

Just Do It: Designing and Implementing a Digital Literacy Course in a Public High School

by

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## Abstract

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This project examines the theoretical and practical educational challenges of designing a ‘digital literacy’ Board/Authority Authorized (BAA) course for implementation in a British Columbia secondary public school. There were three guiding questions for this project: (1) What is digital literacy? (2) How digitally literate are today’s youth through their own practices? and, (3) What is the role of formal education in developing digital literacy in our youth? The project had three corresponding stages: defining digital literacy through the existing literature; designing a digital literacy course that met students’ contemporary learning needs; and structuring the course for implementation in a public secondary school. Through a synthesis of existing discourses regarding learners in a digital age and the author’s classroom-based teaching experiences, digital literacy was defined as “the ability to interact critically, creatively and ethically with text, tools and people in digital contexts.” Further, the course was designed to engage and impact contemporary students’ personal and social constructivist approaches to learning in online and face-to-face contexts. Finally, the BAA course shell was created addressing provincial Ministry of Education, District and school-based criteria, as well as students’ competencies for implementation as a grade 12 elective in a local high school for the following academic year.

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## Dedication

This one is for my mother who taught me the power of passion. Thank you Mom for all your strength, your ferocious ability to love completely and for sharing your passion for humanity and diverse texts with me. You touched everyone who knew you.

## Chapter 1: Introduction

*“The illiterate of the future are not those that cannot read or write. They are those that cannot learn, unlearn, relearn.” Alvin Toffler (1970)*

### Twinship and Teams

A key aspect of my identity and way of being in this world revolves around me being a twin. ‘Twinship’, as I call it, can be difficult to describe to the uninitiated. The closest I can come is to invoke long term teams such as romantic and business partnerships where partners can hold a whole conversation through a glance, gauge emotional status through intonation and adjust to accommodate a partner’s need or ability level instinctively. In successful partnerships individuals become stronger as a collective by supplementing each other’s weaknesses and accessing each other’s strengths. Now imagine being born into a team where, from day one, you have known nothing different. All knowledge, skills and strengths are communal and applied to all situations. If one twin had a skill, the team had the skill; if one twin knew something, the team knew it. We never had to be taught how to work together - it was our default setting, our natural state of being. We knew we were stronger together.

Hence our confusion when we started school and officially had to be separated. We could count to 100 and recite our ABCs . . . as a team, but floundered when isolated. When presented with a task, we would access each other immediately to complete it, causing swift intervention by teachers and an anxious meeting with our mother. Apparently, if you do not know something by yourself, you do not know it. If you cannot do something by yourself, you cannot do it. It is called an unhealthy dependency at best; cheating at worst. We quickly learned that in school you had to think and act individually and we accommodated the system, sliding back into our natural rhythm daily as the last bell rang. My twin and I still think this is a weird belief system and I use

that word consciously to highlight the alien nature of what we were being told was right by the adults in our life. I still remember the day, having moved to another province, we were registered in the same Grade nine English class, our first class together since our purposeful separation in Grade one. We entered the class half way through the school year when the teacher was in the middle of a debate unit in which the class was split down the middle and given controversial topics to debate. Debating first with my brother and then against (we both agreed I should go on the other side to shake things up) was one of the highlights of my formal education. Now this made sense.

### Teaching as a Playgroup

I remember a similar sensation of ‘rightness’ as a teacher when the education field began to use words such as collaboration, student voice, and distributive cognition. Even if the authorities throwing the words around had not embraced them in theory, let alone practice, I now had the language and research to back up what I had always known: we are stronger together. To expect one-self to hold all the necessary knowledge and skills for any given task and to see shame in failing to do so is . . . well, weird. As well, this is not how most real work worlds operate. In retrospect, much of my joy in teaching can be traced back to needing to be part of a collective. When asked by a PhD student last year to sum up in one word what teaching means to me, the first word that jumped into my mind was “playgroup.” This surprised me as I had never really investigated how I felt about teaching other than enjoying it and it was not the most scholarly or politically correct of terms. Upon further consideration, I realized that I view my students as playmates and my classes as playgroups and that there is absolutely no difference between how I feel when playing with students and that day in that English nine class debating

with my brother. Instead of “teaching,” I have always subconsciously viewed what I do as collaborative learning and exploring. Although learning outcomes have always provided a compass, how we achieve those objectives was a collective endeavor because that just makes sense. We are stronger together.

I use the word “subconsciously” above because I confess I was unaware of how my twinship had manifested itself in my teaching. In fact, I was as much a victim and/or perpetrator of traditional education as any other educator whom had successfully navigated almost 20 years of formal education. This was highlighted for me last year while wondering about my practice as I watched my students present projects in small groups to the class. Why was I focusing on formal presentation skills at all instead of more on effective collaboration? Do I do too much ‘presenting’ myself in class? Then I noticed something odd. Rather than a transmission approach while presenting, my students were stepping in and out of the main presenting role, according to their ability, knowledge and skill. A strong communicator would summarize but then defer to another with more knowledge for specifics while the more technologically savvy student navigated technological issues as they arose. Not just this, but the audience was confidently and quite informally participating, adding tidbits, making connections, clarifying, assisting, asking questions, joking . . . playing. I was not watching a presentation. I was watching a dialogue. I was watching a playgroup explore. Even more fascinating, I realized that my students were mimicking me: this was how I taught. My first epiphany was that this was what my classroom looked like. No wonder passive audiences unnerve me. Not only was my daily audience not passive, I didn’t even have one; I had playmates. My second epiphany was that what I had modeled completely trumped everything else. The words and assessment tools I used to frame the task set traditional presentation expectations. These were completely disregarded. My

students had internalized what I had modeled, not what I had stated as my expectations. My inherent belief in collective strength had manifested in my practice despite traditional pedagogical approaches and my own lack of awareness.

### Lived Digital Literacy

I am not a digital native, at least not according to Prensky's (2001a) definition of a digital native being someone immersed in the digital world from birth. Although collaboration is second nature, I grew up as completely removed from technology as a modern Canadian can be. My childhood ironically echoes the nostalgic baby boomer ideal of outdoor play with imagination as the main toy, uncontaminated or constrained by concrete walls and screen time. This made for some interesting moments when my disconnected reality brushed shoulders with mainstream technology. One of my mother's favorite stories of my childhood was of having to remove my brother and me from the theater during *Snow White* due to our misguided attempts to warn the main character of her impending demise. No one had told us the film experience was not real; that we could not interact with the animations we saw on the screen. Today our misconception has turned into reality. Today, one can interact with screen animations.

### Play, Imagination and Expanding Notions of Text

Although I was not immersed in the digital world, many of the competencies now attached to digital literacy were fostered during my youth. As my entire family was avid readers, critical consumption of information was a necessary skill, especially as my literary appetite far outpaced my emotional maturity. My mother refused to censure my reading, despite my school's concern at a seven-year old lugging Margaret Mitchell's *Gone With the Wind* to silent reading. Instead, she paced my reading, reading what I read and provoking constant conversation and

reflection on all material. No text was judged as unworthy literature, whether it was my Louis L'Amour Westerns, classical mythology, Jack London, Victorian Gothic, Viking torture techniques, X-Men comics or Harlequin romances. I had absolute free rein in my readings and a weekly family trip to the library to feed my interests. As a twin, collaboration saturated every childhood memory and my playgroup involved diverse participants, including six dogs, three cats, two calves and one crow. Creation was constant, ranging from collaboratively writing and performing plays (to any visiting neighbors' dismay) and attempting homemade play-dough recipes to building life size tipis in the forest and knitting full outfits (caps included) for the rather reluctant barn cats. Although mainstream technology was slow to emerge in my household with a television only appearing when we were 14, tools were acquired and learned as needed for our adventures (such as attempting to help the beavers build their dam in the local creek).

Imagination and play saturated all aspects of my childhood.

#### Imagination and Technology as an Adolescent

Today, in many ways I feel as if my technological naivety and active imagination have benefited my adoption of technology. As technology evolves, what it can do also evolves, expanding how we use it. We are at a time where our own imaginations are the only limits on how we use technology. However, familiarity with a tool can limit what we imagine doing with it. For example, in high school I predictably clashed with my mother over my social life and, facing the ultimatum that she know where I was at all times, I immediately bought a pager and righteously provided her with the number. Now, my social plans could remain flexible and she could access me anywhere and anytime. What I imagined using the technology for was completely unhindered by the 1990's association of pagers as the exclusive property of drug dealers, escorts and lawyers. This association was made clear to me directly by friends and

indirectly by the clerk's shocked expression during my purchase. Yet a peer who actually had a father who was a lawyer, complete with pager, was awed by this new application of a very familiar technology. Her familiarity with the tool had limited her imagination of how to use it.

#### Imagination and Technology as Curriculum Coordinator

As a part time Technology Curriculum Coordinator for a local School District, I have observed similar behavior among a wide range of teachers. Recently I was working with four experienced and enthusiastic teachers, all in their 40s and 50s who had come prepared with a multitude of questions around integrating technology into their pedagogy. All were excited at having acquired a laptop, an LCD projector and a document camera in their classrooms. We discussed interactive software, multimedia resources, file sharing and captioning options on DVD players (as many taught hearing impaired children). As the session neared to an end, one individual lamented the logistics of balancing all her new technology on her cart with her much-needed DVD player. When I suggested she use the DVD player in her laptop and forgo the extra machine, shocked silence descended upon the room. My casual suggestion gained me more acclaim than any in depth analysis I have offered on much weightier subject matter. They were also horrified and stunned that they themselves had never imagined that they could use their laptops as DVD players even though they knew the devices had DVD players. Once reassured that yes, captioning was also available via the laptop media player, the teachers left thrilled with their discovery. These were intelligent, experienced professionals all choosing of their own volition to engage with technology yet were limited by a preconceived assumption around the affordances of the devices they were using.

## Digital Literacy among 21<sup>st</sup> Century Learners

That being said, such behavior is understandable among digital immigrants and foreigners (Prensky, 2001a). After all, according to Prensky (2001a), such individuals are struggling to grasp the new digital world that has exploded around them. A lack of fluency, if you will, is to be expected. What is surprising is similar behavior among the natives of our digital world. My other teaching assignment is teaching an alternative Grade 10 cohort program at a school in the Sooke School District. The environment is informal: students and teachers are on a first name basis, Friday attendance is voluntary and courses are both interdisciplinary and blended. Students have access to wireless Internet, 18 laptops and 14 iPads at all times and are encouraged to bring and use their own devices. In the B.C. education system, students with 'high needs' requiring additional support are designated, and an Individual Education Plan is created for them. A typical alternative classroom has many designated students so all curriculum needs to be highly differentiated and multimodal. The small community, untraditional setting and mixture of such diverse humanity tend to disrupt mainstream classroom power structures, allowing students more of a voice. I had also assumed the program's flexibility and access to technology would allow students to maximize their digital abilities.

Come with me to a typical bright day in a classroom not that long ago. Picture about 18 students, aged 15 to 17, as diverse as an ER waiting room, the only common thread is that all have chosen an alternative setting for their education. Imagine the cheerful chaos of teenagers opening and signing onto brand new laptops from the brand new laptop cart, futilely looking for long lost notes and assignment instructions in backpacks, vying for electrical outlets and desk space. As we settle into our work, I make my way over to a student who has made desperate eye contact across the room. My arrival prompts an accusatory declaration that he has no idea what a

key word in the assignment means. My eyes travel over his jail-broken iPhone, a steady stream of texts vibrating through, up to the laptop, already open to a YouTube music video blasting his favorite song through his head set, casually resting next to a binder with a remarkably artistic rendering of a scene from Halo. I raise an eyebrow, “What do you do at home when you don’t know something?” “Google it,” is the prompt reply. We maintain steady eye contact, each waiting for the other’s response when I realize he is not even close to connecting what he does at home to his problem with his assignment. “Why don’t you Google the word you don’t know?” I receive a blank stare, a blink and a slightly surprised, “Right.” Headphones go back on, head goes down, and the student disappears into his work with an absent-minded “Thank you” thrown my way. And I am left wondering.

Why had a “digital native” failed to successfully transfer his digital literacy from an informal environment to a formal educational environment? Why had he failed to imagine a different application for a technology he is very familiar with? As I began to watch and ask questions of my students I found that they displayed contradictions in their digital competencies daily. The same student who could readily identify and scoff at the obvious manipulation in video game marketing would also accept historical details in his favorite game as accurate without investigation. Another student would confidently clarify changing loopholes in Facebook’s privacy settings for the class and yet be the first to post explicit photos of herself online. When given the option to choose any presentation medium they wished, the vast majority of students would choose the familiar PowerPoint or poster options. Many struggled to understand where exactly they were saving material on a computer, causing all matters of grief, and yet could easily explain the differences between my iPad and Windows Surface tablet. Yes, my students were comfortable in the digital world and demonstrated many of the commonly

accepted traits of the 21<sup>st</sup> century learner. However, odd gaps emerged and begged the following questions:

- How digitally literate are today's youth?
- Can youth be expected to become fully digitally literate on their own?
- What is the role of formal education in developing digital literacy in our youth?

## My Objective

These questions are important during a time period of unprecedented potential change in public education. Provincial politics and public perception partner new brain research and the concept of the “21<sup>st</sup> century learner,” stirring the colloquial pot of Education as we know it. The crisis? Our world has changed, our children have changed and the education system has not. The challenge? To: “better meet the needs of 21st century learners” (BC Ministry of Education, 2011, p. 3). But what are 21<sup>st</sup> century learners? And what are their needs?

Most agree that 21st century learners are different. Although sensationalism saturates every facet of the debate, be it bemoaning the erosion of attention spans or heralding a golden generation of digital savants, most concur: our children have changed. Correspondingly, we have developed labels complete with generalizations regarding aptitudes and learning preferences: Millennials (Oblinger, 2003), the Net Generation (Tapscott, 1997), Digital Natives (Prensky, 2001), Generation Y (Wolburg & Pokrywczynski, 2001), 21<sup>st</sup> Century Learners. What all these labels share is a premise that today's youth think and learn differently due to their life-long immersion in digital technologies.

The provincial government of British Columbia concurs. In October 2011, the B.C. government unveiled the BC Education plan that promises to “modern[ize] education” (p. 3).

The plan adheres to the concept of a new digital generation with “[m]ost students . . . fully conversant with technology” (Premier’s Technology Council, 2010, p. 4). In short, B.C. students are 21<sup>st</sup> century learners, a homogenous group with specific traits requiring a restructuring of pedagogy and curriculum. However, as my experiences illustrate, it is not as simple as providing access to technology and inquiry based assignments. If we want citizens that can navigate and flourish in our 21st century, we must understand whom contemporary youth are as learners, what it means to be fully digitally literate and how we can facilitate digital literacy in our classrooms.

### Shift from M.A. to M.Ed.

The question, however, is how to effectively explore and facilitate digital literacy among youth. My first instinct was to research my questions and study my target audience. However, I struggled with my M.A. Every time I settled on a research path, I evaded, became unmotivated, and lost my direction. All I wanted to do was play with my students. I wanted to talk to them about what we should research, what we thought as a group, and what we wanted to try and discuss. I wanted to access their thoughts, skills, knowledge, and interests. Studying students instead of working with them left me feeling isolated, like a child at the playground told to observe from the sidelines. My twinship epiphany had freed me of the invisible shackles my formal education experience had left on my pedagogy, or at least I was more aware of them. If this was what I believed in and who I was, why not consciously embrace it?

In addition, I am an action-orientated person. I like to do things and, as a teacher, I like to do things that meet students’ needs. When I first entered alternative education, I started teaching online courses to students with behavior and learning challenges. Online courses in my experience do not work with this cliental. Consequently, I proposed an interdisciplinary cohort

program based on community that I thought might work. Due to open-minded administrators and incredibly supportive colleagues, it did. Of course, the program evolved every year according to student need and input. What I learned, however, is that acting and learning must co-exist. For us to effectively meet students' needs, we have to design learning experiences with those needs in mind and then just do it, assessing, reflecting and adjusting continually from the field with student input. If learning is removed from action, it begs the question: Why learn? Knowledge must serve action and action must inform knowledge.

### Let's Just Do It

During this time, the BC Ministry of Education began to move towards a focus on personalized learning, allowing curriculum to be tailored to individual needs and interests. According to the B.C. Ministry of Education (2013), personalized learning is “student-initiated and self-directed” learning co-planned with parents and teachers instead of the traditional uniform approach. In order to facilitate this, K to 10 curricula was being revamped to allow depth over breadth with learning outcomes being dramatically reduced to allow more flexibility, exploration and choice for both teachers and students (BC Ministry of Education, 2013). The Ministry began supporting student-centered pedagogy and emphasizing student's voice, engagement and ownership of their learning. Teachers were increasingly encouraged to facilitate and mentor rather than transmit with learning being reconsidered as a life-long personal “continuum” instead of a vacuum to be filled by an expert (p. 12). According to the Ministry, students in the senior grades should be self-directed and able to choose the majority of their learning experiences. Technology should be independently used for student learning and competencies may be demonstrated through a variety of ways. School should be a “base-camp,”

facilitating involvement with the community and fostering strategies that transfer beyond the school doors. Competencies that can be applied in complex contexts were highlighted above skill development and knowledge acquisition. Constructivist pedagogy and interdisciplinary inquiry-based learning opportunities were encouraged instead of the traditional “stand and deliver” approaches.

Along with the shift in education policy came a shift in focus by the academic and education communities from digital natives to 21<sup>st</sup> century learners and skills. Digital natives were now termed 21<sup>st</sup> century learners and the crisis had evolved from the generational gap to the deficit of digital life skills necessary for navigating our complex world. Digital literacy was the new ‘buzz word’ and in my classroom digital literacy topics, materials and issues were weaving into our learning community’s daily discourse. By digital literacy topics, I mean digital content from students’ virtual lives as found on FaceBook and YouTube as well as issues and topics that wrestled with what it means to lives partially in a virtual world. As much as I loved exploring the humanities, I found myself longing for more time to discuss and engage specifically in digital literacies. It occurred to me that the time was ripe; instead of trying to study students’ 21<sup>st</sup> century skills and literacies from the sidelines, why not explore these literacies with students as a learning community? Why not bring together a playgroup that could explore what youth need to know and be able to do in the digital era? The idea of a grade 12 elective course on digital literacy emerged. I found my momentum and, within weeks, had administrative approval to create, offer and teach Digital Literacy 12 twice in the 2013-2014 year and had changed my M.A. to the project based M.Ed. The courses filled within a month of being offered and I was left with the challenge of creating a course with enough structure to satisfy Ministry and district requirements and enough flexibility to allow co-construction with my students.

## Chapter 2: Literature Review

### Who are 21<sup>st</sup> Century Learners?

Humans are masterful at adapting their environments to meet their needs. Technology has been a most useful means to this end, be it the application of the plough or a nuclear bomb. The tables have turned though as our creations now in turn influence us, causing us to adapt and evolve through our exposure. Immersion in our digital landscape has changed how we work, think, play and learn. Of course, it can be argued that this reciprocal relationship between technology and humans has always been evident: the Agricultural Revolution, the invention of the printing press, the Industrial Revolution, and so on. What makes today different is the speed at which technology and therefore our behaviour is evolving.

Rideout, Foehr, and Roberts (2010) report a dramatic increase in media use among contemporary youth. The areas covered in their study were: type of media used, time spent with each medium, amount of time spent multitasking and how youth differ in their media use. Participants were 2002 grade 3 to 12 youth aged eight to 18 years from across the United States. The Kaiser Family Foundation's former studies in 1999 and 2004 allowed reflection on changes in media use by youth over a ten year span. Media considered were television, music, computer, video games, print and movies. Key findings included a large increase in media use among young people over five years from 6:21 to 7:38 hours per day, seven days a week. As well, an increase in mobile and online media was observed between 2004 and 2009 with 58% more youth owning an iPod/MP3 and 27% more owning a cell phone. The significance of this study is not only that youth are heavy users of media, but that their media use can dramatically increase and

diversify according to new tools. Of interest is the increase in mobile phones as the technology's affordances increase (e.g. smart phones).

Every generation believes the new one to be different. According to many, this one actually is. In 2001, Prensky published a scathing call to arms for educators everywhere to accept the sharp divide between themselves and digital natives, youth born and raised in the new digital world (2001a). Digital natives crave interactivity, multitasking, random access, graphics, connectedness, fun and fantasy (Prensky, 2001b), directly at odds with their linear minded, text dominated instructors. Although simplistic in his approach or because of it, Prensky succeeded in provoking discussion, debate and further research into whether digital natives actually exist. His demand that educators learn the "world's new language" in order to successfully teach today's youth has created an urgency among education stakeholders rarely seen (2001b, p. 7). Intriguingly, Prensky dilutes his polarization of digital natives and their digital immigrant educators in 2009, suggesting that, as we approach a time when both educators and youth have been raised in a digital landscape, a more useful distinction is the attainment or lack thereof of digital wisdom. He moves from a focus on learning styles to the wisdom to be gained "from" technology and to be used "in" appropriate application of technology, echoing a shift in urgency around generational divides to a demand for digital literacy (2009, p.1).

Prensky is not the only one to claim a digital generational gap and distinct new learning styles among youth. Oblinger (2003) also identifies a distinct group with different "attitudes and attributes" (p. 4) and accordingly labels anyone born 1982 onwards a Millennial, a new type of student preferring teamwork, experiential activities, structure and technology. Oblinger also suggests that an "imbalance" exists between Millennial needs and post-secondary realities (2003, p. 6). Two years later, Oblinger & Oblinger (2005) expand on the characteristics of the new

learners and rebrand them the Net Generation. The Net Generation is digitally literate, connected, immediate, experiential, social, collaborative, goal orientated, visual and kinaesthetic and engaged by relevant issues (Oblinger & Oblinger). These new learners slide effortlessly between physical and virtual worlds and can easily co-exist in both. Although there is extensive use of technology, it is mainly for socializing and entertainment with digital literacy often being shallow. Of interest is the move away from specific birth ranges as a means to membership and a new emphasis on technology exposure being key, echoing Prensky's (2009) shift to digital wisdom.

Contrarily, Tapscott moves from a broader definition of the Net Generation (1997) to a narrower one (2009). In 1997, Tapscott was the first to use the Net Generation to describe the new learners emerging. Membership was dependant on exposure to the Internet or, if you will, growing up on the "Net." Ten years later, Tapscott narrowed admittance to birth dates between 1977 and 1997 and termed those born 1998 onwards Generation Next or Generation Z (2009). He argues that the Net Generation is a global one that shares eight norms, all centered around access to the Net and digital technologies. Net Geners prize freedom and choice, customize, collaborate, scrutinize, desire integrity, demand fun, and consider speed normal and innovation to be part of life. This is resulting in a generational gap in which authority has shifted from traditional holders such as parents, corporations, marketers, and governments to the younger generation. Companies and institutions have to become more goal focused than process focused, allowing Net Geners to blur the boundaries between play and work, home and office, as well as providing opportunities to communicate and contribute. A lack of speed in processes will be a factor, creating frustration and dissatisfaction among the Net Geners.

## Digital Literacies of 21<sup>st</sup> Century Learners

Underlying the new direction of education towards personalized learning is the concept of a new generation of student with unique learning styles and needs. Recent emphasis and studies on new literacies and multimodality all resonate back to this general assumption: students are very different today. We hear terms such as “digital natives” and “digital immigrants” referenced casually in educational circles and research articles. Until recently, the professional questions that arose were often ones of how to provide technological access and adjust pedagogy to accommodate the needs of the 21<sup>st</sup> learner. In other words, we did not question the urgent need to evolve education to meet the new digital literacies of our cliental, we only questioned how. If the foundation of our new direction in education is revolutionized digital youth, it is crucial that that foundation be an informed one. So the question is, what are “digital natives” and how do we know? We need to know our students in order to be able to meet their needs. However, we need reliable evidence in order to know them, not uninformed assumptions.

### Questioning the Concept of Digital Natives

The initial concept of the “digital native” by Marc Prensky (2001a) was based on unsupported opinion and little to no research. Although studies have emerged in reaction to this deficit, the popular mainstream acceptance of the concept has resulted in a dangerous generalization that all youth are digitally literate. Ironically, as we learn more, it seems all we know about best practice in traditional literacies translates into the larger picture of digital literacies. Many factors such as socio-cultural context, community practices, and technological access influence student technological knowledge and use. Students are different, both from

each other and previous generations, and educators must first know their students in order to teach them.

Bennett, Maton and Kervin (2008) analyze the current status of the digital native debate, investigate the underlying assumptions behind the digital native concept, and explore why poorly researched claims were so widely accepted. The authors first narrow the digital native debate to two fundamental claims: (1) a homogeneous generation of digital natives exists, and (2) education must immediately evolve to meet their needs. This then is further broken down into the two assumptions that digital natives have advanced technological knowledge and skills and that they have unique and new learning styles. The authors condemn the lack of empirical research behind the claims and point out that emerging research suggests key areas requiring further investigation before wide scale educational change:

- Diverse role of technology in youth's lives (what is being used and how is it being used)
- Influence of students' socio-cultural background on their digital knowledge and skills
- Differences between age groups and cognitive development
- Transfer of technology use for learning purposes

Finally, the article asserts that a moral panic and strong group divisions have been evoked which in turn have stalemated the debate, polarizing opponents into camps of dismissive cynicism and thoughtless propaganda.

#### Diverse Digital Literacies

The demand for further investigation into the underlying assumptions regarding digital natives was answered by Kennedy, Judd, Churchward, and Gray (2008). The overall research goals were to probe the assumption that digital natives had a homogeneous technological

experience and that they are competent with information and communication technologies. Specifically, the study focused on: (1) assessing the access and use of technologies and technology based tools by incoming first year university students, (2) the self-reported desire of students to use technologies to support academic studies, and (3) determining the relation between everyday technology usage and preferences for academic technology usage. The participants of this 2006 study were 2120 first year University of Melbourne students born after 1980. This grouping was 25.3% of first year students of which 62.4% were female and 37.5% were male. One third were ESL students and one quarter were international students. The quantitative methodology involved a four-page questionnaire with four sections: demographic information, access to hardware and Internet, use of and skills with technology based tools, and preferences for academic technology usage. The main finding of the study was technological diversity among participants in terms of access, usage and knowledge. Although over 85% of students used the web to access information and send emails, only 23.8% of students used social networking sites daily or weekly. Blogging was popular, with 34.9% of students keeping a blog, but 69.7% students had not built a website in the last year and 81.6% had never contributed to a wiki. In addition, the majority of students (75%) wanted to use technology for university studies. Interestingly, there was a clear association between current frequency of use and desired use of technologies in academic studies. Although many students come to school with a basic technological familiarity, their digital literacy skills are diverse and student equity is a concern.

A second study by Kennedy, Dalgarno, Gray, Judd, Waycott, Bennett, et al. (2007) critically explored the technological skills and preferences of the “Net generation” first year university students and their teachers. There were three phases to the study: (1) investigation of technology access, use and preference among first year university students and their teachers, (2)

implementation of eight projects integrating technology and learning, and (3) a dissemination stage in which findings were shared. The study was founded by the Carrick Institute for learning and Teaching in Higher Education. Participants were 2588 first year students at three Australian universities, 80% of whom were under 25 years of age. More participants were female (68.9%) than male (31%). A questionnaire survey was administered to participants with 46 students also participating in focus groups and individual interviews. The study's findings showed that although the majority of students frequently used established technology such as email and Internet surfing, use of technologies that facilitated collaboration, production and publishing were low. For example, 80% and more of students surveyed had never created a Podcast or contributed to a Wiki. There was a wide range of diversity in technological knowledge and use. The significance of these findings is that decisions based on broad generalizations of digital natives are likely incorrect.

Jones, Ramanau, Cross, and Healing (2010) further investigated the homogeneous assumption underlying Prensky's concept of the digital native. The study looked at: (1) student access to and use of technology, (2) student use of technology for university studies, and (3) course specific use of technology. The participants were 596 first year university students from five universities in England. Thirty-three percent of the 1809 students approached responded. It is worth noting the survey took place in the spring of 2008, at the end of the school year. Referencing the survey tool generated by Kennedy, Judd, Churchward, and Gray (2008), the study used a quantitative questionnaire composed of four parts: demographic characteristics, access to technology, use of technology for university studies, and course-specific uses of technology. Responses were divided into four age groups: 20 years old and younger, 21 to 25 years old, 26 to 35 years old, and older than 35. As well, a small number of interviews were

conducted. The researchers caution that the sample was not fully representative of first year students, participants were volunteers and the questionnaire relied heavily on self-reporting. Although, the results of the survey support that students interact heavily with technology, details of usage are crucial. For example, mobile phone usage is high with most students (97.8%) owning one and 13.4% using a wireless mobile connection. As well, differences in Internet usage was found not only in each age category but also in year cohorts, debunking the homogeneous concept of digital natives. The survey also found discrepancy among student comprehension of course technological requirements and identified minorities. The second year of this study (spring 2009) investigated why students chose certain technologies and incorporated a more mixed methodology (qualitative and quantitative), increasing the number of interviews and including Cultural Probes. Further research is needed in mobile phone usage and transferring student technological usage into education purposes.

#### Lack of Transfer or Depth in Digital Literacies

The frequency and characteristics of digital technology use among undergraduate students was further investigated by Margaryan and Littlejohn (2008). Participants included 160 Year 3 undergraduate students in Social Work (30 participants, average age 33) and Engineering (130 participants, average age 21) from two British universities. Twenty-four percent were female and 76% were male. The sample choice was determined by the research goals of: (1) the impact of technical and non-technical subject areas on student use of technology and (2) any age variations in technology use. Both quantitative and qualitative methodologies were used, involving a paper-based questionnaire survey, 8 one hour long semi-structured student interviews and 8 staff interviews from January to May 2007. The survey had four main sections: (1) personal details, (2) technology used formally in the course of study, (3) technology used for

learning in relation to the course but that is not formally required through the course, and (4) technology used for recreational purposes. Students aged 19 to 27 were grouped as digital natives and students aged 28 to 38 were labeled digital immigrants. The three main findings of the study were that: (1) a limited range of technologies were used by students, (2) there were low levels of use and familiarity with social technologies, and (3) there was no evidence of extreme differences in knowledge creation and sharing. A significant finding was that neither student group used technology effectively to support their learning. As well, lecturers are often unaware of the educational potential of technologies. Implications for future research would be investigating how to conquer the divide between informal and formal use of technologies.

Kvavik (2005) provided quantitative research investigating the technological literacy of undergraduate students. The study investigated four areas: (1) the kinds of technologies being used and preferred, (2) the level of student skill with these technologies, (3) technology contribution to the undergraduate experience, and (4) the learning gains from the use of information technology. The participants were 4374 undergraduate students, freshman or seniors, across 13 universities in five American states. Ninety-five percent of the sample was 25 years old or younger. In addition to the large-scale survey, qualitative interviews were also held. The study's findings suggest that although technology is widely owned and used, uses are mostly limited to writing documents, e-mailing and surfing the Internet. The main purpose of student use was said to be educational pursuits followed by communication. Students' academic major and year (senior or freshman) were large factors on technology use as were age and gender. Females used technology more for communicating while males tended to use technology more for video gaming, downloading music, and accessing the Internet. While students ranked themselves as highly technologically skilled on the survey, the interviews suggested

unspecialized surface level knowledge. Students preferred classes with moderate levels of information technology and emphasized quality over quantity. GPA was not observed as a relevant factor for any of the findings. Convenience was perceived as the main benefit (48.7%) of IT use in the classroom and course management systems were mainly used for communication and administrative tasks rather than learning support. The findings suggest that students do not have a sophisticated and in-depth knowledge of information technology and are not demanding intensive IT incorporation into the learning experience. The significance of these findings is that digital natives do not come to school with an already fully developed IT skill set and that they have mixed feelings about the inclusion of technology in the classroom. Further research should investigate how technologies are being used by educators to support classroom learning, and the impact of this digital-based pedagogy on students' perceptions and use of technology.

#### Challenges Facilitating Digital Literacy in Schools

Leander (2007) attempts to answer why schools with technology and Internet access ultimately fail in their effective incorporation in learning. He examined school organization of space and time compared to the structure of space and time in youth's personal online practices. Leander conducted an informal qualitative study at a private girls' school with grades 5 to 12 and technology and Internet access. He held one to two hour individual interviews with the principal and four teachers and then observed vignettes of practice. He found that although technology was available and used for learning, it was often ineffective due to competing discourses or perceptions. The first contrast was in the understanding of students as both empowered by online learning but also vulnerable and exposed. Second, classrooms were simultaneously opened up to information but constructed as a closed information spaces. Finally, online activity and interaction were seen as damaging to classroom interaction as a distraction and a physical barrier. Leander finds that technology in the school was used as a supplement and a tool to support traditional practices such as

sequential activity and text-talk-text cycles. He argues that school productions of space-time are directly at odds with the space-time everyday online practices of students. The significance of this research is its suggestion that there is an inherent tension in effectively incorporating technology into the mainstream education system that subversively sabotages success. Leander's findings suggest that our problem is not simply professional development and technology access but that the spatial practices of schooling must be considered and revised. Further research should investigate students' online practices, schooling practices and an attempted marriage between the two.

### Summary

As we see every day in our classrooms, our students cannot be treated as a homogenous group and administered a "one size fits all" approach. The impact of age, gender, socio-cultural context, prior knowledge and access as well as many other factors influences our students' literacy. It is interesting that many of the studies relied heavily on self-evaluation of technological skill which contradicted other evidence. Although the information on student self-perception is informative, how can a subject evaluate what they do not yet fully understand? They have no scale to compare their abilities to. This is exhibited in the findings that students desired technologies they were already familiar with to be used in their courses (Kennedy, Judd, Churchward, & Gray, 2008). It is comparable to teaching a beginning reader two strategies and then asking him or her to evaluate six strategies for their effectiveness while reading.

We are on the right path with rigorous research taking place to inform the assumptions surrounding 21<sup>st</sup> century learners and digital literacy skills. However, Prensky (2001) is correct about one thing: change is occurring much more rapidly than the research pacing it. We need to factor in trends and conduct more on-going research such as Rideout, Foehr, and Roberts' report (2010). Technology is now the portal to contemporary literacy, thereby making it the gatekeeper for

successful membership in our community. It is our job as educators to meet the needs of our diverse clientele in order to ensure equity throughout their lives.

### Importance of Digital Literacy

The initial concept of a born-digital generation with inherent capabilities has evolved into a demand for 21<sup>st</sup> learning skills or, if you will, digital literacy. By separating digital literacy into a skill set instead of an innate way of being, governments, researchers and educators implicitly recognize lifelong learning and the ability of learners of any age to master new skills. That being said, it remains to be seen whether personalized learning will become a new method of categorizing and controlling curriculum. However, by acknowledging diversity among 21<sup>st</sup> century learners, we can better meet our students' needs.

As we move from a focus on digital natives and skill gaps between students and teachers, attention has turned to the skills necessary to succeed in the 21<sup>st</sup> century. Dialogue has evolved from adjusting the education system to meet the needs of 21<sup>st</sup> century learners to an exploration of just what those needs might be if our end goal is fully participating members of society in a digital age. A fully participating member of society is a citizen who can successfully participate civically, socially and economically. Literacy, as the ability to use the dominant symbol system of a society, is a passport to participating in society. As the literacy demands of any society evolve with that society, we are now accordingly faced with redefining the literacy of the 21<sup>st</sup> century to include digital literacy. Governments and education systems around the world are beginning to discuss the importance of digital literacy and develop national strategies and curriculum to ensure digitally literate citizens. The consequences should we fail to do so are concerning as so many facets of our personal and professional lives are digital. Every time period has unique literacy demands; in the 21<sup>st</sup> century, those literacy demands include digital literacy.

## Consequences of Digital Illiteracy

Digital illiteracy among our youth will result in inequality, passive media consumption and ethical confusion. Jenkins, Clinton, Purushotma, Robison, and Weigel (2006) identified three potential areas of concern: (1) the Participation Gap, (2) the Transparency Problem, and (3) the Ethics Problem. Without the inclusion of digital literacy in public education, a variety of socioeconomic and demographic factors will result in discrepancy in digital access and skill development among youth. As well, the lack of transparency in mass media and media's influence on perceptions and belief systems make passive consumption dangerous. Most importantly, as youth spend increasing amounts of time in virtual worlds, the development of social norms and ethics through traditional mentorship is disrupted. Youth are left to develop an ethical orientation in the digital world without guidance and supervision. However, Jenkins et al. stress that it is not about protecting youth but rather a need to "engage them in critical dialogues" (p. 12). The end goal is independent lifelong learners, not fenced sheep.

The benefits of a digitally literate population are multi-faceted. The Digital Britain media - literacy working group believe a digitally literate and engaged populace will "embrace, engage and exploit the opportunities provided by a Digital Britain . . . and . . . drive the digital economy" (Digital Britain, 2009, p. 2). Perlmutter et al. (2010) identify both social and economic benefits for a digitally literate Canada. Economically, innovation, creativity and productivity will increase along with ICT infrastructure while socially, participation, engagement, inclusion and online safety will be fostered (Perlmutter et al.). Just as traditional literacy was and is a gateway to full civic and economic participation in one's society, so too is digital literacy as all aspects of our communities develop a virtual presence. Whether driven by the challenges of a digitally illiterate population or lured by the national benefits of digitally empowered citizens, the benefits and

necessity of digital literacy are widely accepted. However, developing a common understanding of just what digital literacy is can prove challenging.

## Defining Digital Literacy

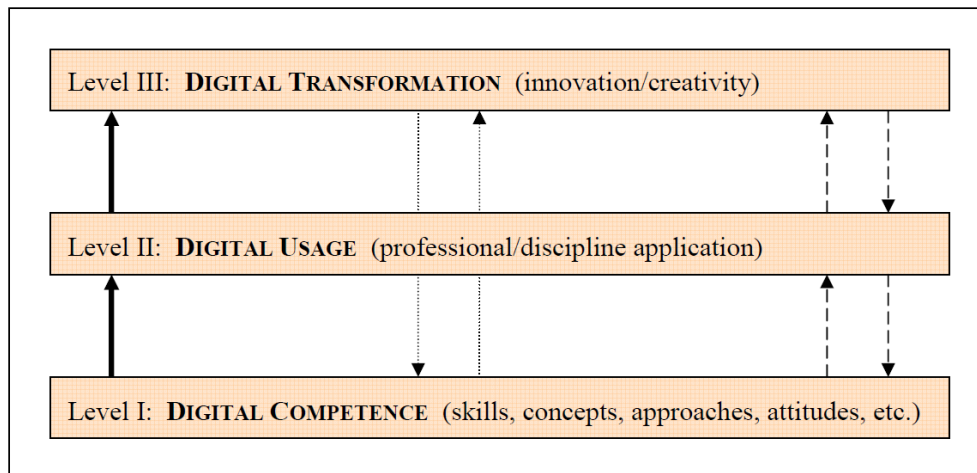
Although used widely in the 1990s, “digital literacy” as we now recognize it was coined by Paul Gilster in 1997. Simple and direct, Gilster defined digital literacy as the ability to both understand and use digitized information (1997). What proved lasting in an era of rapidly evolving digital tools and resources was Gilster’s emphasis on higher-level cognitive skills rather than the simple use of constantly evolving digital sources. His statement that “digital literacy is about mastering ideas, not keystrokes” is worthy of forming the heart of any definition of the term. Too often we become lost in our tools and lose sight of what we could, should and wish to do with the tools; the medium becomes the end. As well, a focus on tools in such a rapidly changing arena renders any statement obsolete potentially before the ink dries or, if you will, multimodal dissimulation.

## Digital Literacy Competencies Emerge

The concept of digital literacy continued to evolve during the dawn of the 21<sup>st</sup> century. The DigEuLit project expanded on Gilster’s interpretation by detailing specific skills and competencies. Digital literacy was defined by Martin & Grudziecki (2006) as:

The awareness, attitude and ability of individuals to appropriately use digital tools and facilities to identify, access, manage, integrate, evaluate, analyse and synthesize digital resources, construct new knowledge, create media expressions, and communicate with others, in the context of specific life situations, in order to enable constructive social action, and to reflect upon this process. (p. 255)

Of interest is the emergence of creation, collaboration, and social action, moving the definition beyond the more passive terms of “use” and “understand” into the interactive virtual era of the 21<sup>st</sup> century. Martin & Grudziecki (2006) identify three stages of digital literacy development: (1) digital competence, (2) digital usage, and (3) digital transformation. Intriguingly, unlike many other models, competence is the first stage instead of usage. Digital competencies range from manual skills to critical evaluation skills and creation, encompassing what many would define as a comprehensive definition of digital literacy on its own. However, Martin & Grudziecki consider it only the first building block necessary to allow digital usage, the actual application of these competencies within a relevant context. The end goal is digital transformation where mastered competencies result in creative and innovative digital usage that in turn prompts meaningful change within a context or domain. Although Martin & Grudziecki are to be commended for their emphasis on social action and their recognition of literacy as situated within communities and contexts, the term “digital usage” is too easily confused with basic IT skills instead of application of cognitive competencies. As well, despite assertions to the contrary and the inclusion of multi-directional arrows, their model (Figure 1) suggests a linear and sequential acquisition of digital literacy, completely at odds with the lifelong learning critical to digital literacy.

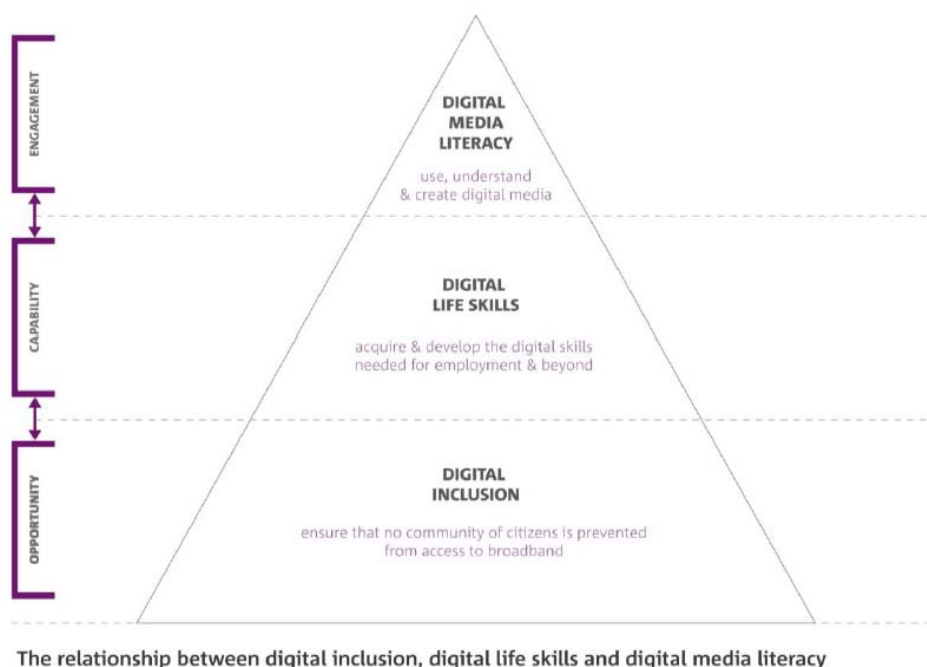


*Figure 1 Levels of Digital Literacy by Martin & Grudziecki, 2006.*

## Media and Digital Literacy

Media and digital literacy have almost become synonymous. Digital Britain (2009) blurred the two together into digital media literacy and attempted to synthesize the multiple approaches to media literacy within the country. Similar to Martin & Grudziecki (2006), Digital Britain identified three interdependent levels to digital media literacy: (1) digital inclusion, (2) digital life skills, and (3) digital media literacy. Digital inclusion focuses on opportunity or, if you will, access to digital technologies and broadband while digital life skills encompass the capacity or the “acqui[sition] and develop[ment]” of necessary digital skills (p. 9). Digital media literacy is engaged use, understanding, and creation of digital media. As observed in the diagram below, each component builds upon the other to achieve the ultimate goal of digital engagement. Although the clear stages of opportunity, capacity and engagement are appealing, the “digital journey” is assumed to be linear with a clear progression from stage one to stage three. The 21<sup>st</sup> century citizen needs to be a lifelong learner, capable of looping back, diving under or over, and existing in multiple digital literacy “stages” simultaneously as contexts and communities change. Linear progression is unrealistic and denies the complexity of any form of literacy. The reality of

the 21<sup>st</sup> century is dynamic chaos and, as such, requires an approach such as complexity theory to fully embrace it. Rather than isolated or additive factors, the complex whole must be considered (Mason, 2008). Digital literacy is complex and adaptive and new understandings emerge through the unpredictable interaction of multiple elements.

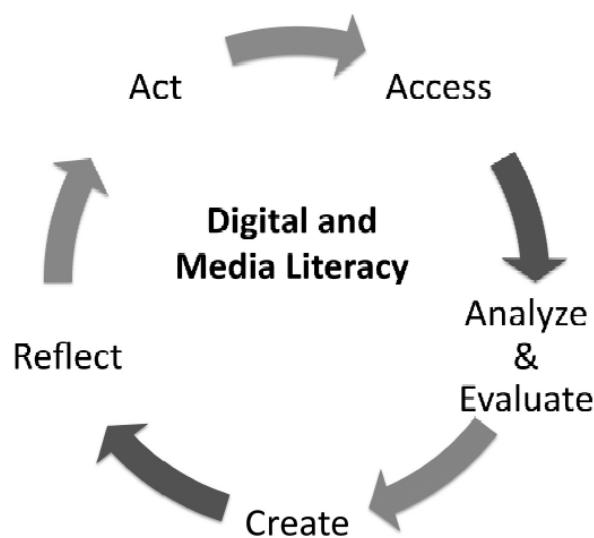


*Figure 2 Three Components of Digital Engagement by Digital Britain, 2009.*

### Spiral Model of Digital Literacy

The interplay and movement between competencies must be evident in any digital literacy model. Hobbs (2010) comes close by using a spiral model to depict five competencies: (1) access, (2) analyze and evaluate, (3) create, (4) reflect, and (5) act (Figure 3). Defining digital and media literacy as a “constellation of life skills that are necessary for full participation in our media-saturated, information-rich society,” Hobbs emphasizes lifelong learning and participation (2010, p. vii). Advocating a focus on critical thinking and communication instead of our current

obsession with new technology, Hobbs' sees digital literacy as empowering people to use their voices and rights to "improve the world" (p. 17). The use of action words instead of descriptive headings is potent, inviting action and application. As well, the spiral model implies lifelong learning, each action informing the next in an endless cycle. Also of note is the use of reflection to invoke ethical consideration instead of the addition of "appropriate" before action words as observed in the B.C. Ministry of Education's definition of digital literacy. The recognition that ethical interaction, virtual and face-to-face, requires continual self-investigation and reflection rather than an adherence to extrinsic rules and guidelines learned once and applied to all contexts is significant. Finally, the call to action and participation within one's community as an end goal to which everything else leads epitomizes literacy in its truest sense: the ability to successfully participate in one's community by interacting with the community's symbol system.



*Figure 3 Essential Competencies of Digital and Media Literacy by Hobbs, 2010.*

The model would be a very pragmatic tool for educators and students to create digitally literate projects and assignments. Similar to the scientific method or inquiry method, Hobbs' model provides an action plan to meet an objective. For example, if a student wished to raise

awareness in his or her local community on ground water pollution, he or she would ensure access to the necessary media and technology tools, analyze and evaluate relevant information, create a medium such as a discussion forum or blog to raise awareness, reflect on social responsibility and ethical principles and finally act by publishing their medium and interacting either through that medium or other venues to accomplish their objective (Figure 4). However, what makes this model such a useful methodology limits its ability to fully encompass the concept of digital literacy.

Essential Competencies of Digital and Media Literacy	
1.	<b>ACCESS</b> Finding and using media and technology tools skillfully and sharing appropriate and relevant information with others
2.	<b>ANALYZE &amp; EVALUATE</b> Comprehending messages and using critical thinking to analyze message quality, veracity, credibility, and point of view, while considering potential effects or consequences of messages
3.	<b>CREATE</b> Composing or generating content using creativity and confidence in self-expression, with awareness of purpose, audience, and composition techniques
4.	<b>REFLECT</b> Applying social responsibility and ethical principles to one's own identity and lived experience, communication behavior and conduct
5.	<b>ACT</b> Working individually and collaboratively to share knowledge and solve problems in the family, the workplace and the community, and participating as a member of a community at local, regional, national and international levels

*Figure 4 Description of Essential Competencies of Digital and Media Literacy by Hobbs, 2010.*

### Our Target Audience and Accessibility

When defining digital literacy, it is important to remember that our main audiences are neither politicians nor academics. Our target audience is the masses, specifically youth. Consider the following definition of digital literacy by the BC Ministry of Education (2013):

Digital Literacy is the interest, attitude and ability of individuals to appropriately use digital technology and communication tools to access, manage, integrate, analyze and evaluate information, construct new knowledge, create and communicate with others. (BC Ministry of Education, 2013).

Although the above definition is comprehensive and includes all the important components inherent in digital literacy, how many times did you need to read the definition in order to understand it? Now imagine students trying to do the same. In attempting to cover all aspects of what it means to be digitally literate, the definition fails to be a usable tool. Teachers and students need a clearer tool that maintains the essence of what digital literacy is.

MediaSmarts comes closest, in my view, by identifying three components, each easy to grasp: (1) use, (2) understand, and (3) create. The first is defined as technical fluency, the second the ability to comprehend and evaluate information and the last as the ability to produce and communicate. In short, digital literacy is access and use of digital media software and hardware, critical understanding of digital content, and creation and communication with digital tools (Perlmutter et al., 2010). However, the model created by MediaSmarts and Perlmutter et al. (2010) is complicated and cluttered (Figure 5). Although the model recognizes lower and higher level digital literacy skills, the clarity of the three main components is lost with the addition of categories at the top and bottom and the details in the white space. In a time where people have come to expect sophisticated and intuitive design as commonplace, this model's design ironically fails in its purpose by confusing digital literacy rather than explaining it.

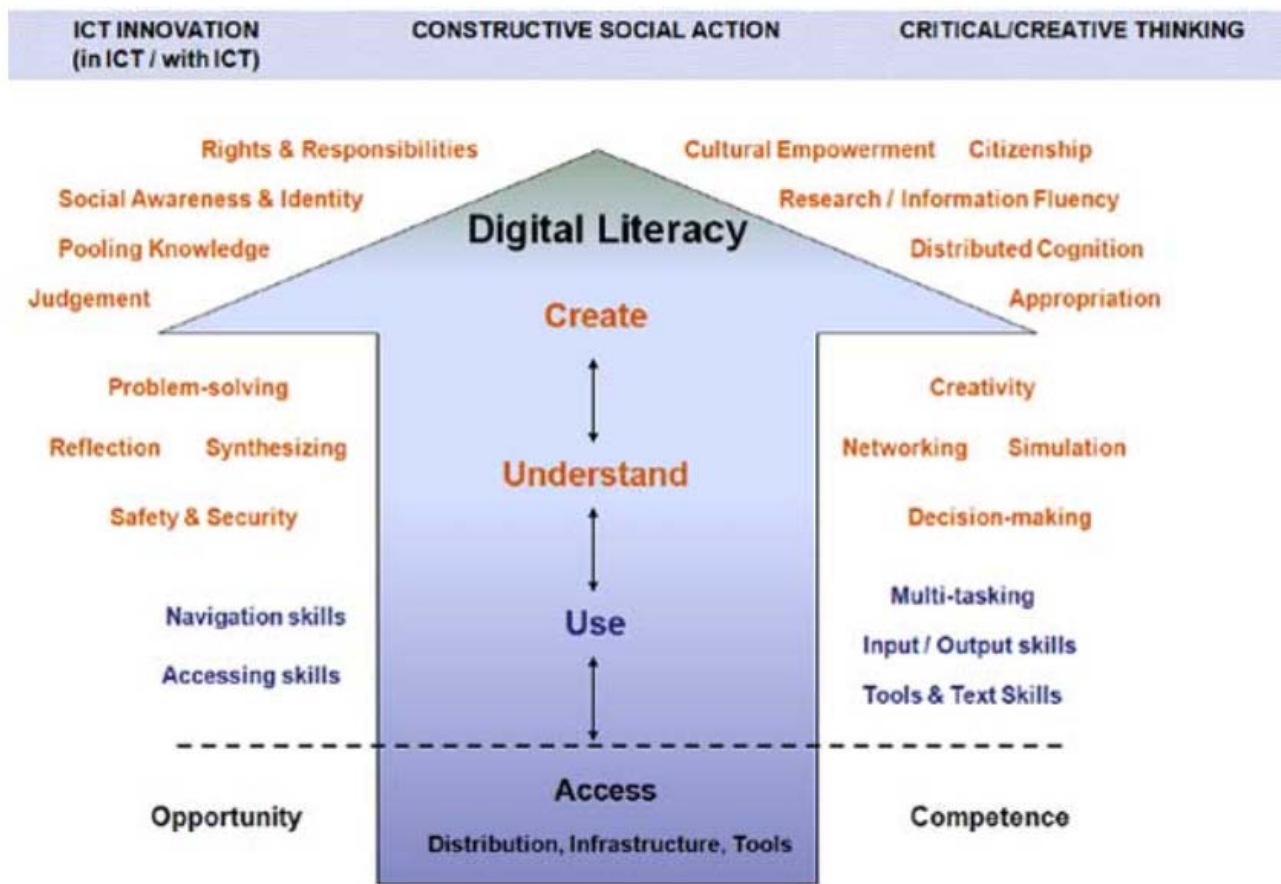


Figure 5 A Model for Digital Literacy by Perlmutter et al., 2010.

### The Interactive Nature of Digital Literacies

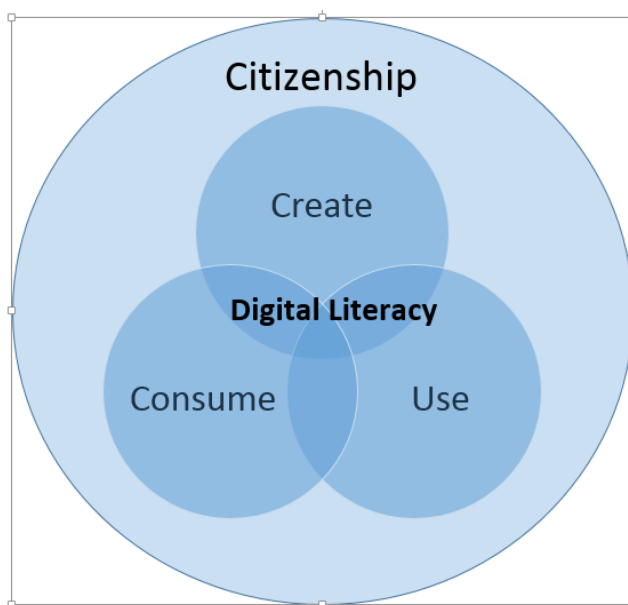
Also confusing is that digital literacy is also often viewed as an umbrella term for multiple literacies rather than a distinct literacy. Martin & Grudziecki (2006) identify the following literacies as being part of digital literacy: IT/ITC literacy, technological literacy, information literacy, media literacy, visual literacy and communication literacy. MediaSmarts highlight technology literacy, information literacy, visual literacy, communication literacy and social literacy as well but emphasize critical thinking or, if you will, critical literacy. The interrelated nature of the numerous 'new' and 'traditional' literacies is widely accepted.

However, Jenkins et al. (2006) argue “new media literacies should be seen as social skills, as ways of interacting within a larger community, and not simply an individualized skill to be used for personal expression” (p. 20). What truly defines new digital literacies is their interactive nature. As Jenkins’ claims, it is all about participatory culture or community involvement. If we accept that “meaning emerges collectively and collaboratively” (p. 20), all the digital literacy models examined so far are lacking. The focus is still on an individual mastering skills and making meaning. Jenkins’ digital literacy skills include: play, performance, simulation, appropriation, multitasking, distributed cognition, collective intelligence, judgment, transmedia navigation, networking, and negotiation. These skills focus on interaction that is key to defining digital literacy.

## My Approach to Digital Literacy and Defining Its Competencies

### Interaction

I define digital literacy as the ability to interact critically, creatively and ethically with text, tools and people in digital contexts. Interaction is central to my definition, whether it be between an individual and text, an individual and a tool or an individual and other people (or all three simultaneously). Interaction is the nucleus of digital literacy and as such, must be emphasized in any digital literacy definition. As Jenkins’ (2006) proclaims, the participatory cultures of our era demand that all digital literacy skills be considered social: interaction is inherent. To demonstrate the central nature of interaction, I have chosen a Venn diagram for my model; no component can exist in isolation (Figure 6). As well, the Venn diagram avoids the impression of linear skill acquisition or stage progression as critiqued in Martin & Grudziecki (2006), Digital Britain (2009) and Perlmutter et al. (2010).



*Figure 6 Digital Literacy Competencies by Stokes-Bennett, 2013.*

## Citizenship

The concept of digital literacy as a social skill set dependent on interaction, however, positions digital citizenship as absolutely essential. How can we speak about society and social skills without communal rights and responsibilities? Citizenship cannot be supplementary, an add-on imploring participants to play nice. Citizenship must saturate every facet of digital literacy, providing a lens of rights and responsibilities that allow participants to actively evaluate and reflect on their actions and/or lack of actions. Instead of creating a separate set of rights and responsibilities for the digital world, I would strongly recommend using the Universal Declaration of Human Rights (UDHR). An influential document in most democratic charters, the UDHR provides internationally recognized language and transferable concepts and skills. Instead of a set of rules, the UDHR is a tool set that allows people to critically explore the tension between conflicting rights and responsibilities. It provides “enabling constraints” that allow participants to maintain a focus and common purpose (Mason, 2008, p. 48). I have made

citizenship the encompassing circle within which the digital competencies exist. I have chosen the word citizenship instead of ethics or digital citizenship to emphasize the participatory nature of digital literacy and the universal relevance of citizenship rights and responsibilities, be it face-to-face or virtual.

### Competencies

The digital competencies I chose are based on components found in the above definitions of digital literacy. Three overarching concepts are always identifiable: (1) create, (2) consume, and (3) use. Most similar to Perlmutter et al.'s (2010) core components, I have deliberately chosen "consume" instead of "understand" as it suggests a transaction instead of a removed and passive experience. Rosenblatt's (1994) theory of transaction is compelling in a time of dynamic multimodal literacy where text and reader can now literally act upon each other. What is specifically compelling is that there is a dynamic interaction rather than a passive transmission of information. I included communication in the category "create." My reasoning behind this is that every creation is a communication and every communication is a creation. By folding the two together, creator accountability is emphasized and an audience and purpose is implied. I have expanded Hobbs' spiral to a Venn diagram and kept her short, easy to understand action words. Recognizing my target audience of contemporary youth, I have focused the message with simple terms and visuals.

## Creating a Course in Digital Literacies

### Learning Outcomes

When developing the learning outcomes for the course, I strongly considered the BC Ministry of Education's Digital Literacy Competencies (formally standards). The BC Digital Literacy Competencies draw heavily from the International Society for Technology in Education's (ISTE) National Educational Technology Standards for Students (NETS) (2007). In fact, the Ministry has transferred the NETS verbatim, using the same six categories complete with specific skills and student profiles. Both the Ministry (2013) and ISTE (2007) identify the following digital literacy competencies: (1) Creativity and Innovation, (2) Communication and Collaboration, (3) Research and Information Fluency, (4) Critical Thinking, Problem Solving, and Decision Making, (5) Digital Citizenship, and (6) Technology Operations and Concepts. Although a very sound breakdown, the Ministry's competencies are too broad and seemingly disconnected from each other, hence my approach of three concepts within the citizenship context. However, I have respected the Ministry's six competencies, including them within my broader concepts (Table 7).

My Big Ideas	BC Digital Competencies	BC Digital Literacy Framework Summaries
CREATE	Creativity and Innovation	Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.
	Communication and Collaboration	Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.
CONSUME	Research and Information Fluency	Students apply digital tools to gather, evaluate, and use information.
	Critical Thinking, Problem Solving, and Decision Making	Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.
CITIZENSHIP	Digital Citizenship	Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.
USE	Technology Operations and Concepts	Students demonstrate a sound understanding of technology concepts, systems, and operations.

Figure 7 Digital Literacy Competencies by BC Ministry of Education, 2013.

Based on these competencies as well as Martin & Grudziecki (2006), Digital Britain (2009), Perlmutter et al. (2010), and Hobbs' (2010) work, I developed the below learning outcomes identified below. The summaries below are mash-ups from the authors listed above, specifically Hobbs (2010) and the BC Ministry of Education (2013).

### **Citizenship**

*“Understanding rights and responsibilities.”*

The student actively reflects on and consistently applies social responsibility and ethical principles to her/his own digital identity and lived experience, communication, behavior and conduct. She/he understands rights and responsibilities as a community member. She/he is an aware and responsible designer of personal "digital footprint" and employs strategies to navigate inappropriate content, conduct and contact.

### **Create**

*“Creating and communicating with digital tools.”*

The student consistently demonstrates creative thinking, constructs knowledge, and develops innovative products and processes using technology. She/he considers purpose, audience, and multimodal composition techniques. She/he effectively connects, shares, communicates, and collaborates with others in digital environments to participate in multiple communities.

### **Consume**

*“Critically understanding and using digital content.”*

The student consistently comprehends complex media using critical thinking skills to analyze quality, veracity, credibility and point of view, while considering potential effects or consequences. She/he effectively uses critical thinking skills to question, plan and conduct

research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.

## Use

*“Accessing and using digital software and hardware.”*

The student consistently demonstrates a sound understanding of technology concepts, systems, and operations. She/he finds, evaluates, selects and uses appropriate media and technology tools skillfully. She/he problem solves by troubleshooting, transferring learning, networking and experimenting.

## Assessment

Students will receive a highlighted rubric for the course as their report card. This will allow descriptive feedback on student mastery of specific learning outcomes which enables students to identify their strengths and their areas requiring attention. The language and format for the rubric has been modelled on the Ministry of Education’s Performance Standards as many students and educators are familiar with these tools. Despite encouraging assessment practices that are more descriptive, the Ministry still requires that a percentage and letter grade be entered for senior students. Each student’s rubric grade will be converted into a percentage and letter grade for formal reporting periods. For more information, refer to the BAA Course Framework in Chapter 3. Assessment is an area that bears more consideration, particularly in relation to shifting conceptions of how we come to understand the conditions for ‘learning’, ‘knowing’, and ‘sharing’

## Chapter 3: My BAA Digital Literacy Course

### Board/Authority Authorized Course Framework

The Ministry allows districts to design and offer courses that meet needs in their communities (BC Ministry of Education, 2012). These courses can be used for any of the 28 elective credits required by students to graduate. A proposed Board / Authority Authorized Course (BAA course) must go through three levels: (1) the BC Ministry of Education, (2) the school district, and (3) the school. A BAA Framework must be completed and approved by the school's Principal (where the course will be offered), the school district's Superintendent, the district's Board of Trustees and, finally, the Ministry of Education. Below is the BAA Framework for Digital Literacy 12, developed based on the Ministry's BAA course template.

School District/Independent School Authority Name	Sooke
School District/Independent School Authority Number	SD #62
Developed by	Devon Stokes-Bennett
Date Developed	July 2013
School Name	Westshore Centre for Learning and Training
Principal's Name	Paul Block
Superintendent Approval Date (for School Districts only)	Pending
Superintendent Signature (for School Districts only)	Pending
Board/Authority Approval Date	Pending

Board/Authority Chair Signature	Pending
Course Name	Digital Literacy
Grade Level of Course	12
Number of Course Credits	4
Number of Hours of Instruction	45 hours
Prerequisite(s)	None
Special Training, Facilities or Equipment Required	Computer(s) and/or devices with visual audio affordances, wireless internet access. Teacher will need experience with the World Wide Web, social media, a district hosted blogging platform and mainstream technology.
Course Synopsis	This course facilitates students interacting critically, creatively and ethically with multimodal text, tools and people in digital contexts. As a culmination, students create, implement and share a digital social action project. Learning outcomes for the course are grouped under the curriculum organizers: Citizenship, Create, Consume, and Use. Students are given the opportunity for self and peer assessment throughout their learning.

### Rationale

This course facilitates students becoming positive and productive digital citizens. Students will master skills essential to being a lifelong learner such as how to access, manage, integrate, analyze and evaluate information, construct new knowledge, create and communicate with others.

### Organizational Structure:

Topic	Title	Time
Unit 1	Understanding Rights and Responsibilities	10
Unit 2	Accessing and Using Digital Software and Hardware	15
Unit 3	Critically Understanding and Using Digital Content	10
Unit 4	Creating and Communicating with Digital Tools	10
	Total Hours	45

### Unit Descriptions

#### **Unit 1: Understanding Rights and Responsibilities**

Students will explore and apply the Universal Declaration of Human Rights to the virtual world as an ethical lens through which to evaluate and reflect on appropriate and inappropriate content, conduct and contact. Students will analyze relevant current events through this lens and, through dialogue and collaboration, develop a social contract for both their face-to-face and virtual learning community. Students will also understand the permanent nature of digital content and conduct and evaluate and monitor their digital footprint/tattoo accordingly. This unit will form the foundational critical analysis skill set for all following activities and projects.

#### **Curriculum Organizer – Citizenship**

*It is expected that students will:*

- reflect on and consistently apply social responsibility and ethical principles to their own digital identity and lived experience, communication, behavior and conduct;
- understand rights and responsibilities as a community member;
- be an aware and responsible designer of personal "digital footprint";
- employ strategies to navigate inappropriate content, conduct and contact.

#### **Curriculum Organizer - Create**

*It is expected that students will:*

- consider purpose, audience, and multimodal composition techniques;
- connect, share, communicate, and collaborate with others in digital environments in order to participate in local and international communities.

## **Unit 2: Accessing and Using Digital Software and Hardware**

Students will identify and evaluate the affordances, limitations, potential uses, social impact and ethical considerations of diverse technological software and hardware through collaborative inquiry. Students will select and investigate both current and future technology of interest to them and create multimodal learning opportunities with and for their peers to share their learning. Throughout their projects, students will use the ethical lens developed in the prior unit to evaluate and inform their decisions and actions.

### **Curriculum Organizer - Use**

*It is expected that students will:*

- demonstrate a sound understanding of technology concepts, systems, and operations;
- find, evaluate, select and use appropriate media and technology tools skillfully;
- problem solve by troubleshooting, transferring learning, accessing community and experimenting.

### **Curriculum Organizer - Create**

*It is expected that students will:*

- demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology;
- consider purpose, audience, and multimodal composition techniques;
- connect, share, communicate, and collaborate with others in digital environments in order to participate in local and international communities.

### **Curriculum Organizer – Citizenship**

*It is expected that students will:*

- reflect on and consistently apply social responsibility and ethical principles to their own digital identity and lived experience, communication, behavior and conduct;
- understand rights and responsibilities as a community member;
- be an aware and responsible designer of personal "digital footprint";
- employ strategies to navigate inappropriate content, conduct and contact.

## **Unit 3: Critically Understanding and Using Digital Content**

Students will share and discuss digital content in their virtual learning community. Each student will find and share digital content addressing an ethical situation surrounding digital conduct, content, and/or contact. The digital content may be any mode or multimodal (video, picture, news article, blog, website, etc.). Students will be expected to both lead a virtual discussion and contribute to weekly discussions. Students will also complete a critical thinking inquiry project during which they will formulate an inquiry question regarding digital content of interest to them, plan research strategies, conduct research, and analyze the quality, veracity, credibility and point of view of their selected content and research sources.

### **Curriculum Organizer - Consume**

*It is expected that students will:*

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

- comprehend complex media using critical thinking skills to analyze quality, veracity, credibility and point of view, while considering potential effects or consequences;

### **Curriculum Organizer - Create**

*It is expected that students will:*

- demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology;
- consider purpose, audience, and multimodal composition techniques;
- connect, share, communicate, and collaborate with others in digital environments in order to participate in local and international communities.

### **Curriculum Organizer - Use**

*It is expected that students will:*

- demonstrate a sound understanding of technology concepts, systems, and operations;
- find, evaluate, select and use appropriate media and technology tools skillfully;
- problem solve by troubleshooting, transferring learning, accessing community and experimenting.

### **Curriculum Organizer – Citizenship**

*It is expected that students will:*

- reflect on and consistently apply social responsibility and ethical principles to their own digital identity and lived experience, communication, behavior and conduct;
- understand rights and responsibilities as a community member;
- be an aware and responsible designer of personal "digital footprint";
- employ strategies to navigate inappropriate content, conduct and contact.

### **Unit 4: Creating and Communicating with Digital Tools**

Students will create and maintain a personal blog on a topic or topics they are passionate about (passion blogging). Students will be expected to demonstrate the skills learned in the above units in their weekly blogs. Students will collaboratively evaluate social action using digital tools. They will then complete a culminating project in which they participate in a positive social action of their choice using digital tools. Their target community may be local, national, or international. Projects must be shared with the learning community twice prior to publishing for peer assessment and feedback. Students will submit a reflection on the creation process, ethical considerations, and the potential impact on society.

### **Curriculum Organizer - Create**

*It is expected that students will:*

- demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology;
- consider purpose, audience, and multimodal composition techniques;
- connect, share, communicate, and collaborate with others in digital environments in order to participate in local and international communities.

### **Curriculum Organizer - Consume**

*It is expected that students will:*

- use critical thinking skills to question, plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.
- comprehend complex media using critical thinking skills to analyze quality, veracity, credibility and point of view, while considering potential effects or consequences;

### **Curriculum Organizer - Use**

*It is expected that students will:*

- demonstrate a sound understanding of technology concepts, systems, and operations;
- find, evaluate, select and use appropriate media and technology tools skillfully;
- problem solve by troubleshooting, transferring learning, accessing community and experimenting.

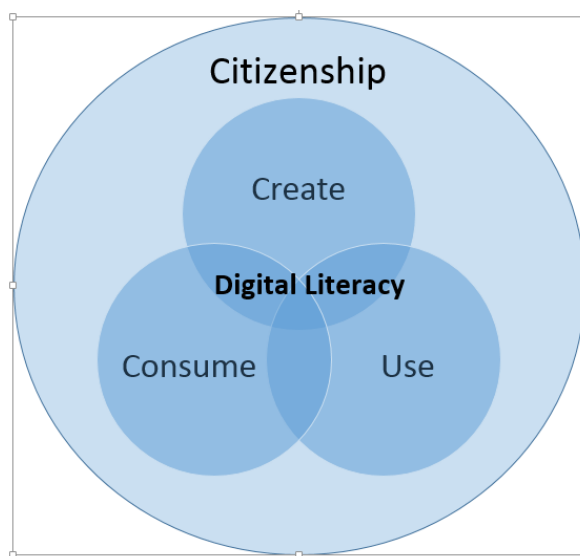
### **Curriculum Organizer – Citizenship**

*It is expected that students will:*

- reflect on and consistently apply social responsibility and ethical principles to their own digital identity and lived experience, communication, behavior and conduct;
- understand rights and responsibilities as a community member;
- be an aware and responsible designer of personal "digital footprint";
- employ strategies to navigate inappropriate content, conduct and contact.

### **Learning Outcomes**

These four curriculum organizers need to be considered holistically, as represented by the below diagram. Students will master and demonstrate the required outcomes through contextualized personalized learning such as inquiry projects instead of segmented assignments. The objective is to scaffold skill development until all digital literacy components are being utilized simultaneously.



Curriculum Organizer	Learning Outcomes
	<b>It is expected that students will:</b>
<b>CITIZENSHIP</b> <i>“understanding rights and responsibilities”</i>	<ul style="list-style-type: none"> <li>• reflect on and consistently apply social responsibility and ethical principles to their own digital identity and lived experience, communication, behavior and conduct;</li> <li>• understand rights and responsibilities as a community member;</li> <li>• be an aware and responsible designer of personal "digital footprint";</li> <li>• <u>employ</u> strategies to navigate inappropriate content, conduct and contact.</li> </ul>
<b>CREATE</b> <i>“creating and communicating with digital tools”</i>	<ul style="list-style-type: none"> <li>• demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology;</li> <li>• consider purpose, audience, and multimodal composition techniques;</li> <li>• <u>connect</u>, share, communicate, and collaborate with others in digital environments in order to participate in local and international communities.</li> </ul>
<b>CONSUME</b> <i>“critically understanding and using digital content”</i>	<ul style="list-style-type: none"> <li>• comprehend complex media using critical thinking skills to analyze quality, veracity, credibility and point of view, while considering potential effects or consequences;</li> <li>• <u>use</u> critical thinking skills to question, plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.</li> </ul>
<b>USE</b> <i>“accessing and using digital software and hardware”</i>	<ul style="list-style-type: none"> <li>• demonstrate a sound understanding of technology concepts, systems, and operations;</li> <li>• find, evaluate, select and use appropriate media and technology tools skillfully;</li> <li>• <u>problem</u> solve by troubleshooting, transferring learning, accessing community and experimenting.</li> </ul>

Figure 8 Digital Literacy Learning Outcomes.

## Instructional Component

### Pedagogy (Methods & Techniques)

- First Peoples’ Principles of Learning
- Constructivist instruction
- Collaborative instruction
- Personalized learning & inquiry
- Universal Design for Learning framework
- Direct instruction
- Modeling
- Gradual release of responsibility / scaffolding

## Activities

- Inquiry & Inquiry Projects
- Group work/collaboration
- Personal blog
- Virtual learning community collaboration & communication
- Multimodal creations
- Analysis of digital content, conduct, contact & tools
- Social action project
- Self and peer assessment

Performance Methods	Personal Communication	Other
virtual portfolio	group dialogue	weekly formative assessment
passion blog	self-evaluation	teacher anecdotal records
projects	peer evaluation	Rubrics
	Reflection	performance standards

## Assessment Component

Criterion-referenced and performance assessment based on standards. Students will be expected to apply the skills and concepts in this course to tasks. The below Performance Standards, developed from the BC Performance Standards framework, will be used to monitor, evaluate, and report on individual student performance. The standards will be used for formative and summative assessment. They will be curriculum-embedded and an integral part of learning activities, allowing students to identify their strengths and areas to focus. This descriptive feedback facilitates self-evaluation, specific goal setting and targeted effort. A scale for grading has been created to convert the 4 point scale to a 10 point scale, necessary for summative reporting in senior grades.

### Four Levels of Student Performance\*

#### NOT YET WITHIN EXPECTATIONS

- the work does not meet grade-level expectations
- there is little evidence of progress toward the relevant prescribed learning outcomes
- the situation needs intervention

#### MINIMALLY MEETS EXPECTATIONS

- the work may be inconsistent, but meets grade-level expectations at a minimal level
- there is evidence of progress toward relevant prescribed learning outcomes
- the student needs support in some areas

**FULLY MEETS EXPECTATIONS**

- the work meets grade-level expectations
- there is evidence that relevant prescribed learning outcomes have been accomplished

**EXCEEDS EXPECTATIONS**

- the work exceeds grade-level expectations in significant ways  
the student may benefit from extra challenge

*\*Taken from “BC Performance Standards” created by the BC Ministry of Education. See Additional Information below.*

**Grade Scale Conversion Chart**

<b>Rubric Grade (4 point scale)</b>	<b>10 Point Scale</b>	<b>Letter Grade</b>
4- / 4	9 – 10	A 86-100%
3- / 3 / 3+	7.5 / 8 / 8.5	B 73-85%
2+	7	C+ 67-72%
2	6 / 6.5	C 60-66%
2-	5 / 5.5	C- 50-59%
1 / 1+	1 – 4	I (Incomplete)

## Digital Literacy 12 Performance Standards

	Not Yet Within Expectations	Meets Expectations	Fully Meets Expectations	Exceeds Expectations
<b>CITIZENSHIP</b> <i>"understanding rights and responsibilities"</i>	The student does not apply social responsibility and ethical principles to her/his own digital identity and lived experience, communication, behavior and conduct; does not understand rights and responsibilities as a community member; struggles with maintaining a responsible "digital footprint"; struggles generating strategies to navigate inappropriate content, conduct and contact.	The student sometimes reflects on and applies social responsibility and ethical principles to her/his own digital identity and lived experience, communication, behavior and conduct; understands some rights and responsibilities as a community member; may struggle with maintaining a responsible "digital footprint" and navigating inappropriate content, conduct and contact.	The student actively reflects on and consistently applies social responsibility and ethical principles to her/his own digital identity and lived experience, communication, behavior and conduct; understands rights and responsibilities as a community member; is an aware and responsible designer of personal "digital footprint"; employs strategies to navigate inappropriate content, conduct and contact.	The student exhibits leadership in digital citizenship; reflects on and models social responsibility and ethical principles in her/his own digital identity and lived experience, communication, behavior and conduct; is a positive, supportive and productive member of digital communities.
<b>CREATE</b> <i>"creating and communicating with digital tools"</i>	The student does not demonstrate creative thinking, construct knowledge, or develop innovative products and processes using technology; struggles with purpose, audience, and multimodal composition techniques; struggles to connect, share, communicate, and/or collaborate effectively with others in digital environments.	The student sometimes demonstrates creative thinking, constructs knowledge, and develops innovative products and processes using technology; may struggle with purpose, audience, and multimodal composition techniques; may struggle to connect, share, communicate, and/or collaborate effectively with others in digital environments.	The student consistently demonstrates creative thinking, constructs knowledge, and develops innovative products and processes using technology; considers purpose, audience, and multimodal composition techniques; effectively connects, shares, communicates, and collaborates with others in digital environments to participate in local and international communities.	The student is an innovative creator who synthesizes diverse knowledge and multidisciplinary skills through effective and respectful collaboration to enable constructive social action. Communication skills are purposeful, effective and adaptive.
<b>CONSUME</b> <i>"critically understanding and using digital content"</i>	The student does not demonstrate comprehension of complex media; struggles to effectively analyze quality, veracity, credibility and point of view, and potential effects or consequences; struggles to use critical thinking skills to question, plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.	The student comprehends media but sometimes struggles with complex media; may struggle to fully analyze quality, veracity, credibility and point of view, and potential effects or consequences; may struggle to use critical thinking skills to question, plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.	The student consistently comprehends complex media using critical thinking skills to analyze quality, veracity, credibility and point of view, while considering potential effects or consequences; effectively uses critical thinking skills to question, plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.	The student masterfully uses critical thinking skills to develop insightful inquiry questions and to comprehend and analyze complex media and its potential impact; highly developed information and research fluency, problem solving skills and decision making skills.
<b>USE</b> <i>"accessing and using digital software and hardware"</i>	The student does not demonstrates a sound understanding of technology concepts, systems, and operations; struggles with selecting and using appropriate media and technology tools skillfully; struggles with effective problem solving strategies.	The student sometimes demonstrates a sound understanding of technology concepts, systems, and operations; may struggle with selecting and using appropriate media and technology tools skillfully; may struggle with effective problem solving strategies.	The student consistently demonstrates a sound understanding of technology concepts, systems, and operations; finds, evaluates, selects and uses appropriate media and technology tools skillfully; problem solves by troubleshooting, transferring learning, accessing community and experimenting.	The student has an in-depth understanding of technology concepts, systems, and operations; is an innovative and insightful problem solver who effectively uses networks, prior knowledge and available resources to advance use of and access to digital technologies.

Figure 9 Digital Literacy Performance Standards.

Created from Hobbs (2010), ISTE NETS (2007) and "Digital Competencies" by BC Ministry of Education (2013). See Additional Information below.

### Learning Resources

- A district hosted Wordpress platform will be used as the virtual learning community and personal blogging tool. Students will be able to create a personalized avatar, create multimodal posts, comment to posts, and set privacy settings of each contribution to Teachers, Class, or Public. Posts will be color coded according to privacy setting for easy identification. Students will be able to share images, videos, text and PDFs through both posts and comments.
- Visit from police liaison about digital footprint and cyberbullying.
- Relevant articles, videos, pictures, and information on Internet

## Additional Information

### Sources Used

BC Ministry of Education. (2013). B.C. performance standards. Retrieved July/16, 2013, from [http://www.bced.gov.bc.ca/perf\\_stands/](http://www.bced.gov.bc.ca/perf_stands/)

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ISTE. (2007). National educational technology standards for students. Retrieved July/16, 2013, from <http://www.iste.org/standards/nets-for-students>

Hobbs, R. (2010). Digital and media literacy: A plan of action. The Aspen Institute Communications and Society Program 2010.

## Chapter 4: Reflection

### Logistics

#### Administrative Requirements

Once I had decided upon the specific direction that I wanted to take with my M.Ed. project, I had more than a few challenges to overcome. The logistics of offering a new course in a school involves a great deal of collaboration amongst diverse groups. We were already into the second semester of the school year, and in order to offer and teach Digital Literacy 12 for the coming September, things needed to proceed quickly. First came the proposal to administration. Not only would this require offering a new course on rather short notice, but also redesigning my teaching assignment and filling my former position. Next came consultation with academic advising in order to determine the level of course that would be the best fit for many students' graduation requirements, what code to offer it under and when and where to offer it. As many students required Grade 12 elective credits to meet graduation requirements, Digital Literacy was made a Grade 12 course and three sections were developed: A, B, and C. This allowed students to take Digital Literacy 12 three times for three separate course credits throughout their high school career. As the course content would always be changing according to student interest, mass media, and current events and projects were personal inquiry, there would be no repetition, only continued competency development. It was determined that Digital Literacy 12 would be offered Wednesday afternoon once each semester, accommodating student core classes that were mainly offered Monday, Tuesday and Thursday. There would be no prerequisite for the course so students in any grade could register for it at any time. The course would have approximately 45 to 47 hours of instruction each semester.

## Attracting a Student Population

Then came the marketing. In my school, if enough students do not register for a course or program, it does not run. This went surprisingly quickly and smoothly, due to the strategic time and credit level of the course. As well, having taught grade 9 and 10 for six years at the school, a large number of students both knew me and were interested in digital literacy subject matter. Awareness of the course spread through word of mouth among the students and academic advising consistently offered it as an option when planning graduation programs with individual students. Within a month, Digital Literacy 12 in both first and second semester were full.

Most fascinating was the reaction of students. Over 80% of the students who have registered for Digital Literacy 12 are former students of mine and therefore know me well. Students I had not taught in years, who were registering in the course, approached me in hallways with ideas for course projects and discussions. This was without their once having had a previous conversation with me regarding what I thought the course was going to be about. Students' immediate appropriation of the course and the confident assumption that they could direct course content and activities reminded me of my epiphany while watching my students mimic my teaching style rather than adhere to my formal presentation guidelines. My students know me better than I know myself in this regard. They know very well that this digital literacy course will be a playgroup; with an emphasis being on "group," and were contributing accordingly. They also know that we will co-construct the course as we proceed with content and processes to meet our learning needs, attitudes and desires. In a teaching career fraught with insecurities, unrelenting student emotional and learning needs, and constant wondering whether you are doing enough, the fact that my students know they have a voice in our classroom is something I consider one of my greatest successes as a teacher.

## Technological Challenges

My next challenge was co-creating a virtual learning community for the course with my District's Information Technology Department. This was crucial for three reasons: (1) any platform would need to be district hosted in order to avoid violating the BC Privacy Laws, (2) proactive collaboration and involvement would secure IT support for the endeavor throughout the year, and (3) IT support staff and teachers need to work more closely together in order to create superior learning opportunities for students. Misunderstandings and resentment often arise out of a lack of communication and education on both sides. We are now in an era where teachers need to work with IT support-staff the same way architects work with construction companies; it is an interdependent relationship and, as any relationship, requires work and conscious investment.

At the time I began planning my course, I had access to district hosted Wordpress blogs as well as Moodle and Blackboard Learning Management Platforms (LMS). In my experience with Blackboard, I had observed that although it successfully met teachers' management needs such as a grade book, assignment dropbox, email access and assignment accessibility, the technology was rarely used for learning interactions. Instead, it seemed the equivalent of placing a linear textbook with accompanying assignments online for a student to work through individually. Granted, the textbooks have evolved to be multimodal and more interactive and the assignments more open. However, the interactive affordances of the LMS such as discussion boards, wikis, and blogs were almost never used in the Distributed Learning, Blended or face-to-face courses I observed the technology being used. I once attempted to use an empty Blackboard shell only for its interactive affordances to enhance a face-to-face course. My attempt failed in my opinion for two reasons: (1) I disliked using the technology as it felt rigid and was time

consuming to edit and modify and (2) the students saw no benefit to using the technology for interaction with their peers when they had face-to-face interactions in class, Facebook access and texting access through their mobile phones. Their personal technology met their needs better than the LMS. Although Moodle is easier to edit, it also has a linear structure and is not as visually appealing, without a great deal of work, as many other options. Consequently, the district's Wordpress blog was my first choice for a virtual learning community platform.

#### Using a Blog as a Learning Platform

Not only is Wordpress visually pleasing, it is intuitive, open and also widely used in the real world. As well, its interactive affordances have greatly increased, evolving its potential from simple blogging. However, I still needed certain adjustments and so I made the following requests to our IT department:

- *Students as Contributors:* Students can be added as contributors to the blog. The goal is to create a learning community where everyone can share information, pictures, videos, comments, etc.
- *Teacher Logistics:* Teachers can easily add and delete students to blog as contributors as we often have student movement (new students, students dropping courses, etc.).
- *Personal Profiles:* Students could complete a personal profile with the ability to upload an avatar. That being said, I would want their profiles to be only accessible to blog members (the class). I prefer that their avatar would be visible to the public (I will have them create a symbol or choose a picture instead of their actual pictures if we can have avatars open to the public).
- *Privacy Options:* Allow students to select a level of privacy for their contributions. Perhaps: (1) public, (2) class, (3) teacher only.

- *Multimodal Interaction:* Allow students to include pictures and video in comments/replies on blog posts (not just text).
- *Posting Approval:* No approval required for postings if they are blog members although I will want full power to delete or edit all posts. I would rather start with fewer restrictions and add more only if/when it becomes necessary.
- *Personal Student Blogs:* Another option I would be excited about exploring would be eventually having all students have their own blog with their feeds being amalgamated via something like Buddy Press.
- *Groups:* Groups can be created and students can post specifically to a group.

The IT department modified a Wordpress theme in the following ways.

- Students can select an audience for each post: Teachers, Class, or Public. Privacy settings are color coded: post will have a red ring for Teachers, a green ring for Class, and a brown ring for Public access. Additionally, there is also a small text blurb at the bottom of each post stating who can see it.
- Front Page, Recent Posts, Date Archive, Author, Search, Category, and Tag pages modified to only show posts that are viewable for each user/viewer.
- The built-in Recent Comments widget could not be modified to limit the scope of comments to only viewable posts, so had to be rewritten that as a shortcode.
- Users can upload videos, images and PDFs to comments as well as posts.
- Students will need to be added to an Active Directory security group that allows them to log into WordPress with their Active Directory account. Once they are in this group, they can log into the blog and automatically be added as Student Authors.

- Groups in the blog can be created and students can post specifically to a group.

The IT department created a test blog in which we trialed the above affordances and fine-tuned the tool. I included the specifics of the IT Department's work in order to illustrate the complex background work required by IT to manifest my vision for teaching a digital literacy course. With their support, I now had my interactive, virtual learning community platform for the course. Although highly successful, the collaboration had moments of challenge. I requested that students be able to upload video and images to comments as well as posts. I found myself having to explain why students needed to be able to respond to each other through multiple modes. Perhaps from a technical stance adding video and images is an unnecessary complication to an efficient system. But I understand, from my experiences teaching contemporary students as well as from my theoretical understanding, that such affordances are key to meeting the learning outcomes of this generation - which is the whole point of this project and endeavor.

### Writing my Literature Review

The greatest challenge when writing my literature review for my Masters' project was the multidisciplinary nature of my project. I needed to consider who my learners were, what their needs were, the learning environment, my pedagogy and the specific skills and content necessary to be digitally literate. Potential areas of focus included: 21<sup>st</sup> century learners, their digital literacies, assumptions about their digital literacies, personalized learning, constructivist learning, inquiry, multimodality, new literacies, virtual learning communities, digital citizenship, critical literacy, participatory culture, and BC's changing education agenda to name a few. Each of these considerations or areas was key to my MEd project – creating the digital BAA course - and each could be deserving of a robust literature review in and of itself. However, if I was to

successfully complete both my project and offer the course, I had to choose a focus.

Consequently, I am left feeling somewhat as if this portion of the project is incomplete, leaving many important areas not discussed. Yet, at the same time I recognize that I am now part of this conversation, and that this conversation will continue to unfold for me and for thousands of other educators and students as new technologies, literacies, and educational initiatives emerge.

Importantly, for me, this conversation and these many different areas can be explored from the field with my students.

### Creating the BAA Framework

Creating the BAA Framework as my M.Ed. project held many tensions for me due to the multiple audiences, conflicting requirements, and the variety of personal and institutional interests that had to be addressed. The BAA Framework needed to satisfy my school's administration, the District executive, the Board of Trustees and the Ministry while maintaining a structure that would allow me to be flexible in meeting students' learning and literacy needs. As well, I needed to do each of these within a defensible theoretical structure as required for my M.Ed. degree. Challenges became possibilities as school and district administrative groups had to be reassured that enrolled students would be both safe and accountable for their public online activities. The Board of Trustees, whose members have little formal background, posed further questions regarding students' traditional learning needs. I continued to reinforce the concept of responsible citizenship as a framework and goal, which I found to be broadly accessible and a meaningful to the various stakeholders. The Ministry of Education also has complex and complicated requirements for a BAA course; on one hand emphasizing personalized learning, criteria-based assessment, inquiry and competency development while on the other requesting segregated units with instructional hours assigned and traditional assessment breakdown.

Although the BAA Framework template attempted to be open in its language, the requirements and examples provided were traditional and not informed by more recent curricular changes and proposals occurring in BC education. For example, lists of learning outcomes were still required instead of following the recent move to four or five large concepts in order to allow flexibility, choice, and inquiry. Accordingly, I provided both big ideas and specific learning outcomes and drew heavily from the Ministry's Performance Standards to justify assessment for mastery. I attempted to strike a balance in the course framework between traditional course structure and the new direction of personalized learning in order to satisfy my multiple audiences. This is part of the complexity of teaching and learning in digital times.

## Designing the Course

In creating the BAA course for my M.Ed. project, I worked to design for competency development, as well as for student choice and voice. The potential projects, assignments and activities below provide a skeleton students can modify as desired. The main goal was to provide choice for students and an opportunity to co-design the course.

### **Weekly Activities**

1. *Creating*: Passion based blogging
2. *Consuming*: Critical Conversation Contributions

### **Preliminary Activities & Discussions**

1. *Human Rights*: Students will assess the relevance of the Universal Declaration of Human Rights in the virtual world. We will create a social contract out of this discussion that we will then use as a lens to evaluate conduct and content throughout the course.

2. *Digital Footprint*: Students will investigate and evaluate the digital footprint of themselves, a willing peer, or the teacher.

## **Projects**

*All projects and activities may be done individually, in pairs and/or small groups.*

1. *Critical Conversations*: Every week 2 students will post content on a current or recent situation involving technology and ethical considerations along with discussion questions. Peers are expected to engage in discussion both virtually and face-to-face. Posting students are expected to monitor, respond and ask provoking questions during the week to facilitate discussion. Posts and contributions may be multimodal.
2. *Exploring Current Technology*: Students will create UDL multi-modal learning pieces on a piece of technology (Twitter, Pinterest, Facebook, smart phones, etc.). Students must assess affordances, limitations, potential uses and ethical concerns. How is it used? How can it be used? Students must post their project twice prior to publishing for community feedback and provide a final self-assessment via podcast.
3. *Exploring Future Technology*: What technology will change the world next? Choose and assess any technology. Predict and imagine potential social impact and ethical considerations. Criteria will be co-designed with students.
4. *Dig Deeper Inquiry*: Critical investigation and inquiry of any issue or topic in the media that interests students. Critical thinking questions will co-developed with students to guide investigation. Focus on critical thinking, and research and information fluency.

## **Large Final Project: Social Action Project**

5. *Evaluating and Presenting a Social Action.* Students will select a social activist whom has invoke social action in a community through digital tools. The goal is to expose students to diverse social actions in order for students to engage in social action themselves in their communities.
6. *Change the World Project:* Students will use digital tools to effect positive social action in a community. Students must post their project twice prior to publishing for community feedback and provide a final self-assessment via podcast.

## **Additional Activities**

1. Mini-lessons will likely be required on specific tools such as Wordpress, Podcasts and screen captures as students tend not to choose a tool for use that they are unfamiliar with. These will be posed as mini-inquiries and students will collaborate to learn the new technology.
2. A potential assignment to facilitate transfer of learning and mixing disciplines would be to have students submit an assignment from another course displaying multimodal components with a reflection piece. We will see what the students think of this idea.

Please note that the above activities, assignments and projects are tentative and subject to change according to student need and interest that will emerge as each iteration of the course is offered in the future. Importantly for me as their teacher, my students will always have the right (and responsibility) to propose alternative activities and projects they feel meet the learning outcomes. Although my project is complete, this course is a dynamic and

continually evolving entity, and we – learners and teacher - will restructure it together in the field as we go along.

## Recommendations

Initially, I had posed the below questions as a guiding framework for this project.

- How digitally literate are today's youth?
- Can youth be expected to become fully digitally literate on their own?
- What is the role of formal education in developing digital literacy in our youth?

As we move forward, it will be crucial for teachers to understand and respect the complex challenges and demands faced by Informational Technology (IT) support, and for IT support staff to understand and respect that IT tools in Districts only exist to serve educational purposes – those of the learners and teachers. As well, school Districts will need to provide IT support not just for system maintenance and performance, but also for design and innovation. The latter cannot be added onto existing workloads without employee burnout and resentment. So a further recommendation is to have technologically savvy educators, with a variety of classroom experiences, as IT department heads in order to provide the vision and connection to educational purposes required in our complex contemporary times.

I believe that our students are digitally literate but that that literacy must be deepened and developed into a conscious tool that youth can apply throughout their lives. As illustrated throughout my Master's of Education project, students and teachers can only go so far on their own – whether that be in innovation, critical thinking, or learning relationships. Without mentorship and guidance, our abilities plateau. Accordingly, our youth need their whole community's involvement to become fully digitally literate. We need to engage in this arena not

just for our youth but for ourselves as educators and members of a vitally literate society as well. We need to be having these critical conversations in the variety of social learning contexts – from classroom, to boardroom to Blog - and be creating collaboratively and reflectively. Formal public education can provide a forum to develop these competencies, but also demonstrate respect and investment by joining our youth in consciously navigating the complex virtual world that now surrounds and saturates every facet of our lives. As we accept the role of digital tools in our communities and engage with them ethically and purposefully as a community, we become digitally literate citizens. As I hope my Master's of Education project has demonstrated, we just need to do it now.

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