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# Incorporating Digital Technologies in Adult Basic Education

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Concepts, Practices and Recommendations

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## Concepts, Practices and Recommendations

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### A report completed for AlphaPlus

By

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# TABLE OF CONTENTS

<b>PART ONE</b> .....	03
<b>1.1 Introduction</b> .....	03
<b>1.2 Research scope and methods</b> .....	03
1.2.1 Data sources: Literature review .....	04
1.2.2 Data sources: Interviews and vignettes .....	05
1.2.3 Limitations of the research .....	06
<b>1.3 Terminology</b> .....	06
1.3.1 Adult Basic Education .....	06
1.3.2 Technology .....	06
<b>PART TWO</b> .....	08
<b>Defining digital literacy: Implications for policy and practice</b> .....	08
<b>2.1 A skills-view of digital literacy</b> .....	08
<b>2.2 A pluralist view of digital literacy</b> .....	09
<b>2.3 Digital literacies: Using digital technologies in social contexts</b> .....	10
<b>2.4 Digital literacies in ABE settings</b> .....	11
<b>2.5 Access to technologies in ABE settings: Digital divides</b> .....	11
<b>PART THREE</b> .....	13
<b>Incorporating digital technologies in ABE: Promising practices</b> .....	13
<b>Vignette One</b> .....	13
<b>3.2 Learning from SIAST: Transforming ABE practice</b> .....	15
<b>3.3 Powerful digital literacies</b> .....	16
<b>Vignette Two</b> .....	17
<b>Powerful ways with digital media: A Nova Scotia Experience</b> .....	17
<b>3.4 Learning from the ACALA project: Slow learning</b> .....	19
<b>3.5 Mobile learning: Cellular phones and literacy</b> .....	20
<b>3.6 Social media literacies</b> .....	21
<b>3.7 Incorporating social media literacies into adult basic education settings</b> .....	22
<b>Vignette Three</b> .....	26
<b>Pathways for learning technology access, use and social distance</b> .....	26
<b>3.8 Four components of a sustainable and integral approach to digital technology in ABE</b> .....	28
<b>PART FOUR</b> .....	29
<b>Professional development: The key to digital technology equity and access</b> .....	29
<b>Vignette Four</b> .....	29
<b>Incorporating digital storytelling in ABE in the Northwest Territories</b> .....	29
<b>4.1 Learning from the NWT Literacy Council experience</b> .....	31
<b>Vignette Five</b> .....	32
<b>Incorporating digital technologies in professional development for Literacy and Basic Educators in Ontario</b> .....	32
<b>4.5 Reflections and conclusions</b> .....	36
<b>RECOMMENDATIONS</b> .....	38
<b>WORKS CITED</b> .....	39



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# PART ONE

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## 1.1 Introduction

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Kress (2003) has observed that we are in the midst of a revolution in the uses and purposes for literacy, manifest in how we learn, teach, work and live our everyday lives. These changes to literacy and learning are taking place in different ways, in different settings, but educators and researchers agree that what it means to be literate has altered forever in the context of new digital technologies (Dobson & Willinsky, 2007; Snyder, Jones and Lo Bianco, 2005), new forms of work (Gee, Hull & Lankshear, 1996) and new modes of learning (Hewitt, 2003). As Kerka (2008) describes, “[S]ocietal expectations of an educated person now include: using multiple symbol systems, applying knowledge, thinking strategically, managing information, and learning, thinking, and creating in collaboration with others. Such expectations challenge adult educators as never before” (p. 27). In spite of this challenge, and the potential of emerging e-learning technologies to support those who struggle with conventional reading and writing, the issue remains under-researched and under-theorized in adult basic education (ABE) settings in Canada. This situation is perhaps an artifact of the marginal position adult learning occupies within the broader field of education policy and provision in Canada (Canadian Council for Learning, 2011; NALA, 2009). This report considers how digital technologies are changing what it means to be literate and the implications of this for teaching and learning in ABE programs. The innovations and constraints experienced within programs are an important focus of this report, along with what emerging technologies suggest for “powerful” literacy and learning in ABE, and the patterns of inequality in access to digital technologies in ABE settings. What is needed in Canada is a vision of ABE and adult learning more generally, modeled upon powerful literacies and deep learning; a vision that can be realized through a contextualized and textured understanding of how digital technologies can contribute to and serve individual, community and societal learning goals.



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## 1.2 Research scope and methods

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The goals of this review are twofold:

- To develop a conceptual framework attached to digital technologies that is relevant to ABE settings, and contributes to insights about literacy and learning in these diverse contexts;
- To document current practices in the ABE field with respect to incorporating digital technologies into learning curricula, with implications for professional development and the design of ABE.

The study combines a critical literature review with in-depth interviews with adult basic educators who are using digital technologies in ABE programs and to support professional development for educators.



### 1.2.1 Data sources: Literature review

The implications of a digital economy and culture for adult learning is the topic of recent policy research in Canada and internationally (Canadian Council of Learning, 2009; Candy, 2005; Centre for Literacy of Quebec, 2005; Chovanec and Meckelborg, 2011; Media Awareness Network, 2010; NWT Literacy Council, 2009; Moriarty, 2011; Snyder, Jones and Lo Bianco, 2005; Veenhof, Y. Clermont and G. Sciadas, 2005). Although drawing upon different theoretical underpinnings, these studies help to establish a social and economic prerogative to democratize access to digital technologies across Canadian society, and to incorporate digital technologies into adult learning as a strategy to respond to changing literacies and learning within an emerging digital economy and culture. The goal of this report is to build upon these studies, and focus more specifically on how educators are using e-learning technologies in the actualities of ABE practice. Indeed, most research considers the promises of digital technologies for readers and writers who are already quite proficient. This report incorporates studies carried out among struggling adult readers and writers. Through this focus, we consider both the micro-level complexities and understandings of technology in local ABE settings, as well as the broader concepts and policies that shape local practice. This opens a lens to consider not only how educators incorporate digital technologies into their practice, but also why educators and learners may choose not to, and the roles that contestations about “what counts” as literacy and essential skills, as well as differential access to digital resources play in such decisions. Indeed, as Moriarty (2011) observes, “there is a lack of documentation of the real experiences of adult literacy educators working with students in a technological environment” (p. 27). Our goal is to begin to address this research gap.

While our primary focus is upon ABE settings, we necessarily broadened this focus to include adult literacy, youth literacy, career preparation and related contexts that inform and shape the work of ABE. We included in the literature review studies that documented how digital technologies are shaping learning and literacy in everyday life and in institutional settings (including but not limited to ABE settings). As our reading and synthesis progressed we settled on four themes:

- How digital technologies are shaping and transforming literacy and learning, with implications for policy and practice;
- Promising practices in incorporating digital technologies in ABE;
- Digital divides and inequality in access to digital technologies for learning;
- Professional development for educators and related curricula and delivery policy.

It bears noting that much of what people know and can do with e-learning technology today has been learned informally, collaboratively and spontaneously outside of formal schools and with the support of colleagues, family or friends; in other words, outside of the context of formal education. This is also true for adult basic educators who have learned to use digital technologies and incorporate them in learning settings even when they must struggle to do so largely without access to paid professional development, resources and a digitally infused curriculum. How and why educators accomplish this is an important line of inquiry informing promising practices and educational principles for ABE. In the literature search, we used the following terms: Adult Basic Education (ABE); Digital Literacies; 21st Century Learning; Social Media; Adult Literacy; Adult Learning; E-Learning, Emerging Technologies; Access; Equity.

## 1.2.2 Data sources: Interviews and vignettes

In-depth interviews are the second prong in our research strategy. The analysis of literature helped to refine questions for exploration with adult basic educators. Our interview approach was to contact each provincial or territorial literacy association, which normally act as hubs for support and coordination of ABE and literacy work in that province or territory. We asked each association to recommend organizations in their jurisdiction that were incorporating e-learning technologies in their work. This was not a perfect method. Sometimes provincial organizations could not be sure of the range of the work underway in each province, and sometimes making contact with these groups was difficult due to erratic program schedules and educator availability. We settled on ten interviews with adult educators and policy makers in Nova Scotia, New Brunswick, Ontario, Saskatchewan, British Columbia and the Northwest Territories, five of which are included here as vignettes of practice. When we could not interview educators, we looked for artifacts and accounts of e-learning in ABE through websites, blogs, reports and the products of these projects, such as digital stories, 'zines, and so on. The interviews focused on three themes coded in the literature scan:

1. What forms of technology do educators use in their programs and how do they use them?
2. What are the implications of e-learning technologies in ABE settings for teaching and learning?
3. What are barriers to incorporating technologies in ABE settings?

The responses to these questions, and the elaborations and insights offered by educators are presented as vignettes of practice, woven into the themes that guide the study, by way of illustration and elaboration. Our goal is to provide windows into design, decision-making, challenges and learning outcomes involving e-learning in local and diverse settings.

### 1.2.3 Limitations of the research

This is an exploratory study, focused on the experiences of educators, and less directly, on the experiences of adult learners in ABE. The attention to depth rather than breadth leaves many stories and contexts not represented in this study. The limits of time and resources have meant that many creative educators who are exploring the affordances and limitations of digital technologies in ABE were not captured in the study. We do not claim the themes emerging from the practice vignettes may be generalized, although the aim is that the work that is discussed will resonate across settings and open avenues for further inquiry.

## 1.3 Terminology

### 1.3.1 Adult Basic Education

The ambitious goals of ABE programs are to support adults to complete requirements for secondary school graduation, to help adults “get a better job” (Government of British Columbia, 2011) and/or to prepare adult learners for post-secondary education. But what constitutes an ABE setting? Categories surrounding literacy learning such as “literacy-level” “ABE”, “essential skills” “academic upgrading” “employment training” and so on, reflect particular institutional arrangements. For example, the allocation of responsibilities for adult learning in Canada in the areas of funding, delivery and curriculum development are frequently divided among municipal, provincial or federal jurisdictions. The physical location of ABE programs also vary widely (college-based, school-based, community-based and increasingly, virtual or online learning spaces hosted by school districts under provincial jurisdiction). Many programs, when they are able to respond to local contexts and learning needs, also include one-to-one and small group classes geared toward academic upgrading, English language support and employment skills. Moreover, given that most adult learners have “spiky profiles” (Hamilton, 2009), it is common for an adult learner to work on reading skills at a grade 4 or 5-level (sometimes referred to as “literacy” level or “foundation” level learning) and to work on Grade 9 math or vice versa. In northern, rural and remote communities, ABE programs may be co-housed in a primary or secondary school; educators may work with youth in secondary schools as well as adults in ABE programs in a connected system. ABE programs are also offered alongside employment or community literacy initiatives, designed for new readers and writers or for those who are not pursuing formal learning leading to graduation. Interactions among educators and learners in formal and informal education settings are often multi-directional, and instructional practices associated with community-based literacy may infuse ABE. Indeed, to the extent that all this work involves teaching and learning to read and write different kinds of texts for different purposes, ABE programs are always engaged in literacy work, though “literacy” has often come to mean a particular “level” of learning along a continuum (Smythe, 2011).

Thus, while the focus of the present inquiry is ABE programs, we attended to what programs actually do to respond to adult learning needs, rather than to the descriptors used to categorize various kinds of learners.

### 1.3.2 Technology

One of the first tasks in assembling the present report was to sift through the broad and diverse meanings attached to the term “technology” and to settle upon an appropriately focused, but generative understanding for the purpose

of this report. Learning technologies need not be digital or even electronic. The slate, the hornbook, quills and papyrus, the printing press, pen and paper, chalk and blackboards, whiteboards, overhead projectors, PowerPoint presentations, audio-visual equipment from Super8, VCR, DVDs and so on, represent successive and often overlapping technologies that have afforded new modes of teaching and learning, and new meanings accorded to literacy and learning over time. Across history, new technologies have spurred new social relations, along with new values and practices surrounding “what counts” as literacy, and the goals of learning. Emerging technologies, defined by Warschauer and Liaw (June, 2010, p. 1) as “either arising or undergoing fundamental transformation in the past [two] decades”, are certainly transforming teaching and learning practices. These technologies are digitally based, or “electronic”, and the incorporation of these technologies into learning settings is commonly referred to as “e-learning”. As Moriarty (2011) explains, “we use the term e-learning when speaking about teaching and learning with digital technologies” (p. 14). Another term for “digital technologies” is Information and Communication Technologies (ICT). To incorporate the broadest possible definition this report has adopted the term, “digital technologies”.

New learning possibilities and new relations surrounding digital technologies are rooted in the shift from analogue to digital systems. Analogue systems convert audio and video (human voice, images) to “electronic pulses”. In this way, analogue telephones and televisions do the same work as their digital counterparts. However, there are limitations to the amount and kind of data that can be encoded and decoded in analogue systems. Digital technology, by contrast, decodes and encodes data (including print, images and sound) within a 0/1 binary system, the combinations of which are almost endless. Hence, digital technology is able to process more information more quickly, making it possible to create, mix and share texts in multiple modes (image, sound, text, colour and so on) and formats. The “highway” or broadband through which such information is shared is the Internet, hence the importance of broadband access, width and speed in discussions of access to digital technology (although as we will see, digital technology can be incorporated into learning without reliable Internet access). New digital technologies, particularly those that have arrived on the scene in the last two decades, such as laptop computers, new word processing formats, email programs, iPads, mobile phones, cameras, iPods, projectors and so on, support new ways to read, write, learn and share and store information (Warschauer and Liaw, 2010).

The literature scan suggested three main approaches to incorporating technology in ABE settings. The first is the use of learning management systems (LMS) and teleconferencing for distance learning (such as Moodle, LearnNowBC, Elluminate and Ontario’s e-Channel), most frequently used to support professional development for educators and to provide access to learning for students “when attendance at bricks and mortar locations is not possible” (Moriarty, 2011, p. 15). A second dominant approach is related to ‘basic computer skills’ including the use of desktop computers to learn word processing, file management, Internet search strategies, using email and so on. A third approach was the use of social media and embedded software, such as iMovie or MovieMaker, PowerPoint and PhotoStory, for project work. According to several of our informants, the tools with the most profound implications for the transformation of teaching and learning are those attached to digital storytelling and social media, or “Web 2.0”. Web 2.0, also known as the read-write web, supports not only reading texts on a screen, but also participation in the creation of texts, and the sharing of texts to known and unknown audiences (Rosen & Nelson, 2008). Rosen and Nelson explain Web 2.0 in this way:

Those who were previously only consumers of information can now also be producers. Furthermore, Web 2.0 applications allow people ways of interacting, collaborating, and sharing their creations (text, photo, audio, or video) with others: They allow all to participate in the conversation of learning and knowledge making.  
(p. 212 – 213)

The research literature and informants in our study suggest that the creation and sharing of content in digital stories, and on social sharing platforms including YouTube, Facebook, blogs, and wikis (all free and relatively user-friendly) is challenging the usual curricular goals of ABE. We elaborate on these changes to practice in the vignettes in this report. The following section considers how technology is changing what it means to be literate and the implications of this for current policy and practice in ABE.



## PART TWO

### Defining digital literacy: Implications for policy and practice

#### 2.1 A skills-view of digital literacy

The Media Awareness Network (2010) offers a definition of digital literacy built from a consensus in international literature that digital literacy includes not only access to digital technology, but also critical understanding and the creation of content (p. 1). Gee and Levine (2009) add to this definition the growing importance of collaborative practices online, and propose a framework for digital literacies instruction that include the “3 C’s”: Critical understanding, Collaborative problem solving and the Capacity to create content in digital environments (Gee and Levine, 2009, p. 51). The perspective that digital literacy involves critical understanding, collaboration and creativity is not present in all leading definitions of digital literacy. For the most part, digital literacy is conceptualized in leading policy documents in Canada as a separate skill “bolted on” to traditional reading and writing. For example, Canada’s Literacy and Essential Skills Framework lists “computer use” as one of ten essential skills for workplace participation, which includes problem solving, thinking and working with others (Human Resource and Skills Development Canada, 2011).

The annexation of computer skills from other cognitive and collaborative processes correlates to a linear perspective of literacy development that can be associated with a skills-based perspective, which proposes that adults must have in place the “building blocks” of conventional reading before they can develop digital skills (OECD/Statistics Canada, 2011, p. 309). In this way, access to digital technologies may be seen as the preserve of those who already have well-developed traditional literacy skills, with the implication that adults who struggle with conventional reading and writing (often referred to as “Level One” and “Level Two” according to International Adult Literacy Survey [IALS]) (Statistics Canada & OECD, 2005) are less likely than other adult learners to have access to literacy education opportunities that include digital technologies (Ontario Literacy Coalition, 2011). This plays out in adult learning settings, which may require students to attain a certain grade level equivalent before they have access to computers, or that incorporate computer use only “if there is time”, or use the tools to produce traditional print texts (word processing and so on), but not necessarily to create and share different kinds of texts using social media. In as far as these practices restrict access to a full repertoire of digital literacy and learning opportunities, they may actually increase, rather than mitigate digital inequality (Hayes, 2010). Given widespread societal use of cell phones, social media such as Facebook and the World Wide Web, and emerging evidence offered by respondents in this report (elaborated in the proceeding vignette) that adults who struggle with conventional literacy are making use of these technologies, the relationships between conventional and digital literacies merit further exploration. This is a topic to which we now turn.

## 2.2 A pluralist view of digital literacy

The concept of digital literacy as a separate “add-on” skill carries conceptual and practical difficulties. Many researchers have found that technology and literacy are intertwined, and indeed it is not uncommon to regard literacy as itself a technology. According to Lankshear and Snyder: “it is practically impossible in some areas to distinguish the boundaries between literacy and technology so that we now talk about ‘technoliteracy’” (2000, p. 4). This point is underscored by Moriarty (2011) in her report on adult literacy and digital literacy: “It makes little sense to continue to think and talk about literacy practices and the use of information and communication technologies as if they were separate activities: literacy education is equally and simultaneously digital literacy education” (p. 12). Digital literacy may also be seen as “extensions and continuities” of print literacies (Dobson and Willinsky (2007, p. 1), not distinct but intertwined, placing new demands on people’s communicative repertoires that build upon conventions of a still-vital traditional print culture.



In this vein, if digital literacy is intertwined with other forms of literacy, it makes sense to think in terms of digital literacies. Weiler (2010) pointed out that the concept of “digital literacy” as coined by Paul Gilster in 1997, in his book of the same name, is inherently pluralist because computers are pluralist, or multimodal machines. Texts read and created on computers are intrinsically multimodal: image, space, text, time and sound combine and recombine in each instance of text production. The challenge is to learn when, why and how to use these different modes for different purposes and audiences; in other words, to deploy strategically different digital literacies. Tibor Koltyay frames the issue in this way: “Technology is just a tool, which does not determine how we must act [ ]; we have to acquire an understanding and adopt meaningful courses of action by employing different literacies” (p. 211).

This is where the concept of digital literacies moves from a question of technological skill to one of contextualized understanding, intent and design (Kress & Van Leeuwen, 1996, 2001; Cope & Kalantzis, 2000), which is what Kress (2003) has referred to as creativity. Kress (2003) observes that creativity happens when people mix different modes together to make meaning; a certain way that a photo accompanies a voice recording, a poem with an image, perhaps set to music; the font we choose, the tone we use in our written and oral language; designed to create the effect we desire. “Creativity”, in this context, implies the capacity to use a particular literacy (or literacies) in particular social contexts. Such creativity is by no means limited to the use of digital technologies; however, such technologies introduce new creative possibilities.

### 2.3 Digital literacies: Using digital technologies in social contexts

A number of studies suggest that reading online text involves the incorporation of conventional reading (such as decoding and interpreting texts), as well as new reading practices, captured by the metaphor of navigation. Readers navigate non-linear online texts by constructing what Rowsell and Burke (2009) refer to as a “reading path”:

[A] reading path charts a reader’s trajectory through a text and it exists as much with printed texts as it does with digital texts. The challenge for online readers lies in the composition of the webpage: Where does the reader first look on the screen and where does that lead him or her? (p. 107)

Rowsell and Burke (2009) explain that whereas many traditional print texts are linear (left to right, top to bottom, with few if any images), a digital reading path must be “constructed” by the reader (p. 107), involving decoding, choices, contextual understanding, decision-making, and multi-modal meaning-making. Similarly, Weiland and Clason (2010) observe that because reading online texts involves navigating hyperlinks, this implies a different set of strategies to those used in navigating traditional print text: “[H]ypermedia reading is a very different sort of reading. That is, the ability to make the most of a traditional printed book does not necessarily translate into the ability to make the most of hypermedia text” (p. 7). Chase and Laufenberg (2011) emphasize the importance of social context and audience for digital reading practices: “To read digitally, students and teachers must learn to read beyond the printed page. They must learn to read across all those platforms which they can use to create” (Chase and Laufenberg, 2011, p. 526). We take up this point in section 3.6, where we consider the importance of critical information literacies of selection, synthesis and interpretation in a digital environment.

The concept of digital literacy has shifted, then, from that of a generic skill tagged onto traditional print literacy, toward a view of digital literacies and, more broadly, multiple literacies as repertoires of practice located in specific and changing contexts for community life, work and learning. The Media Awareness Network defines multiple literacies as a goal of learning in this way:

The term ‘multi-literacies’ is increasingly used to describe the various abilities and aptitudes that are needed to correspond with the wide range of communication channels with which we now engage. This concept also recognizes that being literate in a digital world entails not just technological proficiency, but also a wide variety of ethical, social and reflective practices that are embedded in work, learning, leisure, and daily life. (Media Awareness Network, 2010, p. 5)

From this perspective, it cannot be assumed that people who struggle with conventional print literacy will also experience difficulties with multimodal, online texts. Indeed, the affordances of image, sound and print cues in these texts may facilitate meaning making and push along traditional print literacy skills. Certainly, much more research about how struggling adult readers and writers navigate digital texts is required (Reder, 2009). As the work of the Media Awareness Network underscores, such research should examine not only if adults have access to digital technologies for learning, but also the types of activities for which adults may use these technologies in everyday and classroom settings.

## 2.4 Digital literacies in ABE settings

As noted above, adults who struggle most with conventional literacy are least likely to have access to literacy learning opportunities, digital or otherwise (Smythe, 2011). Nevertheless, digital technologies are already shaping the work of adult basic educators, just as they infuse the everyday lives of adult learners. Certainly, adults and children encounter digital texts as part of their everyday lives and indeed must negotiate these literacies to access information and resources. For example, several educators in our study pointed out that government forms for childcare subsidies, employment insurance, social assistance and so on, are often only available online, representing for those without regular access to Internet and other technologies yet one more barrier to access among all those already embedded within government forms. The work of adult basic educators increasingly involves helping students to locate, interpret and complete these digital texts using hypertext navigation (reading path) strategies, and strategies to input information into a digital form for an unknown, if powerful bureaucratic audience. Completing forms online or otherwise, has always been a “high stakes” literacy practice, what Richard Darville identifies as the signature work of adult literacy educators to help people learn to read “beyond the surface of the texts to what standpoints they take, what they’re assuming but not saying, what they include and leave out” (Darville, 2010, para 3). This literacy work becomes even more important as digital technologies are deployed by governments and corporate bodies to engage in forms of bureaucratic regulation and surveillance, an issue that Chovanek and Meckelborg (2011) argue is particularly relevant for adult basic educators who work with marginalized people,

[B]ecause, historically, marginalized groups (to which a large number of literacy learners belong) are subjected to more surveillance than others. “Policing the poor” has been accomplished through police action, welfare state policies such as public housing and child welfare, immigration and corrections policies, charitable and non-profit organizations and now the ever-increasing prospect of the use of digital technologies to engage in surveillance. (p. 4)

Even when there are no screens present, digital technologies are coordinating access to ABE programs: texts that govern rules and practices surrounding recruitment, enrollment policies, fees, broadband access, learning outcomes and schedules are decided upon and circulated in online settings with implications for who has access to ABE programs and the kinds of learning people will do there.

## 2.5 Access to technologies in ABE settings: Digital divides

A discussion of how digital technologies are incorporated into ABE settings rests upon patterns of access to these resources at a societal level. Research into patterns of Internet use and uptake in Canada confirm that when it comes to access and use of digital technologies, ‘the rich get richer’. Access to digital technology is aligned with age, income and geographic location. “A 2010 Statistics Canada Internet Usage survey found that of the 28% of Canadians who do not have access to the Internet, over half (54%) say that it is because they cannot afford the connection or don’t have the knowledge or tools to use it.” The other 46% said they are not interested in having an Internet connection, though it is not known if this disinterest stems from lack of access or a lifestyle choice. Geographical divides are persistent, as the vignettes in this report will attest. Canadians living in urban areas are more likely to have and use the Internet (83%) over their rural counterparts (73%). Canadians with incomes greater than \$85,000 had a higher usage level (94%) than those Canadians with an income less than \$24,000 (56%). For people with post-secondary education, 89% use the Internet, where only 66% of users with less education are connected (Statistics Canada, 2009, para 3). Internet use is highly correlated with age, with 98% of 16 – 24 year olds reporting regular Internet use as compared to 66% of adults over the age of 45. Among frequent Internet users, 27% reported creating content in blogs, wikis, Facebook and so on (ibid., 2009, para 5). Although we cannot

assume that people who are not frequent users of digital technologies have lower literacy rates, the correlation between access and other socio-economic indicators suggest that Canada's digital economy is a landscape of unequal access to skills and resources that trace broader patterns of inequality.

Within ABE programs, patterns of inequality are even more entrenched. In a survey of 21 ABE programs participating in a province-wide professional development strategy on learning difficulties, nine programs reported consistent access to maintained computers, Internet and printers for both learners and educators; five programs had access to computers for use by educators only, and six programs had no access to computers or Internet at all (Literacy BC, 2011). Although there are no provincial/territorial or federal surveys of digital resources used in ABE, these unequal patterns are likely replicated to varying degrees across Canada.

Indeed, Canadian policy has focused more recently on increasing access to broadband (with some success) but not upon educational opportunities through which adults may take advantage of the affordances of broadband for learning. The 2009 Canadian Council for Learning State of E-Learning in Canada report notes that governments are making increasing investments in broadband access, and in the development of online training in various employment sectors (CCL, 2009, p. 88- 90). As important as this is, there is not the same investment in learning and technology resources for the most marginalized adults in Canada, those that are most likely to participate in ABE and literacy education and who are not yet involved in the workplace to take advantage of workplace education programs, or who are unemployed, or working in low-wage sectors with little opportunity for workplace training (Nunavut Literacy Council and NWT Literacy Council, 2007). Employment training programs for those receiving Employment Insurance or social assistance tend to emphasize job search strategies (Butterwick, 2010) and usually do not include digital technology instruction required even for entry-level jobs (Ontario Literacy Council, 2011). These persistent barriers to access to digital technologies are of concern given the growing income inequality gap in Canada. The Organisation for Economic Co-operation and Development (OECD) (2011) attributes this gap in part to a lack of education and training opportunities for adults in an economy that is both digitizing and sending traditional jobs offshore (OECD, 2011, p. 26). The report makes two recommendations that have direct implication for the ABE sector:

First, better job-related training and education for the low-skilled (on-the-job training) would help to boost their productivity potential and future earnings [...]. The second strand is equal access to formal education over working life. Access to tertiary education is important for improving the prospects and living standards of lower-skilled people and giving individuals the opportunity to acquire the skills needed in the labour market. (OECD, 2011, p. 39)

Many adult basic educators are innovating within, and often in spite of these policy barriers and the digital inequalities they produce. In Part Three, we present vignettes that trace this work and the insights it produces for adult learning, the goals of ABE and possibilities for professional development and policy.



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## PART THREE

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### Incorporating digital technologies in ABE: Promising practices

In the vignettes that follow, one may observe that the incorporation of digital technologies flow from particular institutional arrangements. Some programs are embedded in organizations with existing access to learning technologies. Others have formed partnerships to link literacy and ABE to employment, social and community development and so leverage funding and resources beyond the usual scope of ABE programs. These collaborative arrangements broaden the range of learning opportunities for adult learners. However, all groups rely upon short-term, project-based funding and the successes and new practices they are forging may not be sustained over time. The following vignette illustrates how digital technologies are incorporated into a basic education program in Saskatoon. Of interest is how “beginning” learners who enroll in the program already use digital tools in their everyday literacy practices. Moreover, access to e-learning technologies for teaching stimulates experimentation, transforming educators’ practice as they play with the possibilities and limitations of different tools, and support adults with learning difficulties. Of importance too are the impediments to equality of educational opportunity when access to digital technologies for learning is unevenly distributed within a city, province and country.



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#### Vignette One

**Incorporating digital technologies in ABE: An overview of the complexities**  
**Informant: Jean Dudley, Program Head: Basic Education**  
**SIAST Saskatoon**

##### Context

Saskatchewan Institute for Applied Science and Technology (SIAST) Kelsey Campus in Saskatoon offers a range of trades, technology and educational upgrading programs for adults. Jean Dudley is the Program Head for the Basic Education 10 program, which offers literacy classes in levels 1-3 leading to an Adult Grade 10 graduation program. Adult 12 is also offered here. The program serves adults 18 – 55 years old, 70% of whom are First Nations adults.

One of the challenges of the SIAST program, and other literacy programs in Saskatchewan, is finding qualified educators who can work well with adults and who can teach reading. The Basic Education program’s location within SIAST provides it with access to digital learning resources not widely available in other literacy education settings. Almost all the classrooms have a SMART Board or BrightLink and a digital projector, there are desktop computers for student use, and a set of laptops that travel from one classroom to another. The program uses many adaptive technologies helpful for adults with learning difficulties such as Dragonally Speaking and Kurzweil (a program that scans and reads a text aloud on the computer). Here, students can produce print texts from spoken language, manipulate fonts in print texts, and adjust the speed at which oral texts are read.



One of the challenges and innovations of the literacy and basic education program at SIAST is to incorporate digital technologies to support new readers and writers. One standard practice is that upon entering the program, all students are provided with an email address and learn to create and send an email message. This also becomes a mode of communication between the instructor and learners. One common activity early in the learning program is for each student to make their own PowerPoint presentations, featuring images and music that tell the story: “Who am I”? Students take turns presenting their work to one another, asking questions and commenting on common themes. Jean notes that this is a “high content/high engagement/low print” activity that allows people to express themselves regardless of their comfort using print language. Additional activities make use of digital cameras: Students borrow the cameras and take pictures of things that start with letters of the alphabet, or represent words and ideas they are learning to read and write.

#### Implications for professional development for educators

Jean points out that because of access to data projectors, desktop computers, SMART Boards and digital cameras in each classroom, educators are more likely to use them often and incorporate them into their teaching and learning activities. Many educators use the data projectors to carry out group analyses of writing, demonstrate spelling and math strategies, stimulate group discussion and so on. Additionally, educators share materials that are uploaded to a common computer drive, which stimulates collaboration.

### Beyond the technology novelty

As the SIAST program progresses in its incorporation of digital technologies, Jean and the instructors have developed a few insights into the effects of this on teaching and learning. Firstly, Jean notes that it is important to take a step back to consider what and how digital technologies are used; they don't always or necessarily stimulate deeper or more engaged learning. She describes that many of the students can now post a message on Facebook – and as important as this is for their identity and engagement as readers and writers – they cannot necessarily manipulate the applications and privacy settings in Facebook to their optimum (and most secure) effect. Not all digital literacy skills are equally powerful. Secondly, Jean notes that the incorporation of digital technologies in many ways returns instructors to a place of inquiry and creativity in their teaching, in which they are more likely to ask why, how and to what ends they are teaching certain content. According to Jean, this critical, reflective stance needs to be part of teaching and learning whether or not it incorporates the digital. Thirdly, students coming into the program may have quite low print literacy skills, but they are not necessarily afraid or ignorant of computers, and not necessarily “reluctant” or infrequent readers and writers. According to Jean, “95% of the students use Facebook, 99% have cell phones, and everyone uses text messages.” This circumstance spurs the instructors to leverage these technologies to expand and deepen literacy skills, such as teaching privacy settings, using wikis to comment on collaborative work, and so on.

### Re-thinking teaching and learning in ABE settings

The SIAST program is well-resourced in comparison with other community-based learning settings in and around Saskatoon. For example, the local food bank is scrambling to acquire print-based texts let alone digital technologies. Small rural communities in Saskatchewan experience high rates of poverty and inequality. Jean would like to deepen the work of the Literacy and Basic Education Centre to address these issues, and plans a project for new students to create PowerPoints on poverty in the community. The program also plans a project that will systematically explore with students what they want to learn, rather than to settle for incorporating digital technologies into a pre-determined curriculum. They plan to create a YouTube video with students on their learning experiences, rather than submit another print-based report. Jean's hope is that their work in the program will become more transparent and open to participation and input from the learner themselves. Indeed, Jean is realizing as they use technologies in new ways, that the traditional approaches and assumptions that guide ABE also need to be examined.

## 3.2 Learning from SIAST: Transforming ABE practice

The experiences of educators at SIAST suggest that the extent to which learning in ABE is critical, collaborative and creative depends upon the nature of the learning goals and resources at hand, and not upon the use of digital technologies alone. Indeed, inclusive and participatory learning are not inherent to digital technology, they must be mobilized to such ends through intentional design. This was also the experience of the St. John's Learning Exchange in New Brunswick, which has made community videos (uploaded to YouTube) to celebrate and bring awareness to International Adult Learners' Week. The coordinator remarked that the work to design and integrate these technologies into their usual literacy education sparked renewed conversations about the nature of adult learning and teaching (personal communication, June 5, 2011). Instructors, as well as learners, have to be prepared to take risks when the unexpected happens and learning outcomes change. Indeed, as Jean Dudley observed, the learning design work involved in incorporating technologies can spur new reflections and insights into the processes and goals of adult literacy and basic education.



The uses of technology for learning at SIAST also suggest that the thoughtful incorporation of digital technologies for learning has implications for equity for people with learning difficulties, for whom tools such as speech readers, digital cameras, PowerPoint and Photo Story applications can offer new avenues for collaboration and for expression. Such practices and tools can provide new structures for participation and for multi-modal communication for all learners associated with universal design for learning (UDL) (CALPRO, 2010). UDL is an emerging philosophy at play in social planning, architecture, housing and education. The idea is that designs for social interaction, living and learning build-in diverse capacities and ways of knowing from the outset, rather than the usual practice of “adding on” accommodations for those who “need” them as a remedial modification. The difference between UDL and accommodation approaches to learning is that UDL shifts the work of accessing and negotiating accommodations from the individual learner to the curriculum. In other words, UDL assumes, rather than accommodates, difference and diversity. Think the dip in the curb! UDL builds into the curriculum design “multiple modes of representation, multiple modes of engagement and multiple modes of expression” (CALPRO, 2007), facilitated by learning technologies.

Finally, the experiences of SIAST described in Vignette One suggest that the literacy practices of adult students outside formal programs involve digital technologies regardless of their “level” of literacy. This implies that access to digital technologies should not be tied to a level of formal education, but rather should be understood as integral to all adult learners’ needs, interests and uses for technologies. Learning settings designed around such principles would constitute a transformation in ABE practice, but perhaps more profoundly a reconceptualization of adult learning policy more generally.

In the next section, we deepen these themes to consider vignettes that illustrate the importance of attending to how digital technologies are incorporated into ABE, as part of a broader discussion about the goals of ABE, the literacies that people need and want to learn, and the extent to which educators and learners have, and can provide, access to “powerful literacies” in digital environments.

### 3.3 Powerful digital literacies

Until recently, it was assumed that younger generations, or “digital natives”, were naturally adept at using digital technologies for learning and hence more digitally literate than their older, “digital immigrant” counterparts (c.f. Tapscott, 1998; Prensky, 2001). Although some practices, such as text messaging, may be more familiar and rapidly executed among younger people (who may happen to text more often), the capacity to use digital tools to engage in a repertoire of digital practices is by no means unique to younger generations (Helsper and Enyon, 2009; Selwyn, 2009). Indeed, as discussed in section 2.5, competency and confidence to use digital technologies are more strongly associated with income, geographic location, patterns of access, interest and frequency of technology use (Canadian Centre for Learning, 2009; Eshet-Alkalai and Chajut, 2009; Moriarty, 2011).

Moreover, while research in the vein of “21st Century Learning” often touts the power of self-directed, informal learning online (Government of BC, 2011) many educators who use digital technologies in their learning settings, particularly in post-secondary and community literacy settings, find that people often require mentorship and opportunities for guided practice to use digital tools confidently and to their most powerful effects (Cullen and Cobbs, 2011; Hayes, 2010). As the blog author of *Adult Education and Technologies* observes, “In digital skills as well as other literacy skills, there are the basics that help you survive, and then the more critical thinking skills that help you thrive and excel.” (para 3). This is what Jean Dudley demonstrates in Vignette One, when she points out the instruction focus in her program upon how students use Facebook rather than that they are simply able to use it. This is a point taken up by literacy researcher James Gee (2011, para 2):

Traditional literacy (reading and writing) has and still does come in two grades. One grade leads to working class jobs, once a good thing when there were unions and benefits, but now not such a good thing when it means low pay and no benefits, usually in service work. The other grade leads to more meaningful work and more financial success. What distinguishes these grades of literacy?

Gee follows up his question (2011): “Does digital literacy come in two grades, as well? Are there ways with digital media (as there are ways with words) that lead to quite different results, despite the fact that everyone is participating and using digital media? I believe there are” (para. 3). Here, it is useful to reiterate the distinction among different forms of digitally-mediated learning as they are most commonly used in ABE and other adult learning settings. Distance learning, when mediated by Learning Management Systems, is designed to meet the needs of institutions to deliver pre-designed curricula and manage grading, registration and so on. The benefit is to open access to learners who cannot attend classes in person. However, opportunities for learners to collaborate, share information, solve real problems and shape course content are constrained. As Dalsgaard (2006) states, “It is necessary to move beyond Learning Management Systems to engage students in active use of the web itself as a resource in self-governed, problem-based and collaborative activities” (p. 23).

Secondly, a “computer skills” approach, or computer-mediated instruction, is designed to teach a range of skills, from word processing to spread sheet design and e-mailing. This too, is beneficial to learners who may feel competent to use these new texts for work and everyday purposes. But as Hayes (2010, p. 204) argues, often this form of instruction amounts to little more than a “workbook on a screen”. Unless digital tools are also mobilized to spur critical thinking, problem-solving, collaboration and other practices that Gee (above) identifies as important for preparation for better jobs, and for higher learning, then, in the words of Hayes, “digital technology is more likely to reinforce a digital divide rather than reduce it” (p. 204).

Of interest, then, is not only whether adult basic educators incorporate digital technologies into their practice, but how and why they do so. The vignette that follows illustrates ‘ways with digital media’ that lead to promising outcomes, within a video-making social enterprise project in Nova Scotia that is designed to support literacy, academic upgrading, employment-related skills and community development objectives in a holistic manner.

## Vignette Two

### Powerful ways with digital media: A Nova Scotia Experience

**Antigonish County Adult Learning Association (ACALA) and People’s Place Library**  
**Antigonish, Nova Scotia**  
**Informant: Lise de Villiers, Executive Director**

Antigonish County Adult Learning Association (ACALA) is a community-based learning organization in Antigonish, Nova Scotia, that is using documentary film making as a social enterprise, and as a mode to teach literacy, ABE and essential skills. Through provincial and federal funding from the Labour Market Agreement, the Department of Labour and Advanced Education, the Department of Community Services, and funds allocated from the PGI (Peter Gzowski Invitational Golf Tournament), ACALA helps adults in the Workforce Literacy Program to make their own video documentaries. The documentary topics vary, but program participants are invited to research the work of local non-profit organizations, interview their staff and document their work. They may also work with the Antigonish Sustainable Development Association to create videos for the Anti-Poverty Coalition, Food Security Coalition, and the Eco-Literacy Committee (involved in projects to restore local rivers). Understanding the importance of an authentic audience for adults’ work, ACALA has established “**ACALA TV**”, a local, online space that streams the documentaries created by program participants. Participants also work to develop and maintain the TV channel, providing another opportunity to learn hands-on, work-related skills.

The screenshot shows the Ustream website interface. At the top, there is a search bar and navigation links for 'Social', 'On', 'Off', 'Login', 'Sign Up', and a 'Go Live!' button. Below this is a horizontal menu with categories like 'On Air', 'News', 'Campaign 2012', 'Pets & Animals', 'Entertainment', 'Sports', 'Music', 'Tech', 'Gaming', 'Education', 'Spirituality', and 'More'. The main content area features the ACALATV channel page, which is currently offline. The channel logo is prominently displayed in the center of the video player. To the right, a list of recent videos is shown, each with a thumbnail, title, view count, and upload date. Below the video player, there are social media sharing buttons for Twitter (97), Facebook (140), and a '+1' button (3). The page also includes a 'Pop out' button and a 'Share' button.

According to the Executive Director, Lise de Villiers, “the best learning is applied learning.” Access to digital tools such as cameras, computers, editing software and microphones provide people with power to do things they have never done before and to have their voices heard about issues that are often ignored in the media. For the non-profit groups involved, it is important that the people they want to reach with information about health, food security and so on are also those that are helping to create that information.

According to deVilliers, people have taken enormous pride and ownership in producing their documentaries for a broad audience. These videos are uploaded to an online streaming site called “ACALA TV” for public viewing. The editing processes for video production can be time consuming and require lots of patience, but the skills required to edit video are similar, and even more demanding, than the skills needed to produce a traditional print text such as an essay or worksheet: organization, flow, coherence, structure, language accuracy. The differences are that the video making process requires more collaborative work, and results in something that people believe to have more social impact. In deVilliers’ experience, “If people feel that the product is really theirs, they are willing to spend the longer time it takes to produce it, and they don’t lose interest.”

Few adults in the community have access to digital tools and technologies in their homes. However, ACALA collaborates closely with other non-profit organizations so that they share resources as much as possible. Very recently the community has established The People’s Place, a new library that provides community access to the Internet and computers. ACALA TV is the vision of one of the early program participants, that people also have free access to cameras, and to training in digital video production through the “People’s Place”.

The process of developing texts that are collaboratively produced and shared with a broad audience is always slower. One has to pay attention to quality. But Lise de Villiers feels that this “slow learning” is what leads to deep skills and real changes in people’s lives.

### 3.4 Learning from the ACALA project: Slow learning

The “slow learning” within this digital video production embedded in an ABE and essential skills program develops many rich skills: conceptualization, planning, writing, storyboarding, collaboration, using cameras and audio effectively, editing, revising, producing and sharing the products with an authentic, known audience. Processes of apprenticeship and guided participation (Rogoff, 1995) are central to this learning, whereby “newcomers to a community of practice enhance their skills and understanding through participation” (p. 143). Taylor, King, Pinsent-Johnson and Lothian (2003) found that collaborative practices that support apprenticeship and guided participation are more likely to result in independent and self-directed learning (p. 98), frequently emphasized in goals linked to “21st Century Learning” (Government of Alberta, 2011 Government of BC, 2011). As ACALA’s coordinator, Lise DeVilliers observes, these processes take time; they often require combinations of learning modes including direct instruction, observation and mentorship, “hands on” tinkering and play, and other forms of guided practice. Learning may be slower in terms of creating a product (such as a video), but also deeper, often with a closer match to skills and practices used in better jobs and higher learning settings. These are hallmarks of quality learning environments, “narrowing the gap between the school world and real-life society” (Huang, 2002, p. 34). Located in semi-rural Nova Scotia, the ACALA project supported this crucial link by using the video work to create local knowledge and material resources important for a community in the midst of economic transition.

Quinn (2006), in calling for a slow learning movement attached to technology, invokes the metaphor of learning as “drip-irrigation over time as well as the fire hose for the moment” (para 2). A slow schools movement is also underway in the K-12 system in North America as a correlate to the “slow food” movement. This is summarized in the guiding ideas of “slow schools”:

The process of education is not about supplying students with lumps of information to be regurgitated on demand. It is about enabling students to learn how to learn. It is also about giving them opportunities to hear what others have learnt (knowledge) and to then discuss, argue, and reflect on this knowledge to gain a greater understanding of its truth for them and of how this knowledge will be of use to them. (Slow Movement, 2010, para 6)

Along with a multiple literacies and integrated perspective of digital literacy described above, slow learning presents challenges to the logic of contemporary accountability regimes that require rapid progress through a print-based curriculum and the achievement of measurable literacy levels “up a ladder” (Crowther, Hamilton and Tet, 2001, p. 4). Indeed, a connection can be made between the concepts of “slow learning” and “powerful literacies”, both oriented to embedding literacy in real-world practices, to producing texts for authentic audiences, and to deepening literacy practices, including digital literacies, in keeping with people’s interests and learning goals. This makes it more possible for learners themselves “to decide what is really useful literacy” (Crowther, Hamilton and Tet, 2001, p. 4) and to “gain some measures of control over their lives” (ibid, p. 6) as they pursue educational and employment-related goals. The incorporation of digital technologies is not necessary to realize these ends, but it does provide a context for engagement and authentic learning (for learners as well as educators) that makes their attainment more possible. As Drexler (2008) points out, “The tools themselves are not as important as the connections made possible by them” (p. 42).

### 3.5 Mobile learning: Cellular phones and literacy

The cost of operating a cellular phone is relatively high in Canada. While no projects we approached discussed using mobile phones for learning in their ABE settings, the practice is increasingly common, with a growing body of research documenting their potential to link inside classroom learning with everyday literacy and learning needs. As noted above, more adults are arriving in literacy and ABE classes with either feature phones (a more basic phone with core features such as camera, calendar and texting features), or smart phones (the more recent brand of phone which allows users to download a range of learning, entertainment and communication applications that interact with other computers and mobile tools). Text messaging, or “texting”, is perhaps the most common use of mobile phones. People who do not participate in formal education or who struggle with conventional school literacy can be avid texters (Attewell, 2003), and texting is a vital literacy practice for many, representing an opportunity to extend and deepen other literacy practices. While many educators have expressed concern that texting leads to spelling and grammatical errors, researchers have found the opposite, hypothesizing that frequent reading and writing, even when using “textisms” (2nite, LOL) leads to more fluent and accurate reading and writing (Dixon and Nichols, 2011). Moreover, people use different literacy practices for different audiences, differentiating between “textism” language and “conventional” language when necessary (Rosen, Chang, Erwin, Carrier and Cheerer, 2010). The practice of texting creates new audiences and modes of expression and the sheer volume of writing produced in daily texting activities provides opportunities for practice that are vital to learning. With respect to making use of the other applications and tools, literacy educator Susan Gaer (2011) found that supporting students to learn how to optimize the use of their phones carried many benefits: her students were more confident to implement “cell phone” etiquette



in different settings, use their cell phone cameras to take photos of items representing target vocabulary (and to generate writing topics) and use the calculator feature to keep track of grocery costs (including price per pound/kilogram) of bulk items. Learners and educators can also access applications such as “polleverywhere.com” (Gael, 2011), an audience response system that allows classes to do quizzes together, or to poll one another on various topics. In this way, when learners have access to mobile phones, these can be used to bridge the gap between inside class learning and everyday life literacy uses, providing opportunities for practice using different sign and symbol systems.

### 3.6 Social media literacies

The capacity to mix images and sound to produce rich texts, and to share these texts with authentic audiences, as demonstrated in the ACALA project, are made possible in part by the affordances of a suite of social media tools associated with Web 2.0. The social sharing and creative functions afforded by Web 2.0 can be grouped into a range of tools that may or may not rely upon Internet access: collaborative group learning and knowledge creation platforms such as wikis, Google docs, blogs and online gaming; multimodal or “rich” text production such as video, digital stories and photo stories using iMovie, MovieMaker, VoiceThread, PowerPoint, Glogster; publication platforms such as Vimeo, YouTube and so on, and geo-mapping tools including Google Earth, and inter-personal communication tools such as Facebook and Twitter. These tools are ever-changing but their underpinning logic is the facilitation of user-generated content and sharing to broad audiences. For adult learners in basic education and literacy programs, the capacity to communicate experiences to broad audiences is particularly important (and as discussed below, so is the capacity to use privacy tools in strategic ways, privacy literacy). We see the potential of these social sharing platforms in the work of adults in Mount Currie’s Ts’zil Learning Centre digital storytelling program. In the Lil’wat nation, history and traditional knowledge are shared orally. Working with elders, Lil’wat language experts and community members, the ABE class (run by Capilano University based in North Vancouver, BC) created digital stories based on participation in a range of cultural activities from mushroom harvesting to drum making. These stories were shared in community events and on community web sites, creating interest and engagement for learners and audiences. Students received course credit for English and Social Studies, and identified many other learning benefits, including “literacy, presentation, team work and critical thinking skills, photography skills and non-linear editing” (Sampson, 2011, p. 8). The students reported that one of the most important aspects of the program was the sense of pride in sharing cultural knowledge through stories with people within and outside their community. These uses of digital stories have been extended to other areas of the curricula, where adult students create digital stories to explain fractions and other math concepts to other learners.

Although digital storytelling has become more common in K-12 and adult learning settings, much of what people learn about social media has taken place outside of school settings, through self-directed, informal learning. However, many educators argue that social media literacies should be taught more systematically, as part of a broader project toward digital citizenship and participatory democracy: to counter a surveillance culture, protect privacy and critically read and create online materials (Burke and Rowsell, 2008; Chovanec and Meckelborg, 2011; Hayes, 2010; Warschauer, 2003). Indeed, not all social media sites promote the same kinds of literacies, and, like Gee’s distinction taken up earlier between “types” of literacy, there are more and less productive patterns of social media use and participation (Rheingold, 2010). For example, Carrington and Hodgetts (2010) uses the term “literacy

lite” to describe the basic “clicking literacy” embedded in many corporate-sponsored web sites oriented ostensibly to “play” or for “sharing”. They use the example of Barbie.com to demonstrate that certainly, children are adept at finding their way around the site, clicking on the relevant buttons to update their Barbie wardrobe and so on, and so in some ways they may be said to be “digitally literate” in accomplishing learning aims as defined by the site. But the critical, cognitive and creative demands placed upon site users are limited; the literacy practices are more passive than powerful, with respect to how they may be leveraged for deep learning and for critical engagement, not to mention the negotiation of gender and class identities.

Bean (June, 2011) expresses similar concerns about the design of online adult learning sites, pointing out that “CCBB” or “Clicky Clicky Bling Bling” site design practices tend to distract people from the pursuit of a main idea, and encourage instead the consumption of broad swaths of digital content with little opportunity to construct a reading path to support integration or understanding. There is a tension, in other words, between expanse and depth in the presentation of information for learning in many online settings. Bean argues this is also an issue of form over substance:

CCBB design shines and sparkles wildly in the sun. These are the programs that make people say “cool” and “wow” or “hey, check that out!” But there’s a dark cloud to all this sparkle; all that glitters is not gold. Too much clicking can lead to learner fatigue, is distracting to the learner, and doesn’t promote deeper understanding. (June, 2011, para 12)

Weiland and Clason (2010) offer an example of this in their investigation of the uptake of new online literacies in a distance education course populated by younger adults of the “net generation.” They interviewed students about their use of the online course resources and reported that “[students] articulated and demonstrated the ease at which they could “surf” the “interesting” resources that the Web provides, but they found it quite difficult to search, evaluate, and effectively use those resources for a specified task” (p. 5). The authors concluded that the availability of information through hyperlinking does not preclude the capacity to synthesize and interpret content. These findings have considerable implications for ABE programs, where students are asked to negotiate the academic reading and writing demands of the secondary school curricula, while also attending to their very pressing employment, family, and further education goals. Snyder, Jones and LoBianco (2006, p. 12) crystallize the challenge to ABE in this way: “In the words of Schneiderman (1997, p.vii), it isn’t just a matter of helping learners to ‘surf the net, but [to] make waves”.

### 3.7 Incorporating social media literacies into adult basic education settings

Selywn (2009) points out that the newness of digital technologies, including those associated with social media, has blinded some educators and researchers to their relative power and value in specific settings. He argues that there is a tendency to over-value ‘new’ informal uses of the social web and technologies in general, whilst downplaying unequal power relations that operate in learners’ lives, and which technologies alone cannot solve. As discussed earlier, intransigent relations of social inequality and digital divides cannot be erased through access to bandwidth or computers alone. But when adults can attend ABE programs, the technology-mediated practices they learn and

have access to can forge links between in-class learning and work and everyday life. Rheingold identifies five social media literacies he associates with managing work and learning in a digital culture. Although his ideas are rooted in post-secondary education contexts, the social media literacies he identifies are relevant in ABE settings where students may benefit from mentorship and practice to put these digital tools to their most powerful ends; in other words, to “make waves”. Rheingold argues for a shift in perspective from mastering “skills and technologies” to a focus on learning the new literacies of social media. He starts with attention literacy as fundamental to other social media literacies.

### Attention literacy

According to Rheingold, “Attention is the fundamental building block for how individuals think, how humans create tools and teach each other to use them, how groups socialize, and how people transform civilizations” (p. 16). The relatively rapid arrival of digital tools into formal learning settings has sometimes created conflict so that educators are wont to ban cell phones, iPads, laptops and so on from classrooms so that students can “pay attention”. Certainly, some educators do not allow cell phones or laptops in their classes for just this reason. Another approach, according to Rheingold, is to ask students to become aware of how they are using their attention for learning: can digital tools be used to support learning in the classroom in ways that enhance rather than distract from learning? Is it appropriate to be carrying on a Facebook update while another classmate is talking, or can Facebook use become a topic of group discussion: when, why and how is it appropriate to the learning needs of the whole group? Is it such a bad thing if students Google a topic of class discussion to verify the accuracy of information or check a fact? How should digital tools be used to be effective in a community of learners? Engaging in meta-cognitive conversations such as these, learning about learning, and learning how to learn, are central pillars of adult learning theory oriented to self-direction and lifelong learning (Brookfield, 1995; Knowles, 1998). Moreover, such discussions foreground the implications of digital technologies for shifting relations of power between instructors and students: what is the role of the instructor when information is freely available online? This question is revisited in section 4 where we consider professional development for adult basic educators.

### Participation Literacy

Deeply connected to attention is participation: indeed, most digital distractions in formal learning settings represent a pull to participate in another community; this is a deep and central part of learning. But one educator in our study reported that the incorporation of digital tools in her class breaks down the sense of community. Working in an adult upgrading program in the lower mainland of BC, this educator explained: “There is something very distancing about the laptop screen, almost like a physical and emotional barrier between people. My students spend their days alone, in terrible jobs, speaking to no one. When they come to class, I want to create a space for face-to-face, interpersonal connection: conversation and affirmation (personal communication, September 23, 2011).

This suggests the importance of context. Critical reflection among instructors and adult learners surrounding the affordances and limitations of digital technologies in ABE settings seems central: What does it look like when people make positive connections online or face-to-face, and learn something of personal and social value? What is happening when people achieve something important together? For some, updating one’s Facebook status and reading the ‘walls’ of near strangers are examples of inattention or time wasting, though perhaps not harmful participation. But for others, a Facebook account may offer powerful access to community and an opportunity to learn new forms of reading and writing. For example, a youth group in Nova Scotia helps the homeless youth they serve to set up Facebook accounts. They also provide the young people with Internet access, among other learning resources, including a strong focus on dramatic and visual arts. The Facebook accounts were one way the organization could reach out to youth, and for youth to connect with family and friends. We revisit the connections between digital outreach, relationships and learning in Vignette 3.



In this vein, Rheingold (2010) believes that online participation of any kind is better than no participation:

Participating, even if it's no good and nobody cares, gives one a different sense of being in the world. When you participate, you become an active citizen rather than simply a passive consumer of what is sold to you, what is taught to you, and what your government wants you to believe (p. 18).

With the goals to promote democratic participation and work and learning skills, it is also important to learn how to work online in concert with others. According to Rheingold, this is the literacy of collaboration (2010, p. 19).

### Collaboration literacy

Collaboration literacy involves harnessing resources to work with others toward common goals. Social constructivist approaches whereby knowledge and experience are shared and made available for individual and group learning have long been valued and practiced in adult education settings (Brookfield, 1995; Huang, 2002; Muth, 2008). Collaborative and participatory learning in adult literacy and basic education is not new, though there is little research on what this looks like in digitally-mediated settings among new readers and writers. Social media tools such as wikis, Google Docs, blogs and Facebook present contexts for small groups of people who know each other, and even large groups of strangers, to work together to common ends. This involves sharing ideas, most often through writing but also in screening, selecting and posting web-based media. Learning how to use online spaces to create and focus a topic, share information, build upon others' ideas, do one's share, make room for others to collaborate, offer constructive feedback and suggestions and so on, are all practices central to collaboration literacy.

Moreover, research suggests that writing online leads to better writing. Warschauer, Arada and Zheng (2010) found that secondary school students who share their writing online "strengthen [ed] their sense of authorship and ownership" (p. 223). Smythe and Neufeld (2010) found that students writing for an audience of peers, family and the school community spent much more time editing and revising their work than when the audience was limited to their teacher. Of course, sharing work may be difficult for adults with little self-confidence. Safe and supportive learning settings, appropriate scaffolding and strong group norms and guidelines are always important to create a context for meaningful collaboration. Closely related to collaboration is learning how to access and manage online networks.

### Network literacy

Many adult literacy and basic education programs cite the cultivation of social capital as important, if difficult to measure, goals of their work (Tett and Maclachlan, 2007; Alfred and Nanton, 2009). Social networks are a symbolic form of social capital with often real material consequences (Bourdieu, 1997; Lin, 2000). Rheingold (2010) argues that the capacity to locate and participate in different kinds of online networks is becoming increasingly important to adults for citizenship, information, employment and activism. For example, interpersonal networks usually involve reciprocity and writing texts for known audiences that often include personal details not appropriate for sharing in work or education-related networks (we have all witnessed the social fallout when Twitter messages or blog posts meant for personal friends find their way into the networks of unknown audiences). The use of blogs, wikis and Twitter involves writing for and learning from unknown audiences with shared interests. Knowing how to identify and use these different networks for personal, social and collective ends is part of becoming literate in social media. This involves critical and informed decision-making, and asking: "which people are you going to allow into your attention sphere? Who is going to take up your mind, your space? Is the person trustworthy? Entertaining? Useful? An expert?" (Rheingold, 2010, p. 22). Such questions, according to Rheingold, lead to "critical consumerism" or critical information literacy.

## Critical information literacy

Rheingold's other name for critical information literacy is "Crap detection" (p. 20) (after Postman and Wiengartner, 1969). As discussed above, digital technologies are introducing shifts in the traditional roles of instructors and teacher-student relationships. In an era where information is freely available online, it is perhaps less important to impart facts than it is to model and encourage a critical approach to locating, synthesizing and interpreting information found on the Internet and in print-based resources (Orlowski, 2006; Badke, 2008). Rheingold frames the issue in this way:

In the past we could go to the library and take out a book to read; we might disagree with the book, but probably somebody, or several somebodies, had been paid to check the factual claims in the book. When we get information online today, there is no guarantee that it's accurate or even that it's not totally bogus. The authority is no longer vested in the writer and the publisher. The consumer of information has to be a critic and has to inquire about the reality of the information presented. (p. 23)

Learning how to do this requires a full repertoire of critical, multimodal literacy skills, from analyzing the layout and use of advertising on a web-page, to tracing the authenticity of information through cross-checking and synthesis and searching the credibility of the author by what others say about him/her and how they use their work. As noted above, the sheer volume of information that people are able to access on the web is no substitute for the knowledge they are able to create from this information. If ABE is geared toward the goals of citizenship, access and participation, foregrounding critical information literacies in online settings is central to that work.



### Privacy literacy

Closely connected to all these social media literacies is that of privacy literacy. This is not included in Rheingold's framework, but seems particularly important for adult learners who, as (Chovanek and Meckelborg, 2011) point out, are more likely to be socially and economically marginalized and so more vulnerable to online surveillance. Indeed, ABE learners may benefit from learning privacy literacies that go beyond the management of passwords to include what and how to share personal information online, to be mindful of their **digital tattoo**, (the traces of online lives that are buried within the web architecture), to learn the conventions for communicating with strangers, and to identify SPAM or a hoax [1].

To close this section, the following vignette captures the importance of social context for incorporating digital technologies into ABE settings. A “one size fits all approach” is unlikely to be successful, particularly among marginalized adults with various learning and life needs that reach beyond technology into the realms of social support, confidence, trust and access to resources.

## Vignette Three

### Pathways for learning technology access, use and social distance

**Informant: Jack Jones (pseudonym), Literacy and ABE educator, British Columbia, Canada**

#### Computers in outreach education

Jack has spent 4.5 years teaching adults to learn with computers in a variety of community-based programs in British Columbia. His experiences offer a lens into the relationships between digital technology and literacy among very marginalized and low-income adults who strive to learn amidst many competing struggles for housing, health, food and safety.

From Jack's perspective, access to computers and high-speed Internet is important in a democracy that is increasingly moving “online”. Many government forms and applications for subsidies or financial support are now only available online, so Internet and computer access is important to ensure everyone is able to find and apply for resources.

For many of Jack's students, computers are also a first step into wider and deeper engagement with literacy and learning, and social participation. But for this to be so, intentional and careful decisions are made about where, how and with what forms of technology people are best served.

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[1] For an excellent discussion of the importance of privacy literacy, see Turow, J. (2003): Americans and online privacy: The system is broken. A report of the Annenberg Public Policy Centre of the University of Pennsylvania. Retrieved July, 2011 from: [http://www.securitymanagement.com/archive/library/Anneberg\\_privacy1003.pdf](http://www.securitymanagement.com/archive/library/Anneberg_privacy1003.pdf)

In the adult learning centre where he works, adults may drop in for help filling in a form or to use the computers; others may choose to attend more regularly, meeting with a tutor to work on a project or build literacy skills for further academic study. Jack introduces adults to computers, keeping in mind that many people are very curious about computers, but also very fearful of making mistakes, or wary that it will be “too hard” and they won’t be able to manage. Sometimes people expect to fail when they learn something new, Jack explains, a product of negative past experiences in learning situations, and of low self-esteem.

One strategy of the program where Jack works is to embed ABE and literacy into existing services and programs such as shelters, women’s centres and housing projects. As Jack says, “we need to go where people are, rather than expecting them to somehow find us.”

### Just in time and responsive technologies

Locating computer classes “where people are” is part of a responsive instructional strategy that Jack and his colleagues have adopted. As Jack describes it, his job is to provide “just in time” support to people who do not have regular access to computers. In such contexts, “timing is everything”. For example, one day, Jack arrived at a housing project to meet informally with some of the people he would work with the following week in a computer skills class. He met a man at the front office and as they were chatting, this man told Jack that “he wanted to learn something of computers” though he had never touched those sitting in the lobby. So they sat down together at one of the computers, and within ten minutes, the man, in his early 60s, was on the Internet, typing in URLs for sports news, reading articles about his favourite teams and even finding a site that showed hockey games, a real boon for a man with no access to a TV. Jack later reflected: “If I had said to this man, ‘I will teach you how to get on the computer next week when I come to teach the class’, the moment would have been lost and it is unlikely the man would have come to the class.”

Jack starts his computer tutorials with the question, “What do you want to be able to do?” Almost everyone wants an email or Facebook account and to surf the Internet. In a short time, one man with a new Facebook account found his brother, whom he had not heard from in 18 years. Another young man wanted to learn to use the word processor and Internet for personal writing. As he gained more confidence, he enrolled in an ABE class, building upon his Grade 10 education to eventually complete his secondary school diploma.

### Computers as a way in to new literacy practices and learning

Jack has also found that sometimes when people say “I want to learn computers” what they also really want is to improve their reading and writing. For example, when an adult types in a URL or a Facebook message, they will often comment that they need to learn to spell, or write or type better. Here, Jack connects them to other programs offered by his workplace; in this case, an ABE class.

### Digital tools and social distance

Jack maintains that linking instruction to the technologies adults have access to outside of a classroom or tutorial relationship is central to learner-centred practice. He is wary of taking up the newest digital tools for use in formal learning settings, when students don’t have access to these in their everyday lives. For example, it may be fun

to have a class set of iPads so people can play with applications, but how does this support learning when the instructor collects the iPads at the end of the class and the learners go home empty-handed? In this way, “first tier” mobile digital tools can support literacy learning in very creative ways in some settings. But they can also widen the social distance between instructors and learners because instructors have access to them and learners don’t. Similarly, Jack suggests that technologies work best in adult learning when they start from where learners are. Some students he has met in his work love to make digital stories, but for others it is too much to learn at once, they become overwhelmed and are scared away. He suggests a process wherein students master the many different tools embedded in a computer at their own pace: word processing, using a printer, attaching files, finding images and music and so on, building confidence, control and learner engagement, so that when they come to make digital stories (if they choose to do so), they are able to participate more actively in the process.

### Coming full circle

Here, Jack comes full circle in the relationship between digital technologies and literacy: “If we introduce the latest ‘must-have’ digital tools, tools our students will never be able to afford, not only are we being “played” by corporations that make these products, we may also be sending the message that our learners will be never be included in a digital culture. Once they acquire one tool, the next will have arrived and they will be once again on the outside.” Jack concluded the conversation with new questions: “What do people need the tools for? Are digital technologies for learning a means to an end, or an end in themselves?”

## 3.8 Four components of a sustainable and integral approach to digital technology in ABE

Jack’s experiences highlight the concept of integrity when incorporating digital technologies in ABE settings. Technological integrity refers to the alignment of digitally-mediated learning strategies with the resources and uses for such technologies people have in their everyday lives. Integrity encompasses four inter-related components that Jack argues should be in place to support digitally-mediated learning among socially and economically-marginalized people. The first is access to up-to-date, working computers with Internet, a printer and speakers. This ensures that people can learn how to use a range of computer tools to read and produce multimodal texts. A second and related component, central to ABE is sustainability: People have to know where technology resources are and how to access them; they need to know that once they commit to learning, the resources will continue to be there (the program or computers won’t be taken away or discontinued without warning). Third, integrity in learning programs requires opportunities for practice: For people to become proficient in new literacy practices, it’s important to have mentorship and the tools and time to practice these literacies, hence the importance for adult learning programs to provide people with access to working computers. The fourth component is the presence of trained literacy educators who can recognize and provide appropriate support in the moments when people’s literacy needs and interests shift: from “being curious”, to surfing the ‘net to creating web pages; from reading others’ writing on the screen, to creating their own texts; and supporting people’s learning pathways when they begin to ask about pursuing their learning and career goals. This vignette also illustrates how complex patterns of access play out among marginalized adults, and the place of “just in time” learning strategies for creating pathways to more formal patterns of participation in ABE. Adults with whom Jack works expressed an interest in technology because they wanted to be part of something “going on” in the wider community; a sense of belonging and a way into further learning. But we are also alerted to the potential for social distancing between educators and learners when digital tools are introduced into a learning landscape rife with other inequalities. These concepts lead to a consideration of the central role of professional development in incorporating digital technologies in ABE, the fourth and final theme considered in this report.



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## PART FOUR

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### Professional development: The key to digital technology equity and access

In this section, we come full circle to the themes of equity, plurality, context and quality of learning. Initiatives to incorporate digital technologies in ABE settings should consider the educational, social and structural constraints to using new tools and resources in learning settings that are, in general, marginalized in comparison to mainstream K-12 education. As we have seen, constraints and barriers are fruitfully explored as socio-contextual and socio-political factors linked to the ease of access for instructors and adult learners in integrating technologies into their existing curricula and classrooms. Other factors include curricular frameworks that value and support multimodal and powerful literacies, and access to professional development for educators (tied in to the dimensions of marginality of ABE and adult literacy education in Canada).

Certainly access to Internet, laptops and desktop computers in programs varies greatly depending upon the context: College-based ABE programs are usually better equipped than school district and community-based programs, although community programs may have a wider scope to innovate using digital technologies because they are less bound to the prescribed learning outcomes linked to graduation requirements in ABE programs. Interests, uses and needs for digital technologies also vary according to context. As Helen Balanoff observes in the vignette below, efforts to incorporate professional development for educators often run up against issues of reliable access to technologies, as well as the messiness and unknown outcomes that this work involves.



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### Vignette Four

#### Incorporating digital storytelling in ABE in the Northwest Territories

**Informant: Helen Balanoff, Executive Director, NWT Literacy Council**

##### Context

A literacy project carried out in the NWT revealed a gap between learners' use of literacy (including video and online/computer gaming) outside of school, and the emphasis on print-based literacy in their classrooms. In short, learners reported being bored with school and not seeing how the curriculum is relevant to their lives. This gave rise to a digital technology project funded by the NWT Ministry of Education, Culture and Employment among ABE and alternative learning programs. The research project was guided by two questions:

- What can digital technology do to enhance and make relevant learning in today's world?
- What might be the roles of blogs and digital storytelling and other social media tools in achieving these goals?

### Challenges: Working with educators in an unreliable Internet setting

The NWT Literacy Council launched the project by offering a workshop for all adult basic educators in Inuvik, focused upon incorporating blogging and digital storytelling into their practice. The workshop was, in the words of Helen, “terrible” because they could not access the Internet to demonstrate the use of the tools. This was an opening for some teachers to say, “you see, this is why we don’t use digital technology in our teaching.” Indeed, there is some access to Internet in some northern communities, but the speed and quality of the connection often do not support communication on the web, such as offered by blogs, wikis, and other social sharing/networking sites. A second barrier to the integration of digital tools in ABE in the NWT is that the Internet protocols are currently the same as that of the NWT Government, which blocks access to YouTube, Facebook and a number of other social media platforms of interest to learners. However, the College is looking to change this arrangement in the future.

### Do it anyway

In spite of these obstacles, the NWT Literacy Council persisted, discovering that the resources for critical digital literacy such as navigating web sites and for digital storytelling do not always require Internet access. They uploaded all the resources required to construct digital stories onto CD-ROMs and now run their workshops and distribute their resources using this platform. The NWT Council also used screen captures to save websites and use them as resources to engage educators in critical evaluation of web-based information, a strategy educators could also share with their students.

### Digital divides

These accommodations represent ways around the limitations of poor access to the Internet in northern communities, but are not a long-term solution: youth and adults in these communities require access to this vital resource along with their southern counterparts. Access to the Internet and to digital technologies is uneven in the Northwest Territories just as it is in many parts of Canada. Band offices and libraries are key sites of access for most small communities, and mobile phones only work in a very few communities. This produces uneven patterns of access, and a digital divide within and between communities and geographic regions that, according to Helen Balanoff, has to be addressed directly and with an understanding of the geography and social uses of technology in local cultures.

However, Helen Balanoff points out that none of these obstacles constitute good reasons to ignore the new learning opportunities that digital technologies can provide. Through its challenges, the NWT Literacy Council has learned to “just do it” and figure out how to address the obstacles as they go. In recognition of this, the NWT Literacy Council is persisting with efforts to advocate for more reliable Internet access, and to look for ways to introduce new digital tools, such as podcasting, wikis, and video-making for youth. Here, they have decided to focus on tools that require



minimum web access (or on and off access) and that support learners to be creators, rather than mere consumers, of web content.

Helen Balanoff was careful to note that incorporating new strategies into teaching does not happen overnight: “People are afraid. Things can go wrong, the web is slow, there is a reluctance to use the computer in front of students in case educators make a mistake. Few educators themselves may have used Facebook, or know how to create a blog or wiki, so they are uncomfortable to leave their comfort zones in a classroom setting.”

#### Digital divides Digital storytelling as a cultural and social fit

According to Helen, the key to supporting shifts to new digital teaching strategies is to mentor and demonstrate the uses of these tools on the spot, in the moment, in a hands-on manner. Making available examples and tools for getting started is important, as a means to examine what others have produced and ask about the intricacies of production. The NWT Literacy Council plans to collect and share digital stories from ABE classrooms across the NWT, noting that this form of storytelling has “taken off” in the NWT, not only because of its accessibility off line, but also because it is a good fit with the visual and oral learning culture of many Northerners.





## 4.1 Learning from the NWT Literacy Council experience

The experiences of NWT Literacy Council suggests once again that educators are incorporating promising digital learning strategies within the constraints of their curricula and resources. But as Helen Balanoff points out, there are also risks for educators when they do not feel as comfortable with the use of digital technologies as their students. Moreover, many ABE educators do not have access to regular professional development opportunities in the same way as their K-12 counterparts. This significant issue is highlighted in the fifth and final vignette describing the use of social media technologies in a professional development initiative to support adult literacy and basic educators to incorporate digital technologies in their practice. The following vignette illustrates struggles among Ontario-based educators that resonate with educators in ABE programs across Canada.

### Vignette Five

#### Incorporating digital technologies in professional development for Literacy and Basic Educators in Ontario

Informant: Monika Jankowska-Pacyna, Projects Coordinator, AlphaPlus

One of AlphaPlus' goals is to bring Literacy and Basic Skills (LBS) organizations in Ontario closer together, and to support the professional development needs of educators in that province. To address these needs, in 2009 AlphaPlus received LBS Research and Development Project funding to deliver a series of "Web Savvy" workshops for educators. The training was delivered face-to-face in various locations across Ontario and content was provided via an online learning environment called Moodle that allowed participants to access the information and resources even after the training ended.

The "Web Savvy" workshops were based on consultations with the field and included topics such as using social media in learning programs, navigating the Internet, critical information literacy, and incorporating blogs and wikis into classroom practice. Although the workshops were popular and many participants added their names to wait lists for more training, the project wasn't funded in the following year. Knowing that the topic of digital technologies was important to educators, AlphaPlus continued providing the training and workshops on a smaller scale by launching monthly "Tech Tuesdays" meetings. Organized in Toronto, these face-to-face events allow educators to meet with other educators, learn about digital technology, and explore ideas and resources. The topics vary and are directed by group interest. Some of the topics explored during the sessions were: bookmarking tools, wikis, blogs, podcasting, Twitter, web conferencing, Facebook and Google Docs.

## Web Savvy training site

You are not logged in. ([Login](#))

### Welcome!

This training site, set up using [Moodle](#) learning environment and managed by [AlphaPlus Centre](#), will allow you to explore, share, learn, and think about how you can use web tools in adult basic education learning environments. We use it to train and support adult educators in integrating technology into practice.

**Please note that access to the courses is restricted and requires login.**

For step-by-step information on registering, visit [Registration Instructions](#).

### NEW!

### Web Savvy - face-to-face professional training opportunities in Ontario

Terms like Facebook, Twitter, wikis, podcasts and blogs are a recent addition to mainstream vocabulary and although the variety of new Web 2.0 tools and resources can be overwhelming, they can have a great impact on adult educators' professional and personal lives.



To help adult educators gain confidence and skills in using the internet and adapting new technology tools into their teaching practice, we offer free, on-demand, face-to-face **Web Savvy** workshops across Ontario.

The customized workshops are supported by this Opening Doors training site and offer practical hands-on training, peer-to-peer support opportunities, and examples of how Web 2.0 tools are used by other organizations in the field.

[READ MORE](#)

[Printable brochure](#)

### Login

Username

Password

[Create new account](#)

[Lost password?](#)

### Registration Instructions

[How to create a new account.](#)

### About AlphaPlus Centre

[AlphaPlus Centre](#) is a non-profit organization committed to advancing adult basic education through the smart use of readily available web-based technology.

Contact us at: [info@alphaplus.ca](mailto:info@alphaplus.ca).

This site is developed using a Learning Management System (LMS) called [Moodle](#). It is a free web application that educators can use to create effective online learning sites.



A challenge for the face-to-face meetings is often timing. During the day, educators are at work and it's hard for them to get release time. Hence, attendance often depends upon instructors' ability to attend workshops outside of work hours. Interest and attendance also fluctuates with the changes in funding, program mandates and participants' availability. This reality, and the fact that adult literacy and learning is also of interest to other employment and community service providers prompted AlphaPlus to open the workshops to a broader audience. This gave participants a chance to share diverse perspectives on technology and how it can be used in the literacy field and beyond. For example, during a workshop on **"Glogster"**, a tool that allows users to create interactive posters, one of the participants pointed out that this tool would be particularly exciting and relevant for practitioners working with the deaf community, because it incorporates ASL (American Sign Language) video inputs. These interdisciplinary insights benefit the whole group. To reach out to participants outside Toronto, AlphaPlus also started offering TechTuesdays webinars. They cover the same topics as the face-to-face meetings and are delivered through GotoWebinar approximately two weeks after the face-to-face workshop in Toronto. The webinars allow participants to sign up for the sessions in advance and access the sessions online from anywhere. Although the attendance varies from eight to twenty-five people per session, the webinars are becoming more popular and allow AlphaPlus to reach out to a much broader audience. Sometimes, programs register as one participant but have a group of educators watching and listening to the one-hour session. Thus far, the webinars focused on YouTube, creating and managing websites, using interactive SMART Boards, using RSS feeds to manage learning resources and information, Glogster, and so on. Topics of interest also include the skills to manage information and online privacy, including passwords, Facebook and cloud computing. AlphaPlus plans to offer more webinars in the future.

The screenshot shows a Meetup page for 'Tech Tuesdays' in Toronto, ON. The page is organized into several sections:

- Header:** Includes the Meetup logo, navigation links for 'Find' and 'Start', and a search bar with 'What's new', 'Help', 'Log in', and 'Sign up' options.
- Main Title:** 'Tech Tuesdays - Network and learn with your ABE peers'.
- Navigation:** A menu with links for 'Home', 'Members', 'Sponsors', 'Photos', 'Pages', 'Discussions', and 'More', along with a 'Join us!' button.
- Left Sidebar:**
  - TECH tuesdays:** The group name in large, bold letters.
  - Toronto, ON:** Location and founding date (Sep 11, 2009).
  - Statistics:** A list of metrics: Participants (157), Group reviews (20), Past Meetups (26), Our calendar, and Follow us (with social media icons for Facebook and Twitter).
  - We're about:** A list of topics: Education & Technology, Adult Literacy, Internet & Technology, Networking and Learning, and Online Education.
  - Organizer:** Monika Jankowska-Pacyna, with a profile picture and a 'Contact us' button.
- Main Content Area:**
  - Description:** 'Tech Tuesdays are a series of informal monthly meetings that bring together Adult Basic Education (ABE) administrators, educators and supporters to share information and resources about new and promising technological tools. Together, the group learns how to use new web-based technology, integrate it into practice and network with individuals and organizations committed to advancing the adult basic education community. Our face-to-face events are organized in Toronto and scheduled on the FIRST Tuesday of each month. During our meetings we discuss web-based tools that can support ABE, such as wikis, blogs, podcasts, Twitter, Facebook, and more. Approximately two weeks after the face-to-face meeting, we organize a webinar on the same topic to reach out to those who could not participate in person. The Tech Tuesdays meetings are organized by AlphaPlus, a non-profit organization that strives to increase adult literacy skills through the use of digital technologies by supporting educators and stakeholders with research, tools and training.'
  - Join us:** A prominent orange button with the text 'Join us'.
  - Who do I know here?:** A button for logging in with Facebook to find out, with a note: 'By creating a Meetup account, you agree to the Terms of Service'.

## Challenges and issues in professional development

As noted above, LBS (Literacy and Basic Skills) educators in Ontario (and most other Canadian provinces) often do not have access to professional development and time to learn new technologies. Monika observed that many educators often require direct instruction and opportunities to explore technologies before they are comfortable integrating them into their practice. There is often a lag between learning a new tool, and actually using it in a teaching context, so ideas and awareness may be brewing under the surface, but take time to appear in classroom practice. Moreover, since the literacy field often relies on volunteers there is an ongoing need to train and re-train educators.

Given the ever-changing nature of the field and the immediate, time-sensitive needs of educators, Monika has noted that new learning strategies are required in professional development initiatives. Rather than “front loading” training for educators, she believes that ongoing, collaborative and experiential learning methods are more effective, wherein educators gain confidence and familiarity with new tools by using them in practice and discussing challenges and possibilities with fellow educators. Monika has learned that this work requires time to “play”; but often experimenting or “playing” with digital technologies must take a back seat to the everyday demands of literacy work, in a context of “time crunches” and competing expectations. Nevertheless, Monika has noticed that the cumulative effect of their efforts over the past few years is that literacy educators are demonstrating more confidence and skill in incorporating digital technologies into their work.

## New insights into teaching and learning

Monika is careful to note that her work in professional development for educators is oriented to critical reflection on the uses of the technologies as tools and how they may effectively support (or not) practitioners and learners. Not all technologies are appropriate in all settings, and nor is technology the answer to some of the intransigent problems in adult literacy in Canada. She observes, “All tools have pros, cons and drawbacks. Individual educators and the field have to grow accustomed to using them at their own pace, keeping in mind that opportunities for practice and familiarity with tools is uneven across settings.” This is also a process of changing traditional views about educators as learners. “Facilitators need to see themselves as learners, too, and be alright with making mistakes and learning alongside their students. What is needed is a new tolerance for experimentation.”

## Equity and digital divides

An important factor in any decision to incorporate digital technologies in ABE is context and purpose. Monika points out that technologies change rapidly; mobile phones and tablets, for example, are now the primary tools to access and create social media and are becoming important learning resources in North America and other parts of the world. But smart phone subscription rates are comparably expensive in Canada and might not be sustainable or appropriate as a mode of learning in that many students simply can’t afford them. In addition, the take-up of digital technologies will depend upon their cost and affordability; free tools are obviously more desirable, but they come with their own constraints regarding service support, advertising and viruses, spam and limited repertoires. Thus, depending on the tools chosen, some programs might have access to excellent and innovative resources, while others might not.

Monika feels that the incorporation of digital technologies in adult learning is inevitable. How it will look, who will benefit, and who will access them depends largely upon broader communication and technology policies in Canada, as well as upon more organized and ongoing planning, funding, and support for technology integration

within the adult literacy field. Currently, many literacy programs don't have written technology plans and often purchase equipment and tools through special, one-time grants if and when they become available. There is also no or very limited funding available to maintain and update the digital resources once they are acquired, or to train educators to use them. For example, through one-time grants, some programs were able to purchase SMART Boards but they weren't able to provide ongoing training on how to use them.

## 4.5 Reflections and conclusions

Inequities in access to digital technologies and to professional development for adult basic educators are interconnected fixtures in the Canadian literacy landscape. The experiences of the NWT Literacy Council suggest that rather than allowing these inequities to restrict their use, digital technologies can be mobilized to help address the issue. The vignettes included in this report point to practices that can bridge divides, with caveats that digital technologies cannot do it all: Digital technologies should support, rather than drive the goals of ABE, and without equity-driven policies surrounding adult learning, social and economic sustainability, it is likely that the rich will continue to get richer. Although the incorporation of digital technologies will necessarily reflect local circumstances and learning needs, equitable access to digital technologies across jurisdictions, including access to professional development for educators, is central to projects of digital equity depicted in the Federal Government's vision for a "Digital Economy" (SSHRC, 2011). Indeed, professional development for ABE teachers provides a fertile context for exploring new learning concepts in a rapidly shifting educational and economic terrain. The challenge for ABE, indeed all education settings, is not only to teach computer skills, as important as this may be, but to support learners to critically use a variety of social media literacies, and to "apply this knowledge for specific purposes, in specific contexts of use." (Scribner and Cole, 1982, p. 236, in Lankshear and Knobel, 2002, p. 2).



Similarly, inequities in access to technology can also be addressed within ABE settings, which are attended by people who are likely to live within digital divides; indeed, the mandates of these programs can be extended to include digital literacies in the context of a digital economy and research interests at the federal level to “build digital skills for tomorrow” (SSHRC, 2011, para 9).

However, within the prevailing deficit discourses surrounding adult learning in Canada, ABE and literacy are considered compensatory, remedial programs rather than central to a social, educational and economic strategy. To change this, a first step is to re-visit the conceptual separation of “literacy” from “digital skills” that frames contemporary adult literacy and basic education policy and provision. More research is needed to explore how adults who struggle with conventional print literacy use digital technologies in their everyday lives, and whether a view of “basic” print literacy as a pre-requisite for digital literacy is defensible. Indeed, the effects of this assumption play out in the material resources available in ABE and other adult learning settings. As Monika Jankowska-Pacyna observed in Vignette Five, program funding is restrictive with respect to the acquisition of fixed assets; most programs that have acquired technological tools did so through one-time grants; these tend to be last-minute, “use it in a hurry” grants that lead to uneven distribution of the resources and perhaps the acquisition of inappropriate resources. Moreover, as Jack Jones outlined in Vignette Three, the technologies that are used in programs should reflect the everyday lives of learners and support opportunities for practice, moving toward a closer match between formal curricula and learners’ everyday technology uses.

The incorporation of digital technologies in ABE is inevitable: How it will look, who will benefit, and who will access them depends largely upon broader social, economic and technology policies in Canada, as well as upon funding and accountability regimes for ABE and literacy. Indeed, whether digital learning in ABE settings amounts to “worksheets on the screen” and the reinforcement of digital divides (Hayes, 2010), or to the mobilization of powerful literacies that support adults to “make waves”, rests upon much-needed conversations at local, provincial and federal levels about what constitutes “basic education” for adults in the 21st Century. In the meantime, however, it seems ungrounded to wait for people’s literacy skills to improve before they are offered access to digital technologies for learning.





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## RECOMMENDATIONS

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1. Research is needed to explore how adults who struggle with conventional print literacies engage with and learn digital literacies.
2. A review of the conceptual constructs underpinning essential skills frameworks is required in light of new digital literacies, and in particular to explore whether the constructs of “building blocks” for literacy or “basic” digital skills are reliable constructs in light of technology-infused literacies used in almost all workplace and everyday settings.
3. Digital divides should be studied in the context of both federal and provincial employment training, employment insurance (EI), social assistance and broadband access policies, all of which often overlap to constrain adults’ access to education and training in a changing economy.
4. Digital divides should be conceptualized to include not only issues of access to technology tools and infrastructure, but also to the kinds of literacy practices people have access to in ABE and literacy programs.
5. ABE programs linked to school districts can benefit from collaborations with community organizations, so to leverage resources and knowledge, particularly those linked to e-learning, to create learning opportunities that are more closely linked to authentic learning and “better work”.
6. A multi-pronged, federally driven social and education policy framework inclusive of adult education is required to address patterns of inequality across jurisdictions in Canada.
7. The curricula, organization and funding for ABE and adult literacy education should be included in new visions for “21st Century Learning” proposed in provincial education ministries.
8. The funding of digital technology infrastructure should be linked to sustainable funding for ABE and literacy programs. “One-off” funding to acquire digital tools and technologies, in the absence of staff training, equipment maintenance and program sustainability provisions, results in long-term disuse or disintegration of valuable resources.
9. Adult basic educators should have ongoing access to professional development and training geared toward the thoughtful incorporation of digital technologies appropriate to their learning settings. Here, combinations of online, face-to-face, follow-up training and ongoing inquiry, supported through collective agreements and/or financial and career incentives, will recognize that professional development is an important lever in equity-driven ABE and training.



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## WORKS CITED

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Alberta Education (2010). Inspiring Action on Education. Edmonton, AB: Government of Alberta. Retrieved from: <http://ideas.education.alberta.ca/media/2905/inspiringaction%20eng.pdf>

Alfred, M. V., & Nanton, C. R. (2009). Survival of the supported: Social capital networks and the finish line. *New Directions For Adult & Continuing Education*, (122), 83-93.

Attewell, J. (2003). *Mobile learning. Literacy Today*, (36), 14.

Badke, W. (2008). Information Literacy Meets Adult Learners. *Online* (Weston, Conn.), 32(4), 48-50.

Bean, C. (June, 2011). *Clicky clicky bling bling part two* [Weblog entry]. Retrieved from: <http://cammybean.kineo.com/2011/06/clicky-clicky-bling-bling-part-2.html>

Bourdieu, P. (1986). The Forms of Capital. *Handbook of Theory and Research for the Sociology of Capital*. J. G. Richardson (Ed). New York: Greenwood Press, 241-58.

Brookfield, S. (1995). *Becoming a critically reflective teacher*. San Francisco: Jossey-Bass Inc.

Burke, A., & Rowsell, J. (2008). Screen pedagogy: Challenging perceptions of digital reading practice. *Changing English: Studies In Culture & Education*, 15(4), 445-456. doi:10.1080/135868408024930

Butterwick, S. (2010). *Meaningful training programs for welfare recipients with multiple barriers. Help first, not work first*. Vancouver: Canadian Centre for Policy Alternatives.

CALPRO (2007). *Universal design for learning. Professional development sheet #2*. Retrieved from: <http://www.calpro-online.org/documents/factsheetuniversaldesign.pdf>

Calvani, A., Fini, A., Ranieri, M. and Picci, P. (2012). Are young generations in secondary school digitally competent? A case study on Italian teenagers. *Computers & Education*, 58 (2), 797 – 807.

Canadian Council for Learning (May, 2009). *The state of e-learning in Canada*. Ottawa: Author.

Candy, P. (2004). *Linking thinking: Self-directed learning in the digital age*. Sydney: Government of Australia.

Carrington, V., & Hodgetts, K. (2010). Literacy-lite in BarbieGirls™. *British Journal Of Sociology Of Education*, 31(6), 671-682. doi:10.1080/01425692.2010.515109

Centre for Literacy of Quebec (2005). *Adult basic education, literacy, media and technology: An annotated bibliography*. Quebec Centre for Literacy: Montreal.

Chase, Z., & Laufenberg, D. (2011). Digital literacies: embracing the squishiness of digital literacy. *Journal Of Adolescent & Adult Literacy*, 54(7), 535-537.



- Chatti, M., Jarke, M., & Specht, M. (2010). The 3P Learning Model. *Journal Of Educational Technology & Society*, 13(4), 74-85.
- Chovanec, D. & Meckelborg, A. (December 3, 2011). Social networking sites and adult literacy learning: *Raising the issues*. Toronto: AlphaPlus.
- Cope, B., & Kalantzis, M. (Eds.). (2000). *Multiliteracies: Literacy learning and the design of social futures*. London: Routledge.
- Crowther, J., Hamilton, M. and Tett, L. (2001). *Powerful literacies*. Leicester: National Institute for Adult and Continuing Education.
- Cullen, T., & Cobb, I. (2011). Computer Literacy Needs in a Traditional Library Literacy Program: Results of a Needs Analysis. *Techtrends: Linking Research & Practice To Improve Learning*, 55(6), 25-32. doi:10.1007/s11528-011-0538-0
- Darville, R. (July, 2010). *Notes on institutional ethnography and new literacy studies*. Retrieved from: <http://thesaltychip.edublogs.org/2010/07/05/notes-on-institutional-ethnography-and-new-literacy-studies/>
- Dalsgaard, C. (2006). Social software: E-learning beyond learning management systems. Retrieved from: [http://www.eurodl.org/materials/contrib/2006/Christian\\_Dalsgaard.htm](http://www.eurodl.org/materials/contrib/2006/Christian_Dalsgaard.htm)
- Dobson, T.M. & Willinsky, J. (2009). Digital literacy. In Olson, D. and Torrence, N. (Eds.), *The Cambridge Handbook of Literacy*, 286-312. Cambridge: Cambridge University Press.
- Eshet-Alkalai, Y., & Chajut, E. (2009). Changes over time in digital literacy. *Cyberpsychology & Behavior*, 12(6), 713-715. doi:10.1089/cpb.2008.0264
- Gaer, S. (2011). Cell Phones in the Classrooms? Yes!. *Adult Basic Education & Literacy Journal*, 5(3), 176-180.
- Gee, J.P., Hull, G., and Lankshear, C. (1996). *The new work order: Behind the language of the new capitalism*. Sydney, Australia: Allen & Unwin.
- Gee, J. P. (May 23, 2011). Digital natives, digital brains? [online newspaper article]. *Huffington Post*. Retrieved from: [http://www.huffingtonpost.com/james-gee/digital-natives-digital-b\\_b\\_865263.html](http://www.huffingtonpost.com/james-gee/digital-natives-digital-b_b_865263.html)
- Geist, M. (November 29, 2011). *In a global digital economy, Canada lags*. Retrieved from <http://theyee.ca/Mediacheck/2011/11/29/Canadian-Digital-Economy>
- Government of British Columbia (2011). *Adult basic education*. Retrieved from: <http://www.aved.gov.bc.ca/abe/>
- Hamilton, M. (2009). Putting words in their mouths: the alignment of identities with system goals through the use of Individual Learning Plans. *British Educational Research Journal*, 35(2), 221-242.
- Hayes, B. (2010). Reconceptualizing adult basic education and the digital divide. In Belzer, A. (Ed). (2007). *Toward defining and improving quality in adult basic education: issues and challenges*. New Jersey: Laurence Erlbaum Press. 203 – 220.

Huang, H-M. (2002). Toward constructivism in for adult learning in online learning environments. *British Journal of Educational Technology*. Vol. 33, No. 1, 27 – 37.

Human Resources and Skills Development Canada (2011). *Literacy and Essential Skills: Definitions*. Retrieved from: <http://www.hrsdc.gc.ca/eng/workplaceskills/LES/definitions/definitions.shtml>

Kerka, S. (2000). Extending Information Literacy in Electronic Environments. *New Directions For Adult & Continuing Education*, (88), 27 - 34.

Knowles, M. (1998). *The adult learner: The Definitive Classic in Adult Education and Human Resource Development*. Houston, TX: Gulf Publishing.

Kress, G. (2003). *Literacy in the new media age*. London: Routledge.

Kress, Gunther R., and Theo Van Leeuwen. *Multimodal discourse: The modes and media of contemporary communication*. London, New York: Arnold; Oxford University Press, 2001.

Koltay, T. (2011). The media and the literacies: media literacy, information literacy, digital literacy. *Media, Culture & Society*, 33(2), 211-221. doi:10.1177/0163443710393382

Jewitt, Carey, and Gunther R. Kress (2003). *Multimodal Literacy*. New York: P. Lang.

Lankshear, C., & Knobel, M. (2003). *New literacies: Changing knowledge and classroom learning*. Buckingham: Open University Press.

Lankshear, C., Snyder, I. and Green, B. (2000). *Teachers and technoliteracy: Managing literacy, technology and learning in schools*. Sydney, Australia: Allen & Unwin.

LeNoue, M., Hall, T., & Eighmy, M. A. (2011). Adult education and the social media revolution. *Adult Learning*, 22 (2), 4-12.

Media Awareness Network (July 7, 2010). *Digital literacy in Canada: From inclusion to transformation. A submission to the digital economy consultation*. Ottawa: Author.

Michael, M. G., & Trezek, B. J. (2006). Universal design and multiple literacies: Creating access and ownership for students with disabilities. *Theory Into Practice*, 45 (4). 311-318.

Middleton, S. (2003). *Literacy and technology*. Vancouver: Literacy BC. Retrieved from: <http://library.nald.ca/research/item/4275>

Moriarty, M. (2011). *Finding our way: Digital technologies and e-learning for adult literacy students, educators and programs: A literature review*. Toronto, AlphaPlus. Retrieved from: [http://alphaplus.ca/en/web-tools/online-publications-a-reportsgroup1/finding-our-way/cat\\_view/59-finding-our-way.html](http://alphaplus.ca/en/web-tools/online-publications-a-reportsgroup1/finding-our-way/cat_view/59-finding-our-way.html)

Muth, B. (2008). Radical conversations: Part One social-constructivist methods in the ABE classroom. *Journal Of Correctional Education*, 59 (3), 261-281.

Nan, L. (2000). Inequality in social capital. *Contemporary Sociology*, 29(6), pp. 785-795.

Nasah, A., DaCosta, B., Kinsell, C., & Seok, S. (2010). The digital literacy debate: an investigation of digital propensity and information and communication technology. *Educational Technology Research & Development*, 58 (5), 531-555. doi:10.1007/s11423-010-9151-8.

National Adult Literacy Agency (NALA). (2011). *A literature review of international adult literacy policies*. London: NRDC, Institute of Education, London  
The National Adult Literacy Agency.

Northwest Territories Literacy Council (August, 2009). *Reframing literacy and training support in the NWT using new technologies*. Yellowknife, NWT Literacy Council.

Nunavut Literacy Council and NWT Literacy Council. (2007). *Improving essential skills for work and community: Workplace and workforce literacy*. Yellowknife: Author. Retrieved from:  
[http://www.oecd.org/document/51/0,3746,en\\_2649\\_33933\\_49147827\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/51/0,3746,en_2649_33933_49147827_1_1_1_1,00.html)

OECD (Organization for Economic Cooperation and Development) (December, 2011). *Divided we stand: Why inequality keeps rising*. Paris: Author. Retrieved from:  
[http://www.oecd.org/document/51/0,3746,en\\_2649\\_33933\\_49147827\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/51/0,3746,en_2649_33933_49147827_1_1_1_1,00.html)

Ontario Ministry of Education (2010). *Ontario's e-learning strategy*. Toronto: Author. Accessed November 2, 2011 from: <http://www.edu.gov.on.ca/elearning/strategy.html>

Orlowski, P. (2006). Educating in an era of Orwellian spin: Critical media literacy in the classroom. *Canadian Journal Of Education*, 29(1), 176-198.

Prensky, M. (2001). Digital natives, digital immigrants part one. *On the horizon*, 9 (5), 1 – 6.

Postman, N. & Wiengartner, C. (1969). *Teaching as a subversive activity*. New York: Dell Publishing.

Powell, D. D., & Dixon, M. M. (2011). Does SMS text messaging help or harm adults' knowledge of standard spelling?. *Journal Of Computer Assisted Learning*, 27(1), 58-66. doi:10.1111/j.1365-2729.2010.00403.x

Quinn, C. (July 25, 2006). Further (slow) thoughts learning [Weblog entry]. Retrieved from: <http://blog.learnlets.com/index.php?s=slow+learning>

Rheingold, H. (2010). Attention and other social media literacies. *Educause*, 45(4), 4 – 14.

Rogoff, B. (1995). Observing sociocultural activity on three planes: Participatory appropriation, guided participation, and apprenticeship. In J.V. Wertsch, P. del Rio, & A. Alvarez (Eds.), *Sociocultural studies of mind* (pp. 139-164). Cambridge, UK: Cambridge University Press. Reprinted (2008) in K. Hall & P. Murphy (Eds.), *Pedagogy and practice: Culture and identities*. London: Sage.

Rosen, D. & Nelson, C. (2008): Web 2.0: A New Generation of Learners and Education, *Computers in the Schools*, 25 (3-4), 211-225

- Rosen, L. D., Chang, J., Erwin, L., Carrier, L., & Cheever, N. A. (2010). The relationship between “textisms” and formal and informal writing among young adults. *Communication Research*, 37(3), 420-440. doi:10.1177/0093650210362465
- Rowell, J., & Burke, A. (2009). Reading by design: Two case studies of digital reading practices. *Journal Of Adolescent & Adult Literacy*, 53(2), 106-118.
- Sampson, L. (November, 2011). Technology and First Nations culture combine to enhance student learning. *Groundwork*, 32 (1), 7 – 8. Retrieved from: <http://www.abeabc.ca/pub/groundw/fall11/fall11.pdf>
- Scribner, S. & Cole, M. (1981). *The psychology of literacy*. Cambridge, MA: Harvard University Press.
- Siemens, G. (2007). *Digital natives and immigrants: A concept beyond its best before date*. [Weblog entry]. Retrieved from: <http://connectivism.ca/blog/2007/10/>
- Slow movement (2010). *Slow Schools and Slow Education - connecting children to life* [Weblog entry]. Retrieved from [http://slowmovement.com/slow\\_schools.php](http://slowmovement.com/slow_schools.php)
- Smith, E. (2007). *The ‘hybrid’ adult education classroom: Fieldnotes for ALBE Staff*. Pennsylvania Department of Education: Bureau of Adult Literacy Basic Education.
- Smythe, S. (2011). Certification for what? Practitioner perspectives on the changing landscape of adult literacy education. *Proceedings of the CASAE/AERC Conference*. Toronto, Ontario, June 6 – 9, 2011, pp. 638 – 644.
- Snyder, I., Jones, A., Lo Bianco, J. (2005). *Using information and communication technologies in adult literacy: new practices, new challenges*. Victoria: Government of Australia.
- Social Sciences and Humanities Research Council (2010). *Digital Economy*. [http://www.sshrc-crsh.gc.ca/funding-financement/programs-programmes/priority\\_areas-domaines\\_prioritaires/digital\\_research-recherche\\_numerique-eng.aspx](http://www.sshrc-crsh.gc.ca/funding-financement/programs-programmes/priority_areas-domaines_prioritaires/digital_research-recherche_numerique-eng.aspx)
- Statistics Canada (2005). *Adult literacy and life skills survey of 2003*. Ottawa: Author. <http://prod.library.utoronto.ca/datalib/codebooks/cstdli/ials/2003/ialss2003gid.pdf>
- Social Sciences and Humanities Research Council (SSHRC). (2011). *Research priority area: Digital economy*. Retrieved January 11, 2012, from [http://www.sshrc-crsh.gc.ca/funding-financement/programs-programmes/priority\\_areas-domaines\\_prioritaires/digital\\_research-recherche\\_numerique-eng.aspx](http://www.sshrc-crsh.gc.ca/funding-financement/programs-programmes/priority_areas-domaines_prioritaires/digital_research-recherche_numerique-eng.aspx)
- Statistics Canada (2009). *Canadian Internet Use Survey*. Retrieved September 12, 2011 from <http://www.statcan.gc.ca/daily-quotidien/100510/dq100510a-eng.htm>
- Smythe, S. and Neufeld, P. (2010). “Podcast Time”: Negotiating digital literacies and communities of learning in a middle years ELL classroom. *Journal Of Adolescent & Adult Literacy*, 53(6), 488-496.

Taylor, M., King, J., Pinsent-Johnson, C., & Lothian, T. (2003). Collaborative practices in adult literacy programs. *Adult Basic Education*, 13(2), 81.

Tett, L., & Maclachlan, K. M. (2007). Adult literacy and numeracy, social capital, learner identities and self-confidence. *Studies in the Education of Adults*, 39(20), 150-167.

Thacher, M. (2011, May 27). *Classes of digital natives*. [Weblog entry]. Retrieved from <http://marianthacher.blogspot.com/>

Veenhof, B, Clermont, Y & Sciadas, G. (December, 2005). *Literacy and Digital Technologies: Linkages and Outcomes*. Ottawa: Statistics Canada.

Warschauer, M. (2003). *Technology and social inclusion: rethinking the digital divide*. London: MIT Press.

Warschauer, M., and Liaw, M. (2010). *Emerging technologies in adult literacy and language education*. Washington: National Institute For Literacy.

Warschauer, M., Arada, K., and Zheng, B. (2010). Digital literacies: Laptops and inspired writing. *Journal of Adolescent & Adult Literacy*, 54 (3), pp. 221 – 223).

Weiland, S. and Clason, N. (2011). Adult online learners between screens and print: practices, preferences and prospects. Paper presented at the *Midwest Research-to-Practice Conference in Adult, Continuing, Community and Extension Education*. Lindenwood University: St. Charles, MO. September 21-23, 2011, pp. 1 – 7.

Weiler, M. (2010). *A tale of two technologies: Opening the practices of historians, opening public servant curriculum*. Unpublished Doctoral

[1] For an excellent discussion of the importance of privacy literacy, see Turow, J. (2003): Americans and online privacy: The system is broken. A report of the Annenberg Public Policy Centre of the University of Pennsylvania. Retrieved July, 2011 from:

[http://www.securitymanagement.com/archive/library/Anneberg\\_privacy1003.pdf](http://www.securitymanagement.com/archive/library/Anneberg_privacy1003.pdf)

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