, stating that “it’s such a contradiction because [the district principal] is constantly saying how teachers have an obligation to inject their teaching and students’ learning with technology, they need to be moving

forward in the 21st century; yet, when we try to use things like YouTube and Facebook and blogs and wikis, and all of these wonderful things, we are constantly faced with problems.”

Conversely, rural School District Ten in the West Kootenays does not block student access to any sites. Instead, they have a policy in place wherein students are allowed to use popular internet resources such as Facebook and YouTube if they can justify why the use is educational. As a result, many teachers have embraced the use of these resources in their teaching and learning practice. A teacher and literacy coordinator in the district stated that “our teachers are getting quite creative in finding ways to make fits and to use technology in purposeful kinds of ways,” stating that she and her colleagues have made interesting use of online communication tools as a site of both learning and interacting. One of the reasons this district has placed an emphasis on technology (even a small rural school is equipped with several labs, including multimedia Mac stations) is because, being in such a small, spread out area, they value connections with a wider global community. As a result of this pedagogical mindset, the secondary schools have become pioneers in educational video conferencing and virtual meeting networks (such as Elluminate Live) with other schools, in addition to promoting synchronous and asynchronous use of online meeting spaces such as Moodle. One teacher stated that “at this point, I use Moodle as the backbone of all of my in-class classes, so all of my assignments are paperless, students upload their papers to the site, they give peer feedback and assessment almost exclusively online.” Educators have also

made the concerted effort to embed technology literacy practices into their teaching, including addressing online rhetoric and etiquette, information verifiability and personal privacy. The district has found that, as a result of using technology to communicate both across distance and to revolutionize teaching practice, “learning for all students improved. It’s a very inclusive kind of paradigm, and it builds in a lot of assessment for learning practices.”

Interestingly, although both districts make some use of Moodle, it has been received in very different ways by teachers. In the Bulkley Valley district, the software package is pushed upon the teachers at the district level, while other online resources are limited and banned. In the West Kootenays region, Moodle has been adopted by teachers because the educators themselves view it as the most efficient ways to realize their goals surrounding techno-literacy, while having very few bans or limitations placed on their access.

iv. Richmond and Surrey

Two outer suburbs in the Greater Vancouver Regional District, Richmond and Surrey, have similar technological setups in place, although the regions differ in terms of overall pedagogical outlook. In terms of demographic makeup, both Surrey and Richmond are fast-growing suburban school districts with many new buildings, particularly in Surrey. The Richmond district contains eleven secondary schools and has the highest number of visible minority inhabitants in Canada (59%, according to the 2006 census), most of whom are of Chinese descent. Generally, students come from middle to upper-middle class backgrounds. The Surrey school district is the largest in BC, with nineteen secondary schools. The

ethnic makeup of this district is quite different from Richmond, with 30% being classified as a visible minority, most of whom come from South Asian descent. Economic backgrounds of students are mixed, but are generally from working or middle class families.

In terms of internet policies, both districts have elected not to ban access to any popular sites. In Richmond's case, this choice was made purposefully, so as to cultivate a sense of appropriateness and etiquette in their students, as well as allowing teachers to use tools familiar to adolescents. Additionally, one technology consultant stated that limiting access was actually very difficult to adopt as a policy, as students often found creative ways to access sites. If schools take the stance that youth will not have access to these websites, then they have to do everything within their power to make sure that this policy is upheld. Since this is so difficult, and arguably arbitrary, this would cause the district's entire policy structure to be brought into question.

District officials in Surrey take a more neutral stance on the issue, and seem to passively discourage the use of popular websites; they have taken to limiting the amount of bandwidth that YouTube and social networking sites take up, as they have proven to be a drain on the already scarce wireless resources. The district's technology consultant stated that through this throttling method, they hope to discourage students from accessing these popular sites so teachers will be able to have more access to bandwidth during class time, although he admitted that this tactic may not be entirely successful. Both districts struggle with limited access through the overstrained Provincial Learning Network.

Both districts also have concerted professional development in place, and both work to encourage teachers to use 21st century tools in the classroom. In Richmond, technological configuration is largely centralized at the district levels; each school is equally equipped at the base level, and all computers run the same software suites, although some schools have opted to use their own funding to add to their technological infrastructure. There are two technology consultants that run in-class and professional development workshops, in addition to providing teacher support in the use of technology. They also organize the use of the “mobile labs” that they lend out to teachers who request computer access for their students in the classroom, as opposed to relocating to the lab. Pedagogically, Richmond teachers and the consultants focus on “digital storytelling” as a way to embrace the province’s multi-modal literacy objectives by encouraging students to represent their ideas in multiple formats, emphasizing the creative role of multimedia manipulation. One popular unit has been “book trailers” in English classrooms, wherein students use simple video editing tools to produce a teaser for a novel, instead of writing a book report. The two technology coordinators are also quite progressive in terms of their overall pedagogical outlook and appreciation of the use of the internet and new technologies to promote this new definition of literacy; “we have to widen the definition of literacy, otherwise we’re disenfranchising the kids. If we say reading is what’s done in novel, then as far as the kids are concerned what they’re doing is not valued, and they want nothing to do with reading [and literacy objectives].”

Similarly, the district technology consultant in Surrey is working to promote the use of online resources in the classroom, particularly in the form of blogs and wikis. His focus revolves around media literacy as defined by the cross-curricular integrative approach set out by the ministry, and the district is involved in several related initiatives, including the Tech Schools Partners Program that works to develop teachers' technology skills with the aim of having several proficient teacher resources at each school in hopes that the techniques and new practices will be adopted by their colleagues. Pedagogically, the district has developed a very progressive set of Information and Media Literacy Capacities for elementary and secondary schools. These capacities revolve around six categories: use, understand, inquire, create, communicate and think critically (Amboe, 2008). Essentially, the overall aim of the capacities is to ensure that students have the practical, social and ethical knowledge required in 21st century life; the "capacity to effectively access, organize, analyze, evaluate, and create messages in a variety of forms. The transformative nature of IML includes creative works and creating new knowledge; to publish and collaborate responsibly requires ethical, cultural and social understanding" (Amboe, 2008). Unfortunately, these capacities have not been significantly cultivated within the district, due to the sheer size of what is now the largest school board in the province. The limitations of having only one dedicated technology consultant at the district level are also a factor. Unlike the Richmond school district, Surrey does not permit students to bring their own technology to school, citing security and bandwidth concerns. This is an interesting decision, particularly given other districts' emphasis on the

inclusion of students' ever-present personal technology, in addition to the fact that school resources are often quite limited.

v. Coquitlam

The Coquitlam school district, comprised primarily of middle class suburban schools including nine secondary schools that are relatively new and well equipped technologically. Demographically, this district is composed primarily of middle and upper-middle class families, 41% of residents being foreign born. Coquitlam is also arguably the most advanced and technologically progressive district in the province. Initiated by the aggressive aims of several technologically-oriented district officials and school administrators, a vast amount of the district's funding has been poured into their infrastructure, teacher support and professional development. Unlike most other districts, Coquitlam does not use the Provincial Learning Network as its wireless source; rather, all secondary schools are equipped with a higher bandwidth enterprise provider, and some schools have even opted to invest in a fibre optic network. At the district level, there are two people whose roles are dedicated to technological support and development in the positions of Staff and Development and Technology Innovation Coordinator. Largely, the pedagogical model is one of teacher support and development, and revolves closely around the district adoption of the Microsoft SharePoint suite, which is an online space in which a teacher can build a "portal" for each of his or her classes, complete with the option of including a wiki, blog, discussion board, video streaming area and a host of other features. Perhaps most importantly, this software is heavily supported at the district level,

and portal sites are automatically set up for teachers, who can then choose whether they want to use this resource in their teaching practice. Many have elected to, and as a result the technology has become increasingly popular and has been adopted almost as a norm by many Coquitlam teachers; in the average school, approximately one third of the teachers have a portal site. Students are strongly encouraged to bring in their own technology to school, and in some secondary schools almost every student logs into the portal each day; one district official stated that in one day, he measured 200 student devices on the network at any given time. In terms of professional development, the district uses an “action research” model, wherein teachers (currently 28 technology learning teams across the district) come together to set out their personal learning goals regarding technology and meet up once a month to discuss their successes and challenges.

One school, Heritage Woods Secondary, seems to serve as a paradigm for this progressive model. Headed by a principal whose focus revolves around the cultivation of a progressive 21st century learning environment, this is one school that is having a fibre optic network installed, and every single teacher receives a tablet PC to use as they wish. Most of the educators, from Math to English teachers use technology frequently in their classroom, and many run in-class activities wherein students use their own devices online in order to complete a task. The principal is quick to state that their school was given unique opportunities in the form of a brand new building and a provincial technology grant, although he emphasizes that it is teachers’ overall pedagogical attitudes

that have resulted in its success, as opposed to the technology itself. The following is a brief example of a few of the innovative practices in place at Heritage Woods:

“The history 12 teacher...has got them doing a lot of blended coursework; you walk into his class and they’ll only be six or so of them in there, but you go down to the Grand Hall, and there’s the rest of them, and they’re responding to one another on discussion groups - they use Skype to communicate back and forth, and so a real use of a different set of tools there to communicate. He uses his portal quite heavily to view videos outside of class as well as during class time, so it’s really dependent on kids having access on almost a daily basis in his class. Other socials teachers are using Sharepoint and such to create; for example, in Socials 10 they used a Sharepoint environment that only gives access to kids in the program to create Facebook sites for famous Canadians, so to try and demonstrate their knowledge of these famous Canadians” (Interview, Heritage Woods principal).

Interestingly, this last project was one that was also conceived of by a Vancouver teacher, although ultimately she had to have the kids draw out the mock Facebook profiles on paper, as access to the social networking site was blocked.

3.3 Limitations of Study and Summary of Findings

This study was designed to provide an overview of select BC district practices and policies regarding internet use in schools in order to ascertain the

limitations and opportunities for technology integration as reported by teachers, administrators and students themselves. Due to its scope, the study represents only a preliminary overview of these practices; more research is needed to give more depth to the above profiles. However, the vast differences in pedagogical practices became evident throughout the study, and will provide an excellent starting point for further discussion both within the final chapter of this paper, and for other researchers and educators.

One central limitation of the study was the relatively small participant sample; out of dozens of school districts, only eight were profiled at any great length. However, this sample seems to be relatively representative of the variety of pedagogical outlooks and educator practices that are characteristic of British Columbian education. This study would serve as a useful starting point for a more comprehensive district to district comparison. Similarly, the sample size of the student survey was relatively small; the aim, as illustrated above, was not to produce a quantitative argument of statistical significance but to begin to profile the general online habits and opinions of BC students. The results themselves, while not statistically generalizeable, do indicate the overall online trends and perspectives of BC adolescents, and generally corroborate with other similar research studies. Again, further research could be undertaken to ascertain a more definitive relationship, and this study provides an overview of trends that may help develop a more in depth inquiry.

As seen from the district profiles, pedagogical mindset, infrastructure, policy and teaching practices vary significantly across the province. Most seem to

be struggling in some way with successful implementation for a wide variety of reasons, ranging from funding and infrastructure shortages to a pedagogical outlook that deemphasizes the use of popular online resources as a classroom tool. In this chapter, I have described the in-class case studies, student perspective and trends in district teaching practices and policy mandates; I will now turn to the analysis and discussion of this data, examining how these disparate policy decisions and teaching practice compare to the progressive definition of digital literacy outlined in the first chapter and the overall curricular mandate set out by the province.

Chapter Three: Digital Literacy Practices in BC

Introduction and Chapter Outline

As observed in the review of practice and policy in BC, there is a great disparity in pedagogical tactics regarding the use of internet resources in the classroom. In this final chapter, I will engage in a discussion of these various practices, examining how they reflect or divert from both the overarching definition of digital literacy outlined in the first chapter, in addition to the multi-modal literacy imperative set out by the province.

In the first section, I profile the pedagogical attributes of BC teaching and learning practices regarding internet use, defining both perceived successes and limitations at the administrative/policy level as well as within classrooms themselves. I examine why certain schools, districts or teachers seem to find success and balance in technological integration, assessing the factors behind productive implementation. In my analysis, I find that the key determinants of successful use of internet resources revolve around two central factors: pedagogical mindset and infrastructural opportunities and limitations. Any successful initiative must have substantial investment in both respects, and I examine the relationship between these two factors, assessing how they are manifested in the various districts. I then turn to a more in-depth examination of

the in-class case studies and reported findings of the teacher interviews, drawing out commonalities and differences in teaching practice. Here, I note that one pivotal difference in pedagogical approach revolves around teachers' outlook on the role of the internet within the classroom setting; while many educators I encountered view online tools as an essential resource in the modern classroom, far fewer engage with the more critical pedagogical opportunities in treating internet use as a site for textual reflection and analysis.

In the second section, the definition of digital literacy is expanded upon, particularly in relation to BC's curricular outcomes surrounding new media. I explore the attributes outlined in the first chapter as central characteristics of successful digital literacy initiatives: the overall goal of competency transference, the framing perspective of multimodality and a greater emphasis on fostering critical reflection within mediated environments. In doing so, I outline and reinforce successful practices that utilize internet-related media both as a resource and a site of study, summarizing the feasible ways in which BC curriculum and teaching practices might further emphasize and develop this positive potential.

Finally, I return to the three framing parameters used as a basis for the analysis of digital youth in the first chapter: online representation and socialization, creative production and civic participation, and information seeking practices. Using these frames, I examine how BC pedagogical practices intersect with the balanced view of digital youth as previously outlined, recognizing both the opportunities offered through online space as well as the ways in which youth

need to be guided in order to fully realize this potential, using the approach to digital literacy advocated in this study. In this way, the model outlined in the first chapter will be compared to actual teaching practice, examining the ways in which the often underemphasized aspects of digital literacy might be better realized within the current educational environment in BC.

Section One: Profile of internet Use in BC Classrooms - Opportunities and Limitations

1.1 Administrative and Policy-Related Barriers to Successful Implementation

At the district and administrative level, a wide range of opinion exists regarding the function of online tools in the classroom. Some districts, such as Vancouver, devalue the role of popular websites and resources and view them as having a disruptive quality that overrides any pedagogical offerings. Others, such as Coquitlam, emphasize the productive role of these resources in the classroom, considering them an essential aspect of their educational strategy. Given this incongruence, it becomes crucial to examine why these differing mindsets exist. As I examine, district and school-specific policies and learning models concerning the role of online technologies are primarily affected by two central factors: infrastructure and pedagogical mindsets regarding educating students through and about these tools. These aspects are mutually reinforcing and significantly affect teaching and learning practice within schools and districts.

The most obvious and very real barrier to successful and meaningful use of online resources in schools is lack of access to technological infrastructure.

Not a single district profiled was exempt from some sort of barrier in this respect, although they greatly varied in terms of overall access and reliability. Vancouver was among those with the poorest quality of access, with very real barriers existing that other districts are not burdened with to the same degree. Many of the school buildings in the Vancouver School Board are older, and do not easily allow for consistent wired or wireless access, particularly as compared to more suburban districts, where newer schools have been designed and constructed to accommodate modern technology. Furthermore, factors such as declining enrolment and a more widespread need for funding greatly affect the ability of a district to allocate dedicated funds to technological infrastructure. This has been particularly problematic in the case of the VSB. As many of their schools are situated in urban environments and offer continued education or other programs, dispersed funding demands have resulted in an underdeveloped online infrastructure, particularly as compared to other districts. As observed in the Vancouver case study, students were unable to complete their presentations as planned, as the wired access was down on that particular day. Similarly, Mr. McLean feels that he cannot rely on the access, and plans his lessons accordingly with optional online supplements; this situation was exacerbated when the network was downed by a virus for nearly a month early in 2009.

Other districts also face technological problems. For instance, although Surrey offers wireless internet in all of its secondary schools, the bandwidth is strained and teachers often cannot stream video clips or access relevant sites at various points of the day. This lack of both access and reliability is a very real

barrier to both widespread emphasis on online resources in schools as well as teacher inclination to use a technology that is not dependable. Overstretched funding and declining enrolment (in some districts) only exacerbate this challenge.

The other key determining factor in how online technology is implemented within the various districts is the pedagogical outlook regarding internet resources at the district and administrative level. As outlined in chapter two, the various school boards have a wide variety of stances concerning online technology and its place in formal school environments, which tend to fall into one of two categories. In the first situation, internet use is viewed as being primarily disruptive, something that should be limited to contexts that are deemed as 'educational.' Popular websites and applications are seen as superfluous at best, and at worst they are viewed as dangerous and inappropriate in a school environment. In some districts there is also some degree of arbitrariness evident at the district level, particularly as seen in the case of Vancouver, where access to certain sites is blocked without significant teacher or administrator input. This seems to indicate that at the policy and curriculum level these resources are not being considered as pedagogically useful. Viewing online space primarily as a threatening distraction is reflected in the tone of caution present in my interview with the Vancouver vice-principal, who emphasized that such resources could be used effectively, but only when 'distracting' popular websites are blocked and a protectionist stance taken; "kids spend too much time on computer at home...it can be dangerous form of communication."

This illuminates the key pedagogical bifurcation concerning the role of online technology in schools: some administrators view the internet as being a educationally rich and stimulating environment that should be emphasized in modern curriculum, while others view it primarily as being distracting, inappropriate or dangerous, something that belongs to students' 'outside' lives and not in a school setting. These views, although distinctly polarized, are not of course mutually exclusive. Those with a more positive and inclusive stance on internet use can also be cautious in regards to student level of access and appropriate use. This was observed in the case of Surrey, a progressively minded district that closes down student device access for security and control reasons. I also do not intend to caricaturize the views of the districts who take a negative and somewhat exclusory stance on internet use, as they all clearly realize that some level of internet access is integral in any modern school setting. It was quite noticeable, however, that two distinct and very different outlooks polarized administrators, particularly regarding the productive (or unproductive) nature of online space in educational settings.

Although the first barrier concerning infrastructural limitations seems to be far more of a fixed variable than pedagogical mindset, the two are bound up in an important relationship that seems to have caused the division of district practices in BC. Clearly, areas such as Vancouver or other districts facing unique demands have greater challenges to overcome in the process of integrating online resources into their schools. However, perhaps the most salient challenge observable in the districts lagging in technological development is the

pedagogical frame at the root of decisions surrounding funding allocation and curricular emphasis. In Vancouver, the district elected to disregard a study outlining teachers' call for greater access and need for developing educational strategy, as well as deciding to limit website access across all schools. As a result, very little funding emphasis has been given to technological support and development, particularly beyond the basic infrastructure level of wiring all schools, the minimum requirement set by the province. Meanwhile, districts such as Coquitlam (and to some extent Surrey and Richmond) have developed a progressive and demanding pedagogical position on internet resources in the classroom and correspondingly have shifted large amounts of resource funding to equip their schools with fast and reliable internet connections in addition to supplementing professional development.

In this respect, infrastructure and access is largely reflective of the pedagogical position of district officials and administrators and their related technological priorities. It is important to note as well that successful efforts to update infrastructure must be accompanied by an overall shift in mindset from viewing online space as primarily distracting, inappropriate or potentially dangerous to perceiving it as a productive and integral resource to modern education. It is not enough to merely provide the tools or infrastructure to educators; a sustained pedagogical plan of implementation must be in place that includes teacher training, professional development and a set of guidelines to begin using the new technology successfully within the classroom. However, "training is clearly crucial to the implementation of technology in schools, and yet

the proportion of funding spent on training is consistently lower than most educational planners see as necessary” (Buckingham, 2007, p. 60). Overall, the most significant barrier to the successful and meaningful use of online resources in schools, then, seems to be a negative or protectionist mindset regarding the role of the internet in adolescents’ lives.

1.2 Teaching and Learning Practice: Successes, Opportunities and Limitations

In the face of this situation, teaching practice, perhaps not surprisingly, often transcends both the infrastructural and pedagogical limitations of the districts. Teachers frequently adopt ‘maverick’ approaches for using internet resources in the classroom, from bringing in their own routers to providing teacher-level login clearance for each student to access blocked websites. There was, however, a wide range of approaches regarding use of technology within teaching practice. In general, teachers tended to view online space as a resource or tool, and/or they would view online environments as a site of study requiring critical attention. Overwhelmingly, however, BC teachers tend to view the internet as a tool to aid their teaching, as opposed to simultaneously emphasizing more of a digital literacy imperative by encouraging critical reflection on texts within online-mediated environments. This trend became evident through teacher interviews, as well as through the in-class case studies.

During the Vancouver case study, for instance, Mr. McLean used the internet frequently, largely to encourage student use of multimedia within the presentation assignment. However, he was less concerned with nurturing a

cohesive sense of digital literacy than he was in fostering technological skills among his students. In addition, in class he would use the internet as a communication tool, with a Facebook account set up to connect with his students outside of the classroom. He also relied extensively on video streaming and website access to supplement his lessons. At the same time, he did not purposefully integrate a critical perspective into his teaching in terms of reflecting on the role of the internet in students' personal lives and within society. When discussing the presentations with the class, he stated that "it's not important if you didn't learn anything about your topic – for me, it was about you learning multimedia and presentation skills." This highlights his primary concern of developing skill-based competencies as opposed to a sense of critical reflection on the revolutionary media that were intended to be the subject of study in this assignment. Other researchers have noted this emphasis on skill development as opposed to critical literacy; "in the case of writing, for example, there is a focus on external aspects of presentation at the expense of developing rigorous arguments or clear critical thinking" (Buckingham, 2007, p. 68). Bruce (2004) concurs, concluding that "the view of the computer as the teacher's machine has resulted in some undesirable practices – first, drill and practice programs are still by far the most common in classrooms. Applications that help them do presentations are the most popular among teachers" (p. 163).

With Mr. McLean, his stated aims were a bit contradictory, particularly as the curricular purpose of the presentations was to investigate "revolutionary media" in a sociological sense, looking at how and why they have evolved and

impacted society since their inception. In my research, however, I discovered that a critical undertone often runs through teachers' pedagogical approaches, albeit in a largely implicit and almost subconscious way. Mr. McLean's teaching practice regularly demonstrated this observation. At several stages in the presentation planning and brainstorming process, he urged students to examine the sociological impact and cultural ramifications of their chosen media. For example, he encouraged the group working on the history of personal music devices to look at how they caused members of society to become more individualized, as well as examining the impact MP3 players have had on the music industry. However, this aspect was heavily deemphasized in the project; it seemed that Mr. McLean implicitly wanted to critically engage the students in more of a sociological analysis, but he seemed to lack confidence that this critical agenda could be translated into the assignment. As a result, it appeared that the students, for the most part, were merely rehashing recovered data instead of critically examining and engaging with the subjects (with the exception of the Digital Television group, as examined in chapter two). This captured a trend that I observed throughout both case studies and within the interviews: teachers are often implicitly taking up themes that revolve around a more sociological digital literacy outcome, although they often do not explicitly consider it to be a part of their overall teaching practice. All teachers generally agreed that looking at the social roles of various media is important, particularly in the case of film, advertising and mass media. Interestingly, however, this objective did not seem to translate explicitly to internet and popular online environments, which largely

seemed to result from lack of clear curricular definitions on digital literacy outcomes, as I will explore below.

In the development stage of the New Westminster case study with Mr. Irwin, I also found that he only implicitly integrated these themes. Through our conversations, I discovered that he had a progressive and technologically inclusive approach to education and the use of technology, but similarly to Mr. McLean, he did not consciously integrate the notion of digital literacy and analysis of online environments in his teaching. It was not until he was introduced to the media education programs and workshops provided by the Media Awareness Network that it occurred to him to use this technology not only as a tool but as a site of study itself. Ultimately, this approach had common ground with his overall pedagogical goals concerning critical awareness and questioning. He stated that “metacognition is an integral aspect of the learning process...by having [students] reflect on the collaborative nature of websites such as Wikipedia, it will ideally affect how they produce and consume information in the future.”

Given this, it was interesting to observe Mr. Irwin throughout the Wikipedia workshop, wherein much of the classroom discussion revolved around who has control and access to information on the internet, what sort of writing is most appropriate for certain venues, and the power of collaboration and participation. This conversation ended up spilling over into almost two full classes, where the above themes were discussed at length. In the end, both the students and the teacher felt as though their core ideas and understanding surrounding the

participatory space of wikis had been further refined or even substantially altered. In fact, they decided to build a class wiki of their own, so as to cultivate a space for resource retrieval, discussion and contribution.

The in-class observation during the case studies, in addition to the interviews with Mr. McLean, Mr. Irwin and others, revealed that digital literacy imperatives were not extensively developed in terms of both pedagogical mindset and actual practice. The reports the more progressive teachers often indicated that they felt that critical reflection on media and society was an important curricular concept. However, these notions seemed to remain largely latent, mostly due to the relatively recent role of online technology in the classroom, in addition to the lack of resources surrounding actual implementation of lessons to encourage the analysis of internet media culture and its impact on society. As a result of these limitations, I found that teachers tend to use online resources in a primarily instrumental manner to supplement conventional teaching practices. Likewise, “Goodson et al. (2002) show how teachers tend to use computers as ‘just another tool:’ they use technology to modify aspects of their existing practice, but tend to keep the basic structures and objectives unchanged” (in Buckingham, 2008, p. 63).

This highlights perhaps the most important barrier to successful use of online resources in the classroom: lack of professional development and guided implementation programs. “For change to happen at the classroom level, it cannot solely come from district policy or initiatives; for lasting change to occur, teachers require a collaborative peer support structure and direction in producing

school-based initiatives” (Mr. Irwin, New Westminster Secondary). While some schools, such as those in the Coquitlam district, offer extensive resources and peer support groups, many others, such as those in the Vancouver School Board, do not provide any direction to teachers regarding both the technical use of online media or guidance on how to integrate these tools or texts into their teaching. Each teacher I interviewed or observed stated that professional development, in-school ‘expert’ contacts and specific curricular recommendations are an essential although neglected aspect of the successful use of the internet in the classroom. Providing teacher training as well as a dedicated set of programs or support for software/freeware is pivotal in successfully implementing use of this relatively new technology, particularly as teachers may feel overwhelmed due to their lack of expertise and thus have no sense of where to begin. This is particularly essential in realizing the digital literacy and multi-modal aims described in the ministry’s learning outcomes, which suggest recognizing media forms as textual sites of study. This approach, however, seems to be largely absent from the practice of even the more progressive teachers. As Seiter (2005) concludes, “in order for internet access to succeed, the device must be accompanied by a host of other expenditures for peripherals, software, and a rich network of human relationships to ensure their maintenance” (p. 9).

Section Two: Digital Literacy

As elucidated in the above analysis of the limitations and opportunities regarding internet use in BC classrooms, while teachers are beginning to integrate technology into their teaching practice, a comprehensive and cohesive

set of pedagogical tactics as related to digital literacy is only being hinted at. This includes the need for a more comprehensive understanding of the definition and goals of digital literacy, revolving around the notions of transferability, multimodality, and critical reflectivity. In this section, I will explore this definition of digital literacy in terms of the practices observed in the BC case study, focusing on the notion of reflective criticality as related to the textual analysis of online space and its relationship to the multi-modal literacy goals set out by the province.

In the first section, I explored how the two key barriers to successful and meaningful implementation of technology use include infrastructural and pedagogical limitations, the latter being the true impediment to progressive development of teaching and learning practice. Largely, the most prominent restriction involves the adoption of the more pessimistic viewpoint of youth and digital technology, when administrators and district officials in particular view popular online resources as a distraction or even dangerous to students' wellbeing. As noted in the first section, this reflects the pervasive tendency of schools to adopt a more 'top-down' approach to digital literacy wherein key competencies and specific skill outcomes comprise the basis of technological integration. This practice, however, often overlooks the informal sorts of literacy that students have developed in their personal experiences with online media. In adopting this top-down approach, schools are seeking to retain control over the formalized types of learning that occur in these environments, and as such may discount the importance of integrating "students' own experiences of framing

learning and acting in the knowledge landscapes of digital culture” (Sefton-Green et al., 2009, p. 122).

This is particularly evident in the decision of many districts to ban or block access to popular social networking and video streaming websites. The puzzling trend of providing infrastructure yet limiting access for pedagogical reasons is not limited to this province. In many countries:

schools have spent lots of money and energy getting wired to the internet so that everyone can enjoy the benefits of this wonderful information and communications technology. Then, right after school staff get the internet connected, they start spending money and energy trying to restrict it. They build firewalls. They develop elaborate internet user policies...many websites are blocked, and in essence the internet is reduced to a reference book for the teacher (Bruce, 2004, 163).

This seems to be counterintuitive for the multitude of reasons examined above: in order for students to be engaged, ethically minded and reflective 21st century citizens, schools must include access and curriculum surrounding the social and cultural use of internet space. As a Richmond district technology consultant stated, “I think the job of schools is not to fight against the technology, the job of schools is to say, ok, we’re in the 21st century –there are certain things that an ethical, citizen of the 21st century that a courteous person of the 21st century does or doesn’t do. So, if you’re in the classroom, or a concert, or a theatre, you don’t talk on your cellphones, because that’s rude. And if you’re going into a meeting where it’s important that you’re not interrupted, then you turn your phone off and let your voicemail take your message.”

One practical challenge to this overall goal is that substantial and purposeful changes must be undertaken in terms of conventional teacher-learner models, including significant emphasis on communal meaning-making, the integration of students' lived experiences and the breakdown of the classic hierarchical classroom environment. As argued in the first chapter, this includes the amalgamation of both the top-down and bottom-up approaches to digital literacy, wherein the relevance of informal digital culture is recognized simultaneously with the cohesive and outcome-driven approach that is characteristic of formal education. As Sefton-Green et al. (2009) and Drotner (2008) elucidate, this tension between the two approaches has resulted in uncertain and uneven tactics for implementing digital literacy strategies. Ultimately, however, it is the combined method that holds the most promise for the development of a useful and successful digital literacy framework.

In the first chapter, I outlined a working definition of digital literacy based on the notion of reconciling these two approaches, featuring three central tenets. First, formalized approaches to digital literacy must include emphasis on the concept of transferability, both to and from students' informal experiences and competencies cultivated in their digital environments. Next, a cohesive and progressive digital literacy strategy must include recognition of changing forms of literacy, including emphasis on multi-modal sites of reading, writing and comprehension. Finally, projected learning outcomes should be focused on the development of a sense of reflection and criticality on mediated environments, particularly as this key competency is one that has been demonstrated to be

lacking in adolescents' navigation of online space, as argued in the first chapter. I will now turn to examining each of these attributes in greater detail, particularly as pertaining to BC teaching practice and policy.

2.1 Transferability and Multimodality

Perhaps one of the most challenging aspects of digital literacy is the notion of transferability of learning practices from informal to formal realms. As previously explored, teachers, policy makers and administrators seem to discount teenagers' personal online experiences to some degree, particularly as related to social networking, which is often viewed as a distraction or waste of time. A technologically progressive Coquitlam principal expressed that "unfortunately, a lot of parents have the same views as a lot of those trustees or teachers, which is we need to keep this out our kids already spend too much time online. It is, they see, they cannot see it or they do not see it as a teaching and learning tool." As a result, schools such as Point Grey have limited or banned access to these more informal environments, as they do not see any educational value in allowing students or teachers to use these sites. These methods, however, are not only rarely successful, but exhibit more restrictive forms of a top-down approach that ignores the pedagogical importance of these resources, both in terms of recognizing the informal types of literacy and competencies students bring to the classroom, as well overlooking the need to guide and educate adolescents on the use and navigation of these resources. As a Vancouver district teacher-librarian consultant succinctly stated, "you want to

teach them the responsible, ethical use of these tools. This is a teachable moment.”

In order to ensure transferability within a digital literacy paradigm, schools must abandon the notion that popular internet resources are a distraction or liability. Some have already begun to do so in BC, but I observed that educators still tend to discount the relevance of informal sites of learning and the function of transference with more formalized environments. In addition, methods of banning or blocking access generally end up failing. Savvy students quickly find ways to access their favourite websites, from using proxy servers to accessing material on networks that are not limited by school restrictions; “in response to these regulations, most teenagers developed “work-arounds,” or ways to subvert institutional, social, and technical barriers to hanging out. These work-arounds and back channels are ways in which kids hang out together, even in settings that are not officially sanctioned for hanging out” (Ito et al., 2008, p. 13). Schools believing that they are curbing a distraction or refusing to condone ‘questionable’ behaviour in the learning environment reveal themselves to be quite out of touch with the fact that not only can students find ways to access these sites anyway, but such environments can prove to be pedagogically rich resources. A Coquitlam principal expressed that choosing to block access is “a huge error. What it’s doing is creating a bigger gulf between kids and teachers. If we ignore what kids choose to do when they have their own time, it just doesn’t make any sense whatsoever to me. We need to make be cognizant of it, and the interesting thing for a lot of teachers is its they’ve had to reevaluate their management style in

the classroom” (Interview). Likewise, Ito et al. (2008) argue that “simple prohibitions, technical barriers, or time limits on use are blunt instruments; youth perceive them as raw and ill-informed exercises of power” (p. 37). Removing these inefficient and counterproductive barriers is the first step in realizing the more progressive pedagogical goals that recognize the importance of competency transference between informal and formal learning environments.

As expressed by Drotner (2008), one central difficulty is that the way adolescents navigate online environments and the accompanying set of competencies that are developed are vastly different from the way that formalized learning environments are structured:

The forms of knowledge...that young people use and develop through their self organized digital practices are clearly at odds with the definitions of knowledge on which most school curricula are based: they focus on the learning process rather than the resulting knowledge; they prioritize concrete issues over abstract concepts, experiences over facts and immediacy over delayed results. Also, they are motivated more by the sharing of personal problems than by the unraveling of wider social issues (170).

As outlined in the first chapter, this is a substantial challenge to existing teaching practice, which has long been based on hierarchical models of imparted information and cultivation of specific sets of knowledge. However, it is becoming clearer that future competencies that will be required of adolescents in their social and economic lives reflect more of this nonlinear form of learning. Several of the interview subjects expressed that a change in approach from the ‘drill and skill’ method is required; “teachers are concerned that students will cheat on tests using their technology to jump online and look up the answer. Isn’t this the

indication, though, that you're asking the wrong sorts of questions?" (Mr. Irwin, NWSS). A district technology consultant from Coquitlam echoed this sentiment, stating that "your questions can be answered in less than 140 characters? You're asking questions that have rote answers and have no critical thinking involved at all."

Although I observed that teachers were beginning to use a wider breadth of multimedia oriented resources in their classrooms, their teaching methods were still largely instructional in approach, instead of echoing the more exploratory, collaborative environment that adolescents are accustomed to in their informal experiences. In this way, teachers should be urged to adopt a more inclusive and feedback driven classroom approach that better reflects the outside learning styles of both youth and society in general. The typical lecture and "fact parroting" mode of education is becoming increasingly dissociated from a world where adults and adolescents alike have quick access to information, make extensive use of feedback loops and are accustomed to modifying content. Buckingham (2007) expresses the concern that "there is a widening gap in this respect between how technology is used in school and what children are doing with it outside of school...many children find the uses of technology in classrooms to be narrowly defined, unimaginative and instrumental" (p. 74).

In short, pedagogical approaches should be modified to more closely reflect the 'real world' practices and concerns of a 21st century society. "You wouldn't work in isolation without those tools. And yet in school [students are] expected to do that, and that's not natural. In some ways when we're looking at

things like technology we need to rethink how we're doing them and think about the power technology brings. So, it may be less important for students to memorize a bunch of facts when they can Google jockey what they need to, when they need to" (Richmond District Technology Consultant). Many teachers observed in this study are already beginning to integrate these methods, particularly through their use of online resources such as blogs and wikis to foster a sense of peer-to-peer learning, discussion and discovery. Instead of emphasizing fact-based lessons, progressive teachers are promoting a sense of discovery and collaborative meaning making in their classrooms. These approaches still retain conventional notions regarding core concepts, yet they simultaneously use techniques that more closely reflect students' experiences and more general social, cultural and career-based expectations of the modern world. This model of "peer-based learning is characterized by a context of reciprocity, where participants feel they can both produce and evaluate knowledge and culture" (Ito et al., 2008, p. 39). The move to this more collaborative style of teaching and learning practice recognizes the importance of digital literacy transference between formal and informal sites of learning, and is essential in creating an educational space for students in which they learn both hard skills and a sense of critical engagement with the environments they encounter on an everyday basis. This is essential, as

The digital practices carried out in out-of-school contexts do not automatically develop into competencies in and of themselves. To do so, young people need systematic training and development, so that insights gained from one particular experience or problem may be transferred and applied to other issues and situations. These forms of joint training can only be performed through formal

education. This is because school is the central social institution in which individuals come together with the specific purpose and possibility of pursuing sustained, joint learning processes. (Drotner, 2008, p. 180)

In order to realize this vision, a substantial change is required in pedagogical outlook, particularly at the level of administrators and district officials. The impact of a progressive administration cannot be underestimated, as is evident from the efforts at Heritage Woods Secondary in the Coquitlam district, wherein technology integration and digital literacy goals are paramount. “The quality of school leadership, the collaborative and consultative approach to decision-making and the general ‘ethos’ or ‘learning culture’ of the school” (Buckingham, 2007, p. 67) greatly impact the quality of teaching practice in regards to technological integration, as viewed in the districts with more progressive goals surrounding the use of online space. In these school boards, internet use is viewed as a vital tool in the classroom, and to a lesser degree an essential component of overall pedagogy surrounding education on citizen practice and social impact. Districts having a more limited or pessimistic point of view on the subject of internet use in schools could benefit from exposure to other boards that view more socially-oriented “online activities [as] jumping-off points for experimenting with digital media creation and self-expression. Rather than seeing socializing and play as hostile to learning, educational programs could be positioned to step in and support moments when youth are motivated to move from friendship-driven to more interest-driven forms of new media use. (Ito et al., 2008, p. 35).

The recognition of the importance of informal sites of learning and literacy originates from the understanding that the definition of literacy is undergoing substantial changes in a contemporary society characterized by multi-modal forms of reading, writing and comprehension. Kress (2000) indicates that this entails “setting quite a new agenda of human semiosis in the domain of communication and representation...[including] a full understanding of the potentials and limitations of all of these modes; of their present use in society; of their potentials for interactions and interrelation with each other; and an understanding of their place and function in our imaginings of the future” (p. 183). In cultivating a learning environment of play, exploration and collaborative culture in a school environment using the multiple modes of media and communication to which they are accustomed, students have the opportunity to develop a greater sense of transferability of competencies between informal and formal modes of learning. A Richmond district official expressed his support of this notion as well, stating that “we keep it very open, then you can instruct the students to use it appropriately... you can pull in an interest that they have, there’s a connection that happens, an engagement that you wouldn’t ordinarily be able to find... why not capture that energy and interest?”

The recognition of online space as a vital subject of study in English and Social Studies classes is integral in the development of a cohesive approach to digital literacy in schools, particularly in realizing the learning outcomes set by the province. This emphasis on multimodality and multiple literacies within the provincial mandates reflect this notion:

Literacy in the area of information and communications technology can be defined as the ability to obtain and share knowledge through investigation, study, instruction, or transmission of information by means of media technology... Literacy also involves a critical examination and understanding of the ethical and social issues related to the use of information and communications technology. When planning for instruction and assessment in English Language Arts 8 to 12, teachers should provide opportunities for students to develop literacy in relation to information and communications technology sources, and to reflect critically on the role of these technologies in society. (“English Language Arts IRP, 2007, p. 15)

In order to realize these goals and to encourage transference to and from informal, multimodal forms of representation, communication and meaning-making, teachers must both make use of these resources as a pedagogical tool and critical site of study.

2.2 Critical Reflection

Although many multimodal characteristics and emphasis on transference can be observed in current teaching practice, priorities regarding the fostering of a sense of criticality within online environments are not as readily apparent. As explored in the first section of this chapter, teachers tend to take a more instrumental approach to internet resources, instead of viewing them as a relevant site of study in and of themselves. This third component of the working definition of digital literacy is perhaps the most important, but also the most vague and underemphasized in BC teaching practice. I noted that educators seem to interpret the goals of transference and multimodality to extend mainly to the integration of digital tools in the classroom, and as a result “there has been fundamental confusion between the use of technology as a ‘tool’ for subject

learning and technology as a separate subject in its own right” (Buckingham, 2007, p. 65).

As stated, the 2007 English Language Arts IRP (Integrate Resource Package) for grades 8-12 contains a strong media and digital literacy component, stating, for instance, that “literacy also involves a critical examination and understanding of the ethical and social issues related to the use of information and communications technology...Teachers should provide opportunities for students to develop literacy in relation to information and communications technology sources, and to reflect critically on the role of these technologies in society” (p. 15). These ambitious and progressive curricular requirements do not seem to be fully realized, as technology use continues to serve a primarily instrumental function in BC classrooms. Many researchers have critiqued this emphasis on skills cultivation and instrumentalism. Seiter (2005) found that “most forms of computer education do little to advance critical thinking skills, but instead consist of electronic worksheets that offer practice in the format of standardized, computer-scorable test itself” (p. 6) while Bruce (2004) concludes that “when we learn things or develop skills removed from their context of use, we too often find them sealed away in what Dewey calls a ‘water tight compartment’” (p. 7). While teachers seem to have moved somewhat beyond this ‘drill and skill’ approach, there is still a noticeable lack in pedagogical emphasis on digital literacy, even though progressive outcomes concerning criticality and multimodality are outlined in the curriculum IRPs.

One difficulty is that this concept is often ambiguous and is not always specifically defined within both curriculum and teaching practice. As I observed in my research, themes surrounding digital literacy were often at most implicit in teaching strategies and revolved primarily around more protectionist-oriented themes of privacy and online safety. The IRP recommendations represent this challenge; although they present an advanced overall narrative regarding critical literacy as related to information technology, there is not a similarly cohesive set of specific recommendations and lesson plans for teachers to use in the realization of these ambitious goals.

Although BC teachers are beginning to regularly integrate multimodal methods into their teaching practice, the lack of a cohesive and defined approach to furthering criticality goals detracts from the overall efficacy of digital literacy initiatives. Adolescents are surrounded by online media and have a highly developed set of social and personal practices in these environments, as represented by the 'celebratory narrative' presented in chapter one. However, as observed in the countering argument, there are serious shortcomings in regards to quality of information retrieval, reflective online representation and civic/social contribution in current youth practice. A comprehensive digital literacy effort recognizes both the importance and relevance of integrating popular online culture into the classroom, in addition to the essential recognition of the serious shortcomings of youth navigation of online space, particularly as related to the general lack of reflection or critical approach to virtual environments. As Withrow (2004) concludes, "many young people are talented in creating and expressing

their ideas in multiple formats from text, audio recordings, video art forms, and music to mixed media through the computer. Our challenge is to teach children to be critical in both the receptive and expressive communication modes” (p. 3).

This pedagogical effort at fostering criticality can be achieved through the textual examination of online space, as demonstrated by the Wikipedia exercise at New Westminster Secondary. In this workshop, the students were prompted to examine their own relationships with the online resource, in addition to seeing how information is formed and negotiated on the internet. Overwhelmingly, the teens were shocked to see how quickly their entries were changed, and their opinions on Wikipedia seemed to be substantially altered after the exercise. Furthermore, this activity allowed the teacher to open a dialogue with the students about a wide range of reflective subjects, from verifiability of sources online to contributive etiquette and appropriate forms of writing. Lessons such as these, which focus on the transferability of critical skills from informal to formal sites of learning, are essential as “children need a safe space within which they can master the skills they need as citizens and consumers, as they learn to parse through messages from self-interested parties and separate fact from falsehood as they begin to experiment with new forms of creative expression and community participation” (Jenkins et al., 2006, p. 16). These sorts of exercises encourage the cultivation of a sense of inquiry surrounding social expectations, changing structures of media hierarchy and power, and an understanding of how knowledge is created, propagated and negotiated in modern culture. It gives teachers an “opportunity to analyze how these positions are materialized in

language and text and would show students that the production of knowledge necessarily entails relations of power that are able to be contested and transformed” (Bruce, 2004, p. 65).

This approach is characterized by a project of inquiry and reflection on the role of digital media in our social, personal, economic and cultural lives. In this way, digital literacy is not confined to a specific set of competencies defined by a top-down approach. The focus instead shifts to encouraging the transference of critical reflectivity to online space in an informal setting. Ideally, when students from the case study class at New Westminster go home and look something up on Wikipedia, they will take an extra moment to reflect on the source of the information, perhaps examining the footnotes or links to extended sources. Possibly some may even go on to make original contributions to the database, or at the very least hold a greater awareness and understanding of the dynamic process of online negotiation of meaning. This approach recognizes both the benefits and opportunities offered by this new environment, in addition to taking into account the shortcomings observed regarding adolescents’ day to day use of these technologies, representing the ideal pedagogical balance elucidated in the first chapter. Ideally, a successful digital literacy pedagogical effort will produce adolescents who have a better sense of themselves and their role as citizens, information seekers and producers, as well as cultivating a greater awareness and sense of control surrounding their personal online representation. As summarized by Withrow (2004):

[digital literacy is] the ability to understand and use those written language forms required by society and/or valued by the individual.

Young readers can construct meaning from a variety of texts. They read to learn, to participate in communities of readers, and for enjoyment...we must go beyond the book to digital tools and develop literacy skills that include critical analytical skills that enable citizens to use technology efficiently and ethically (p. 2, 3).

In essence, this approach allows for a greater realization of the offerings of online space in terms of representational, contributive and meaning-making potential while simultaneously mitigating the observed weaknesses of adolescents' informal literacy practices noted in chapter one. "When it comes to maybe some of the ethical issues, some of the safety issues and some of the other things, they are not as aware... the role of the teacher has always been to provide a little experience, to give the opportunity to think about [subjects] ethically or morally....We have a lot to bring to the equation for kids in technology" (Richmond District Literacy Consultant). This sense of digital literacy allows for essential reflection and analysis of our social world and communities, which "construct the ideology of possible identities, relationships, and values realized within that community...critical literacy pushes this one layer further to explicitly reflect on how symbolic interactions construct community and ideology" (Bruce, 2004, p. 235) .

This pedagogical approach is already being taken up to some degree in BC classrooms, although it remains largely implicit in teaching practice. In order to realize the digital literacy and multi-modal goals of the provincial curriculum, a more sustained effort must be undertaken to foster a clear sense of moving beyond the mere integration of online tools in the classroom to an approach based on dialogue and critical reflection. As noted above, the key factors in

realizing this well developed sense of digital literacy are ample teacher training, the provision of specific guidelines and activities, and the overall cultivation of a progressive pedagogical approach by administrators and district officials. Certain helpful resources are already available, such as the suite of workshops and activities tailored to BC learning outcomes offered by the Media Awareness Network, which was made use of during the New Westminster case study. However, teachers seem to be generally unaware of these resources, and the vague wording of the digital literacy outcomes in the IRP curriculum have resulted in uneven and uncertain implementation (or lack of implementation) in BC schools. As stated previously, a specific set of professional development opportunities including workshops, peer support groups and the training of ‘teacher experts’ at each school are essential in realizing these goals. A Coquitlam district technology consultant indicated that “there are pockets of it happening in Vancouver and it really comes down to: does the leadership want to put it all together and to support them to both create the network and have someone bring it together and provide them with an environment to use.”

Some districts have a long way to go, particularly those currently taking a disapproving or protectionist standpoint concerning online technology. However, other districts such as Coquitlam provide a working model for other school boards as an example of a system in which infrastructural, pedagogical and specific digital literacy goals have all seen a reasonably successful implementation. Districts would benefit from the opening of a dialogue amongst school boards in order to ascertain the common opportunities, limitations and

demands expressed by teachers, students and administrators in the context of fostering a cohesive digital literacy initiative. To encourage this application, I will now turn to investigating the three central characteristics of digital youth culture outline in chapter one, examining how the approach to digital literacy outlined in this section can be specifically achieved in these areas.

Section Three: Realizing Digital Literacy Goals Within Online Environments: A Further Investigation of the Three Frames

3.1 Online Representation and Socialization

Throughout the case studies, interviews and surveys, one clear and decisive fact emerged: the vast majority of youth spend a great deal of time and allocate a great deal of importance to social networking sites. Long since past are the days in which teens frequent anonymous chat rooms; in fact, adolescent virtual realms are now often just an extension of teens' offline lives, being used primarily to communicate with existing friends through shared pictures, videos and running commentary. As examined in the first chapter, this widespread practice has a dichotomous character: while online social space gives teenagers a participatory realm in which to play with and cultivate their social and personal identities, they often do not give enough attention to concerns regarding safety, privacy and self representation. In this section, I explore how, if at all, the pedagogical potential of these experiences are being realized in schools, with particular attention to how the shortcomings in online representation are being taken up in secondary school environments in BC.

Perhaps the most frequently emphasized aspect related to this attribute in schools is online safety and e-bullying. These have emerged as a hot button topic in the media; consequently, schools and public institutions such as the RCMP have launched efforts to encourage kids to reflect on the photos, videos and information they post about themselves online. In many of the schools I visited, such as those in the Surrey and Richmond districts, this is now a component of the Health and Career services offerings, which are usually once-weekly non graded mandatory courses. I found, in fact, that when asked about teachable moments or issues surrounding adolescent internet use, online safety and privacy almost always came up as the first concern. Some schools have cultivated mini-programs where students take part in workshops or lessons surrounding how to protect their privacy and reflect on appropriate internet use. At a secondary school in Surrey, for instance, a Health and Career Services instructor printed out a Facebook profile of a randomly selected girl living in Toronto with a very open profile replete with many pictures of her drinking alcohol, as well as a good deal of information about herself, including her university and residence. The teacher put the profile up on an overhead (as she did not feel that she could rely on internet access in order to show the actual posting) with the aim of having students critique it in terms of what they had discussed concerning privacy and accessibility. Rather than engaging in this critique, however, she was shocked when the students became outraged that she had printed off someone's profile for them to deconstruct; they felt that it was a real invasion of the woman's privacy and that the teacher should have gotten

her permission, or at least notified her that she had accessed her profile for that end. While their reaction was unexpected, it provided the fodder for a rich discussion surrounding the level of public access to personal information, in addition to emphasizing the overall message concerning general awareness that it is not just friends who are able to view one's profile; future employers, universities and even potential mates are increasingly using social networking profiles as a screening mechanism. In general, educators seem to view the internet as a place in which students are potentially endangering either their safety or public image, and are being quite proactive in terms of educating youth in this respect. This was found to be the case in all of the districts except for New Westminster; the majority had in place Career/Health programs that featured lessons and workshops in this vein. In this sense, goals surrounding transferability of competencies and understanding are being heavily emphasized, as teachers seek to positively impact students' online conduct outside of a formal school environment.

In concentrating on these elements, however, a more negative view of adolescents' online habits seems to have been cultivated within some BC schools, and consequently they are adopting a primarily protectionist stance on the matter. At the same time, I have found that, largely, schools are not at all giving similar emphasis to the more constructive potential regarding self representation, identity formation and social ethics, which represent more of a digital literacy emphasis on critical reflection and appreciation of multimodal space, as I explored above. Although protecting one's privacy online is extremely

important, an equally relevant subject is the appreciation and understanding that online space calls for a new set of ethical standards and contextual sense of appropriateness, as well as an investigation into the social impacts these media forms have had on relationships and society. A few schools, particularly in Richmond and Coquitlam, have set this as a specific goal, and allow students to use social networking tools and similar applications such as wikis and blogs within their studies, all the while maintaining a discussion surrounding social respect, appropriateness and the concept of one's virtual presence as a very real component of one's identity that must be carefully maintained. A school in the interior that was piloting wiki and blog resources found that "an important learning outcome that we hadn't considered, was the difference in tone between what's respectful, what's MSN speak, what isn't – how tone in digital communication is interpreted in different ways; it becomes a real learning point, a teaching point for students and certainly anecdotally. My students say that they now look at their communication even when it's not school oriented with a different eye because they're aware of things they wouldn't have noticed before" (English Teacher and Literacy Coordinator, Arrow Lakes School District). Educators need to refrain from oversimplifying the role of social networking and online presence in youths' lives and begin recognizing that these environments "can play an intricate and fascinating role in people's lives. [They are] both a text for understanding...and a text to be written anew. As a text it bears on students' use of other representational and communication media; on their language and cultural background; on the way they learn, work and play; on their social relations; on

their community; and on their sense of self” (Bruce, 2004, p. 5). In doing so, students will be encouraged to cultivate a sense of critical inquiry into their informal and leisure practices that takes into account current trends in adolescents’ digital lives outside of school.

In line with the argument that educators are not emphasizing the more textual analysis of online space, students are rarely encouraged to reflect on the social implications of online presence, and the impact this has on the way we socialize as a culture, even in the more progressive districts. Although it is a central tenet of the Language Arts curriculum, multimodal forms of literacy are still tending to be deemphasized. However, there are many teaching approaches and workshops available designed to encourage students to reflect on how they represent themselves online, not as an effort to protect them, but rather to urge them to view their online actions as a very real and meaningful extension of their self representation. The Media Awareness Network offers lesson plans and step by step workshops on a variety of subjects related to online critical reflection, including a lesson entitled “Promoting Ethical Behaviour Online: Our Values and Ethics” and a workshop entitled “Avatars and Identity,” which encourages reflection on “the importance of using empathy and common sense when talking to others online” (see <http://www.media-awareness.ca/english/teachers/index.cfm>). Units such as these encourage further reflection on how online presence is shifting notions of identity, accountability and ethical responsibility.

Although most of the educators (over 90%) interviewed in this study agreed that this is a very important subject of consideration in 21st century life, it seems unclear to them as to how this could successfully function in a classroom setting. Clearly, this aspect is heavily deemphasized by schools, particularly in those that ban access to popular websites that they view as having no pedagogical potential. When asked directly whether teachers should encourage this level of reflection on self representation and online presence, for instance, educators seem to be divided. Some acknowledge that this is an essential component, but cite concerns ranging from feasibility (from lack of technological access) to ethical considerations stemming from the discussion and analysis of personal image and representation. Others state that, even if important, this sort of reflection does not have a place in formal education; these sorts of subjects are better left up to parents and students themselves. One administrator even went as far to say that it is not the school's responsibility to be an ethical or moral guide. Of course, many would suggest that this statement is problematic; however, it does raise the point that reflecting on personal representation does not have a comfortable spot within current curriculum.

However, reflection on personal and social practices has long been a subject of consideration (and contention) within school environments; subjects surrounding gender, race, class and stereotypes permeate many secondary English, Social Studies and Civics classrooms. As Mr. Irwin stated, "students need to understand that the images that are coming at them in media - whether it is on TV, in film, or now on the internet - are created "on purpose". It is in

discovering the purpose that the students become aware that stereotypes are being purposefully perpetuated. This extends to literature, music videos, commercials - any media that these students are likely to 'read' and it is my job to make sure that they are 'reading' thoughtfully." It is integral that teachers continue to emphasize representational subjects in terms of online space, in order to engage students in discussions surrounding social and personal expectations, self concept and ethical considerations that they perhaps would not address in a non-school setting.

3.2 Collaborative Culture and Civic Participation

As is apparent through the survey results and similar studies, adolescents are spending a great deal of time online. While most of their time is spent on social networking sites and chat applications, as evidenced by the survey results in this study, collaborative environments such as YouTube, blog sites and wikis are also very popular. In the first chapter, I examined how these sorts of environments can facilitate creativity and collaborative meaning making, from posting re-mix videos on YouTube to keeping up a daily blog on a subject of interest. However, it was also noted that such use seems to be the exception rather than the rule, which this study confirmed. It was quite apparent that youth are more consumers within these environments than they are producers. While they frequent video streaming sites, blogs and wikis, for instance, they do not contribute to them to the same degree as they search and share within the sites, as found in both the student surveys and focus groups. As I observed during the Wikipedia exercise at New Westminster Secondary, youth still tend to view the

internet more as a resource than a collaborative environment. The exception to this may be YouTube, as many of the teens (approximately 70%) did say that they had contributed a video at some point. Blog and wiki participation, however, was found to be low. Furthermore, as examined in the first chapter, many researchers have found that the majority of youth participation tends to be superficial or even derogatory, rather than collaborative or participatory as many internet idealists suggest.

The potential to realize this vision of creativity and participation is great within pedagogical environments, and I observed many instances of it within my research; it is perhaps this area that holds the most potential for the digital literacy goals concerning multimodal sites of learning and ensuring transference of critical reflection. Teachers seem to recognize the collaborative power of internet tools, and many are making use of blogs and wikis within their practice in an instrumental sense as a teaching supplement. In the Kootenays, an English teacher used a blog and wiki embedded within Moodle to communicate with her students. She found that the teens eagerly participate in these environments, finding that “without question what students are saying is that it’s a purposeful way of engaging them in authentic learning kinds of conversations... The kids said what really increased their learning was that they could see what other students were writing, and that they could engage in real time and write and see each others’ work. That’s the thing that compels them.” Another English teacher in the Interior found that student levels of engagement substantially increased as she integrated more and more technology into her teaching: “I use blogs and

wikis for motivating and engaging students and I would love to do more chatting about online literature circle... the kids are excited about doing it, the chances are they'll actually do it. I think that technology directly affects their level of engagement."

In general, teachers have found that students readily participate in such forums, finding them valuable as both a virtual site in which to make course materials available, in addition to stimulating discussion on certain topics. Some educators have even made online discussion a mandatory and graded aspect of the class, a trend that is extremely popular in post-secondary institutions, but still remains a novel concept in high schools. One trend that I noted concerned the snowball effect of technology adoption; once several teachers were using online resources as part of their pedagogical approach within a school, it tended to spread exponentially as the core group provided both the incentive and guidance required by teachers who were unaware of or hesitant to use these tools. In this way, the notion of transferability from informal online space is beginning to be embraced by teachers in the form of blogs, wikis and personal websites.

Interestingly, the complementary concept of transferability back to students' informal use is not emphasized nearly as significantly, reflecting the earlier argument that teachers generally seem to be using new media forms primarily as supplementary teaching tools rather than sites of study in and of themselves. However, I found that although it was largely implicit, teachers generalized recognized the importance of providing an environment that the students were used to, in part to encourage participation and personal

investment in course material, but also to cultivate a sense of respect and ethical accountability online that youth seem to be lacking. As Jenkins et al. (2006) maintain, “one important goal...should be to encourage young people to become more reflective about the ethical choices they make as participants and communicators and the impact they have on others” (p. 17). Ideally, this aspect would become a more purposeful part of curriculum involving technological applications, as addressing the ethical concerns and etiquette in a participatory environment such as the internet is an important subject that often goes unaddressed. These include questions surrounding the social, cultural and economic impact of an unprecedented media space that is largely collaborative, open and multidirectional. Topics such as copyright, changing forms of news production and access, new ways of negotiating and sharing meaning and the power of user-driven tools such as blogging and wiki spaces are all rife with significant pedagogical opportunity.

One area that is being explored by some BC teachers is civic participation online; the 2008 presidential election provided an excellent working context to illustrate the impact of online technology on social and citizen interaction. Social Studies and Civics teachers, for example, used this as a point of discussion on the changing nature of politics, as well as the transformative power and importance of collaborative culture, particularly regarding such tools as blogs, wikis and user-broadcasted social networking such as Twitter. For example, the Heritage Woods principal expressed that “as we approach the provincial election, what I’ll probably start seeing more and more is each Socials class saying: let’s

take a look and see what the Liberals and the NDP have posted on YouTube this week. Let's follow them on Twitter, let's see how are they using these new tools to engage kids in the election campaign and view it from a critical eye. And I think those sorts of exercises can't help but to spawn a little bit of curiosity of a lot more critique of kids questioning what's out there." A district technology consultant in Surrey stated that he encourages teachers to get kids to "look at this YouTube video - how does it line up with what else I've learned, who's the author, those kinds of questions that are constantly being asked throughout...It is also teaching the creative commons and public domain – am I allowed to use this information, is it a reliable source, is it first hand knowledge or is it third hand, where does it come from - all of those pieces should be taught as we move along."

These types of innovative practices are occurring more on the margins than they are in general teaching approach; Mr. McLean expressed that he finds that most of his colleagues "have no idea how to openly criticize media, how to really probe it as a topic. I think in part it just seems really intimidating, like they're not really sure where you would start, or how you would incorporate it into your lessons. They don't realize that they can do it all of the time." As such, one point that could also use some further elaboration within BC classrooms is the investigation of the collaborative nature of the internet itself, and how this new environment is related to meaning negotiation, changes in media consumption and production and concerns surrounding copyright and creative license. These aspects of digital literacy focus more on critical outcomes, which tend to be

deemphasized in current teaching practice. This sort of lessons and activities should be an essential part of any Social Studies or English related curriculum, as the way in which meaning is produced and negotiated is drastically changing in multimodal media environments, particularly concerning online space.

Richmond was the only district that specifically mentioned these new learning outcomes within an interview with a technology consultant: “there’s a certain literacy that comes with reading webpages, and that’s part of this multimodal literacy. [It’s about] expressing yourself in a variety of ways through print, through audio, through video - as soon as you start talking about that, now you’re talking about publishing online, what it comes down do – what’s my audience, what am I going to say, who’s going to read it, and so it’s all part of that package.” He did note that this curriculum is new and relatively undefined, and as such is not currently prevalent in teaching practice.

In general, teachers are readily embracing collaborative online tools as part of their overall teaching practice. However, as indicated, these resources are being used largely as a supplement to existing lessons and approaches, without examining the multitude of critical projects that such an environment provides. These topics, as examined above, range from consideration of online audience, intent behind information production and propagation, new forms of political communication, ethical concerns surrounding fair media use and creative license, and the social function of applications such as blogs, wikis and real-time updating. The examples given illustrate the efforts some teachers are beginning to make in terms of integrating a more critical project into teaching practice

surrounding digital literacy, but cases like these are more the exception than the rule. While BC teachers are beginning to use online tools to a greater degree, emphasizing the exploration of this space as an object of study in itself should be cultivated in tandem in order to realize the critical aims of curricular digital literacy initiatives.

3.3 Information Seeking and Production

As profiled in the first chapter, today's youth are quite adept at quickly retrieving information on subjects of interest, as related to their leisure time. Finding a quick fact on Wikipedia, movie reviews or concert listings are second nature to adolescents, and they are accustomed to relying on the internet as a source of information and entertainment. However, youth are notorious 'scanners,' often taking information sources at face value instead of looking to multiple sources or reflecting on the origin of the data. Developing a sense of criticality in information retrieval within the context of online space is increasingly essential in modern curriculum; "one of the central fears is that this 'data glut' is overwhelming the human capacity for critical thinking; ideas are quickly being replaced by information" (Buckingham, 2007, p. 41).

Both of these qualities were immediately obvious in my research and case studies; particularly in their independent projects, students rely almost exclusively on internet resources and often only retrieve information from a single source. In fact, in many of the presentations at Point Grey, whole sections of the related Wikipedia entry on the subject were conveyed verbatim during the delivery of material. Mr. McLean, as well as all of the other educators I spoke with,

confirmed that this was typical; teachers are encountering increasing challenges regarding plagiarism (whether intentional or not), information superficiality and reliance on sources that may not be completely accurate. One librarian suggested that “the information they retrieve tends to be only at a superficial level, cobbled together from sites without in-depth understanding.” While they are very adept at retrieving information quickly and can adequately construct search term variables, youth largely seem not to reflect on the sources of information they are using, nor do they consider at length that such information may not be reliable.

This was clearly evident throughout the New Westminster case study and the exercise surrounding Wikipedia. At the beginning of the unit, Mr. Irwin led a brief discussion regarding the class opinion of Wikipedia as a source of information. Almost all students in the class (85%) confirmed that they used it very often, and only one had ever contributed an entry. They generally thought that entries were provided by experts, and while they did express some concerns regarding the authenticity or reliability of the information, they largely seemed to be parroting the concerns of teachers who had warned them against using Wikipedia as a source. Perhaps most interesting was their general opinion of the authors of the articles and tendencies regarding adding/changing sections; overall, they felt that a relative few experts contributed to the online encyclopaedia, and that it was checked periodically for accuracy by these experts. They were shocked to see how quickly their entries were changed, and were extremely interested in the “history” page which demonstrated the extent to

which these articles are honed and monitored by a variety of contributors. By the conclusion of the unit, their opinions regarding online sources and Wikipedia in general seemed to have undergone a definite shift, particularly when speaking to several of the students in a focus group setting.

This final frame was perhaps the most well developed of the three in BC schools. In all secondary programs there seems to be some deliberate integration of information seeking curriculum; at the very least, new students (typically grade eight homerooms) are brought to the library for a workshop on internet searching, source reliability and the importance of using an assortment of text types in research and reporting. A librarian at Point Grey expressed that while important, these sorts of lessons are often not as effective because students are only exposed to them typically once within their academic careers, compounded by the fact that “it’s difficult to get them to stop long enough to reflect...They also don’t seem to quite believe that the attention is needed. [In addition], teachers assume they do know how to search for and research information, but it’s not actually the case; they need direction to be the most productive.” In general, I found that teachers account for this by requiring a minimum number of both online and print resources in research projects; in both of the case study classrooms, the students were required to use an assortment of resources and to properly document their sources. However, a more substantial investigation regarding evaluating information sources, verifying data and cultivating a deeper understanding of the structure of information in online space could be emphasized to a greater degree in classrooms.

Out of the three frames outlined, the pedagogical opportunities regarding students' online information seeking practices are perhaps the most easily actionable within classrooms. Educators express frustration with the lack of effort students often put into their research; although they do offer library workshops and have in-class requirements, teachers relay that many students still produce "Wikipedia papers." Mr. McLean expressed frustration over the inherent laziness of this trend, stating that "most of them are wiki-dependent, and do the basic Google search... I look at their presentations, and I know where most of their information came from, because it's just so superficial. As far as how much do they actually take advantage of the internet, only as much as it serves their purposes." One possible solution is to reinforce these lessons, which often only occur once in a student's high school career or are merely implicit in sourcing requirements. In addition, more critically-oriented lessons such as the Wikipedia exercise at New Westminster is an ideal example of how to encourage students to actually consider and perhaps change their information retrieval habits. Through similar activities, students actually witness and participate in information distribution and meaning making on the internet and thus get an 'insider' view into the dynamism of online sources. This seemed to give them an appreciation of and most importantly a more cultivated critical understanding of internet information resources than simply telling them to use multiple sources.

This also reflects the overall argument concerning viewing online spaces as an integral site of study in secondary classrooms; a critical understanding and a reflection of one's own practices require a more in depth examination and

deconstruction of the texts themselves, allowing students to cultivate a greater comprehension of the potential and limitations of online spaces. Instead of merely requiring students to use multiple sources, teachers must encourage investigation of why it is important to look to various accounts, leading to discussions surrounding information and the construction of truth in the online age, as well as important issues surrounding meaning production and distribution, as examined above. In doing so, teachers will be employing a framework of digital literacy that encourages students to develop more sophisticated research skills within their academic careers, in addition to fostering a transferable critical approach when searching for and contributing to information sources in their personal online experiences.

Conclusion

As observed in this study, the role of online resources in education is a hotly contested ground. It calls for a fundamental redefinition of what learning, teaching and literacy entail, which is no small feat. As a result, schools tend to uncertainly and unevenly implement technology or digital literacy programs, with ambiguous execution strategies. This trend was observed in the case of BC secondary schools, wherein ambitious and progressive province-wide curricular mandates were not seeing their true potential realized in actual practice. Although funding and infrastructure-related barriers are very real impediments to the successful use of internet resources in classroom, the central cause of certain districts' weak digital literacy models was related more to a protectionist or dismissive attitude regarding youths' relationship to online space. Instead of being viewed as a pedagogically rich ground, with utmost relevance to a comprehensive 21st century education, adolescents' relationship to the internet is often viewed as being wasteful, or a distraction. As demonstrated in the first chapter, however, adolescents require guidance in order to develop a sense of critical literacy in online settings. This in turn encourages the development of a sense of ethical use, civic and creative participation and core competency in information retrieval and negotiation.

Some districts, most notably Coquitlam and Richmond, have recognized the need to emphasize digital literacy outcomes by both shifting funding to core infrastructural upgrades such as the provision of wireless internet, in addition to providing substantial teacher training and structured resources such as the Microsoft SharePoint suite used in Coquitlam. One central barrier to successful implementation in other districts is the uncertainty surrounding where digital literacy efforts should be located, and as a result no one department or area has taken the initiative or responsibility for developing these outcomes. A solution that has worked in districts like Coquitlam is to emphasize an overall, school-wide effort at digital literacy that begins with the encouragement and vision of district officials and individual schools' administration. As with the case of Heritage Woods, all teachers in all disciplines are given both the technical resources and developmental training and support to ensure that digital tools are integrated seamlessly into their teaching practice. In Richmond, the multimodal goals as related to English Language Arts and Social studies are being heavily emphasized, and secondary programs in English in particular showcase a well-developed effort at fostering a new sense of literacy surrounding new media. In general, I found that a well defined and positive outlook surrounding the pedagogy of online space was the greatest factor in the successful implementation of both the digital literacy goals outlined in this study, as well as the ambitious imperatives set out by the province.

As noted in the first chapter, teachers' uncertainty and unfamiliarity with online technology often translates to general aversion or lack of direction

regarding implementation strategies. It is here that a specific teacher training methodology is integral. When asked if professional development was an important aspect of successful technological integration, a Coquitlam district technology coordinator stated “unless positions that support any type of new and innovative use, unless it’s a clearly supported thing, then there’s no way it would ever end up working. So it’s not just good, it’s absolutely essential.” Generally, teachers and administrators find that merely providing occasional workshops on online tools and strategies is not sufficient; educators require a sustained and purposeful development program that includes both infrastructural and pedagogical guidance. Mr. Irwin finds that “workshops or outside consultants are not enough. Schools require on site teacher experts to help guide implementation, in addition to a specific approach to using technology in schools.” This practice of having ‘teacher experts’ trained at each school has been taken up at a number of schools, and seems to be largely successful. Coquitlam, as an example of a district with a very robust and multi-faceted approach to teacher training, encourages both peer group workshops and group sessions, as well as the training and placement of teacher-experts in schools. A district official explains that “we have 28 technology learning teams across the district, which are groups of teachers who come together about once a month and talk about what their practice...and then we have a trainer type model, which is bringing together a leader in each of the schools and really up their skills so that they support others within their school” (Coquitlam district technology coordinator).

Aside from a robust approach to professional development, it is also essential that schools and districts recognize the infrastructural necessities required to realize digital literacy imperatives. At the very least, modern schools must be equipped with a strong wireless infrastructure, where students are encouraged to bring their personal equipment to school. Throughout the interviews, it became clear that concerns regarding security on a wireless network were unfounded; in fact, the Vancouver School Board, with only wired connections and without student PC access, actually has experienced the greatest number of issues surrounding security. Surrey does offer wireless internet access, but limits students from bringing their own personal devices to school, citing “that it will further reduce the bandwidth available, [as well as being] a security risk.” District officials and administrators from Richmond and Coquitlam, however, disagree with security being a concern. In Richmond, bandwidth concerns are an issue, as access is provided through the overstrained Provincial Learning Network. However, they are looking to alternative means of networking, and view the pedagogical opportunities offered by wireless and personal device access to far outweigh any minimal security risks or bandwidth concerns; “it’s all about having access, so wifi everywhere means that teachers with a laptop can get online anytime they want to, more projectors means that they can throw something up on the screen anytime they want to, more kids with laptops in their hands means that they can do editing and peer editing right there on the spot” (Richmond Technology Consultant). Administrators in Coquitlam, who have chosen to redirect funding resources to support enterprise-level

wireless access, are incredulous over fellow districts' lack of basic technological infrastructure; "without being overly dismissive, it really is bizarre in today's day and age that schools don't see wireless as being something like air... the internet is probably the biggest public resource we have, so why wouldn't public education just be a conduit to all of that? Public education should provide public access to public resources" (Coquitlam technology coordinator). In this way, Coquitlam has taken an unprecedented risk in the reallocation of their resources, but they have largely found the decision to enhance infrastructure and teacher training has had widespread positive effect on the quality of teaching and learning within their schools.

One final aspect that seemed to have an effect on successful use of internet technology in schools was the structure of the IT departments at the district level. In Richmond, for example, the department incorporates literacy imperatives, with the aim of going beyond infrastructural concerns to foster a cohesive overall approach to digital literacy, supporting both pedagogy and hardware-based components. The district has a literacy group that has recently incorporated technology and multi-modal aspects into their strategy; "so it's no longer just the techie guy telling teachers about it, it's the literacy leaders using technology." This has had a positive impact on the fostering of a more cohesive pedagogical approach to technological integration, rather than merely providing IT support. A comprehensive 2008 study on Roanoke School District (pseudonym) in a mid-Atlantic state found that "teachers reported that the IT department seemed at times "to direct," rather than support them. Others

indicated they felt intimidated by the IT staff and consequently stopped asking for help” (Hannafin, n.p.). I found this to be the case in school districts with a less progressive digital literacy strategy in place; a Northern teacher had the ambition to integrate technology into her teaching, but found the support staff to be unapproachable, condescending and limiting.

In Vancouver, the converse to Richmond’s strategy has actually occurred; according to a district administrator, there used to be a department devoted to literacy learning and technology, but the ‘literacy’ aspect was removed due to lack of funding and consequently has become limited to the IT component. She expressed concern with this tactic, stating that that “if you are going to implement technology successfully, there has to be a substantial investment in pro-d, and just simply putting hardware into places without an educational plan and educator input is dooming it to mothballs in many places.” As elucidated at the onset of the third chapter, although it is essential to have an updated and reliable technological infrastructure, the true backbone of successful digital literacy and technology initiatives begins with a shift in pedagogical mindset. Administrators must realize the essential role schools should have in fostering digital literacy, and abandon the notion that online space is largely a distraction or dangerous waste of time in adolescents’ lives. A Richmond technology consultant explains how his position was previously located in the technology department, but was recently shifted to have more of a literacy focus; “with the idea that well, it’s not the technology that should come first, it’s the learning services and you have to

support that using technology. So it's a bit of a mindset shift, which makes more sense I think."

The cohesive pedagogical vision that must be in place in order to ensure successful and meaningful use of technological infrastructure requires a well defined understanding of digital literacy goals, particularly as related to BC curricular requirements. First and foremost, educators must realize that formal learning environments are becoming increasingly less isolated from the outside world, particularly in terms of the popular use of digital technologies. In fighting to retain a strict distinction between formal and informal realms, administrators are overlooking substantial pedagogical opportunities in regards to digital literacy in many respects; from online representation to civic participation and information seeking, it has been demonstrated that adolescents require guidance in their negotiation of online space. It is the responsibility of educators, as advocated by researchers and curriculum designers alike, to recognize the importance of transferring competencies to and from formal and informal environments. This begins with the recognition that these informal spaces provide ample, and often easily accessible, teaching resources; from the use of blogs and wikis to streaming YouTube videos, we can begin to see these tools being used to a greater degree in BC classrooms. The goal of transferring competencies and critical perspective back to students' personal use of online technology, however, is an aspect that requires further attention and development, as argued in chapter three.

As evidenced by the emphasis placed on multimodal forms of literacy in the 2007 English Language Arts IRP, it is also imperative that districts and administrators abandon the view that online forms of literacy and engagement are inferior to conventional forms of reading and writing. In order to sufficiently equip students for modern life, schools must recognize multimodal forms of literacy in order to ensure that adolescents are able to consume and produce online texts in the critical manner that has been long associated with the active reading of conventional texts. In terms of student engagement and fostering of relevant competencies, digital and multimedia resources provide fertile ground for timely teaching strategies, as well as a more robust approach to digital literacy education. An ideal mindset is exemplified by the pedagogical approach of a West Kootenays district, wherein “we make sure that we’re looking at the media literacy kinds of outcomes and embedding it into the rich learning kind of activities that we have students involved with. It’s just a part of what we do all of the time. Our kids regularly have a variety of ways to demonstrate their learning, many of them being through digital media” (English teacher/literacy coordinator, Arrow Lakes).

Finally, the most important component of a digital literacy framework is the overall objective of encouraging adolescents to become critical consumers and producers of information in online environments. As demonstrated in chapter one, while youth have developed a sophisticated set of working competencies surrounding internet navigation, they largely lack a more critical engagement with the material found online. They need to be encouraged to reflect on how they

represent and conduct themselves online, particularly in regards to privacy, self-representation and ethical considerations. Adolescents also need to be pushed to go beyond a superficial understanding of participatory online space in order to truly recognize the civic and contributive potential of the internet as a social/cultural medium, in addition to reflecting on concerns surrounding shifting notions of audience, ownership and creative licence. Perhaps most urgently they must be given more support in terms of internet-related information retrieval, particularly regarding the shifting forms of meaning-making in collaborative online space.

By developing a cohesive pedagogical implementation strategy that revolves around a well defined understanding of digital literacy, schools will be able to best educate their students in a 21st century context. Coquitlam is an example of a district that has taken substantial risks and emerged a paradigm of digital literacy implementation; other districts should consider adopting a similar perspective. With such disparate technology strategies existing within one province, districts would benefit from greater dialogue amongst schools boards, in addition to a more specifically developed provincial strategy based on the progressive components of the most recent IRP. Only with a substantial effort to shift pedagogical mindsets concerning popular online space and its relation to digital literacy will schools be able to successfully implement technological infrastructure and educational strategies, ultimately having a constructive impact on students' broader relationship with the internet and collaborative media. As online space is substantially redefining social, cultural and economic

expectations and relationships, as well as the basic way meaning is understood and negotiated, it is becoming paramount to prepare adolescents with the expanded literacy skills required by contemporary society.

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