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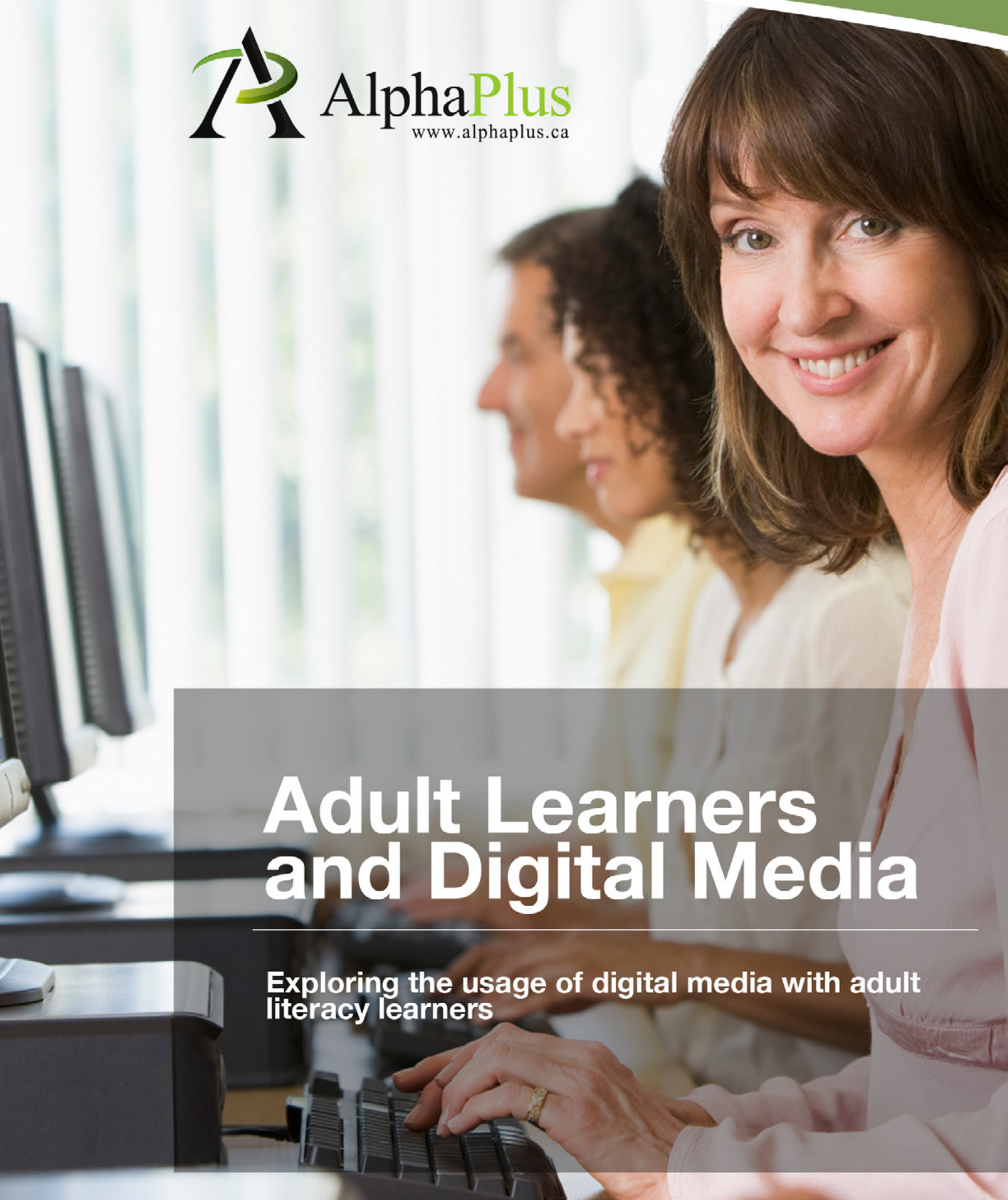

Adult Learners and Digital Media

Exploring the usage of digital media with adult literacy learners

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Final Report

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RESEARCH OVERVIEW

Despite the fact that adult literacy agencies in Ontario have a strong tradition of commitment to equity of access to literacy learning, and have been at the forefront of work in developing and understanding computer-based and Web-based literacy learning (AlphaPlus Centre, 2003), the emphasis of most programs is still on traditional print literacies. There is currently a dearth of research on the use of digital media in adult literacy programs. This research reports on the perceptions and experiences of ten adult learners with digital media as they work through small group sessions to create their own digital texts and then reflect on whether and how they think that digital media might help them build digital literacy skills and whether they might be able to apply these skills in their daily lives.

Purpose of the Study

The purpose of this small scale study was twofold:

1. To explore and understand the attitudes and experiences of adult Canadians who are non-users or limited users of digital media and Information and Communication Technologies (ICTs). This was done in order to more deeply understand the motivating factors that influence and shape adult learners' existing competencies with using digital media. (i.e. What are their experiences with digital media and ICTs and how is their motivation, confidence and sense of ability shaped by these experiences?)

2. To investigate the ways in which adult learners use and respond to digital media in order to expand their communication potential. (i.e., Do adult learners think that digital media such as PhotoStory or Glogster help them to build literacy and technology skills and are they able to apply these skills in their daily lives?)

Situating the Research

The critical nature of addressing adult learning is being heightened by dramatic demographic changes (Rubenson, Desjardins, & Yoon, 2005). Clearly, the changing age structure of the Canadian population has created a major challenge to economic prosperity as a decreasing inflow of young and highly skilled people into the labour market may undermine productivity, at the same time see adult workers remain in the labour force well beyond the traditional retirement age (Rubenson, Desjardins, & Yoon, 2005). In fact, there is already some concern that adult workers in Canada with fewer ICT skills has resulted in a deterioration of their position in the labour force (OECD, 2004).

From this perspective, in today's increasingly knowledge-based digitized economy, digital media literacy skills are increasingly becoming the cornerstones for the growth and prosperity of the province and to individual success (Statistics Canada, 2005; Webb, 2004). The economic benefits of a digitally literate workforce have been well

demonstrated and these skills must be continually augmented and sustained in order to fully realize the benefits of digital media in the workplace. The skills needed to effectively participate in a knowledge-based digital economy include the capacities to find, organize, understand, evaluate, create, and share information through constantly evolving digital technologies, technologies and innovations that demand continual learning and re-learning. Possessing these skills effectively allows adults to not only function in an increasingly digital world, but provides adult learners' with the confidence to use new communications and media services, which are becoming ever more important for participation in all other aspects of Canadian society (Veehhof, Clermont, & Sciadas, 2005). With low competency and motivation, non-and limited adult users of digital media are in danger of being left behind if they are not able to keep up with rapidly changing technology. Certainly, becoming more digitally media literate would allow adult learners to be less reliant on other people and organizations to use media such as the Internet for them. Through the use of digital media adult learners including those who are employees, jobseekers, newcomers, and others are more easily connected to the resources they need to enter the labour force, advance in their careers, enhance their communication potential, and for achieving fulfilling productive, expanding and participating lives within the context of our democratic society (Kellner, 2004; Kellner & Share, 2007; Lankshear & Knobel, 1998; New London Group, 2000).

To be literate in the 21st century, we need to be able to both read critically and write functionally regardless of the medium. In personal, civic, and professional discourse, multiple modes of expression, facilitated by the multimodal, multimedia nature of digital media, are not luxuries but essential components of knowing and communicating. The ever-expanding use of digital media is constantly reshaping the ways we acquire information and understand concepts. Although we have long communicated using images, sounds and gestures, as well as words, the contemporary difference is the ease with which we can combine these multiple modes--words, images, sound, colour, animation, video, and styles of print--in projects so that they are part of our everyday lives. Simultaneously, there results increased cognitive demands on the audience to interpret the intertextuality of communication events that include combinations of print, speech, images, sounds, movement, music, and animation (Bearne, 2003; Jewitt, 2008; Kress, 2003). Our youngest generation often takes these things for granted; however, most adult learners did not grow up in the digital age and therefore must be open to new learning in order to develop digital media literacy skills.

DATA COLLECTION METHODS AND ANALYSIS

In this small scale study, qualitative methods were used to elicit the perceptions and experiences of adult learners with digital media. Through small group and one-on-one interviews, we explored adult learners' attitudes and experiences with digital media. This was done in order to understand the challenges and barriers that may exist for adult learners engaging with digital media. Qualitative methodology is appropriate given that we are interested in exploring the perceptions and experiences of adults in relation to their practice of digital media. To know what motivates any individual in their choices is complex, and thus qualitative interviews allowed for an examination of the subtleties of the choices they made.

Small group interviews were conducted with a total of 12 participants. Seven participants were drawn from adult education centers in Windsor and five participants were drawn from Oshawa, Ontario. Through face-to-face interviews, we sought to gain greater insight into how adult learners cope with living in an increasingly digital world. Once data based on learner perceptions of digital media had been collected, the research team conducted small group sessions focusing on the use of digital media, including creating a short PhotoStory narrative (3-5 minutes) and an advertisement using Glogster. Following this process, we conducted follow-up interviews to ascertain whether and how the learners' perceptions of digital media had changed. More specifically, we explored whether adult learners think that digital media help them to build literacy and technology skills and whether they might be able to apply these skills in their daily lives. This report brings to light a set of issues arising from the analysis that relate to the research questions.

In keeping with the standard practices of Windsor's and UOIT's Research Ethics Boards, all the names of the participants used in this report are pseudonyms.

Data Sources

Throughout the process, researchers, and research assistants acted as participant-observers in the sessions and collected data using detailed observation notes and audiotaping of sessions. During the technology sessions, selected participants were interviewed at key points to gain more in-depth perspectives of noteworthy literacy events identified through observation.

The analysis was qualitative which is in keeping with the established practice of in-depth studies of site-based learning. Research data consists of (a) detailed field notes; (b) transcribed interviews with participants; (c) the digital texts created by participants; and (d) audio recordings of selected learning/authoring activities. We turn now to highlighting the major findings of the study, beginning with the Oshawa Research Site.

FINDINGS

Oshawa Research Site: John Howard Society of Durham Region, Adult Literacy Program

Contextual Factors and Background

The Adult literacy program at the Oshawa location of the John Howard Society of Durham Region is intended for adults who are 18 years of age or older who want to improve their reading and writing skills. It is the case that most of the adults in the Oshawa program also work on their math skills simultaneously. The program is free and voluntary. Although participants meet in a group setting, their programs are individualized and they work independently at their own pace and on their own schedule, with support from staff and volunteers on a one-to-one basis. All the participants are assessed by staff regularly so that modifications can be made to their programs according to their progress. Although there is a separate room with several computers and a larger, open room with long tables and a row of computers along one wall, there is very limited use of the computer technology in the program, with the exception of the incorporation of the computer reading program, "Autoskills" which was developed specifically for the learning disabled adult. With this notable exception, one of the coordinators of the program indicated that the computers were not used in the development of literacy skills. Some participants opted to use the computers to word process their written work but this was not a requirement. In an informal interview with one of the instructors it was noted that most of volunteers and staff were themselves unfamiliar with the array of digital technologies available to support digital literacy skills development. The instructor who worked with the five participants in our study explained that it was difficult to find volunteers and that he had been "brought out of retirement" twice out of necessity.

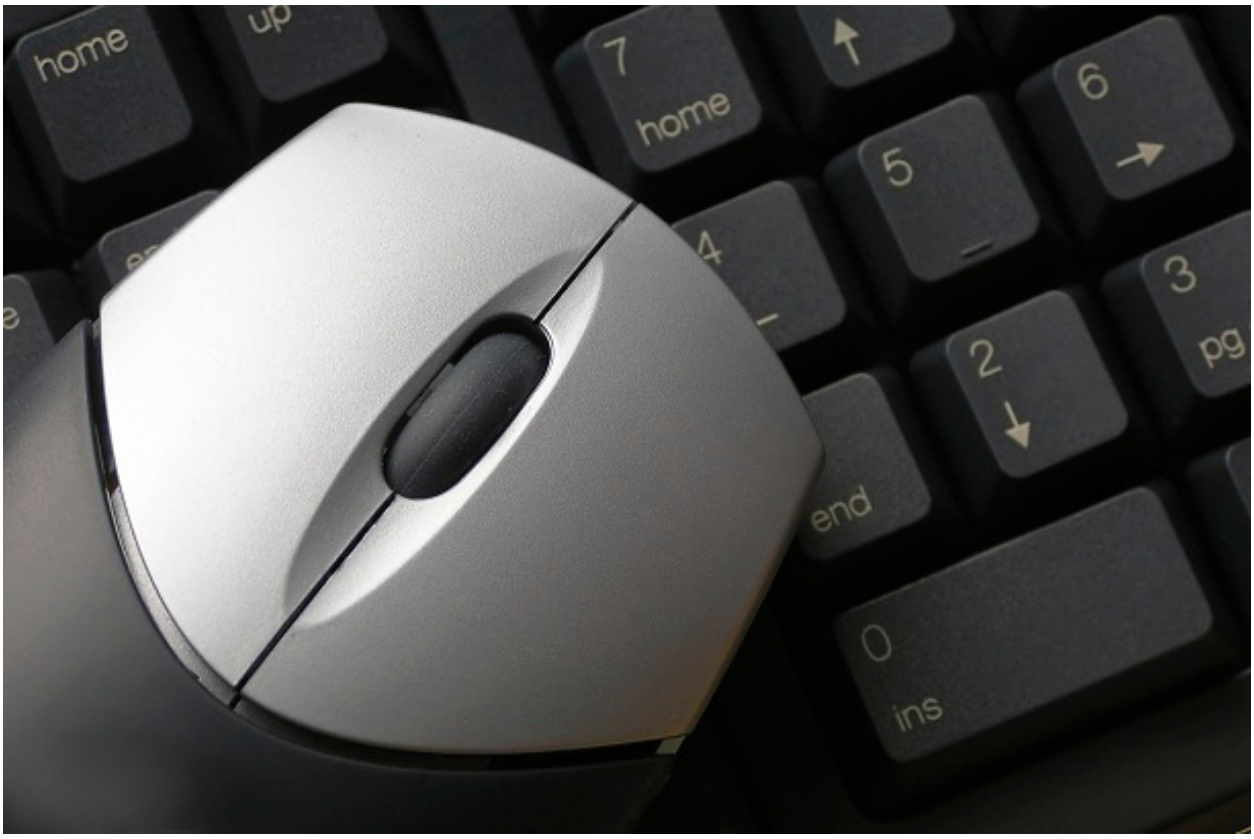
All five participants at the Oshawa research site were drawn from this adult literacy program. One of the coordinators of the program invited participants and distributed the letter of information and the consent forms. A mutually convenient date was established and the research team worked with the five participants at the research site for approximately two hours on the afternoon of May 5, 2011. At the beginning of the session, the group, both at the Oshawa and Windsor sites, was surveyed about their current digital literacy skills using the following nine questions:

1. How often do you use a computer to access the Internet?
2. How do you typically use the computer? The Internet?
3. Have you ever created/produced a digital text, i.e. a photo story, website etc? If so, what kind of text was it?
4. What skills did you have to have to succeed?
5. Have you ever shared a digital text with others? If so, how and with whom?
6. Did you learn how to access the Internet in school? If not, how did you learn?
7. How have you used computers/the Internet in your previous work?
8. What value do you think digital literacy skills have for you personally? Professionally?
9. What excites you about being involved in this research project?
10. What apprehensions about this project do you have?

Following the survey, the research team explained that we would be introducing them to two new programs: PhotoStory3 (a free download from Microsoft) and Glogster, a web-based interactive poster program. The programs were described and the participants were given the choice of which program to use. Three participants chose to create an interactive poster using Glogster and two participants chose to create a "how-to" video using PhotoStory.

The Oshawa Participants

Jennifer: Jennifer is a white female and in her 40s, who has a personal computer in her home. She stated that her reason for purchasing the computer was for her son in high school and that she herself had limited experience with using it. She logs onto the Internet daily to check email, search for recipe ideas, or to look up information. She had downloaded a program to make movies with personal pictures but she found it too complicated and has not used it since. Her initial response to the PhotoStory program was excitement and eagerness.



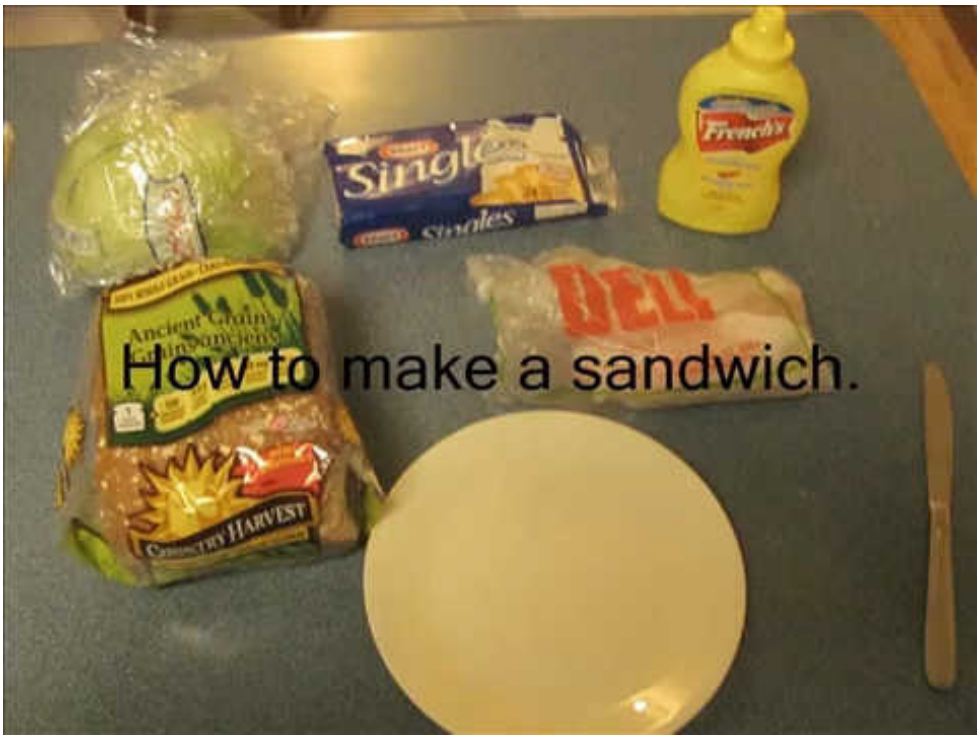
Ken: Ken is an older white male, in his late 50s, who has never used a computer. He said he has always wanted to learn how to use a computer but has never had the opportunity. He has no formal job training and did not complete high school. He had also spent an unspecified amount of his life in the prison system. His initial response to the PhotoStory program was also excitement and eagerness to get started on learning. He expressed his concerns that he did not know anything about computer usage and would need help.

Creating a "How-To" Video Using PhotoStory

Both Jennifer and Ken were quite excited about learning how to create a short video. Ken in particular was eager to begin, stating, "I would love to learn how to use a computer." We had taken some photographs of the making of a ham and cheese sandwich and uploaded them into a folder on the desktop of each laptop. The first task of the project was to import the images which they were able to do without any difficulty. The next task required them to put text over the images. Jennifer was able to quickly figure out how to do this and she began adding her own text with little prompting. Ken was shown how to add text and he added his title screen text "thisismypictures." He asked a few basic questions but essentially added each text blurb himself.

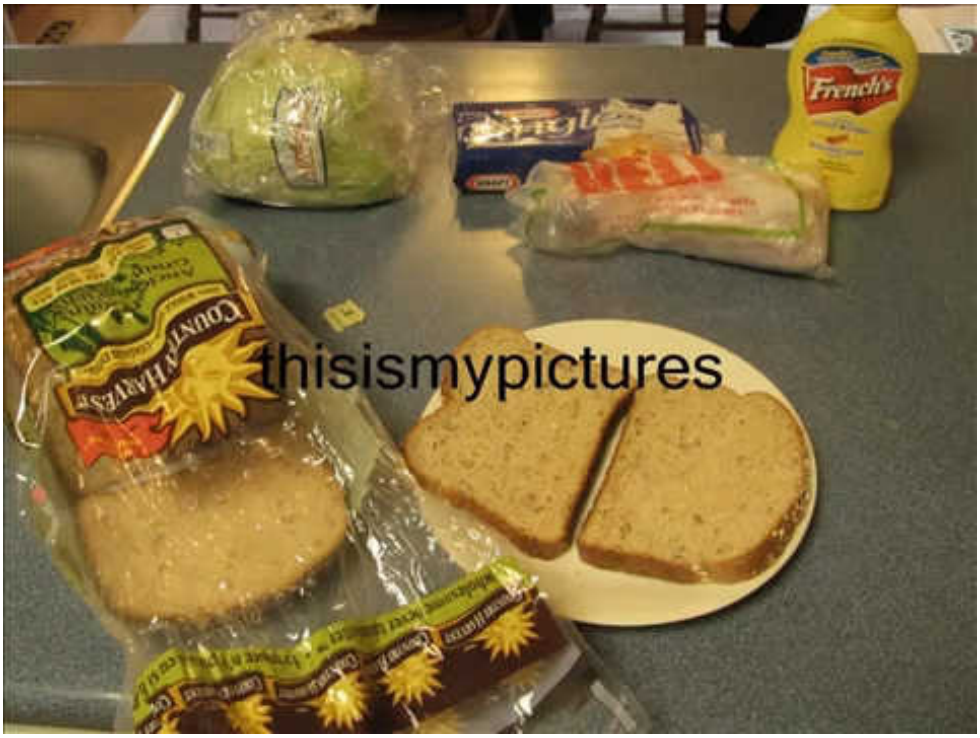
The next task of the project was to add narration over top of each image. We explained that they had the option to type the notes out first and read them or to just speak into the microphone, improvising the narrative as they went along. Jennifer decided to type her responses out first before recording. Ken was less comfortable with typing and decided to record on the spot. Both candidates previewed each of their recordings before moving onto the next one. During the recording process, both candidates were laughing. Ken took a humorous approach and recorded himself singing about how to make a sandwich. Jennifer did a more "cooking network" informative approach. Both

To watch Jennifer's PhotoStory move your cursor over the image to use the video player controls, or go to**: http://www.youtube.com/embed/zQ7F-S1h2Ao**



candidates appeared to be enjoying themselves and did not seem shy to record their own voices. Once Ken began singing and laughing, both candidates became more outgoing during the recording process.

To watch Ken's PhotoStory move your cursor over the image to use the video player controls, or go to: http://www.youtube.com/embed/imBSK-u7uQM



The final task of the project was to add music. The program comes with a bank of sounds and music and both candidates began testing the different samples. Jennifer decided on light soothing music for her video. Ken decided on what he called a "Stephen King" approach and chose scary sounding music.

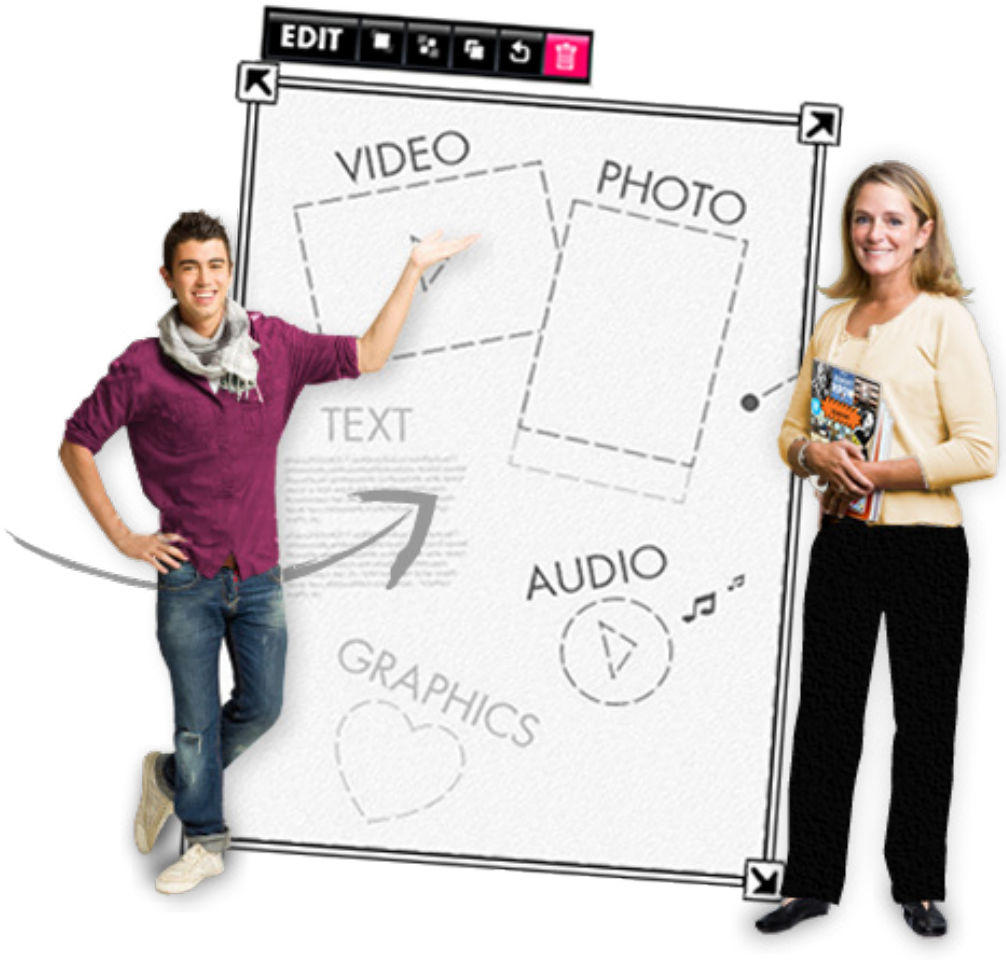
Both participants definitely had fun creating their "How To Make a Sandwich" videos and were excited about future possibilities: Ken noted, "If I had a computer, I'd love to make more and more of these" and "I could make some wild videos!". Linking the experience to his work in the adult literacy program, he commented, "This would be interesting to do in class what we're doing now when we do our reading. It would be interesting. Maybe you could talk to [name of coordinator] and he could pass it on because I think this would be easy for some of the students."

Ken was very proud of his video and offered to share it with others: "If you want your other teachers to hear this or your other clients, let them hear it, I don't care." He then called everyone around him to come and see his video, and then he asked the coordinator to view it too. Directing his comment to the coordinator, he said, "I can show you how to do this and then we could do this in class. It would be better than writing a book report." Jennifer was similarly excited about the experience. She commented, "This program is pretty cool. This is way easier than using any

program that I've ever seen" and she was able to envision future ways to apply her learning, noting "I really like this program. Now I can take pictures of my niece tonight and I can add baby music that I like."

Creating an Interactive Poster Using Glogster

In a separate room, using the John Howard Society computers, the three other participants worked to create an interactive poster using Glogster, a web-based program that enables users to add images, video, graphics, text and sound to posters. The initial task the research team devised was to have the participants create a "Job Wanted" poster, which would immerse them in the program while at the same time get them reflecting on their skill sets. All three participants were women; one was in her late 50s and the other two were in their mid-40s with children at home. All of the participants were tentative at first, but then eager and excited to begin. A rather lengthy discussion about the importance of digital technologies in young people's lives ensued. In particular one participant, Linda, had a strong awareness of cyber-safety. Speaking of her children and their access to the Internet, she said "The oldest



To find out more about Glogster go to **http://edu.glogster.com/**

one, I know all his passwords and the youngest one I know too. But the youngest one is not allowed [to use the Internet] unless one of us is there." Linda felt that having a computer at home was important for her children but she was "not sure" how she might use a computer to develop her own literacy skills.

The research team began to work with the three participants to create the interactive posters. They did not engage with the idea of creating a "Job Wanted" poster so we shifted gears and had them just begin to explore the features of Glogster. We showed them how to import images and text and then gave them time to play. Two of the participants created pages with random images but Linda decided to make a postcard for her two sons. Once she had settled on a purpose for her poster, Linda became motivated and excited. She incorporated images and the text, "I love you, boys" and she asked if she could print it out to give to them. Although she was unable to see the relevance of creating an interactive poster in the beginning, by the end of the session she was asking, "Is this class going to be every day? Or are there certain days you are going to be doing it?" and commented, "I just wish this [kind of class] would continue." Linda noted that they did not have many opportunities to use this kind of digital technology in the program where the focus was on print-based functional literacy. At one point, one of the staff came into the room to ask her about her notebook and she exclaimed, "See right there! Paper and Pen." Although only Linda created a finished poster, all three women felt that more computer time to balance 'pen and paper' time would be beneficial to them.

Windsor Research Site: Windsor Public Library, Adult Literacy Program

All participants from the Windsor, Ontario research site were drawn from the Windsor Public Library, Adult Literacy program. The literacy program is intended for adults, 18 years of age and older and is funded through Employment Ontario and The Ontario Ministry of Training Colleges and Universities, Skills Investment Branch. According to their mandate, the provincially funded program provides disadvantaged adults in Windsor with basic literacy one-on-one tutoring, on-going tutor and learner support, basic literacy small group classes for persons with developmental disabilities, workforce classes, and some basic computer classes. At the time of the study, Emma, the Adult Literacy Teacher, mentioned that the age of the adults participating in the program ranged between 19 and 64 years. One prerequisite at the Windsor site was their first language must be English. The Windsor Public Library program provides adults opportunities to develop digital skills and access to the Internet or computers in general, at the same time also provides a number of other important services such as training and support.

Background and Context

There were seven participants involved from the Windsor Context, two male students, and four female students and the Adult Literacy teacher, Emma. We interviewed the Adult Literacy Teacher, Emma, in order to secure a deeper sense, not only of the community from which the participants emerged, but also of the individual students themselves. All participants from the Windsor context faced issues of poverty and came from marginalized communities where resources were severely limited. At the time of the study, all of the participants in the Windsor context were unemployed, although most mentioned to us that they were actively looking for work. Depending on the participant, the time unemployed ranged anywhere from several months to five or more years. As with many others in the labour force, some participants in our study were exited out of the Ontario labour force due to the 2008-2009 economic recession. This was the case for Ted, who lost his job in 2008 and has not been able to secure employment since. As such, all of the participants within the Windsor context came largely from economically distressed and disadvantaged communities and were clients of Ontario Works, a provincial financial aid program that helps support individuals to meet basic needs such as food and housing. Some of the participants were also part of the Ontario Disability Support System. This provincially funded program helps adults with particular disabilities that are in financial need, pay for various living expenses such as food and housing.

The participants all had very low and limited literacy skills. Emma, the Adult Literacy Teacher made special mention of this fact, and highlighted that they particularly had very low reading skills. In most cases the students in the program were only able to recognize a few familiar words or two in simple text. In fact, Emma mentions that when they first entered the program, “some of the participants did not know the alphabet.” According to Emma, it was also the case that some of the participants were not be able to use printed information to make decisions such as understanding how to read road maps or write/read grocery lists. In some cases, according to Emma, important and everyday tasks (when one is not employed) such as filling out a job application can be difficult if next to impossible, a task that is required of some of them in order to qualify for, or, maintain government support. In light of past difficulties with print literacy, it was not surprising then to find that many participants lacked a secondary school diploma, and those who did most often came from a life skills program. We now briefly turn to describing the task we asked the participants to engage with.

What We Did

All of the participants at the Windsor site worked with PhotoStory. The decision to only use PhotoStory was made in light of the adults’ very low literacy skills, overall limited experience with technology and the simple matter of time. At one of our first meetings with Emma, she suggested that it would be best to keep the task as simple and as straightforward as possible. Given that PhotoStory is not an overly complex program, we thought the participants would find it manageable. For each participant, we visited the library twice, once to conduct a presession interview that was intended to better understand the participant’s attitude toward, and experience with technology. The second visit we had each participant work with PhotoStory on an individual basis, asking them to create their own narrative. Here, after a brief demonstration we asked each participant to select and import the images which they were able to do without much difficulty. The next task required them to put text over the images. At the end of each individual session, we conducted a face-face, individual interview.

When working with PhotoStory, each participant was asked to select and import images. A wide variety of various images were available to the adult learners, found in a folder on the desktop. In order to create a story, the students were asked to select only four to five images. Once the images were selected and situated in PhotoStory, the adult learners were asked to write corresponding text over the images. Most of the adult learners were able to quickly figure out what they wanted to say, but most often needed help writing their own text. They used simple sentences, and often had difficulty with grammar and the spelling of common words. Ted, for example, asked for help spelling words such as “like” and “library.” The final task of the project was to add music. Here, the adult learners were able to select various sounds and music, and each participant began trying various samples. Once their narrative was created, adult learners were able to play their story on the computer.

Next, we draw from the voices of four key participants, three students and Emma, the Adult Literacy Teacher in order to better understand the relationship between adults and digital media. We begin with Ted.

The Windsor Participants and PhotoStory

Ted: Ted is a white male, age 60, who was a labourer for 35 years. Since his early twenties, Ted has worked in a local factory, loading and unloading skids. He was laid off when the 2008-2009 economic recession hit. Unfortunately, Ted mentioned that he did not have a pension or a spouse’s income to fall back on, nor did he receive any severance package or benefits when he was let go. Being older and “slower” he was not hired back when the company rebounded from the impact of the recession. Like all the participants in our study, Ted struggles with poverty on an everyday basis. Ted is ambivalent about looking for future paid labour; he mentions that given his experience, his age, his declining health, and his lack of educational skills and credentials his possibilities for paid labour are limited.

When asked if he thought learning new digital/technological skills would help secure participation in the labour force, Ted mentioned that he was not really interested in learning about technology, in part because he "didn't know how to get into it." Although all of the participants had very low levels of literacy skills, Ted had the lowest. Ted struggled with writing reading and writing simple text. Like many adults from economically disadvantaged groups, he had very little past experience with technology. Ted had no home computer. For Ted, he simply "can't afford one." Compounding the problem, due to his job loss, was Ted no longer had a cell phone, although he had one in the past for a number of years; Ted does not use email, he does not text, or, use any form of social networking.

In our presession interview which explored his attitude toward digital media, Ted mentioned that, while he enjoys computer technology in general, he is largely indifferent toward it; in his own words, he sees no "real value" in it. In Ted's mind, he "got through life without it, so why do I need it now?". Ted's less than positive attitude toward engaging with and learning to use technology was reflected in comments made by Emma, the Adult Literacy Teacher. Here Emma mentioned that working with adult learners over time has taught her that the "biggest challenge" facing educating adult learners is often their attitude toward literacy in general and computer technology in particular. Emma said that "most" adults that she has taught in the program simply do not see literacy, much less digital literacy, as a "necessity" in life. For Emma, they simply do not see "it as valuable." Emma goes to state, that in her experience, many adult learners simply hold the belief that since they have "gotten through life" so far without having to acquire literacy skills, digital or otherwise, why bother now. So for Emma, a "big part" of her "job" working with adult learners is trying to convince them that their lives and labour opportunities would be better if there were not only literate, but digitally literate as well.

When asked in the presession interview about whether or not he felt any anxiety or stress upon learning a new software program, Ted said, "no, not really." Even though his digital literacy skills were very weak, Ted appeared to be open to exploring PhotoStory and comfortable with the overall process. If learning digital literacy skills are to happen for students like Ted, being familiar and comfortable with technology should be viewed as an advantage, helping to contribute to building a self-identity that includes understanding themselves as competent learners and educational achievers. Ted used PhotoStory to develop a five image narrative. Once shown and given directions, on how to select the images, Ted was mostly able to do it independently. Ted found much more trouble in trying to write in the text. Being largely illiterate, Ted needed a significant amount of support from the researchers. Here, Ted was not only supported substantially in spelling the words, but in typing them in as well. Ted was more capable in selecting and managing the music component of the program. In fact, once completed he played his narrative twice in order to listen to the music.

Despite seemingly finding some enjoyment in the using the program, in our post session interview Ted remained largely ambivalent about using technology; while he stated that he thought his experience with PhotoStory was enjoyable (he laughed at times) and that he stated that he was excited in that he "learned something new," he did not see himself using technology in any expansive or extended way in the future. For Ted, computer technology and the Internet were useful, only as limited tools to mostly to check on hockey scores or other sport related material or potentially play games. Ted's ambivalence toward technology is some cause for concern. For adults like Ted who see no real value in acquiring technological skills, the future appears bleak.

Susan: Susan is a white female, mid-50s, who left formal schooling in Grade 9. Susan spent over 17 years in Ontario's labour force, mostly in building maintenance. She was laid off over seven years ago, and has been unemployed since. Susan enrolled in the adult literacy program because, "I can't read" and wished to acquire enough print and digital skills and academic credentials to re-enter the labour market. Susan had very little experience with technology. When she was active in the labour force, she was not required to use technology. Like Ted, due to hardware costs and the ongoing challenge of paying monthly fees, Susan does not have a computer at home.

Unlike Ted, however, Susan had a positive view of technology. In our presession interview Susan, mentioned to us: "I love the computer." Susan enjoyed using technology as a way to connect with other people, but she also understood how technology was reshaping the labour market. Here, she saw a connection between acquiring digital/technology skills and increased opportunities in the labour force: "Today if you do not have computer skills, you are out of luck." The understanding that increased digital/ "computer skills" would help secure future employment appeared to help motivate Susan to learn about how to use technology, although to what to degree is hard to tell.

Susan had little trouble understanding and working with PhotoStory. Once the researchers demonstrated how to use the program, Susan had little difficulty developing her own five panel narrative. Possessing a higher level of literacy skills, Susan was able to write slightly more complex sentences over the images she had selected. Over top of the first image in her story, which was a photo of the Windsor Public Library, she had written, “I like to the library to sing our movies games.” Although Susan struggled with basic literacy issues such as spelling, she was able to write on the computer her thoughts and ideas in a fluent way. In the end, she felt excited about the program, commenting that the “texting on it was pretty neat … you could add your own little sayings to the pictures.” And like Ted, she was eager to incorporate music to her story.

In our post-session interview, Susan was happy and proud of what she had created -- so proud in fact that she suggested that this “story would be great to send to my children.” Not only do Susan’s comment reflect how using and creating ‘photostories’ may help contribute to building a positive self-identity, but also illustrates how acquiring digital literacy skills may in fact increase social inclusion. By wanting to share her story with her children through technology, Susan was demonstrating the importance of some Web 2.0 affordances, including participation in an online community. Finally, Susan mentioned that “I like learning new things on the computer.”

Samantha: Samantha is an energetic, thoughtful white female, 25 years of age. She graduated high school in a technical program and entered the labour force as a domestic helper. Samantha was, however, laid off from her work as a housekeeper/cleaner three years ago, and has been unemployed ever since. Unlike Ted and Susan, Samantha completed a high school course in computers, providing her with some of the basic digital knowledges and computer skills. She understands basic functions of computers, and in her own words, is able to “turn on the computer” and access “YouTube and Facebook.” Samantha does not consider herself to be “computer literate.”

And, similar to Ted and Susan, Samantha does not have a home computer due to costs from hardware and monthly billing. But dissimilarly from Ted and Susan, she did have some work-related experience using some limited kinds of technology (e.g., electronic cash register) while being employed at a local Tim Horton’s. And, unlike Ted and Susan, Samantha used the library Internet for various reasons including accessing Canadian Job Search, an online search engine to find work. Samantha also mentioned that she uses the Internet to do some other forms of research. Here, for example, she mentioned she was interested, for example, in the tsunami that happened few years ago on the coast of Japan. Being motivated to learn more about it, she mentioned that she had accessed online newspapers to find stories about the incident.

Samantha had little trouble understanding and working with PhotoStory. Samantha quickly selected her four photos, but struggled with writing the accompanying text writing. Like many of the participants, Samantha did not do well with writing coherent sentences and was often prevented from completing the writing of text to accompany an image because of her inability to spell. Yet, despite this limitation, Samantha remained positive about literacy and technology, in particular the way in which she could add music to the images. For Samantha, this feature of the program “was really good,” and mentioned that she “like[d] that.” After finishing the narrative, Samantha expressed a wish to use her own personal photos and music in a future story.

In our post-session interview, Samantha held a generally positive attitude toward technology, although like most of our participants she remained somewhat ambivalent toward it. For example, while she recognized the connection between increased opportunities in the labour force participation and increased digital media skills -- “If you want to sit at a desk, then computers are important”--she simply decided for herself that they were not, at least for the present moment, “for me.” When reflecting on working with PhotoStory, she did recognize how exposure and opportunity to work with technology may increase levels of confidence: “I am still not ‘high’ enough with the computer, I [do] feel ‘better’ about using the computer.”

DISCUSSION

In general, we found that being able to create a decent product helped participants grow in their confidence to engage with technology. Some of the participants such as Susan (Windsor), Samantha (Windsor) and Ken (Oshawa) could see a variety of applications within their literacy program, most often though this was linked to personal use where they could swap photos with family and friends on sites such as Facebook. The notion that communication could include multimodal forms of expression (i.e. visual, audial, gestural, spatial as well as linguistic) was a foreign concept at the beginning of the sessions; however, the idea that various modes of expression can work in concert to make meaning, was validated by these adult learners and they were advocating for inclusion of this kind of work in their programs.

Adult learners' performance with various programs such as PhotoStory, show that many of the learners faced serious difficulties in comprehending the more complicated technical knowledge concerning various components of the program. While they were able to use the simple functions of the software programs, a deeper understanding seemed to elude them. Given that systems of public education in Ontario such as the University of Windsor and St Clair College (a post secondary institution that Samantha aspired to attend) and other adult educational institutions, employers, and municipal, provincial, and federal government agencies have made the move to putting services online, adults' limited capacities to understand and navigate the technological/digitized terrain are worrisome. This growing trend has raised the costs of digital exclusion for the poor, working poor, and working class and other vulnerable populations, who lack Internet proficiency and, more importantly in our view, the resources to secure regular, ongoing high quality Internet access.

Most of the adults in the study were not interested, before or after, in detailed technical knowledge such as understanding and using computer terminology, or saving and storing their product. This may suggest that adult learners see their relationship with technology as more consumers than producers. This explains why many of our participants wanted to obtain the necessary skills for using general-purpose software and the Internet for reading newspapers or sending emails, or posting images or things on social networking sites such as Facebook. However, we know that to be digitally literate, we need to be able to use technology, critique it and be producers as well (Selber, 2004).

Though small in scope, our results suggest a relationship between varying levels of literacy skills and ICT use. Adult learners' attitudes toward technology (including its perceived uses), use of the Internet, and use of digital media for daily tasks are linked to literacy skill levels; the higher the literacy level, the more likely adult learners are engaged with computers and digital media. Those less likely to engage with ICTs tended to have lower literacy levels. This theme was best exemplified through Ted. Troubling, is the emerging trend that suggests a minority of limited or non users of technology and digital media expressed ambivalence in learning to use a technology/digital media. This finding has economic and social implications for provinces such as Ontario in general, and working class cities such as Windsor and Oshawa in particular, if those adults who perhaps stand to benefit most from working with ICTs by obtaining employment and government information are not in a position to access and use them.

Most of the adults in our study were not interested in technical knowledge (for example, understanding and using computer terminology, and understanding technical specifications and internal operations of the PC, such as processor, RAM memory, hard disk, etc.). On the other hand, almost everyone wanted to obtain the necessary skills for using general-purpose software and the Internet. Although they did not initially see a direct connection between gaining digital literacy skills for the purposes of obtaining employment (associating computer technology with "desk jobs"), even the most reluctant participants became excited by the possibilities of using ICTs to connect with others. We cannot help thinking that Susan, Ted, and other participants' economic circumstances again highlight and reinforce the way in which public libraries in Ontario and elsewhere play a critical role in the lives of those economically marginalized. If nothing else, they help ensure some Internet access and training for people who

would not find it anywhere else in their community. More specifically, one outcome of this vital role we observed was the way in which publicly funded spaces foster and provide opportunities for greater social inclusion for otherwise disadvantaged, isolated groups. Susan, for example, engaged with technology mostly for personal reasons, as a method to connect with other people and her family through social networking sites. By having access to the Internet and having some digital media skills, albeit very limited, allowed Susan and others to create a greater sense of inclusivity, enlarging, and expanding their world. Susan, for example, remarked that she was able to connect with family members including her daughter who lived in another province through social networking. Her motivation, then, to engage with technology was driven in part by her desire to overcome, not only financial restraints, but geographic ones as well.

Moreover, limited economic circumstances and inability to have open and ongoing access to the Internet at home helps create a noticeable barrier for adults such as Susan and Ted wishing to develop their digital literacy skills. As Dailey et al., (2010), explain:

> The high price of broadband services is the most obvious obstacle to wider use and a critical factor in every study conducted on the subject. High-priced monthly subscriptions are very difficult for low-income households to sustain and produce large numbers of "un-adopters"--people who have been cut off from or had to cancel broadband service. (p. 6)

Moreover, many of the participants' capacity to secure paid employment in order to maintain even their existing overall quality of life appear to be limited. As the Internet increasingly becomes a critical tool for job-hunting and securing academic credentials as an adult, failure to develop ICT skills itself becomes a driver of economic marginalization (Media Awarness, 2010). As online services expand in Ontario and elsewhere, lack of access increases the relative costs of a wide range of activities, from navigating city services, to communicating with family members.

Emerging research shows that lack of digital skills increases the risk of furthering the isolation of those already dealing with issues of economic or social exclusion. In a recent research report on broadband adoption in low-income communities situated within the American context, it was noted that the social function of the Internet has changed, and will continue to change dramatically, establishing a trend that has the potential to create a vicious cycle where digital exclusion perpetuates social and economic marginalization (Dailey, Bryne, Powell, Karaganis, & Chung, 2010). This is simply to suggest, that adults such as Ted who do not continue to learn and upgrade their digital media/ technological skills will simply fall further and further behind in ways that would not have been imaginable in the past.

To put it a little differently, adults such as Ted who do not value or simply lack the motivation to acquire new digital literacy skills most likely isolate themselves socially, economically and otherwise further in an increasingly digitized world. As other researchers have pointed out, only a decade and a half ago, what was mostly an add-on to other forms of information and communication has become increasingly a basic requirement of social and economic inclusion. As Dailey et al., explain:

> The reasons are simple, though often not visible to those who take Internet access for granted. Educational systems, employers, and government agencies at all levels have shifted services online, and are pushing rapidly to do more. While this is, in most contexts, a boon for the well connected and a cost-saver for institutions, it has also raised the costs of digital exclusion for low-income and other vulnerable populations, who often lack regular Internet access, Internet proficiency, or both. (ibid., p. 4)

As noted, Susan (Windsor), Linda and Jennifer (Oshawa) saw the potential of digital media as a way to interact with family and friends. The notion of "digital immigrants" (Prensky, 2001, 2005), the Net Generation, Millennial students and the like, is a familiar trope in the media. However, we have found that rather than looking at age as a determining factor for whether people are proficient or non-proficient users or adopters of digital technologies, a more significant factor is access and this is typically related to social class. To reiterate an important point, the digital divide can only be narrowed by providing the kinds of services offered at the Windsor Public Library. In the case of the Oshawa site, finding human resources who can teach digital literacy skills development is crucial.

We also feel it is important to highlight the significance of how, within local contexts, power and power relations, directly or indirectly, impact adults' relationship to acquiring digital literacy skills. Broadly speaking, research shows

that a “friendly climate of mutual respect, trust, openness, and supportiveness developed in digital literacy classrooms had a critical impact on enhancing adult learning” (Jimoyiannis & Gravani, 2011). Classrooms where adults learn best, are in some ways no different that classrooms where children learn best; they need to be safe spaces where learning can happen. Tett and MacLachlan (2008), have emphasized that in learning communities where power and meaning are mutually negotiated, learners begin to recognize their personal worth and power and its impact in the wider world.

In our small scale study, power and power relations seemed to play a noticeable role in shaping the learning context. Within the Windsor context, for example, one key obstacle facing adult learners, according to the Emma, the Adult Literacy Teacher, was helping students overcome their shame and embarrassment in coming into the classroom. In fact, Emma mentions that social class and class relations played the largest role in preventing her students from coming to class to learn. Not only do disadvantaged individuals face economic challenges such as not being able to pay for bus fare in order to attend classes that help students learn technological skills, but Emma highlights how her students often felt “embarrassed” and had a sense of “shame” when entering the public library. For Emma, when entering the library by themselves, the individual students had to face what could be construed as a class-based gauntlet where they were subjected, in Emma’s view, to other people’s negative “value judgments.” The treatment and the surveillance of her students in this way by the public in general impacted the learning environment in a way that prevented rich learning to happen for adult learners. But it wasn’t just the general public that impacted the self-esteem of Emma’s students. Emma, in fact mentions that one library staff member in particular had issues with her students, “often looking down her nose” at them. Unfortunately, Emma goes on to note that this staff member in particular announced to other people that one of the adult learners goes to the local mission for lunch every day, leaving Emma to simply sigh and state, “social class is a big issue.” In order to address and offset the issue in some small way, Emma and some of her “literacy team” now go to meet the adult learners as they enter the library and escort them to the classroom.

CONCLUSION

Adult learners, in particular working poor and working class adults, are at a disadvantage as younger students aged 25 and under are significantly more likely to grow up with a computer in the home than those aged 25 and over (Statistics Canada, 2005; see also Prensky, 2001). Certainly age plays a significant role in determining which adults engage with the Internet. According to a 2009 Statistics Canada report, 98% of Canadians between the ages 16-24 were online, compared to 66% of those aged 45 or older. The younger adults have been immersed in a media-technological saturated world where they have spent large portions of their lives surrounded by and using computers, videogames, digital music players, cell phones, iPads, and iPods.(**1)** Yet, for adult educators it is important to keep in mind that while younger adults are born into an increasingly digitized world, it is the older age group of Canadians that accounted for 60% of new Internet users. This emerging trend presents opportunities for cultivating ICT and digital literacy skills in older adults (Statistics Canada, 2009). Yet, despite this trend and in light of the way ICTs emerge, develop, and change rapidly, there remains fear among educational stakeholders of a developing disconnect between the skills and competencies of adult students and those skills that are in demand within the current labour market (OECD, 2004). Moreover, there exists a concern that a lack of skills and competencies may also cause a slowdown in the introduction of ICTs in jobs filled by older workers (OECD, 2004). Clearly, since Ontario's knowledge-based digital economy will be even more reliant on technology than it is today, the need for adult learners to become more digitally competent will grow exponentially, and the interconnections required among adult learners and digital media will become stronger (Veenhof, Clermont & Sciadas, 2005). These changes under-score the importance of ensuring that adult learners participate successfully with digital media in order that they can become productive and contributing members to an ever more technologically reliant society.

In considering adult learners' relationship to new literacies, we feel issues around social class must be taken much more seriously. The tendency to obscure class from an analysis of adult learners and their relationship to ICTs and digital media redirect attention from how social class shapes student achievement, and more importantly relationships to economic engagement and opportunities. Against the backdrop of recent large scale economic restructuring which is associated with the processes and rise of a postindustrial, neoliberal policy-scape and the triumph of global capitalism, which has to a degree, transformed the occupation and class-based structure of society in a way that has increased economic inequality, people from lower income communities appear to be more risk socially, politically, and economically (See Camfield, 2011; Connell, 2010; Greig & Martino, in press). Without significant financial resources that help adults secure the necessary social, cultural, and technological/digital capital required to succeed in the "new economy," people from marginalized communities will likely become increasingly socially, politically, and economically disenfranchised (Van Galen & Noblit, 2007).

(1) Here, we need to warn against the use of overgeneralizations as they often simplify complex social and political issues in a way that is not helpful. For example, contra Prensky, some research shows that there is certainly a range of diversity within age categories (as with any category) when it comes to young adult ICT and digital literacy skills. Not all adults under the age of 24 have acquired highly sophisticated technological/digital skills. Once social class is taken into consideration a somewhat different, more messy and complex picture emerges when it comes to which adults within any given generation engage with technology. See Statistics Canada, 2009; See also Dailey, et al., 2010.

This is not a trivial point. In fact, according to a recent Statistics Canada (2010) report, socioeconomic factors are the most significant barriers to increasing digital literacy among adults; indeed the report notes that the socioeconomic digital divide is unquestionably significant in Canada. The recently published report states that 94% of individuals in the top income quintile -- which means Canadians who earn more than $85 000 per annum -- used the Internet; while only 56% of individuals in the lowest quintile--which means people who earn less than $30 000 per annum -- report Internet use. In our view, this seems to suggest that income plays a far more significant role in determining who becomes digitally literate than was assumed in the past. For many of the participants in our study, young and old, this did seem to be the case. This suggests that one way forward would be to increase and expand publicly funded digital literacy classrooms and spaces that afford those adults in most need open access to the Internet and rich, ongoing opportunities to develop digital literacy skills. For society in general, and for lower income groups in particular this change would seem like a positive and productive way forward.

REFERENCES

AlphaPlus Centre. (2003). *What difference does it make? Literacy learner perspectives on Web-based learning with AlphaRoute*. Centre AlphaPlus Centre.

Bearne, E. (2003). Rethinking literacy: Communication, representation, and text. *Reading Literacy and Language*, 37(3), 98-103.

Camfield, D. (2011). *Canadian labour in crisis: Reinventing the workers' movement*. Halifax: Fernwood Publishing.

Carmen, L. (2003). Pedagogy, connectivity, multimodality, and interdisciplinary. *Reading Research Quarterly*, 38(3), 397-403.

Connell, R. W. (2010). Understanding neoliberalism. In S. Braedley & M. Luxton (Eds.), *Neoliberalism and everyday life* (pp. 22-36). Montreal: McGill-Queen's University Press.

Dailey, D., Bryne, A., Powell, A., Karaganis, J., & Chung, J. (2010, March). *Broadband adoption in low-income communities*. The Social Science Research Council.

Greig, C. J., & Martino, W. (in press). *Canadian men & masculinities: Historical and contemporary perspectives*. Canadian Scholars' Press.

Jewitt, C. (2008). *Technology, literacy and learning: A multimodal approach*. NY: Routledge.

Kellner, D., & Share, J. (2007). *Critical media literacy, democracy, and the reconstruction of education*. In D. Macedo & S. R. Steinberg (Eds.), Media literacy: A reader (pp.3-23), New York: Peter Lang Publishing.

Kellner, K. (2004). Technological Transformation, Multiple Literacies and the Re-visioning of Education. *E-Learning*, 1(1), 9-37.

Knobel, M., & Lankshear, C. (2006). *A New Literacies Sampler*. New York: Peter Lang.

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

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

Media Awareness Newtwork. (2010, July). *Digital literacy in Canada: From inclusion to transformation*. Retrieved from **http://www.media-awareness.ca/english/corporate/media_kit/digital_literacy_paper_pdf/digitalliteracypaper.pdf**

New London Group. (2000). A Pedagogy of multiliteracies designing social futures. In B. Cope & M. Kalantzis (Eds.), *Multiliteracies: Literacy Learning and the Design of Social Future*s. London: Routledge.

OECD. (2004). "ICT skills and employment." Information Technology Outlook 2004, Working Paper on the Information Economy, Paris, April 1-2.

Prensky, M. (2001, October). Digital natives, digital immigrants. *On the Horizon*, 9(5). Retrieved from **http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf**

Prensky, M. (2005). Listen to the natives. *Educational Leadership*, 63(4), 8.

Rubenson, K., Desjardins, R., & Yoon, E. (2005). Adult learning in Canada: A comparative perspective. Statistics Canada: Catalogue no. 89-552-MIE-no. 17.

Selber, S. (2004). *Multiliteracies for a digital age*. Carbondale, Ill.: Southern Illinois University Press.

Statistics Canada. (2005). International adult literacy and skills survey: Building on our competencies. *The Daily*, November 30.

Statistics Canada. (2010, May). Canadian internet use survey. Retrieved from **http://www.statcan.gc.ca/daily-quotidien/100510/dq100510a-eng.htm**

Webb, S. (2004). Can ICT reduce social exclusion? The case of an adults' English language learning programme. *British Educational Research Journal,* 32(3), 481-507.

Van Galen, J. A., & Noblit, G. W. (2007). *Late to class: Social class and schooling in the new economy*. State University of New York Press.

Veenhof, B., Clermont, Y., & Sciadas, G. (2005). Literacy and digital technologies: Linkages and outcomes. Statistics Canada. Catalogue no. 56F0004MIE.

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