

Exploration of Newcomers' Access to Internet Literacy

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### **Dedications**

I dedicate this thesis to my mother, Lily. I also dedicate this thesis to my two sisters, Colette and Didi. Your love, your friendship, and your belief in me, have always encouraged me to be the best that I can be. I also dedicate this to Paul. You are my rock. I finally dedicate this thesis to all the Newcomers who might have once been misunderstood, marginalized, or not appreciated because of who they are and where they come from. You are the reason for conducting this study. I hope your voice is heard, I hope that society will respect and appreciate you for who you are and what you are capable of.

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“ There is a complex mutually evolving relationship between a technology and broader social structures, and the relationship cannot be reduced to a matter of the technology’s existing on the outside and exerting an independent force” (Warschauer, 2004, pp.202).

### **Abstract**

The purpose of this study was two fold: (1) to examine how the distribution of resources within and outside an Enhanced Language Training Program (ELT) affected a group of newcomers' access to Internet literacy development; and (2) to discuss ensuing pedagogical and curricular implications for the ELT Program.

The relationship between the distribution of resources and a group of newcomers' access to Internet literacy development was studied through a hybrid of two frameworks: van Dijk's (2005) digital divide and Warschauer's (2004) social inclusion.

The key findings were that the distribution of resources affected access four ways: (1) resources affected multiple types of access, (2) the effect of resource distribution on access was both cumulative and successive, (3) distribution of resources could either facilitate or impede access, and (4) Internet literacy development could potentially increase or decrease the resources. The findings resulted in implications for the ELT program and teaching.<sup>1</sup>

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<sup>1</sup>The immigration centre where this research was conducted, requested that their organization name be published in this thesis, along with the city where this centre is located. The name of the teacher and students are kept anonymous using pseudonyms. The University of Ottawa Faculty of Education and Ethics Board approved the terms of this research.

## **Chapter 1**

### **Introduction**

The purpose of this qualitative case study was two fold: (1) to investigate how the distribution of resources within and outside an Enhanced Language Training Program affected a group of newcomers' access to Internet literacy development; and (2) to discuss ensuing pedagogical and curricular implications for the Enhanced Language Training Program. This was accomplished by giving voice to a group of newcomers in an Enhanced Language Training program which focused on language learning and job-specific language skills, an integral part of getting learners prepared for the Canadian workforce (Integration-net, 2009).

### **Background and Context**

Canadian society is unique in its demographic makeup. The population of Canada has surpassed 34 million, with one in five being foreign-born (Statistics Canada, 2007b). Due to liberal immigration policies, it is estimated that by 2031 one in three Canadians will be a visible minority (Friesen, 2010). This immigrant population is significant to the infrastructure and identity of Canada, a country globally known to celebrate the diversity of its population. Canada's "cultural mosaic" implies that immigrants are able to integrate into society without losing their identity or cultural traditions. Indeed, many minority populations continue to hold very strong cultural ties to people from their communities in Canada and abroad.

Canadian cities have some of the most diverse populations in the world (Statistics Canada, 2003a). The majority of newcomers settle in the larger Canadian cities because of the wide array of government-funded immigrant services, which are a key component to their successful settlement and integration (Citizenship and Immigration Canada, 2009). The area chosen for this study is a city in southern Ontario.

Fifty two percent of the population in this city is foreign born and over half of the city's foreign-born population consists of immigrants from the Middle East and Asia (Canada Census, 2006). Canada's language training is more comprehensive than any other in the developing world (Thakur, 2008) and helps explain why over three quarters of the immigrant population in the city have become Canadian citizens. This trend is facilitated by 12 immigrant and settlement centers, which provide many services and are often government funded. Many programs offered in these centers are delivered in languages other than English, and are designed to help newcomers settle in Canada. An example of services offered includes language training and literacy programs, job training, health seminars, and legal council (Immigration Peel, n.d).

Historically, Canada has been a country that has created social programs. One such initiative has been government funding allocated to educational programs that promote literacy amongst new and native Canadians. In 1899, Frontier College was one of the first organizations in Canada to promote educating Canadians regardless of their location or their socio-economic status (Morrison, 2009). Persons who joined such programs had non-existent to very basic literacy skills (Darville, 1992; Morrison). According to Darville, an increase in literacy programs surfaced in Canada in the 1960's as a response to high unemployment rates. In 1992, Canada started a program for newcomers funded by Citizenship and Immigration Canada, which receives money from landing fees of new immigrants (Citizenship and Immigration Canada, 2004). The program, still in existence in most provinces, is titled Language Instruction for Newcomers to Canada (LINC). It was designed to help facilitate adult immigrants and convention refugees into Canadian society by helping with basic language skills, healthcare, and navigating the job market in Canada (Citizenship and Immigration Canada, 2008; Murray, 1995). British Columbia,

Manitoba, and Quebec use their own programs to service newcomers in language and settlement (Service Canada, 2010b).

A new division of the LINC program is the Enhanced Language Training program (ELT). It was launched in 2003-2004 by the Canadian federal government to provide higher levels of language training including job-specific language training, and bridge-to-work assistance such as mentoring and work placement that helps newcomers enter and remain in the labour market (Integration-net, 2009). ELT is one of the newest initiatives (less than 10 years old) taken by the Canadian government to fill in the gaps created by older language training programs by helping newcomers understand the expectations of the Canadian workforce, while simultaneously helping them build skills to find jobs, prepare for job interviews, write resumes, and network.

In order to standardize these educational programs, a framework of reference for learning, teaching, programming and assessing English as a Second Language for adults in Canada was developed (Pawlikowska-Smith, 2000). The federal government established the National Working Group on Language Benchmarks to oversee the creation and development of the Canadian Language Benchmarks document (CLB) (Norton-Pierce & Stewart, 1997), which is the official Canadian standard for describing, measuring, and recognizing the English language proficiency of adult immigrants (Centre for the Canadian Benchmarks, 2006). The CLB covers three skill areas: listening/speaking, writing, and reading, and spans twelve levels, Level 1 being the lowest and Level 12 being the highest. The curriculum for the Labour Market Access program is based on the CLB, specifically Level 6-10 (Integration-net, 2009).

Literacy takes many forms and specific skills are required in order to be successful in finding employment in Canada. According to Human Resources and Skills Development Canada (2010), there are nine literacy and essential skills that prepare Canadians for the job market.

These include: reading text, document use, numeracy, writing, oral communication, working with others, continuous learning, thinking skills, and computer use. Computer use refers to a variety of different technologies, an important one being the ability to effectively use the Internet.

The Internet has impacted the way Canadians approach and enter the workforce. Government websites advertise employment opportunities, along with tips on how to create proper resumes and cover letters (Government of Canada, 2011; Service Canada, 2010a). The ability to navigate and find relevant information is not simple for everyone. Developing these skills using technology is a form of literacy (Kasper, 2002). Information Communication Technology (ICT) literacy, a term used throughout this study, refers to Internet literacy and computer-mediated communication (CMC), the ability for people to communicate via computer networks, specifically the Internet (Ess, 1996).

The Internet has become a global phenomenon of daily life for most people in the developed world (Drori, 2010; Hargittai, 2010). Internet literacy is vital for Canadians because of the shift from an economy based on natural resources, to a technological, knowledge-based economy (Industry Canada, International Development Research Centre & Statistics Canada, 2003). The rate of workers computer usage at their primary place of employment has jumped from 33% in 1989 to 57% in 2000 (Marshall, 2001).

According to Statistics Canada (2007a), over 80% of all public and private sector enterprises use ICT. This data suggests that technology has permeated the workplace and there is an expectation that those entering the Canadian job market possess technological literacy (Job Bank, 2010; Settlement.org, 2010). Those lacking computer or Internet skills have diminished opportunities for employment.

It has been widely noted that populations who lack computer and Internet skills include disenfranchised groups, which include women, seniors, those without a formal education, and those with disabilities (Kennedy, Wellman, & Klement, 2003; Sciadas, 2002; Topping & McKenna, 1999). In Canada, immigrants often find themselves negatively impacted by the tilted distribution of resources. Less than half of Canada's immigrant population, whose first language was neither English nor French, has access to, or experiences language barriers with the Internet (Statistics Canada, 2003b). This can result in newcomers having difficulty accessing different kinds of information, which could be useful to them in various aspects of their lives in Canada, including information on health, education, employment, and on Canadian rules and regulations (Caidi, Longford, Allard, & Dechief, 2007; Gallo Stampino, 2007; Picout, Hou, & Colombe, 2007).

Canada's employment and professional registration regulations may result in newcomers taking jobs for which they are overqualified (Galarneau & Morissette, 2008). In turn, newcomers' income tends to be significantly less than Canadian-born (Aydemir & Skuterud, 2005; Statistics Canada, 2008) making owning a computer and Internet access less affordable. Immigrants with limited exposure to technology may experience lack of social inclusion and transition to the Canadian way of life can be challenging (Lochhead, 2003).

### **Statement of the Problem**

People who lack Internet literacy tend to be those who are socially and economically disadvantaged, perpetuating a continuing divide between the disenfranchised and the wealthy who control government and business (Drori, 2010; Vicente & Lopez, 2010). This phenomenon is referred to as the digital divide. Only a handful of studies, most external to Canada, have highlighted the issues of the divide in immigrant communities (Bulfin & North, 2007; Ono &

Zavodny 2008; Tsai, 2006; Webb, 2006). This study reveals how issues of access can affect newcomers' experience with Internet literacy development.

Although Enhanced Language Training programs have been in existence for about a decade in Canada, through my extensive research, I could not find published research that evaluates the efficacy of the program with regards to Internet literacy or explores immigrants' perceptions of participating in them. This study adds to the body of knowledge on the digital divide as it relates to newcomers to Canada and their challenges learning a second language as well as acquiring Internet literacy.

### **Research Questions**

This is a timely topic because of the pervasiveness of the Internet in Canadian life and the ever-expanding immigrant population in Canada (Statistics Canada, 2007b; Statistics Canada, 2008). Though network society existed before the Internet, online communication has transformed these communities into more-complex social networks (Veenhof, Wellman, Quell, & Hogan, 2008). There were two research questions that guided this study:

1. How is a group of newcomers' motivational, material/physical, skill, and usage access to Internet Literacy development affected by the distribution of social, material, temporal, mental, cultural/human, and digital resources within and outside the Enhanced Language Training program?
2. What are the ensuing curricular and pedagogical implications for the Enhanced Language Training Program?

The specific ELT course that this study examined is called the Labour Market Access Program. The recommendations resulting from this study may be applicable to other government- funded programs. With these findings, government agencies may have a better

understanding of how the Internet can help transform and empower immigrant communities.

This can impact how government agencies approach immigration, as well as how they approach newcomer integration into Canadian society.

### **Research Approach**

The University of Ottawa Ethics Board approved this qualitative research proposal to study five learners and one instructor in an Enhanced Language Program that took place in southwestern Ontario in 2010. The data that was collected also included notes taken during the interviews and classroom observations. The data was verified and coded into emerging categories that were refined based on the conceptual framework.

### **Assumptions**

I came into the research with some preconceived notions about the learners. As an English as a Second Language (ESL) teacher for 4 years, I have observed students who experience difficulty with or reject doing technology related tasks. I expected the participants of this study to have less Internet literacy skill development. However, what I found was a motivated group of students who took the initiative with their own learning, and were able to create supportive communities while improving their Internet literacy skill development simultaneously.

### **The Researcher**

The topic is a passion of mine. As a second-generation Canadian growing up in a suburban Toronto neighborhood, I witnessed the struggle of my family and other immigrant families. My mother, a Hong Kong native, immigrated to Canada at a time when settlement programs did not exist. She came to Toronto alone at the age of 17 without any knowledge of English and any friends or family for support. It was access to education that helped her overcome barriers thus

easing her integration into Canadian society. Although my mother managed to overcome many struggles she faced as a young immigrant woman in Canada, challenges continue to emerge in her everyday life. In particular, although she is a university graduate, her lack of computer and Internet literacy skills have had a negative impact on her employment opportunities. In reviewing the literature, it was not clear to me that this situation had improved for immigrants today.

### **Rationale and Significance**

Internet literacy is complex, as it requires an ability to execute different skills simultaneously. My frustrating experience trying to teach my mother how to use the Internet helped me understand that learning to use technology is bound in socio-cultural and literacy practices and is as complex as the people who use them. Through researching the needs of immigrants and their journeys to attain digital literacy, I hope to inform the educational system in a unique way. Although ethnic minorities are often excluded by language (Webb, 2006), helping newcomers develop Internet literacy may enable their inclusion in Canadian society. Understanding the complex issues that surround the divide will assist educators and policy makers to create and adapt a curriculum that bridges these inequalities divide for new Canadians.

My research illuminates the experience of immigrants in the Canadian language Classroom, where newcomers are provided with tools meant to enhance their lives in Canada. This type of exploratory research provides a comprehensive understanding of educational needs and resource requirements of new Canadians who must learn English as a second language as well as Internet literacy (De Haan, 2004; van Dijk, 2005). This is accomplished using a qualitative approach that gives newcomers a voice to explain their past experiences with the

Internet, to discuss barriers to access that may have affected their Internet literacy, and to predict their view of how Internet literacy may shape their future.

### **Definitions of Key Terminology**

The following definitions provide readers with a clearer outlook on the direction of the study and its underlying purposes:

**Computer Assisted Language Learning (CALL).** Learning language with and through computer technology (Egbert, 2005).

**Computer-Mediated Communication (CMC).** This falls under the umbrella term of ICT, is the ability for people to communicate with one another via computers networks, namely the Internet (Ess, 1996).

**Convention Refugee.** A Convention Refugee is a person who has a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion, who is outside the country of his nationality, and is unable to get protection from his/her country of nationality (Amnesty International, 2010).

**Digital Divide.** This term refers to a gap between those who do and those who do not have access to new forms of information technology such as computers and the Internet (van Dijk, 2005).

**E-learning.** This type of learning refers to the training initiatives that provide learning materials, course communications, and delivery of course content electronically (Chu, 2010).

**ESL, EFL, and ELL.** The following acronyms are commonly used in research regarding second language learners. Each term has its own meaning. English as a second language (ESL) refers to learners for whom English is not a native language, who live within an English speaking country; English as a foreign language (EFL) refers to learners who live outside an English

speaking country; and English language learners (ELL) is a general term used to describe speakers whose native language is different from English or who have a non-standard dialect. These different terms may be used when describing the studies that will be examined in this thesis.

**Information Communication Technology (ICT).** Specific kind of technology that is at the core of our study is ICT. ICT refers to computers and their networks (Bangou, 2010). ICT uses digital technology and networks to access, manage, integrate, evaluate, and create information (O'Connor, et al., 2002).

**Internet.** Internet is defined as an information superhighway (Kahn & Cerf, 1999), a global computer network providing a variety of information and communication facilities. In this study, Internet refers to a global system of computer networks that consists of many different networks, which allow communication, and the exchange of information.

**L1.** In this research, L1 refers to a person's native language.

**L2.** In this research, L2 refers to a person's second language.

**Newcomers to Canada.** Newcomers to Canada describes various groups of people including protected persons, people who have applied or received permanent resident status or who have received approval in principle from Citizenship and Immigration Canada (Canada Revenue Agency, 2010). For the purpose of this paper, newcomers are those who qualify for the LINC program such as permanent residents of Canada, or Convention Refugees.

**Social networks.** Domains that allow individuals to create a public site or a semi-public site within a bounded system (Boyd & Ellison, 2007).

**Technology.** Technology has always had a place in research regarding education. Technology is a term that can refer to a variety of tools and materials. Technology can refer to anything from computers to the web-based learning systems we have today.

### **Summary**

This chapter described the complex issues facing newcomers to Canada in learning a new language and acquiring the opportunities and skills requisite to help them integrate socially and find gainful employment in their chosen environment. It provided an overview of the research process that follows.

## Chapter 2

### Literature Review

The main goal of this research was to examine how the distribution of resources within and outside an Enhance Language Training Program affected a group of newcomers' access to Internet literacy development.

A thorough review of the literature was conducted to identify up-to-date, critical, and relevant information to frame the study. The literature review that follows focuses on five major themes that are foundational to understanding this complex topic: socio-cultural learning theory, the digital divide, access to ICT, integration of ICT in the classroom, and Internet literacy.

#### **Socio-cultural Learning**

Lev Vygotsky was a significant contributor to theories of socio-cultural learning and education, which have been discussed in various areas of second language acquisition (Donato, 1994; Lantolf & Appel, 1994; Lantolf and Thorne, 2007; Ushakova, 1994; Washburn, 1994). Vygotsky (1962) perceived the two primary functions of speech in both children and adults are communication and social contact. He believed that a child's activities and the objects they deal with shape their reality and impacts the evolution of their thought processes.

Vygotsky theorized that human consciousness could only be explained as part of the active participation in everyday activities (Lantolf & Appel, 1994). These activities included using tools created by people under specific cultural and historical conditions. He described the technical tools used by individuals for manipulating their environment and psychological or cultural tools, such as artifacts, languages, literacy, numeracy, rationality, and logic, which are used for directing and controlling physical and mental behavior (Lantolf & Thorne, 2007). As Lantolf and Thorne note, high level tools serve as a buffer between the person and the

environment and act to mediate the relationship between the individual and social material world. If people can transform their social and material environments, they can change themselves, and the way they live. Vygotsky's theory is relevant to the acquisition of ICT literacy development because this technology is a technical communication tool as well as a cultural tool used in a variety of social contexts. In Canadian society, the Internet is clearly a cultural tool, being used by immigrants to mediate relationships in their new country, while allowing them to maintain contact with people in their country of origin. How Internet literacy is learned is as complex and unique as the learners who use it.

Street's New Literacy Studies theory (2005) was considered for this research. The theory is based on the emphasis power has on the attainment of literacy skills, and the premise that engaging with literacy is always a social practice. He saw the autonomous model of literacy where people are presumed to engage individually in ICT literacy, as imposing Western notions of literacy onto other cultures. The autonomous model does not address the social, cultural, and ideological assumptions that affect literacy. A gap in Street's model of literacy is that it does not take into account how literacy practices and the products of literacy can be re-contextualized, meaning they can be understood differently over changing circumstances (Stephens, 2000).

### **Digital Divide and Newcomers**

Immigrants who come from around the globe are expected to conform to the ways of their new countries. English speaking countries such as the United States, England, and Australia have incorporated technology in their language school systems and programs for newcomers (Chiswick & Miller, 2007; Cruikshank, 2004; Ono & Zavodny, 2008; Tsai, 2006; Webb, 2006). This is in large part due to the fact that over recent years, technology has become more financially feasible and reliable for their populations. It can be beneficial for both teacher and

student when implemented correctly (Busby & Mupinga, 2007; Tondeur, Van Braak, & Valcke, 2006; Webb, 2006; Ybarra & Green, 2003).

Newcomers in developed countries, however, can find themselves disadvantaged since they may not have had similar access to technological resources in their countries of origin (Robison & Crenshaw, 2010). Further, there may be material barriers to resources that put them on the negative side of the digital divide.

Internet and computer use has a positive impact on newcomer's lives when they have access to them (Chiswick & Miller, 2007; Ono & Zavodny, 2008; Tsai, 2006). Chiswick and Miller's study based in Australia focused on whether computer skills and educational attainment had an impact on the financial success of natives and immigrants. They found that increased language skills and educational attainment had positive effects on computer use, and that new immigrants were more computer literate than long-term settlers.

Ono and Zavodny's (2008) study highlighted the experiences of large minority Spanish population in the United States. Their study showed a gap in ICT usage between the immigrant population and the American born population. Similar to the research of Chiswick and Miller (2007), there was a correlation between the language spoken in the household and ICT usage. In Ono and Zavodny's (2008) study, those who spoke Spanish in the home were less likely to have ICT access than those who spoke English. This could be as a result of several factors since many of the immigrants who come to the United States have limited English skills, are in a lower-socio-economic group, and tend to be less educated than the native-born population. For immigrants who are connected online, technology can serve as leverage to help overcome barriers that exist. Tsai's (2006) research, for example, looked at nine Taiwanese families who immigrated to the United States. Computer technology helped them overcome the hardship

brought on by the loss of social networks, social disconnection, and limited language proficiency at the early stages of their settlement period.

Cruikshank (2004) examined the literacy practices of four Arabic speaking teenagers and their families living in Sydney, Australia. The study challenged the notion that these families were more reliant on oral practices than literacy practices, and that these families were disadvantaged. He found that the literacy practices in the multilingual Arabic-English households were dynamic and undergoing rapid change and development, especially in regards to technology and culture. They found that new technologies were subsumed into existing social practices in families resulting in local changes that affect daily life and practices, and global developments such as changes in economics, technology and culture. This study demonstrates that different kinds of ICT development are taking place in communities worldwide and takes into account literacy practices in the home environment.

*A bridgespace* is a collection of interconnected virtual places through the Internet and other media that support people's movement between two regions or countries and sustain cultural ties at a distance (Adams & Ghose, 2003). Newcomers who come to developed countries often enter into the language and/or settlement programs offered. Learning how to use the Internet as a bridgespace has been demonstrated to help East Indians immigrants settle into their new communities in the United States, and maintain identities with their place of ancestry. The Indians in this study stayed in contact with Indian communities in the United States and with their homeland allowing them to maintain their cultural preservation, organize their ethnic community, and fulfill family obligations in India (Skop & Adams, 2009).

The main theme from the literature reviewed above is the notion that newcomers often have difficulty with settlement, which can be eased with their use of the Internet. This assumes

that they are on the positive side of the digital divide by being equipped with the requisite language and technological skills, and having the access to computers and Internet they need to search for online information and available help. Canadian researchers, policy makers, and educators need to examine issues of resources and access for our current programs in order to improve conditions for newcomers and creating programming that meets the learner's personal and workforce needs.

### **Access to ICT**

Access has been one of the major areas of concern for researchers and educators. They have questioned what kinds of resources people need in order to become active online (Jung, et al., 2010; Kennedy, Wellman, & Klement, 2003; Peacock & Künemund, 2007; Rosenthal, 2008). One focus has been on the barriers to resources and how that affects user outcomes. The literature on access and success in using ICT resources identifies the following barriers: socio-economic, learner motivation to use Internet, and having a personal social support network to help overcome barriers to resources.

A vicious circle exists, looping access to information communication technology and poor socio-economic status. Barriers to ICT literacy development to the disadvantaged can have adverse affects on the quality of life (Angus, Snyder, & Sutherland-Smith, 2004; Peacock & Künemund, 2007). There are benefits of the Internet for those who are socio-economically disadvantaged including information on jobs, health care, education, government resources, and being able to access social networks of people who are or have been in similar situations as newcomers to Canada (Chiswick & Miller, 2007; Staeheli, et al., 2002 ; Tsai, 2006).

Other studies have examined how the Internet has been used, and why it is that some people have more difficulty using it than others (Chu, 2010; Kouritzin, 2000; Vicente & López, 2010). Differences in Internet usage are dependent on many factors.

For instance, location is one of the factors that have impacted differences in Internet usage. Globally, there have been differences between richer and poorer nations (Ayoo, 2009; Chen & Wellman, 2004; Robison & Crenshaw, 2010). There have also been discrepancies in usage between rural and urban areas (Donnermeyer & Hollifield, 2003; Stern, Adams, & Elasser, 2009). The research shows that those who lived in urban areas were more likely to have physical access to the Internet. Moreover, the usage patterns were also different between rural and urban areas.

Another factor that has impacted differences in Internet usage is socio-economic status. The initial research in this area examined how financially disenfranchised people were less likely to access technology than people who were financially stable (Angus, et al., 2004; Robinson, Dimaggio, & Hargittai, 2003; Sciadas, 2002).

Disenfranchised groups who experience barriers to access include the elderly, persons with disabilities, women, and visible minorities (Angus, et al., 2004; Peacock & Künemund, 2007). Often these groups have low incomes, impacting their physical access to computers and their ability to stay connected the Internet over time. Research suggests that the disenfranchised would greatly benefit from online resources such as information on housing, health and employment (Guo, Bricout, & Huang, 2005).

The two largest groups with the least access to resources are middle-aged and older-aged adults (Chu, 2010; Rosenthal, 2008). Some experience financial barriers while others may be uncomfortable or unfamiliar with technology (Peacock & Künemund, 2007; Stark-Wroblewski,

Edelbaum, & Ryan, 2007). Researchers agree that older adults are not online as much as younger adults or teens. Many studies have investigated reasons why populations in the higher age brackets are less connected to the Internet than younger populations (Chu; Stark-Wroblewski, et al., 2007). Peacock and Künemund characterize reasons for lack of access to resources for older adults into two categories: lack of means because of their financial resources, and/or lack of knowledge about the Internet (which also includes their lack of knowledge of its cost; and motivational indifference, the lack of personal motivation to use or learn new technology).

With life expectancy increasing and the birth rate declining in various areas of the world, there is concern over how nations are to deal with their aging population. Researchers have looked at how online resources may help seniors access services, which may increase their quality of life.

In 2010, Jung et al. collaborated with an immigrant senior centre in Los Angeles that provided free Internet access and training to its clients. Their purpose was to examine why certain seniors opted for training and why others decided against it. They discovered that seniors who enrolled in the training were less anxious about personal aging and using computers than those who chose not to enroll. Their results implied that psychological variables are stronger predictors for senior immigrant participation than how experienced they were with computers.

Rosenthal's (2008) quantitative study examined older women who were part of a retirement community in Florida, and their experiences with learning new technologies. The study focused on these women's motivation, the various obstacles they faced, and how they overcame the obstacles of learning with new technology. The women in this study were motivated to learn for various reasons including: access to health information and services, keeping in contact with family and friends, shopping for goods and services, and searching for

information on various topics. Because these digital resources were available online, it added to their motivational access. The most common obstacle uncovered in nearly half the women was the feeling of anxiety or stress when they began using a computer. The second obstacle was the lack of confidence, and the third was a lack of personal support given by family and friends.

Chu's (2010) qualitative research of seniors enrolled in e-learning programs explored the relationship between support and seniors' ICT access. She found that the participants' age, self-efficacy with the Internet, and the presence of tangible, emotional family support, shaped the differences in the learners' e-learning experiences. Indeed, older adults who experienced family encouragement had enhanced general and communicative self-efficacy with ICT and good e-learning outcomes.

Women and men are often compared in the kinds of access they have to Internet literacy. Older research on gender gaps and Internet use noted that there was a sharp difference in the access that men and women had on the Internet (Bimber, 2000; Kennedy, Wellman, & Klement, 2003). These differences did not only suggest that women are less likely to be online, but women's interactions online were different than their male counterparts (Barrett & Lally, 1999; Wolfe, 1999). Other research examined how classrooms are trying to combat these gender differences. In Huot and Huot's (1999) research, they explained how there were an increasing number of women-friendly sites, dedicated to giving women power and a voice. Recent research in Canada has found that an equal portion of men and women are using the Internet, however their usage patterns varied such as women being more likely to use social media (Dewing, 2010).

Another area of research is access for people with disabilities since it is thought that the Internet would create opportunities and resources that would help in their daily lives (Guo, et al., 2005; Vicente & Lopez, 2010). Vicente and Lopez's European research explored the

similarities and differences between people with and without disability. They looked at Internet usage and how access to resources impacted the disabled. Further, they looked at affordability, motivation and attitudes, and skills and usage. They discovered that barriers to the disabled included the expensive cost of ICT equipment, the difficulty of using the equipment and their lack of interest in accessing ICT. Guo, et al. (2005) surveyed disabled persons in China and demonstrated that ICT and the Internet would improve frequency and quality of social interaction amongst the disabled population and with the general Chinese population. Overall, however, they found that most disabled persons in China were socially excluded from technology and thus not Internet users.

Although the benefits of technology do not bridge existing inequalities and nor does it completely change the lives of those who are socio-economically disadvantaged, it can improve their quality of life (Ono & Zavodny, 2008; Warschauer, 2004). An in-depth understanding of how social inequalities impact learning requires the subjective view from qualitative studies.

### **Integration of Technology in Education**

Computers today are user-friendly, and technology is more accessible to the general population making ICT integral to Canadian society and to globalization and highly visible in education. Recent studies examined the positive aspects of ICT and how computers and the Internet have transformed education (Coryell & Chlup 2007; Keller, 2005). Some of the benefits include students working at their own time and pace (Keller; Webb 2006), and the ability to transcend time and space with distance learning (Keller) as evidenced by increased online courses being offered through universities and colleges. Researchers and educators listed a multitude of benefits of ICT in the classroom and highlight how it has been incorporated into varied curriculum.

Because of the flooding of technology in today's society, educators have begun to introduce the Internet and ICT at an early age to reduce the disparity of children's access (Cummins, 2006; Livingston & Helsper, 2007; Morrow, Barnhart, & Rooyakkers, 2002). Morrow, et al., in writing about early technological and literacy development, highlighted the importance of incorporating new technologies in the classroom. They found that incorporating technology at the primary level as well as assisting pre-service and in-service teachers, supported and enhanced the development of literacy practices: reading, writing, and language arts.

Though Internet and ICT have an impact at the elementary school level, issues of access affect learners with high school and post-secondary education as well. A learner's exposure to ICT and educational level achieved has an impact on their ICT use. Robinson, Dimaggio, and Hargittai, (2003) looked at how college educated respondents and high school educated respondents differed in their use of the Internet. Factors that influenced access included: the quality of equipment; the user's autonomy and ability; the skills needed to understand and navigate the complex web of information stored on the Internet; the social support network that some users need to become familiar with the potential of ICT; and the type of sites that the user visits while online. College educated users were found to have a broader social network of friends and co-worker contact with email than high school educated respondents. Further, college educated respondents choices of web pages visited were more frequently used for work, education, political, and social engagements than the high school respondents.

Within higher education, there is a global increase in computer and Internet use; however, institutions in disadvantaged countries may experience the digital divide. Ayoo (2009) examined how the integration of technology globally has caused a divide in higher education in East Africa. Internationalization in higher education has increased study abroad programs and promoted

online courses at colleges or universities in other countries. Ayoo pointed out that integrating technology into higher education has created disparities between a minority of developing countries who are highly technological and the vast majority of developing countries who are technologically underdeveloped. Despite the efforts to bridge the divide by various groups investing in the ICT infrastructure in Africa, many countries experience limited access, have little capacity, and find ICT unaffordable.

Integration of technology has also found a place in language classrooms. Coryell and Chlup's (2007) study looked at how English language learning programs in the United States could use e-learning and the Internet to support language acquisition. They found that wired classrooms offered different kinds of technology, which can be adapted to curriculum depending on the program and the learner. In their research, they looked at 15 instructors currently teaching in ESL classes across 11 states. Through quantitative data, participants were asked what their challenges and successes were regarding the implementation and experience with technology in their classroom. Four major themes emerged from their data: extra preparation for the instructor; student-centered instruction to match learning and technological needs; language and technical support for students; and collaboration among students, between students and teacher, and instructors and staff. The researchers found that in order to integrate technology in the classroom, it must be pedagogically sound.

Similarly, Webb (2006) examined the experiences and perceptions of adult ESL learners in seven ICT learning centers in England. The ESL programs provided computer lab space and physical access to computers and the Internet for immigrants. These drop-in labs that focused on improving ESL learners' language ability and technological skills were popular, especially with women. Due to the cultural expectations of traditional women's position in the home, many

women could not attend regular language programs so the flexibility of these programs appealed to them. Webb's study demonstrated that the motivation and IT literacy of learners varied. Those who had the most positive views of learning English through ICT were those with previous ICT experience. The learning settings and the tutor attitudes made learning positive and effective and physical access to resources did reduce some aspects of social exclusion, but technology itself was not enough to overcome other existing inequalities in access to learning.

Language learners are not the only students to benefit from technology in the classroom. Technologically wired classrooms have had positive effects on the lives of students with disabilities. Williams, Jamali, and Nicholas' (2006) examined the beneficial qualities of ICT in special education classrooms with people who experienced learning disabilities and physical disabilities such as vision impairment. Despite the difficulty in finding websites and services that were useful for people with special needs, the benefits from ICT and the Internet included individualized teaching according to student disability, increased motivation for students, and helped communication with other people with disabilities as well as the general population. It proved to be a useful assessment and management tool.

The above research has demonstrated that the integration of technology in the classroom can be a positive experience for teachers and students provided it is grounded upon educational theory (Coryell & Chlup, 2007). When ICT is not theoretically supported in the classroom, it can become insignificant and also troublesome (Gopalakrishnan, 2006). Time and effort must be invested by program developers in exploring appropriate technology, and how it can be best used to support teachers and students. Gopalakrishnan's research suggested that programs with technological components must ensure the following: support is available on demand for the teacher, the organization should be prepared to create new support positions that did not exist

before, and communication needs to exist between the teaching staff, administration, and the technical support staff.

In summary, technology has been seen as a positive influence in education when used thoughtfully and in correlation with teaching pedagogy. It can provide students with more individualized ways of learning, and it can help persons who may not normally have access to the classroom. Researchers, policy makers, and educators must beware that 'new' technology does not equate with 'good technology' and a program's effectiveness depends on the resources available to support it, the kinds of training and qualifications required of the teaching staff, and on the needs of the students (Gopalakrishnan, 2006). Research in the integration of ICT has examined programs primarily from mainstream teaching institutions. Most of the studies that examined immigrant educational programs have come from the United States and Australia (Bulfin & North, 2007; Chiswick & Miller, 2007; Jung, et al., 2010; Ono & Zavodny, 2008; Webb, 2006). More Canadian research is required in the field of ESL with specific emphasis on newcomer settlement programs, since these programs are designed to help integrate immigrants into a society that is technology-dependent.

### **Internet Literacy**

It is important to understand the meaning and impact of Internet literacy because of the way it has transformed how people look for information, and how they communicate. Internet literacy has been subsumed under a variety of terms including online, technological, and new literacy and includes the aspect of computer-mediated communication, part of an existing online culture (Kalantzis, Cope, & Cloonan, 2010).

While some educators view the Internet as an opportunity to teach literacy using a variety of online tools (Coryell & Chlup, 2007; Liu, Moore, Graham, & Lee, 2002), others perceive it as

a form of literacy that needs to be taught with other literacy skills (Henry, 2006; Sutherland-Smith, 2002). Early research saw the attainment of Internet skills as being a technology issue, while others saw it as a reading comprehension issue (Henry). Educators have also acknowledged that students, specifically ESL students, are required to know more than one kind of literacy to survive in English speaking nations such as Canada (Chatel, 2002; Kasper 2000).

The Canadian Council of Learning (2008) examined media literacy for children. Media literacy is the ability to read, analyze, evaluate, and create media in a variety of forms. This requires skills such as critical thinking, multitasking, and collaboration, which are developed through the Internet, computers, and television. This is the same skill's set required by adult learners.

Shields and Behrman (2000) reviewed the technological media literacy skills needed to support learning, personal productivity, decision-making, daily-life tasks, and life-long learning. They identified the following: basic concepts and operation of technology; social, ethical and human issues; technology productivity, communication, decision making, and research tools, and the ability to problem solve technology.

Reading on the Internet requires comprehensive and search skills that are different from reading a book. Skills and strategies that are required for online reading include forming goals, using categories to narrow a search focus, extracting information and specific detail, integrating information across sources, repeating techniques until the goal is reached, and the ability to critique their approach. Henry (2006) asserted that students who follow the following six steps and apply it to their reading online, can build their online literacy skills. Henry recommends using the framework SEARCH:

1. Set a purpose for searching.

2. **E**mployee effective search strategies.
3. **A**nalyze search engine results.
4. **R**ead critically and synthesize information.
5. **C**ite your sources.
6. **H**ow successful was your search?

While Henry's (2006) research outlined the steps to attaining Internet literacy, others have outlined obstacles. Attar (2005) discussed the difficulty researchers and practitioners have investigating and developing theories about webpage reading as a socially situated literacy practice. This research also addresses obstacles that adults face when learning new web-based literacies. Once the user arrives at the screen, reading online using Internet often means negotiating several interfaces while dealing simultaneously with texts. Users have to overcome the invisibility of technology on the web pages, and the difficulty of navigating through hyperlinks.

Email, a large part of what the Internet is used for (Statistics Canada, 2009), has been researched as part of Internet literacy. Chen's (2006) study examined email literacy of second language learners. For these learners, their linguistic ability, the unfamiliarity with the target culture's norm and values, and their understanding of the email medium made email literacy practices challenging.

Social networking has become a significant part of Internet culture and literacy (Livingstone, 2008). It has become commonplace for those who feel comfortable with the Internet to participate in online communities through social networks (DeKay, 2009). In these online communities, individuals self-represent as well as connect with others (Goodings, Locke, & Brown, 2007). Generally, social networking is seen as positive as they are geared towards

assisting people to interact with others they already know, and/or to meet new people (Ellison, Steinfield, & Lampe, 2007). Networks have been used in work-related contexts, online dating, and/or connecting with those who have similar interests (Ellison, et al., 2007). Social networking movements for immigrants have also begun to take place in Canada. In 2009, David Cohen, a Canadian immigration lawyer, created, a social networking site called LoonLounge (<https://www.loonlounge.com>) launched. This site is designed to help members create social and professional connections through community membership. Though it is for any person residing in Canada, it has provided assistance to immigrants who are new to Canada, who have been residing in Canada for sometime, or for those outside the country who are thinking of immigrating to Canada. Since the site has launched, 50000 members have joined the website.

Negative aspects of social networking sites are that they are usually commercially run and marketers may have access to personal information such as an individual's name, age, occupation which can be used to stalk, bully, and to steal (Ellison, Lampe, & Steinfield, 2009; Goodings, et al., 2007).

Internet literacy is an evolving field still open to wide interpretation and definition, varying according to the research and the perspective of the researcher. Some Internet literacy theories focus on the transition of reading and writing from traditional methods to electronic texts (Charney, 1994; Costanzo, 1994; Kress, 2003).

Researchers interested in literacy skills have examined how reading printed texts, a traditional form of literacy, has evolved to modern definitions of literacy, which includes electronic texts. Costanzo (1994) looked at the transformation of literacy resulting from computer use. We read print text as a continuous stream of words which are physically bound in a fixed sequence because of the shape of the page. With electronic texts, there are no set

boundaries and the interfaces that are read can be expanded, condensed, closed and moved. In addition, graphics, music, voice and motion pictures can be added to those interfaces. The difference between the codes and symbols used in the different kinds of literacy also vary. The English alphabet only has 26 letters whereas a standard computer keyboard has seventy-two keys, a lot which are used to manipulate texts. For example, hitting a certain combination may cause text to enlarge, or to bold.

Warschauer (1999) initially described electronic literacy as adapting reading to the screen, processing this information and determining how we navigate through the pages. In later research, Warschauer's (2004) examined how traditional forms of literacy; writing and print and ICT access are closely connected. Literacy is not merely the attainment of a skill but a practice, because it is connected to the social context in which it is used and learned.

### **Summary of the Literature Review**

The literature review above provided an overview of theories, research and current understanding on the topics relevant to this research project: socio-cultural learning theory, the digital divide, newcomers and Information Communication Technology, access to ICT, integration of ICT in the classroom, and Internet literacy.

Socio-cultural learning theory is premised on the concept that learning occurs when people make connections with each other within cultural contexts, through acting and interacting in shared experiences (Vygotsky, 1978). Extrapolating on Vygotsky's theory, people use tools that develop from a culture, such as speech and writing, to mediate their social environments and envisions learners as active constructors of their own reality based on their unique perceptions and meanings they attribute to the world around them.

The most common theme created by the digital divide is the challenges that learners face in regards to their ICT experience. In the theme of access to ICT, certain material, socio-economic, and physical factors made access to the Internet difficult. A learner's age, gender, education, income, first language, motivation, and location can positively or negatively affect access to ICT. Barriers also exist for teachers as some saw technology as being problematic, especially in programs without proper support for teachers and students.

Newcomers experience more barriers for the adult learner for whom English is not their first language. As discussed above, researchers found that those with weak English language skills were less likely to have access to the computer or Internet. Immigrants were more negatively financially impacted by a lack of ICT use and earned lower wages than those who were native-born.

In terms of Internet Literacy, many researchers outlined the different skills sets needed to attain it (Charney, 1994; Costanzo, 1994; Kress, 2003; Warschauer, 1999, 2004). For adults, this can be problematic because they must use a variety of different literacy skill sets simultaneously, and must learn the culture and language of communicating online through such media as email. The information and communication available on the Internet is beneficial for the disenfranchised, and conversely, those who were disenfranchised had the most barriers to access (Warschauer, 2004).

Education is a vast field with many different programs and learners. The role technology plays depends on a program's curriculum, guidelines, funding, staffing, support, student body, and infrastructure. Research on Internet literacy development in settlement classrooms in Canada, could not be found. However, this area of research is significant because of the need to effectively integrate newcomers to the Canadian workforce and the role played by Internet

literacy in today's job market (Job Bank, 2010; Statistics Canada, 2003a; Statistics Canada, 2007a; Statistics Canada, 2007b). Not only is the settlement classroom important, but also what happens beyond the classroom in newcomers' daily lives, their interactions with loved ones abroad, and their workplace.

This study attempts to fill in some of the existing gaps in current research by focusing on a group of immigrants who are currently attending a settlement program in Canada. The group in this study has relatively high abilities in English and most have been educated at the post-secondary level. The aim is to understand the experiences of these newcomers, which will help educators understand the benefits ICT literacy development has had on their lives, as well as the barriers they have faced. Giving students an opportunity to talk about their experience will provide educators and researchers with a new perspective on the digital divide.

## Chapter 3

### Conceptual Framework

This chapter describes and critiques two major frameworks developed by van Dijk (2005) and Warschauer (2004) related respectively to the digital divide and technological literacy. Following this, I discuss the rationale I used to create the conceptual framework that guided this study.

#### The Deepening Divide

van Dijk's (2005) research discovered that the prevalent view of the technological divide between the 'haves' and the 'have-nots' is inaccurate. He found the term 'divide' misleading because there is an entire spectrum of ICT learners whose usage and access varied depending on an individual's circumstances. One variable to take into consideration is the distribution of the following resources:

- Temporal Resources (time to spend on different activities in life)
- Material Resources (income and all kinds of property, computer equipment and services excluded)
- Mental Resources (knowledge, general social and technical skills, not digital skills)
- Social Resources (social network positions and relationships)
- Cultural Resources (cultural assets, such as status and all kinds of credentials)

(van Dijk, 2005, p. 20)

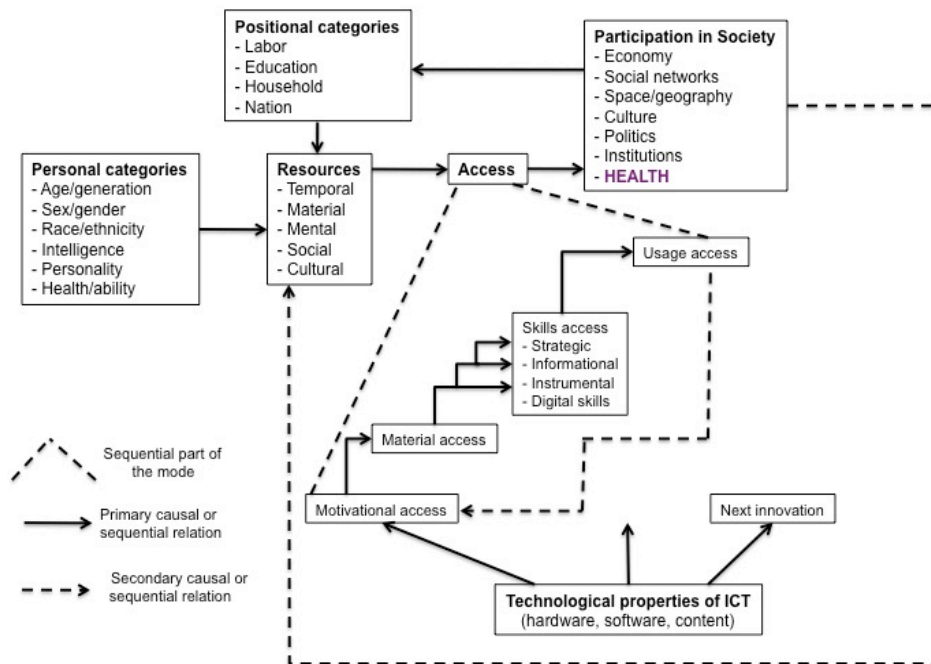
According to van Dijk (2005), the distribution of the resources listed above affects four successive types of access:

- Motivational Access (motivation to use digital technology)

- Material Access (possession of computers and Internet connections or permission to use them and their contents)
- Skills Access (possession of digital skills: operational, informational, and strategic)
- Usage Access (number of diversity of applications, usage time)

(van Dijk, 2005, p. 21)

Distribution of resources is determined by the personal or positional categories of an individual. Personal categories refer to the age/generation, sex/gender, race/ethnicity, intelligence, personality, and health/ability of an individual. Positional categories refer to the labour group, education, household, and nationality of an individual. These variables make up van Dijk's (2005) causal and sequential model of access as seen below.



Jan A. G. M. van Dijk. *The Deepening Divide: Inequality in the Information Society*. Thousand Oaks, CA: Sage, 2005, 240 pp., ISBN 141290403X

Figure 1. A causal and sequential model of digital technology access by individuals in contemporary societies. Taken from J. van Dijk, 2005, *The deepening divide: Inequality in the Information age*, p. 24.

van Dijk's explains how his framework reflects a cumulative and recursive model:

The four successive stages or kinds of access are supposed to be cumulative. The first, motivational, is conditional to this. Trying to gain physical access might be successful. When this happens, appropriation of new technology tends to lead to the development of digital skills of all kinds... Subsequently, the stages are recursive, as they return, wholly or partly, with every new technology or innovation (van Dijk, 2005, pp. 21-22).

van Dijk's framework applies to various kinds of digital technology and is the primary framework of this study.

### **Social Inclusion and ICT Literacy**

Warschauer (2004) observes that many problems occur and reoccur globally in technology projects. He believes that too much time has been spent on hardware and software problems and conversely insufficient attention is focused on the human and social systems that must change for technology to make a difference. Warschauer has six principal conclusions about literacy and ICT access:

- There is not just one type of literacy, but many types
- The meaning and value of literacy varies in particular social contexts
- Literacy brings no automatic benefits outside of its particular functions
- Literacy is a social practice, involving access to physical artifacts, content, skills, and social support
- Acquisition of literacy is a matter not only of education but also of power

(Warschauer, 2004, p. 46)

Based on these six principles Warschauer proposes types of resources needed to enhance the power of communities who are socially excluded. He discusses: *physical resources* such as

material possession of computers and Internet service; *digital resources*, resources available online; *human resources* such as skills and education; and *social resources*, which is composed of social capital, and the social relations people create and maintain online.



*Figure 2.* Effective use of ICTs. Taken from “Re-conceptualizing the digital divide,” by M. Warschauer, *First Monday*, 7.

Warschauer’s (2003/2004) idea of social capital is important to this study. For Warschauer, social capital refers primarily to the capacity of individuals to gain benefits, the power of their personal relationships, and memberships in particular social networks and structures. Warschauer’s conceptualization of social capital is grounded in Bourdieu’s theory of capital (1986).

For Bourdieu social capital refers to the social conditions, which is convertible, in certain conditions to economic capital. Individuals may benefit by the social networks that they have. The volume of social networks is dependent on the size of the network. However, these networks are not natural or a social given. They are constructed through investment strategies aimed at producing social relationships. Through these networks, people can gain direct access to economic resources.

Warschauer also acknowledges that social networks are constructed. Traditional forms of social capital are networks created based on family, friends, co-workers, and acquaintances and these relationships can provide information, influence, social credentials, and reinforcement, what he calls social capital. For Warschauer, social capital is an important factor in gaining access to computers and the Internet because computing is complex. In order to have a computer, people rely on their social networks to offer support and assistance with this.

The Internet has provided expanded opportunities for communication and association with various types of people, and has provided alternate forms of social capital (Lin, 2001; van Dijk, 2005; Warschauer, 2004). Warschauer's framework of literacy and ICT access is significant to this research because it provides clarity in understanding technological literacy and emphasizes its social embeddedness. Technological literacy and social contexts are not separate, but have a complex, mutually evolving relationship.

### **Critique and Revised Framework**

After reviewing and reflecting on the literature I integrated my own insights and suppositions about how the digital divide impacts newcomers and their ICT learning. I came to the conclusion that the current frameworks did not represent my vision of the issues involved for newcomers to become Internet literate.

For this study I combined aspects of van Dijk's (2005) framework and Warschauer's (2004) categories of resources for two reasons. First, van Dijk's framework of the deepening divide is clear and demonstrates the different variables of Internet literacy development. He shows how resources affect access to Internet literacy development, how Internet literacy development impacts resources, and how Internet literacy development can be recursive.

Second, the research highlighted the distinctive role played by social resources on Internet literacy development (DeKay, 2009; Livingston, 2008; Rosenthal, 2008). Warschauer's framework emphasized the social embeddedness as well as the impact that social capital has on technological literacy.

In the conceptual framework that guides this study, the six resources that affect access are: social resources, material resources, temporal resources, mental resources, digital resources and human/cultural resources. Contrary to the above frameworks, I combined cultural and human resources because they encompass the skills and education as well as the social and technical knowledge needed to access Internet literacy. This study emphasizes the influence of social resources as a relationship that depends upon the circumstances of the individual. I will describe the fluidity amongst resources, how some distribution of some resources affects others and how distribution of resources can impact distinctive types of access.

In the conceptual framework for this study, I have combined aspects of van Dijk (2005) and Warschauer's (2004) perspective on the distribution of resources.

Table 1

*Modified Resources and Descriptions*

Resource	Description
Social	Social capital: Social networks and relationship
Material	Income and material possession
Temporal	Time available and time spent online
Mental	Social and technical knowledge and abilities
Cultural/Human	Skills, education, assets, gender, status, and credentials. The social and technical knowledge of an individual
Digital	Resources available online

First, I re-arranged van Dijk's resources and ranked social resources at the top. This was to signify its importance because of research that demonstrated the importance of social resources and practices have on Internet literacy development (Bruce & Bishop, 2002; Buckingham, 2007; DeKay, 2009; Livingston, 2008; Mehra, Merkel, & Peterson Bishop, 2004; Rosenthal, 2008). Second, I added digital resources from Warschauer's framework. Third, I combined cultural resources from van Dijk's framework, and human resources from Warschauer's framework because van Dijk's explanation of status and credentials was general to both employment and education. Whereas human resources in Warschauer's model was education specific, which was appropriate for the context of this study. I have incorporated van Dijk's four successive types of access: motivational access, material access, skills access, and usage access, as part of my

framework. This led to the creation of a framework that combines the resources of van Dijk with Warschauer's resources.

It is important to highlight that distribution of resources and access is different. Distribution of resources can be quantitatively measured, whereas access is the motivation, the position, and the existence of access. For example, material resources are income and computer equipment, whereas material access is the possession of computers and Internet connections or the permission to use them and their contents.

### **Internet literacy development.**

This study looks at Internet literacy development. Internet literacy is different than traditional forms of literacy. Warschauer (2002/2004) makes a distinction between traditional literacy and ICT literacy. The table below is taken from Warschauer to demonstrate the differences between the two forms of literacy.

Table 2

*Literacy and ICT Access*

	Literacy	ICT Access
Communication Stage	Writing, print	Computer-mediated communication
Main Economic Era	Industrial capitalism	Informational-capitalism
Physical Artifacts	Books, magazines, newspapers, journals	Computer, Internet Connection
Organization of content	Novels, short stories, essays, articles, reports, poems, forms	Web sites, email, instant messages, blogs, social networking
Receptive skills	Reading	Reading and multimedia interpretation, searching, navigating, evaluating, critical thinking
Productive skills	Writing	Writing and multimedia, authoring and publishing
Divides	A great literacy divide?	A digital divide?

*Note.* Taken from “Reconceptualizing the Digital Divide” by M. Warschauer, 2002, *First Monday*, 7.

In this study, Internet literacy development refers to the ability to find and critique information online, to communicate online using different kinds of media such as email, chat rooms and forums, and participate in social media, and to navigate using hyperlinks and other interfaces. The development of this Internet literacy depends on a complex relationship between resources and access. Internet literacy development can have a positive effect on resources available to newcomers but conversely, newcomers with fewer resources may have less access to Internet literacy development, and those with low Internet literacy development may lack access to resources. The figure below is the framework of this study.

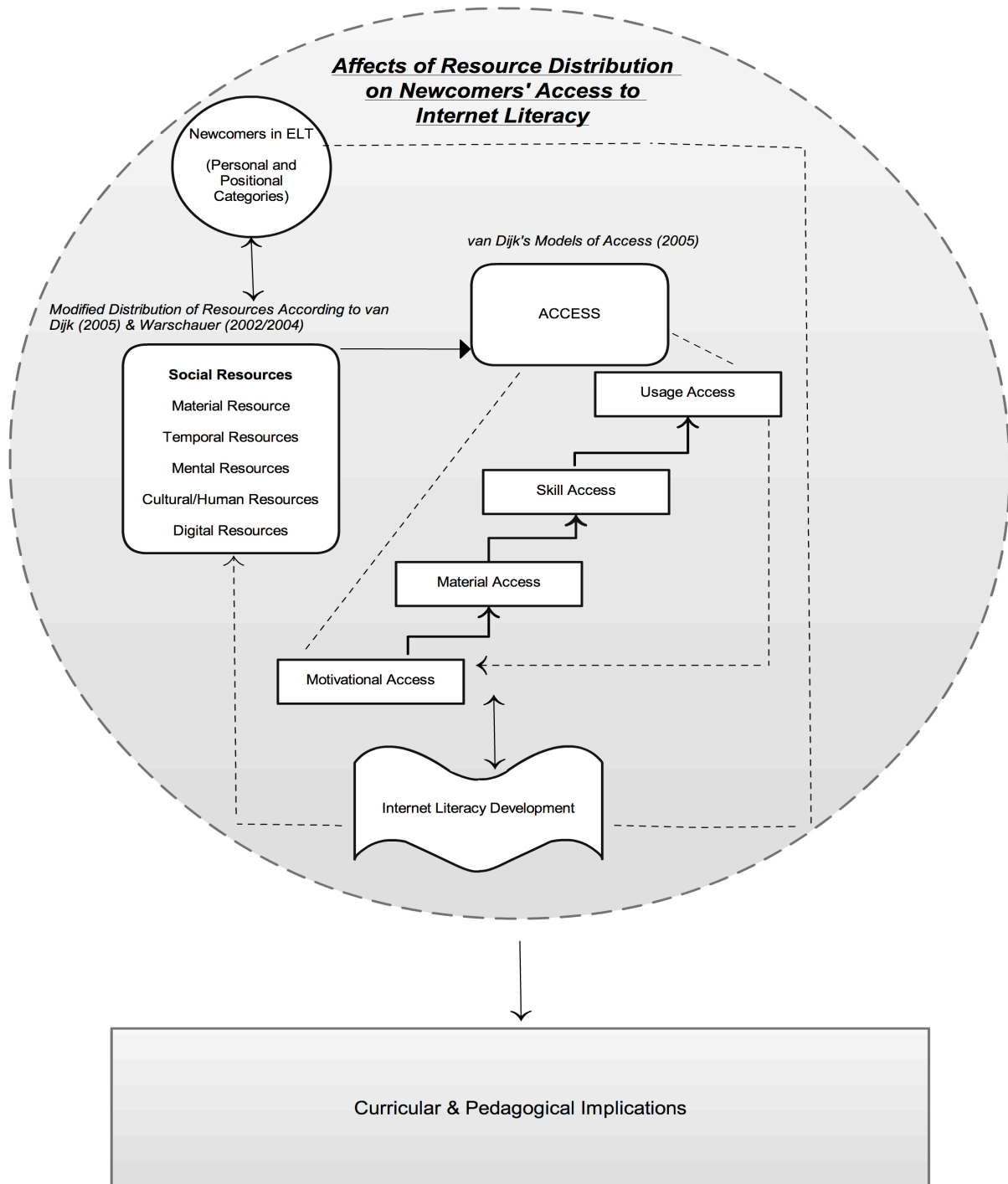


Figure 3. Affects of Resource Distribution on Newcomers' Access to Internet Literacy Development. Adapted from J. van Dijk, 2005, *The deepening divide: Inequality in the information society*, p. 24. And from "Re-conceptualizing the digital divide," from M. Warschauer, 2002, *First Monday*, 7.

This framework takes into consideration four areas: 1) the personal and positional categories of the participants (Newcomers in the ELT program), 2) the resources that are distributed (dependent on an individual's personal and positional categories), 3) the impact the distribution of resources have on different types of access, and 4) the impact access has on Internet literacy development.

At the top of the diagram are the newcomers, who are a variable in this study. Their personal and positional relational categories, represented by the circular diagram, shape their resources. These social categories can produce unequal distribution of resources that manifest in the digital divide, however, it is important to note that all not all relational categories create inequalities. The personal and positional categories are taken from van Dijk (2005) with a modification. The personal categories are age/generation, sex/gender, race-ethnicity, intelligence, personality, and health ability. The positional categories are labor, education, household, nation/language.

van Dijk did not include language as part of the positional category. Previous studies on Internet literacy highlighted the fact that language had a significant impact on Internet literacy development (Chen & Wellman, 2004; Ono & Zavodny, 2008; Robison & Crenshaw, 2010). Considering that this research focused on newcomers and took place within an ELT program, I added the term 'language' to the positional categories and defined it as native English speaker-non-native English speaker. I adapted Warschauer's model into this framework by taking the resources he used in his framework and blending them with van Dijk's resources. As previously stated, Warschauer underlines the role played by social capital on technological literacy. I emphasize this in my framework by making social resources the first resource and highlighting it, although, all resources can influence each other. For example, social resources (i.e. co-workers,

acquaintances, friends) can help with material resources (i.e. income from a job they gained through networking). Conversely, mental resources (the ability to use certain websites i.e. LinkedIn™, Facebook™, etc.) can lead to more social resources (acquaintances and colleagues).

The four successive types of access are essential to understanding this framework. For instance, if problems with motivational and/or material access to Internet literacy development (wholly or partly) can be solved, this may lead to an increase in the development of skills access. For example, the individual may have recently been able to afford the Internet. If skills access is developed, this may lead to increased usage access (the kinds of materials that are being accessed online by an individual).

The complexity of Internet literacy development fits into this framework because technology for the Internet continues to grow. For instance, when the Internet became popular, one of the most common ways for people to stay connected was through Internet chat rooms and email. People had to develop specific skills and gain usage access to these sites. In recent years, however, social media sites such as Facebook™ and Twitter™ have become the mainstream in how people remain connected. New innovation and technology developments will push the continued development of Internet literacy skills. This is how the framework is both cumulative and successive

Understanding how the distribution of resources affect access to Internet literacy development within a specific educational program will have curricular and pedagogical implications for this program. For this reason, the model is in two parts: the circle titled 'Affects of Resource Distribution on Newcomers' Access to Internet Literacy Development' and the box labeled 'Curricular and Pedagogical Implications'. These parts are connected with a

unidirectional arrow pointing from the circle to the box to signify the curricular and pedagogical implications, which will result from this study's findings.

In summary, this conceptual framework that explores the effects of resource distribution on newcomers' access to Internet literacy development guided my decision-making on the design, data collection and analysis and the reporting of findings in this study.

## **Chapter 4**

### **Methodology**

This qualitative case study explores how the distribution of resources within and outside an Enhanced Language Training Program affected a group of newcomers' access to Internet literacy development.

I believed that by studying this phenomenon, researchers and educators would have a better understanding of how to facilitate the use of ICT for newcomers to Canada. The research asked the following two questions: (1) How is a group of newcomers' motivational, material/physical, skill, and usage access to Internet literacy development affected by the distribution of social, material, temporal, mental, cultural/human, and digital resources within and outside the Enhanced Language Training program? (2) What are the ensuing curricular and pedagogical implications for Enhanced Language Training program? This chapter describes the research methodology and includes discussions on the rationale for the research approach, setting, a description of the recruitment process and participants in the case, research design, methods of data collection and analysis. It concludes by considering ethical issues and the trustworthiness and limitations of the study followed by a brief summary.

#### **Rationale for a Qualitative Case Study Research Design**

In this study, the ways distribution of resources affected a group of newcomers' access to Internet literacy development was investigated through the analysis of participants' opinions, feelings, and experiences with Internet. Qualitative research was the best fit for this study because it is concerned with social contexts of the world, and answers questions which begin with 'why', 'how much' and 'in what way', and finds its answers from the opinions, experiences and feelings of the individuals producing subjective data (Hancock, 1998).

A case study is an inquiry that investigates a contemporary phenomenon within a bounded context (Yin, 1994). My aim for this study was to examine a purposeful sample of participants enrolled in an extended language program in southwestern Ontario. This specific situation of newcomers in a settlement program helped to illustrate the complex impact the distribution of resources have on access to Internet literacy development for newcomers to Canada.

A qualitative case study approach was appropriate for this research because it offered a way to investigate complex social units consisting of many variables that are important in order to understand the phenomenon (Merriam, 1998). It allowed me to explore in detail, a single case consisting of a class of students in a nine-week course designed to help newcomers improve their ICT skills and prepare for the Canadian workforce. Each participant in this study had unique beliefs, feelings, and perceptions of acquiring Internet literacy as newcomers to Canada. Therefore, a comprehensive insight of their experiences in an ELT program was best understood through the learners' and instructor's personal experiences and perceptions of events. Further, themes that emerged from the data were unique being derived from my personal and professional background and insights into the topic. The qualitative case study approach allowed for rich subjective descriptions and detailed analysis of the topic from the contextual and perceptual perspectives of students.

To provide an in-depth understanding of education and the perceptions of newcomers on Internet literacy, data was collected by a range of methods consistent with a qualitative case study design (Creswell, 2007; & Merriam, 1998). Data was collected using five methods: (1) initial survey (2) observation of learning activities, (3) interviews of learners, (4) interview of the instructor, and (5) document review. These various methods used to collect data added to the triangulation of data from the study.

## Setting

During the conception of this study, I wanted to focus in southwestern Ontario because of the high concentration of newcomers who live there. This left me two options: I could examine the Language Instruction for Newcomers to Canada (LINC) program or I could research the Enhanced Language Training (ELT) program, a relatively new program initially launched in 2003-2004 by the Canadian federal government to provide higher levels of language training including job-specific language training (Integration-net, February 6, 2010). I chose the latter for four reasons. First, because it was relatively new, and the ELT programs have little research associated with them. Second, I chose an ELT program because it was important for me to research a program that has great significance to newcomers to Canada due to its focus on job-preparedness for the Canadian workforce:

ELT will help immigrants and refugees reach their potential and acquire a sense of belonging by enabling them to participate fully and effectively in Canada's social, economic, cultural and political life. The initiative will help immigrants find and keep jobs they are qualified for more easily and quickly. (Immigration-net, 2009)

Third, the advanced language ability of ELT students would be an asset to me in my data collection. Fourth, I was aware of the center and some of its members before I started the data collection, which provided me with more background knowledge of the site and ultimately led to easier access.

### **The ELT program.**

The program creates job-related training and bridge-to-work assistance, including mentoring and work placement to help newcomers enter and remain in labour market positions. It has been estimated that 45,000 newcomers require job-related language training to reach their

labour market potential (Integration-net, February 6, 2010). One of the major changes that have caused the Canadian job market to evolve over the past decade has been an increase in technological developments (Human Resources and Skills Development Canada, 2006).

Most ELT programs require students to be high-intermediate in all skills in order to enter such programs as ELT. Learners must be assessed between levels 6-8 of the Canadian Language Benchmarks (Pawlikowska & Smith, 2005) for all skills: reading, writing, speaking, and listening. Therefore the linguistic abilities of the ELT students are generally advanced. Programs are designed to help students find employment in their area of expertise, so are designed based on particular employment fields (Citizenship and Immigration Canada, 2008). Further, typical ELT programs have incorporated technology in some fashion into their lessons and programs. For these reasons, the ELT program seemed like a suitable choice for the study.

#### **Selection of site.**

At the beginning of this research process, I contacted three potential immigrant centers for this study (Appendix A). I chose the Newcomer Center of Peel (NCP) in Mississauga, Ontario to conduct this study because the school is one of the largest immigrant centers in Canada, and because of my familiarization with this program. The program's manager gave me permission to conduct the study on the condition that they would be named in the study (Appendix B).

ELT classes at this site did not have a continuous intake of students. Three classes were conducted at a time. I had approached all of the instructors, and received permission from a teacher whose pseudonym in this study is Oscar, to observe his class entitled *Labour Market Access for Newcomers*, a course designed to help newcomers integrate into the Canadian job market. This course took place over a period of nine weeks in 2010 and I attended and observed three classes.

**Course description.**

The course, *Labour Market Access for Newcomers*, was a bridging program for newcomers who want to enter the Canadian workforce. The course was widely advertised in local newspapers, and in flyers, which were given away at airports, churches, and community centers. Students in the program came from either a LINC background or from the general population. To be eligible, students had to be 18 years of age or older, with a minimum Canadian Language Benchmark 6. They needed proper documents (certificates, diplomas, or degrees) and/or previous work experience to be eligible for the course. People who had no work experience or job training, and who had limited language ability could not enter the program. Prior to course admission, the potential student was interviewed by a program coordinator to determine a suitable co-op work placement. This informed the coordinator about jobs the student would be qualified for, and it allowed the teacher to determine the background and needs of the students prior to the start of the course.

The course was nine weeks followed by a ten week co-op where students completed a work placement suited to their qualifications, allowing them to gain Canadian work experience. The curriculum of the course highlighted and enriched the skills necessary for students to get and maintain a job in Canada. Areas of focus included speech, determining skills and experience, building and tailoring a resume, email etiquette, research skills, information interviews, occupational research, job interview skills, networking, and providing information on the Employment Standard Act, Ontario Human Rights, and workplace health and safety. Each student had laptop access, and was often asked to go online to conduct research in their job field in Canada.

The curriculum was not standardized but developed by individual course instructors. The instructor I observed built his curriculum on multitude of sources, such as business textbooks and websites and had it pre-approved by the program manager.

### **Participant Recruitment**

There were two aspects of participant recruitment: one for class observation and the second to conduct interviews

First, I had received permission to observe a course (Appendix B) that consisted of 10 students, and I had also received permission from the teacher (Appendix C). Prior to starting my observations, I described the objectives of my study to the potential student participants, and what their participation in the study would entail. After, I gave them a form that explained my study in simple English (Appendix D). Ten students agreed and completed the initial questionnaire which asked them to fill in solicited information regarding their age, country of origin and length of time in Canada, language(s) spoken, educational status, and occupation or desired occupation. It also asked them to rate their comfort level with the Internet and how much time they spent on the Internet, and to share any other information with the researcher that they chose (Appendix E).

According to the initial survey, the class was composed of three male students from China, India, and Russia, and seven female students from Jamaica, China, Tajikistan, Pakistan, Egypt and the Philippines. Their ages in the class varied the youngest being 20 years old, and the oldest being 64 years old. They had diverse educational and linguistic backgrounds, and different levels of literacy skills both online and offline.

Afterwards, I approached the students who had signed the forms and told them that if they were interested in an interview that they were to email me. Only two students had emailed me to

volunteer to participate by the second class. I approached three more students who I thought might be interested and asked them to email me if interested.

By my third day of observation, I had confirmed my five student participants for the interviews. The students all completed the consent form (Appendix F).

### **Description of Participants**

Five students and one instructor agreed to participate in my research. The criteria for the teacher participant was that he or she should have had a minimum of one year's experience in the ELT program by the time I started observing the class. The reason I decided to include teachers with minimal experience was because the program itself was new, and it may have been difficult to find a teacher who had more than one year's teaching experience in the ELT program.

Although an experienced teacher would add value to the data collected because of their previous experience in the program, teachers with a year of experience could also add a unique perspective and point of view. The teacher who participated in this study met the criteria.

The following table outlines the profiles of the five students who participated in the interviews conducted for this study.

Table 3

*Student Participant Profiles*

Name	A	S	L1	Country of Origin	Education	#	Miscellaneous
Nadia	29	F	Persian	Tajikistan	University teaching degree - country of origin	3 yrs	L2 is Russian L3 is English Married Daughter 7 yrs old
Alex	24	M	Man-Darin	China	Bachelor degree mechanical engineering - England	1.5 yrs	
Lin	55	F	Man-darin	China	Bachelor degree medical science	4 yrs	Lived in Denmark 1 yr. One son - young adult
Rasik	34	M	Bangla/Bengali	Bangladesh	Bachelor degree pharmaceutical science - country of origin	3 yrs	Married -wife in LINC program Daughter 7 yrs old
Nouf	29	F	Arabic/French	Egypt	Bachelor degree pharmaceutical studies – UAE	4 mo	Two sons ages 2yrs & 5yrs School teacher in Egypt

*Note:* A=age, S=sex, L1= first language, #= length of time residing in Canada.

**Research Process**

The following section outlines steps taken to conduct this research.

**Literature review.**

An initial review of the literature was conducted to glean information on social learning theory, the digital divide and all aspects pertaining to the issues surrounding the acquisition of ICT for newcomers to Canada.

**Research ethics board approval.**

After the research proposal received Master's level approval at the university, the research ethics boards outlined procedures required to protect human research subjects and processes to ensure voluntary participation, informed consent, and confidentiality. After demonstrating diligence in adhering to the research ethics board guidelines, ethics approval was granted by the University of Ottawa and Newcomer Center of Peel (Appendix G).

**Data Collection**

To provide an in-depth understanding of education and the perceptions of newcomers on Internet literacy data was collected by a range of methods consistent with a case study design (Creswell, 2007; & Merriam, 1998): (1) collecting initial survey, (2) observing the classroom learning activities, (3) interviewing five learners and the instructor, and (4) document review. The various methods I used to collect information gave weight to the triangulation of research data.

**Initial surveys.**

All those who signed the consent forms were asked to fill out a survey, in order to get an idea of the demographics of the class population. The survey was used to help me understand the educational background of the students along with their abilities with the Internet prior to taking this class. This also gave the students a better understanding of my research.

**Observations.**

The class took place over a span of nine weeks. Throughout those nine weeks, I observed the class three times: once in Week 2, once in Week 5, and once in Week 8. At the time, I was working as a teacher in Ottawa. Based on my scheduling restrictions, I could only commit to traveling back and for to Toronto several times. I believed that three observations allowed me to

see the progress students made in their Internet literacy and the job related skills and strategies taught by Oscar. The students were not required to use the Internet every class as there were specific times when the course focused on Internet research, so I observed those particular classes. Although the three classes I observed varied in type and treatment of material, they all involved some element of group work and research, and students used computers and the Internet. I used an observation rubric to help with the observations based on the resources outlined in the conceptual framework (Appendix H).

### **Interviews.**

Data collected through class observation assisted me to narrow my focus and develop questions that would explore how the distribution of resources within and outside the ELT program affected the participants' development of Internet literacy. I conducted individual, semi-structured, focused interviews (Yin, 1994) with five learners and one instructor. Each participant was interviewed one time and asked to reflect on their experiences with the Internet inside and outside the ELT classroom, their previous experiences with the Internet, and how they thought the Internet would be used in their future careers. The questions were open-ended and I rephrased the questions if necessary, since my participants' second language was English (Appendix I). All the interviews were conducted before or after class and audio-recorded. Each was approximately 30-35 minutes in length for the student participants. This was appropriate because the participants were non-native speakers of English and committing to a longer interview may have been difficult for them. Soon after the interviews had taken place, they were personally transcribed so I could add any mental notes I had remembered from the interview.

I travelled from Ottawa to Toronto to conduct face-to-face interviews for three of the five learners, and the remaining two interviews were done using voice over IP software called

SKYPE™ due to scheduling conflicts on my part. I had made two audio copies of each interview, one with a digital recorder, and the other on my computer with a program called *Garage Band*™.

There were differences between the face-to-face interviews and those completed on SKYPE™. On SKYPE, the participants had more difficulty comprehending what I was asking, and would ask me to repeat my questions. However, their answers tended to be longer and more detailed.

The initial results from my observation phase allowed me to focus the instructor interview on the instructor's role as a language facilitator and student resource. The instructor was interviewed via SKYPE™, using a guided, semi-structured approach. Open-ended questions were used to explore the use of technology in the classroom and the instructor's experiences with learners (Appendix J). The interview was an hour long and was audio-recorded. The instructor view was instrumental to the findings of this study allowing me to explore the case from a different perspective.

#### **Document review.**

Documents that include planning and curriculum guides, teaching materials, teacher assignments, and student works pertaining to elements of technology and the Canadian Language Benchmarks were reviewed based on the resources outlined in the conceptual framework (Appendix M). The objective was to see if and how they impacted the digital resources that van Dijk (2005) and Warschauer (2004) describe as being important to bridging the digital divides. Documents were reviewed using the rubric (Appendix K).

**Data analysis.**

Yin (1994) states that data analysis can be one of the most challenging stages of the research because there are few fixed ways of conducting this process. The conceptual framework helped me organize my questions and my data analysis for this thesis. The data was analyzed in two ways, manually and using Nvivo 9 software. I started by analyzing the data using Yin's (1994) four principals. First, my analysis relied on all the relevant evidence, second it included all alternative explanations for the interpretation of data, third the analysis addressed the most significant aspect of the case study and last, I considered the impact of all my biases and previous knowledge on the case study. Due to the difficulty of case study analysis especially for novice investigators (Yin, 1994), I finished my analysis by using Nvivo 9 software. I used Nvivo as a tool to organize my interview transcripts along with my observation notes. Although the use of qualitative analysis software can enhance interview data analysis (García-Horta & Guerra Ramos, 2009), the computer can only help organize the data that I personally collected, categorized and interpreted.

I read the transcripts of each case several times and made margin notes, then started the process of analyzing the cases. Themes from the framework emerged from my readings with the use of colour codes that provided a visual of each theme. I looked for themes I expected to find based on the conceptual framework and noted unexpected, surprising information. After colour coding was complete, I did a cross analysis of the cases and merged the themes from each case looking at similarities and differences of findings for each participant. As a third step, I used the resources to code the data. Afterwards, I determined how the resources affected the different types of access.

To enhance the reliability of the coding and emerging of categories another researcher was asked to independently code a sample, 10%, of the data. This demonstrated an agreement of approximately 70% of categories between raters.

After conducting my own analysis, I used Nvivo to help me find themes of the study, which are called *tree nodes*. Appendix K represents the themes/tree nodes and the merged findings that correspond to each theme.

### **Ethical Considerations**

#### **Confidentially.**

To ensure confidentiality, all persons interviewed in this study were given a pseudonym. The site for this research gave me permission on the grounds that I name them in the research. The site sent a letter to the Research Ethics Board granting permission as well as outlining the stipulation (Appendix B). The Research Ethics Board agreed to this stipulation on the condition that on my consent forms I would inform the participant that the organization would be named. Also, in order to ensure confidentiality of the participants, I had to inform the participants orally that the research site would be named. The participants agreed both orally and in writing.

The documents and information gathered for this study were kept under lock and key in a safe in an office at the University of Ottawa and computer documents were password protected.

#### **Member checks.**

After I wrote the interview narratives, I emailed the narratives to the participants to check them for accuracy. The student participants did not respond to the first email, so I emailed the participants a second time asking them to verify the narratives. I never received a response. The teacher did respond and was the only member who checked his interview giving him the

opportunity to clarify, dispute, and/or add information of his own, however, he approved the accuracy of my assessment.

#### **Inter rater reliability.**

I chose a rater for my research who is a teacher and who has an M.A. in education. I gave the rater a description of my research, as well as a copy of my conceptual framework before she was given two interviews to analyze. She understood the resources and the kinds of access as outlined in my framework. She was given 10% of the data for two weeks then independently analyzed the data demonstrating 70% agreement of the themes used to code the data. I compared my analysis of the data, compared to her analysis of the data. We were in agreement for most of the themes except for cultural/human and mental resources. This could have been a result of her knowledge of the topic, as well as her assumptions and worldview.

#### **Remuneration for the participants.**

I informed the participants prior to their participation in the study that they will not be remunerated.

#### **Trustworthiness.**

How closely the results of the study, and if it can be transferred to other similar situations and settings, refers to its transferability (Creswell, 2007). The responsibility of the reader and/or future research is to evaluate how and if the conclusion of a study are transferable if a study were conducted in a similar situation or setting (Creswell). In order to provide the reader with information to decide the study's transferability, profiles of the learners and instructor were presented. The profiles outlined the learners' educational and work background, age, gender, ethnicity, languages spoken, household position, and length of their residence in Canada, along

with their own perception of their Internet capabilities. This information allows readers to determine if the results can be applied to other groups or situations.

### **Credibility.**

It is the researcher's responsibility when reporting on qualitative data to give the reader assurance they can believe the descriptions, explanations, and conclusions of the study are true.

Methodological credibility based on research design was achieved through the triangulation of multiple data sources and data collection that helped verify the repeatability of themes. The rationale for using multiple sources of evidence is that it gives the case study strength (Yin, 1994). Data sources used for this research included classroom observations, student-participant interviews, teacher interviews, and document analysis. Emergent themes or patterns from one data source were verified with other data sources.

I also paid special attention to the ethical and respectful conduct of participant interviews and their subsequent transcription (Guba & Lincoln, 2005) and I confirmed my biases as a researcher, which also adds to the credibility of the findings (Merriam, 1998; Creswell, 2007).

### **Dependability.**

Dependability looks for the research design to provide information about the social surroundings of the research study (Yin, 1994). I highlighted the concept of multiculturalism, and the history of literacy and language programs in Canada as well as the context of technological literacy in this country. The decision to pursue this study and conceptual design of this research were dependent on these social contexts. This study may have taken a different route if these social surroundings were different or not acknowledged at the inception of this research. It is important for future researchers to understand that any change of the political,

social, economic, or technological levels will affect the experience and reality newcomers, and ultimately affect the research design.

### **Confirmability.**

Confirmability of qualitative research is based on the premise that the researcher cannot and should not be seeking objectivity due to individual biases and assumptions (Bloomberg & Kolpe, 2008). The confirmability of this research is based on my care in capturing, reflecting upon and transforming the findings and then discussing them from my perspective.

### **Transferability.**

How closely the results of the study resemble or can be transferred to other similar situations and settings, refer to its transferability (Creswell, 2007). The responsibility of the reader and/or future research is to evaluate how and if the conclusion of a study are transferable if a study were conducted in a similar situation or setting (Creswell). In order to provide the reader with information to decide the study's transferability, profiles of the learners and instructor were given that outlined the learners educational and work background, age, gender, ethnicity, languages spoken, household position, and length of their residence in Canada, along with their own perception of their Internet capabilities.

### **Limitations**

Three areas of limitations should be addressed in order to help the reader better understand the findings. The first limitation is regarding language barriers. The participants' first language is different from mine so there is room for miscommunication and misinterpretation on the part of the researcher and the participant. Second, constraints on time and space affected the study. The distance between me in Ottawa and the research site in the GTA made it difficult for me to conduct my observations and interviews. Had I chosen a site that

was in Ottawa, I may have had more time to do a more thorough investigation. Last, my experiences as a Canadian-born female to a culturally mixed family, as an ESL teacher and as a French as a second language learner may have influenced my interpretations and analysis of the findings.

To minimize the impact of limitations on this study, several measures were taken. To deal with potential language barrier that may affect the data, I continually asked them throughout the interviews if they needed me to clarify anything. In order to handle issues with time and space, I made all participants aware that if I was not available to talk to in person, that I would be willing to use Skype to conduct these interviews. This allowed for more flexibility in terms of when the interviews were conducted. To minimize my assumptions and worldview, I constantly revisited them while I was analyzing the data.

The research stages included a literature review, research ethics board approval, and data collection and analysis. It is important to note that any change to methodology could change the data significantly. Additionally, a different researcher may have analyzed the same results differently. The next chapter examines the findings and identifies common themes that emerged from the data.

## **Chapter 5**

### **Findings**

The ways that the distribution of resources affected a group of newcomers' access to Internet literacy development was investigated through a hybrid model of van Dijk (2005) and Warschauer (2004). Two research questions guided this study. They were (1) How is a group of newcomers' motivational, material/physical, skill, and usage access to Internet literacy development affected by the distribution of social, material, temporal, mental, cultural/human, and digital resources within and outside the Enhanced Language Training program? (2) What are the ensuing curricular and pedagogical implications for Enhanced Language Training program? This chapter focuses on the first research question. The second research question is going to be addressed in the next chapter.

This chapter describes the personal situations and perceptions of the five students and one instructor, who took part in the study. Their culture, language, experience as newcomers to Canada and participation in the ELT program tells stories from different viewpoints yet common themes. The themes that emerged are related to social, material, mental, temporal, cultural/human, and digital resources that impacted newcomers' access to Internet literacy development. Each theme had sub-themes supported by evidence gathered from the data.

#### **Participants' Profiles**

All participants were under the age of 50 except for Lin. As many studies have mentioned (Jung, et al., 2010; Rosenthal, 2008) a person's age, and when they received their education, may have influenced their exposure to computers and the Internet.

Student participants, with the exception of Alex, had children. Lin had a child who was 19, and the rest had children under the age of 10. Participants, who had children at the

elementary school level in Canada, reported their children had been educated using the Internet to some degree.

Finally, all participants had come to Canada within the past four years. This is important because the expectations for immigrant populations coming into Canada vary from year to year. Over the past decade, there has been an increasing expectation that new immigrants will have the skills to participate fully and effectively in Canada's social, economical, cultural and political life (Integration-net, 2009).

**Nadia.**

Nadia was a 29-year-old woman from Tajikistan who had lived in Canada for 3 years. She came here with her husband and her daughter, who was 7 years old at the time of the research. Her L1 was Persian, which she spoke with her parents. Her L2 was Russian because her country was once part of the U.S.S.R., but now it is independent. She graduated from a university in Tajikistan with a teaching degree and became an elementary school teacher. In order for her to continue as a teacher in Canada, she needed to apply to teacher's college in Ontario. Due to the difficulty and time commitment in order to accomplish this, she decided that early childhood education would be the best fit for her at this time, so her goal in Canada was to become an early childhood educator.

She used the Internet regularly and considered herself to be somewhat comfortable with this technology; however she felt her daughter and husband were more comfortable on the Internet than she was. Her Internet literacy skills had enabled her to understand her Canadian surroundings and she believed her Internet literacy had greatly improved since entering NCP. She had started the LINC program at Level 1 and had made her way up through the program.

**Alex.**

Alex was a 24-year-old man from China who emigrated from England where he lived for three and a half years while he completed a university Bachelor degree in mechanical engineering. He had lived in Canada for 1 ½ years. His first language was Mandarin, though he also spoke Cantonese. He immigrated to Canada with his family and was looking for employment in his field. Alex felt very comfortable with technology, and he thought of himself as a digital native, a person who has grown up with technology (Hargittai, 2010). He professed not to need the Internet for his line of work, but he used the Internet daily to communicate with friends and family overseas.

**Lin.**

Lin was a 55-year-old Chinese woman who immigrated to Canada in 2006. She graduated with a Bachelor degree in Medical Science 27 years ago. Her first experience with the Internet was in 1996 when her husband moved to Denmark for two years to complete his PhD program. Lin used the Internet to communicate with her husband the first year he was in Denmark. The second year, she joined him and used the Internet to stay in touch with family and friends. After the family moved back to China, she stopped using the Internet until she moved to Canada with her son, who was a young adult. She started using the Internet once again to communicate with her husband who remained in China. Lin also used the Internet to keep up to date with the medical field she had worked in: ophthalmology. Lin professed that although she was not very comfortable with computers, she had become more comfortable with the Internet since she started using it daily. She could not imagine that she would ever be as comfortable as her son or her husband with the Internet.

**Rasik.**

Rasik was a 34-year-old man who emigrated from Bangladesh in 2007. He came to Canada because his older sister lived in Canada and told him that there were great opportunities for pharmacists. He came here with his wife and his daughter who was 7 years old. In Bangladesh, he worked in a pharmaceutical company and at the time of this interview, he was looking for similar work in Canada. He felt very comfortable with the Internet and, as a very active member in the Bangladeshi community in Canada, he maintained a blog that helped connect the Bangladeshi-Canadian community to Bangladesh. He had been online since 1997, when his company started using the Internet.

**Nouf.**

Nouf was a 29-year-old woman, born in the United Arab of Emirates but raised in Egypt. As a child, she went to an international school and learned English. At the time of the interview, she had been in Canada for four months with her husband and her two sons, who were 5 and 2 years old. She studied pharmacy in an Egyptian university. However, after she got married, she could no longer work in the pharmacy, so she worked instead as an elementary school teacher. Since emigrating from Egypt, she had been looking for a job as a pharmacy assistant to tide her over until she took her pharmaceutical exam, which would enable her to become a pharmacist in Canada. Nouf was comfortable with the Internet and had been teaching her eldest son how to use it. She did not consider herself a digital native, but nonetheless, she felt very comfortable with the Internet since she had been using it for almost 10 years.

**Oscar, the instructor.**

At the time of this study, Oscar had been a teacher for 7 years and had worked with newcomers to Canada for 3 years. He had been teaching in the ELT program for about a year

and was asked to design the curriculum for this program but was given minimal guidelines to follow. This was no easy feat because the students would come from a variety of different educational backgrounds, so he had to design a course that would meet the needs and career choices of a variety of students. He was requested to create a course that would help students enter the job market based on several textbooks suggested to him by program coordinators and other resources he thought appropriate. Once he designed the course, he had to have it approved by the program managers.

Oscar said that the Internet in this class was vital to the course's curriculum. The classroom was equipped with a wireless connection to the Internet and every student in Oscar's class was given a laptop to work on daily. Students conducted research, Oscar showed them videos, had them compose resumes and cover letters, and gave them assignments to do at home that required the Internet.

In my interview with Oscar, he explained how students were screened for the course. In order to be accepted to the program, students needed to have some experience using computers and the Internet, however there was not a placement test to test their technological skill. Oscar had had students who were not technologically literate. When I asked him how he worked with those students, he said that he tried the best he could, however he insisted several times during his interview that he was not a trained computer teacher and felt he was not qualified to teach computer skills.

### **Observations in the Class**

The observations enabled me to see how the teacher and the students approached the class. The class was set up in a U-shape with the teacher's desk in the opening of the U. The classroom was opened at 8:45 and teacher gave the students until 9:10 to come in and use the

computers as they wished. Oscar said he allowed the students a lot of free time on the computers. He felt it was important to have that flexibility because of students' hectic schedules or lack of access to the Internet at home. Once the class started, Oscar would review the content of the previous class and then explain the content of the current class and what students could expect for the week.

### **Themes**

In this study, participants shared their positive and negative experiences with Internet literacy. Themes and subthemes emerged through classroom observations that I recorded and student interviews (see Table 2). Themes were developed based on the six types of resources described in the conceptual framework. Almost every resource has several sub-themes. Findings of the study are reported under the following headings:

Table 4

*Resources, Descriptions, and Sub-themes*

	Resource	Description	Sub-themes
Theme One	Social	Social capital - Social networks and relationship	- Staying connected with family & friends - Role of teachers - Family as Teachers
Theme Two	Material	Income and material possession	- Internet Cost and Convenience - Household Sharing - Computers at School
Theme Three	Temporal	Time available and time spent online	No sub-themes
Theme Four	Mental	Social and technical knowledge and abilities	- Language Barriers - Frustration - Changed Perceptions
Theme Five	Cultural/Human	Skills, education, assets, gender, status, and credentials	- Finding Employment in Canada - Children's Safety - Age & Gender
Theme Six	Digital	Resources available online	- Working in Canada.gc.ca - Google: The Search Engine of Choice - Local Knowledge & Lifestyle - Social Networks & Blogs - Medical Research - Censorship - Security

The quotes taken in this next section were taken verbatim from the participant interviews.

### **Theme One: Social Resources**

Social resources were a major influence on participants' motivational access to developing their Internet literacy. This theme that reoccurred in many participant interviews demonstrated how personal relationships with family member, friends, acquaintances, and colleagues motivated the learners to use the Internet and develop their Internet literacy.

**Staying connected with family and friends.**

All participants of this study were from other countries and wanted to maintain communication with their families abroad. This motivated them to practice digital literacy.

The three female participants attributed their initial Internet use with their desire to maintain connections with family or friends. Lin's husband was a PhD scholar and had lived in Denmark for two years, one of those years they had spent apart. Lin explained:

I feel the world is a big world because it is a long distance from China to Denmark. And if we write a letter and mail it, it'll spend ½ months to get information. So, I decided to buy a computer and connect with Internet and that time, the highway, communicative highway. So, each time he reads my phone, and I know he calls me on the computer. (L., personal interview, 05, August, 2010)

Lin's motivation for using the Internet was linked to her desire to connect daily with her husband and this had a positive effect on her experience with the Internet.

Nadia's experience was similar to Lin's. Nadia explains how her desire to stay in contact with friends after she moved to Canada initiated her Internet use. She said, "My husband, he had email address and he was sending pictures and talking or writing to his friend like this, and I ask him to do for me" (Nadia, personal interview, 06, August 2010). Watching her husband interact with his friends from back home motivated Nadia to use the Internet as a form of communication with her own friends. She would also use the Internet when she was feeling homesick.

"Sometimes, if I feel bored, sometimes you miss back home, I can go to ride my country, I can see pictures, or some news" (Nadia, personal interview, 06, August 2010).

Nouf attributed her Internet use to her days of being a university student and being away from home. "I remember, I did my first email when I was 16 or 17. That's when I had to contact

my parents, my friends, when I went from UAE to Egypt I started having my email” (Nouf, personal interview, 18, August, 2010). Nouf is familiar with Internet through years of use and has used it frequently since moving to Canada to keep in contact with her loved ones back home.

### **Role of the teacher.**

An important resource for newcomers is the teacher. Oscar helped his students with their language, job searching, and Internet research skills. Students in Oscar's class were looking for employment and spent much of their time on the Internet searching for jobs.

A significant part of Oscar's curriculum was assigned to searching for information about Canadian employment on the Internet. Oscar introduced students to the government website Working in Canada (<http://www.workingincanada.gc.ca>), which helps people find jobs and other online resources that help them prepare for and apply for those jobs, such as resume building websites. Further, he taught them how to use the correct terminology when researching on the Internet.

When I had asked Nouf how Oscar's class had helped her, she talked about the government website that Oscar had shown the class. “Here in Oscar's class, he told us to use different other words and different other phrases. Working in Canada website really helped us a lot. Knowing about the Ministry of Labour. These key words help me a little bit” (Nadia, personal interview, 06, August 2010).

In my observations, Oscar explained to the class certain things they should look out for when searching for jobs. He explained how to examine the web address of a site to determine if it was a government site and taught them to beware of websites that asked for personal information such as a credit card number or their social insurance number. Privately in the interview Oscar revealed that students would approach him for advice on things that were beyond

the scope of the class for instance how to find the bus schedule or daycare for their children.

Oscar as a human resource was crucial to the students and all felt he helped them improve some aspect of their Internet literacy. Despite this, Oscar maintained that his abilities were limited because he had never been trained how to teach using the Internet as a resource.

### **Family as teachers.**

One of the most accessible social resources that a person can have is the family they share residence with. Every family has different dynamics that can impact on Internet literacy in positive or a negative ways. The following illustrate positive examples. Nadia's husband showed her how to use the Internet, so she could talk to friends back home. Rasik's wife showed him the purpose of Facebook™ and how to use it. When I interviewed Oscar, he mentioned a situation where a student was having great difficulty with a research assignment on the Internet. He had asked the students to research their job position in Canada. Sing, a teacher from India, was having problems.

Sing was sitting still at Google and had written working in Canada. I asked Sing what was going on, and he said, "Well, I don't really know how to use the Internet." It was really frustrating because I was constantly saying, "Is everyone with me? Is everyone with me?" And he didn't say anything. And so I helped him through that afterwards, and then I needed them to send me a bio, through an attachment I mentioned before and on Thursday or Friday his wife came in with him before the class started set up the computer with him, and showed him how to send the attachment. (O., personal interview, 23, August, 2010)

In this situation, the social resource that was most useful to Sing was his wife and not the teacher. Sing may have been too shy, he may not have had the right language to ask for help, or perhaps it

was a cultural trait that prevented him from asking. Whatever the case, Sing's wife aided him, which contributed to his literacy.

As demonstrated, family members can be a very positive social resource for students; however, this is not always the case. When Lin started using the Internet, she felt lost. She would turn to her son for help. "I ask him (her son) for help and he said you need something online, just tell me and I can get it for you. He doesn't show me. He just gets it" (L., personal interview, 05, August, 2010). This aggravated Lin. She also asked her husband to help her, though it created a situation that caused her a great deal of frustration. Lin explained:

It was not easy. Sometimes I said I hate computers because some programs, how the computer works. Why is working that way? I didn't know. I think maybe I should take some course. I asked my husband to teach me. He said "Every time, ask just one thing." He said, "Oh! You learn by yourself. And if you have some problem just ask specifically. If you just let me teach you, it is too much for me. Every time I have some question, I ask again, and next time I ask the same question again, again, again, I make him angry. (L., personal interview, 05, August, 2010)

Lin's husband and son inhibited her Internet literacy. Their frustrations ended up affecting her attempts at trying to understand how to use the Internet and negatively affected Lin's motivation. It was then that Lin decided to take a class to help her. Lin compared her situation in class to her situation at home:

I decided to learn from other people not from him. So, I enrolled to the class, but it's only one week. The teacher and the computer have an operating system. At that time, it was called UNIX and explained what UNIX meant. And I come home talk to him (her husband). "Why don't you give me the...you just teach me just how to use it. You

didn't explain why I should use the correct way." He said, "Because when you learn from other people you take notes, and you remember everything. When I teach you, you never take notes, you never review" (L., personal interview, 05, August, 2010).

Lin's social resources in the classroom helped her increase her skills much more than the social resources she had at home.

### **Theme Two: Material /Physical Resources**

#### **Internet cost and convenience.**

The cost of the Internet in Canada was a material resource that participants brought up in many of the interviews, the majority of the participants stating that Canadian costs were much higher than in other countries. Alex lived in the U.K. prior to living in Canada. "When I was in the U.K. I had it free for one year so I used it. I feel like it was very expensive here. In China it cost me \$100 something year with one megabyte and unlimited downloads Internet"(A., personal interview, 5, August, 2010).

Rasik who also lived in the U.K. prior to immigrating to Canada noticed the difference in price:

It's high compared to (when) I used to live in the U.K. The Internet, if you get a...phone line connection, it counts as complimentary or built-in feature. If you spend \$15-20, you can have really high speed Internet, one gigabyte...If you consider the price and the speed, still Canada is not that accessible to low-income groups. (R., personal interview, 19, August, 2010)

Nouf compared Canada to UAE in terms of price. Nouf explained, "We always use the DSL, so it's always good and fast, not slow. We can always download stuff, cheap and

expensive. Well, everything is expensive to us. For us compared to the currencies back home, everything is expensive” (Nouf, personal interview, 18, August, 2010).

Although all the participants in this study had the Internet at home, many found the Internet in Canada less accessible because it was more expensive than in previous countries they had lived. The participants noticed the affect that money had on their material access to the Internet. By contrast, Nadia felt that the Internet in Canada was reasonable:

I want to buy for my parents, laptop and computer, and I know that we can see each other. I found out it is very expensive. You know, when we say dollar, for example for us 100 dollar is nothing, for them it is a lot. It is 100. I was okay, I can pay, but my dad was no. He said, “Why should I pay 100 if I live with 100 every month?”(Nadia, personal interview, 06, August, 2010)

Nadia's circumstances demonstrate that although she had the social motivation to keep in contact with her family, her family perceived the cost of the Internet too high in her country of origin, preventing them from being online. Nadia did not have daily contact with her family, which ultimately affected her skills, and usage and potentially negatively impact her Internet literacy.

### **Household sharing.**

The battle for computer time was a common theme in the research. Sharing with family members in the household was a material resource that affected students' material and usage access. Some participants shared one computer between 2-3 people. Rasik explained how he had one computer for three people in his house. His daughter, who is seven years old, used the Internet one hour a night. Rasik and his wife, both students, amiably shared the Internet the rest of the night but this meant less time for Rasik to participate in his blogs and look for a job, and

less time for Rasik's wife to practice English. Nouf had only one computer in her household up until 2 ½ years ago. When I asked her how her and her husband shared she said, "It was always a battle. I always wanted to use the laptop and he had to use it as well, and eventually he wins" (R., personal interview, 19, August, 2010).

When I interviewed Oscar, he mentioned that the program planners were aware that people at home may not have access to a computer or the Internet and that this equated to spending less time increasing their Internet literacy skill. That is why, before and after school, students were allowed to use the laptops in the classroom and after class had access to their computer labs in the building.

### **Computers at school.**

When I walked into Oscar's classroom, the first thing I noticed was that every student was assigned a computer. For those without computer or Internet access at home or who had to share a computer, this had a positive effect on their material access to resources. Oscar explained how important having access to the Internet was to the course:

Part of the goal of the Internet activities is to thrust them out there and say listen, this is what you are going to be doing, you need to get used to this, because when they leave me, and they are looking for a job, they need to be comfortable with the Internet. So basically, it's like throwing them in water and say swim. So they sort of have knowledge when they leave... Some of these Internet activities are based on the idea that I have to assess them. I say we don't grade them; however, I need to assess their abilities, what I would consider their working abilities to be with computers because I mean generally you need the Internet, and computers at work. (O., personal interview, 23, August, 2010)

### **Theme Three: Temporal Resources**

The Internet is a fast, effective mode of communication and time, as a resource, can affect use of the Internet. Lin, who professed her lack of proficiency with computers and the Internet, explained how keeping up with relatives reinforced her daily Internet usage. Lin told me:

... My son and I are the only family members here in Canada, so I feel lonely. I feel it is the best way to contact other family members and friends and it is the cheapest way possible and the most convenient way. You know, between China and Canada the jet lag is 13 hours, and now it is midnight for them. For us it's noon. If I talk, they have to be awake by me. If I send them my email, they can check it anytime, so it's convenient. (L., personal interview, 05, August, 2010)

This distribution of time affected Lin two ways. First, it was the fastest way of communication as regular mail often takes a very long time to reach its destination. Second, there is a significant time difference between Canada and China. Lin and her family bridge this time gap by using email at their own convenience, keeping in contact regularly: "I contact with my husband every day. So I felt, I not left him. I still with him together" (L., personal interview, 05, August, 2010). Time became negotiable and this temporal resource had a positive impact on Lin's her motivation to use the Internet and improved her Internet literacy.

### **Theme Four: Mental Resources**

#### **Language barriers.**

Participants' ability to navigate the Internet was compounded by language barriers. In class, students were expected to only use websites in English because of the design of the program. Lin, who was most uncomfortable with the Internet, felt that her ability in English made Internet use even more difficult. "Another thing is at home, my version is Chinese, here it

is English... When I see English, I wonder if it is correct compared to Chinese" (L., personal interview, 05, August, 2010). At home, Lin would often revert back to the Chinese text whenever possible.

Alex was concerned about the language needed to find appropriate websites pertaining to his job searches. He explained, "Sometimes, I want to search something, but I don't know the proper word to type it. That's a problem for me" (A., personal interview, 05, August, 2010).

Nouf, whose English abilities were quite advanced, explained how she also had problems with vocabulary when it came to searching for job information:

In the topic about working in Canada, how to search about places to find out jobs. He (the teacher) did help me with the key words because when searching engines I used to use different words we then use at home. Here there are many other choices, many other different things I used and to explore more. Here in Oscar's class he told us to use different other words and different other phrases. (Nouf, personal interview, 18, August, 2010).

Nouf, confident in her English abilities since she attended an international school, pointed out that even newcomers with advanced English might have difficulty with language in Canada because of the cultural aspects of their adopted country. She said that the language she knows may not be the words that employers are using in Canada.

### **Frustration with technical challenges.**

Frustration with the Internet was evident particularly with Lin and Nadia, who were not as comfortable with the ICT as other participants. van Dijk (2005) noted that frustration can affect the motivation, skill and usage access of learners. Nadia explained the frustration of looking for merchandise sales:

I was looking for something for my daughter. I check through Best Buy. I find very easy. After that, I heard I can find from less price for Zellers. I couldn't find. I was upset. It didn't work. The way it looked was different. I couldn't find anything from Zellers. I don't know if this is normal. (Nadia, personal interview, 06, August, 2010)

Although Nadia was pretty confident with her ability to search for coupons, she felt particularly flustered with some of the store websites she visited, attributing her inability to find coupons for certain stores to her own Internet skills. These types of annoyances can alter a person's motivation to access sites to the point of avoidance of particular websites.

Lin, the oldest and most anxious participant in the class, expressed discomfort and frustration with her Hotmail account. She explained, "...because it developed really quickly. And maybe just I get familiar with this version and tomorrow there is a (new) version" (L., personal interview, 05, August, 2010).

Lin must be commended however, for having the initiative to take an ICT class, as many seniors' who have computer and Internet anxiety do not even enroll in Internet literacy classes (Jung et al., 2010). As we will see, her initial lack of confidence and belief that she would never achieve Internet proficiency did not affect her motivation to continue and improve.

### **Changed perceptions.**

Sometimes an individual's perception of the Internet can affect their access to Internet literacy. Lin was initially very frustrated using the Internet because she could not find what she wanted, however, after taking classes, her perception of the Internet changed. She found it very useful and although it became a bit easier, she still struggles with Internet literacy.

In recent years, social networking has gained popularity in different communities (Weed, 2007). Rasik's involvement with social networking sites like Facebook™ started with his wife,

who showed him how to use it. His perception and use of social networking sites changed when he realized how it could help him maintain a relationship with family and friends:

Like when I first found Facebook. At that time, my perception about Facebook was different. I thought people were posting their very personal information, unnecessary information to others. I tried not to use it. I didn't like the idea. When I saw my wife using it regularly, and she was showing what her friends were doing or how they look like now, or how they looked before. I think that the day after that day I opened an account. I also found that I have my friends; they have Facebook account. My old colleagues, people who I knew before but I didn't have contact with them for a long time. It's definitely becoming an alternative communication media of email. Checking email has become a more formal way. Checking main Facebook has become informal, casual and frequent. (R., personal interview, 19, August, 2010)

Once Rasik started connecting with his former colleagues online it changed his motivation to use social networks and increased his Internet usage access.

### **Theme Five: Cultural/Human Resource**

In this study, distribution of cultural/human resources can be affected by an individual's job, age, culture, education, and marital and parent status. Cultural/human resources affect an individual's motivational, usage and skill access to literacy as I will discuss below.

#### **Finding employment in Canada.**

All the participants in this program were looking for a job in Canada and this impacted their motivation to use the Internet, and how they used the Internet. They unanimously agreed that it was necessary for them to use the Internet to find employment in Canada and all of them checked job websites and looked for positions they could apply for as a primary part of their

daily routine. Nadia discussed how she started incorporating the Internet daily, “Actually, daily from last year because I was looking for a job...I needed to go to Workopolis...and I needed to check any opening” (Nadia, personal interview, 06, August, 2010). Rasik explained, “Nowadays, I spend a lot of time searching jobs. Yeah, mainly these four: searching jobs, reading articles, reading newspaper checking email” (R., personal interview, 19, August, 2010).

Rasik, Nadia, and Lin all worked in the medical field or in pharmaceuticals and in addition to looking for work on the Internet, furthered their knowledge about their field by keeping up to date with the latest research and developments via the Internet. They felt this would improve their chance of getting a job in the future.

Rasik used the web regularly for health research and as a means of communicating with other divisions in the company he worked for. “I want updated job information. I want to know the industry train. All the information on the Internet will help me do this. I need to keep up to date” (R., personal interview, 19, August, 2010). He would sometimes contact former colleagues to see if they had heard anything about his area of employment.

### **Children's safety.**

Children motivated their parents' use of the Internet. All participants with small children encouraged their children to spend some time on the Internet, however, parents wanted to assure their children's safety while using the Internet. To do this, parents had to keep informed on what it was their children were doing while online. This diligence not only affected their motivation, it also affected their skill and usage access.

Four of the five participants had children. Of the four, three had children under the age of 10. I asked those participants if they allowed their children to use the Internet and how that

affected use at home. Rasik allowed his daughter one hour of Internet nightly; however he would watch over her and put a restriction on the websites she used. Rasik explained that,

I have blocked some websites that have live chat options. It's a website for kids. They have live chatting options. I blocked that one. I don't like the kids talking because some of the words they were using were not good for 7 years old. I usually stay around her.  
(R., personal interview, 19, August, 2010)

Nouf had similar feelings about her son. As Nouf explained,

My 5 years starting to use it. He's going to the Disney channel, the imagination movie and all these cartoons, and he is playing games online. And it is very good because he is developing a lot of his vocabulary and his skill. He's becoming much better at that. He knows how to open the...how to click on the Internet item, how to open the whole thing, how to find the favourite menu on his own. I'm really happy(Nouf., personal interview, 18, August, 2010)

She was not afraid that he would open something unsuitable; however she was afraid that he would open something that would cause viruses. Nouf was also clear on how she watched over him.

My ears are with him...I'm afraid of the viruses. I don't want him to go to the wrong window. When I hear any kind of sound, I just go see what he is doing because I don't want him to open anything wrong, like the pop-up window. My ears are with him."  
(Nouf., personal interview, 18, August, 2010)

Despite her fears, she felt for the most part that the Internet was a great benefit to her son.

Nadia's 7-year-old daughter was also an avid user of the Internet often using it to

communicate with her school friends. Nadia's fear was that her daughter would "...write our personal information. Like my address...my postal code." (Nadia., personal interview, 06, August, 2010)

Parents of these young children were alert when their children were using the Internet. This acute awareness for their children's safety forced the parents be aware of what their children were doing online. In being aware of, and making a conscious effort to avoid the dangers to their children and themselves, they developed new skills such as placing firewalls on their computers. This contributed to their online literacy practices.

Another way that children influenced their parents Internet literacy may have been connected to their ages. Nouf, Rasik and Nadia had children between the ages of 1-10. A lot of the mothers Internet usage involved finding things for the household and for their children meaning that their Internet literacy was tied to their roles as young wives and mothers. Parents with grown children such as Lin, had different motives for starting to use the Internet. Parental status, therefore, affects how they used the Internet.

### **Age.**

Age itself may not be considered a cultural or human resource, yet a person's age can impinge on their technical and social knowledge (Rosenthal, 2008). In this study, age was a recurring cultural/human resource and often reflected attitudes towards the Internet. As we have seen, Lin, the oldest participant of this study, had some technical difficulties online. In my observations of the class, Lin was always able to complete the tasks that Oscar asked of her, however, she was very cautious and slower than other participants. In our interview, she brought up how she felt she would never be as comfortable as others. When I asked Lin to rate her comfort level with the Internet, with 1 being the lowest, and 10 being the highest Lin answered,

“I don't know. Maybe a 4 or a 5” (L., personal interview, 05, August, 2010). I asked Lin to explain her rating she said, “I don't know. I think it's not just I'm a worker as ophthalmologist. I feel very confidently I don't need anyone. I can do anything by myself. But with a computer I can't say that” (L., personal interview, 05, August, 2010). Lin's frustration may be attributed to her unsuccessful attempts at learning the Internet with her family. Although she never mentioned her age as a contributing factor, it is an important cultural resource worth considering when looking at her skills access.

Age of the younger participants of this study may also be a contributing resource to their usage access. Alex, Nadia and Nouf were in their 20's. Alex had been using computers since he was a kid. Nouf had been using the Internet since the end of high school and beginning of college. Nadia had only been using the Internet for 3 years, yet she seemed more confident with her skills than Lin, who had been using it longer.

### **Gender.**

Recent research has found that men and women's time spent online did not vary however their usage did (Dewing, 2010). Most men and women in this study seemed to spend a lot of time on the Internet; however they did not use it for the same purposes. The young mothers of the study, Nouf and Nadia, spent a lot of time on the Internet looking up information for their children and their household whereas men in this study spent more time researching employment opportunities and articles related to their field of study. Contrary to the other female participants, Lin spent more time researching employment opportunities than looking up information for her household. The men and women of the study demonstrated how gender as a cultural resource affected skill and usage access.

### **Theme Six: Digital Resources**

Digital resources accessed by these students influenced their Internet usage and skills access. In this section, I reveal what they did online and their purpose for accessing particular digital resources.

#### **Working in Canada.**

In my observation of the class in Week 2, Day 1, Oscar had the students look at a government website Working in Canada (<http://www.workingincanada.gc.ca>). This website outlined students how to research job information on the Internet such as market demand, qualifications for the job according to the province of Ontario, and the kind of pay likely to be expected if one gained employment in one's desired field. In several of the interviews, the teacher and the student participants mentioned that would highlight the market demands for the jobs they were seeking. In my interview with Oscar, he mentioned the importance for students of finding and navigating websites such as this:

Essentially, what it is, is a government website that offers a report on different jobs. So, let's say I want to know about a teacher. I go to the site, and I type in teacher in their little tool. What it does it opens up a report that talks about wages about teachers in Canada, places where work is available. It does have links to actual opening of particular jobs, what a teachers duties are in Canada, the outlook for teaching in Canada, what kind of skills are needed to be a teacher in Canada, tons of different stuff like that. (O., personal interview, 23, August, 2010)

Oscar used this website to help students understand how to navigate government websites and what kinds of websites they were to look out for. Overall, this website appeared to help increase students' skills and usage access.

**Google: Search engine of choice.**

Participants who had used the Internet for over 10 years noted differences overtime. They found that the Internet had become increasingly user-friendly. Many participants referred to Google as their search engine of choice, using the term “google” as a verb, and would often refer to Google when they talked about their research. Rasik illustrated the differences he noted with the Internet over the past 13 years:

You had to fill out 10-20 options to get the right answer. At that time, I didn't find it friendly. If you somehow lose that connection or that page, you have to do that all over again. When Google was introduced, it became even easier for such topics. It is simple and straightforward. I found that using the Internet was not difficult for me. (R., personal interview, 19, August, 2010)

Nouf saw Google as user friendly. “I just love it. I love the Google thing. I can google anything I want...whatever topic...I can find anything on the Internet” (Nouf., personal interview, 28, August, 2010).

From my classroom observations, Oscar set the example of using Google when illustrating how to search for certain web pages on the Internet. Students often used Google as their default page when they started the research assignments given to them in class. Alex pointed out that the Google feature many students like is when you start typing a phrase, Google's menu drops down and it has a variety of options for a person to click on. This feature can be quite useful to newcomers whose English may not be strong and may be a reason why many participants in this study chose Google as their browser; it made their usage access easier.

**Local knowledge and lifestyle.**

Young female participants discussed how they used the Internet to help build and maintain their households in Canada, such as grocery shopping, transportation, weather, and a variety of other reasons. Nadia was first introduced to coupons for various grocery stores by one of her classmate's in the LINC program. In one of Nadia's classes, she had passed a classmate's screen and asked her what it was that she was doing. Her classmate was looking for supermarket coupons. Nadia wanted to use coupons to save money for her household, so her classmate showed Nadia how to search for them. Since then, Nadia uses the Internet daily to save on household items. Her pride in her newfound ability to find deals for her household motivated her to look for more websites that would provide similar monetary benefits, thus increasing her motivation, skill, usage access, and her Internet literacy.

In the classes that I observed, Nouf seemed very comfortable with the Internet and was often the first one to complete tasks that Oscar had for the class in an efficient, timely fashion. She had started researching Canadian life on the Internet from the UAE in order to prepare herself. She and her husband looked into Transport Canada, and the cost of renting an apartment in Canada. When Nouf came here, she started looking into daycares, doctors, and even the proper clothes needed in Canada during the winter months. Nouf attributed most of her Internet use to helping the household:

I really use it for my kids. I was looking for daycares, looking for subsidies. I was looking for dentists, optometrists, doctors, even pharmacies around us. You know, things that will be for my kids, to see where to take them to public places, looking for proper vaccines to be taken, looking holidays in Canada. Even the winter clothing, I was looking for what is proper to be worn. I always have on my desktop. The first page that opens is

the weather forecast daily. When I used to take the bus, it was always the transit bus. I would Google map everything. (Nouf, personal interview, 18, August, 2010)

### **Social networks and blogs.**

Social networks have become an Internet phenomenon in the past couple of years (Boyd & Ellison, 2007). A social network site is a web-based service that allows individuals to construct a public or semi-public profile within a bounded system where they share a connection with other members of the site (Boyd & Ellison). Although social network sites were not used in Oscar's class, he had considered incorporating them in his curriculum in the future:

I've been experimenting, and I've been wanting to introduce social networking in the class because I feel that it is important. Things like Twitter, LinkedIn, Facebook are still quite new, so I'm still trying to determine how I want to introduce that into the class. I think it'll be quite important. (O., personal interview, 23, August, 2010)

In the interviews, some participants mentioned social networking as being a significant part of their Internet use. I asked Nouf if she had ever joined any social network sites. She had joined Facebook™ at one point but felt that it took too much of her time, so she decided to only log in occasionally to communicate with friends:

I have a Facebook. I felt that it needs a lot of time. I don't have enough time. I have about 100 friends on Facebook from Egypt from the time for college but daily, I don't go on Facebook. I just go to catch up with my old friends. (Nouf, personal interview, 18, August, 2010)

In recent years, social network sites have been places for people to network, which can lead to employment and information about daily life (Weed, 2009). Nouf may not be aware of the advantages of joining a social network because of the limited time she spends online.

Rasik had joined a social network site and was an avid blogger. Weblogs (blogs) are frequently modified webpages that have information on a particular subject with the newest information usually at the top of the webpage (Herring, et al., 2004). Rasik's blog experience demonstrates how cultural and mental resources, and social networks can affect an individual's usage access:

Now-a-days, I have a blog, so I write blog, and I make comment on other people's blogs. I reply to any comment or any questions that are registered or making comments on my blog, about something that I had posted in the blog... It's a Bengali blog, and I think it is one of the biggest Bengali blogs in my community. I usually blog about short stories, political, or well-known situations. Also, I write about some medical information blog, or health blog. (R., personal interview, 19, August, 2010)

Rasik's involvement with the blog and social networking demonstrates his commitment to his online community and the Internet. Both he and his reader invested a lot of resources into the blog. Personally and professionally, Rasik was heavily invested in the Internet in terms of what it had to offer him, and how he added to the information highway. In return the blog, as a digital resource, improved his Internet usage access and Internet literacy. Rasik's ability to communicate with his community via blogs and social network sites motivated him to continue with his writing, and had a great impact on his skills and usage.

#### **Professional information.**

For some participants the Internet helped them keep up with current research in their employment area, particularly those who had trained and worked in the medical community. Rasik had worked for pharmaceutical companies and attributed his first time use with the Internet with his work:

After working in the pharmaceutical company, the company had the service, the Internet, and they had Intranet as well. So I am exposed to this communication, Internet communication from 1997. I started as a means for communicating and getting data from the sister companies that I worked for. While working there, I found it very useful and then I got my first Internet connection in 1998. Since then, I am using it regularly, everyday. (R., personal interview, 19, August, 2010)

Rasik explained how the Internet helped him further his work. "I started using the Internet for getting information regarding diseases. At that time, there were popular websites, Medline, Askjeeves.com, Metpro. These provided health study information" (R., personal interview, 19, August, 2010).

Lin also noted the importance of the Internet regarding to her profession. "I can still read some articles, professional articles in my field. Ophthalmology articles and journals...its published lots of articles about my profession" (L., personal interview, 95, August, 2010).

### **Censorship.**

Censorship is an issue that came up in this study in two areas. First, two of the five students came from countries where material that contained religious or political overtones was censored. The inability to access certain information impacted material access for these students. Nouf found it to be particularly troubling. As a Christian, she used to teach Sunday school in Egypt and often found it difficult to find material on the Internet because the government had censored many things that had to do with any religion with the exception of Islam:

I'm not talking about the parental guidance stuff. I'm not talking about things only for adults. They also block things that are religious or politics and sometimes it is quite annoying because for a Sunday school teacher, I try to search from Christian stuff. I find

a lot of sites blocked in the UAE. But here, I could find anything I want. (Nouf, personal interview, 18, August, 2010)

Alex also had similar experiences in China. He felt that some sites blocked in China were not blocked in Canada. Alex said, "In China you cannot go to Facebook, and some Taiwanese websites and some Hong Kong websites but I can figure out how to go around it" (A., personal interview, 05, August, 2010). Alex figured out ways to get around the censorship, which meant that he had developed some literacy skills due to censorship.

The topic of censorship came up when I talked to Oscar about the classroom environment. In various schools that I had worked for in the past, certain websites were blocked or monitored to prevent students from using the school's Internet for personal use. In my interview with Oscar, I asked him if he, or his school, had any restrictions on the students' use of the Internet in his classroom:

I don't give them any restrictions. But I think that they can't be looking up any hateful sites, they cannot be looking up pornography. Like I don't tell them that, because I want that to be obvious because they're not kids, they're adults. (O., personal interview, 23, August, 2010)

Moreover, Oscar would not allow students to use the Internet while he or other people were talking. In my observations of the class, I noticed several instances where students would be using the computer while Oscar was giving a lesson. Sometimes he would want the students to follow him on their laptops, yet other times, he would teach lessons that would require students' full attention and the students were not supposed to use their computers at those times. However, some students would use the computers during those lessons anyway. Oscar would call those students out on it in front of the class. On occasion, he would single students out who

did not follow his instructions. When I asked him why, he explained that he wanted to create a professional environment for the students. He believed that if they accessed the Internet at their place of work during a meeting, it may end up in their termination. He did not want to mislead the students into thinking that the Canadian work environment was any different than the classroom.

### **Security.**

Usage access can refer to activities that participants avoid while using the Internet. Security was an issue that came up during some participants' interviews. When I asked them what they did not feel comfortable with, four out of five did not trust the security of websites and were concerned about safety in the form of identity theft, and Internet theft of credit cards and bank accounts. Some students did not even believe Canadian bank websites were secure. This section highlights the students' fears.

Nouf's fear had to do with computer viruses:

These pop-up windows, I just hate them. I remember one time, I am speaking for me and my husband. It gave us problems. We had to reformat the whole laptop again, so I think these pop-up windows, I don't know how to deal with it. They worry me. (Nouf., personal interview, 18, August, 2010)

Identity theft was also a fear for Nouf. "I don't like using my Visa. I don't like to shop online. I don't like to use my account online. I don't like paying online. I don't think it's safe enough" (Nouf, personal interview, 18, August, 2010).

Nadia was also wary about using the Internet: "I don't buy clothes. I don't do my banking on the Internet" (Nadia., personal interview, 06, August, 2010). When I asked her why,

she explained “I heard some how to call it, they steal, thieves, they steal information” (Nadia, personal interview, 06, August, 2010).

Alex, who was quite comfortable with anything on the Internet, had been a victim of identity theft. “Actually, one time, my credit card being used by others. Like \$300...more than \$300 paid to Rogers, but the bank stop it because at that time I was in China and didn't pay anything for network” (A., personal interview, 05, August, 2010).

### **Affects of the Distribution of Resources on Access to Internet Literacy Development**

The first research question that guided this study was how is a group of newcomers' motivational, material/physical, skill, and usage access to Internet literacy development affected by the distribution of social, material, temporal, mental, cultural/human, and digital resources within and outside the Enhanced Language Training program. In response to this question, we can say that the distribution of resources within and outside the ELT did affect the participants' access to Internet literacy development in multiple ways. First, the data shows that resource distribution could affect multiple types of access. For instance, family members, friends and the teacher as social resources affected participants' motivational, usage and skill access, and subsequently their Internet literacy. Participants were heavily invested in staying connected with family and friends. This motivated them to go online and communicate. Nadia, Nouf, and Lin claimed that their Internet use started because of the long distance between themselves and their families. All learners in the study were motivated to find new ways of communicating with their family members.

Family members living in Canada was another resource, which helped students improve their skills and knowledge. In several cases, the participants explained how their spouses taught them how to use certain types of social media, thus facilitating usage and skill access. Moreover,

the teacher had significant influence on students' access to Internet literacy development. He helped them gain awareness of the expectations of the Canadian workplace. As well, he helped them improve their knowledge on available resources online, which was meant to improve their chances at gaining employment in Canada. In this context, the teacher had a positive impact on all four types of access. He increased their motivation to use online sources, he increased their ability to access computers, he increased their possession of digital skill, and increased their time spent online.

Material/physical resources were significant factors in access and Internet literacy. Conversely, each student had free access to a computer and Internet before class, during class, and after class. This increased their material, skill, and usage access. Sharing computers and the cost of the Internet had mixed results. Some participants felt that Canadian Internet was very accessible and affordable which facilitated material access. Others found it to be too expensive, however this did not impact their material access, usage, or skill access since all participants in this study had Internet access at home and at school.

The temporal, or time resource was only mentioned by one participant from the study as having an impact on their Internet use. This student found that the speed of the Internet greatly increased her motivation and usage time spent on the Internet.

The distribution of mental resources could also affect various types of access. Some participants had added communicating via social media to their Internet practices after learning about certain websites. When Rasik first heard of Facebook™, he had decided that he did not want to use it before understanding its use. However, once his wife showed and explained to him the different functions of Facebook™, this increased his skill and his usage access. He started using social media as a method of communication, and would use it daily to keep in contact with

family members, friends, and former colleagues and this ultimately increased his motivation to be online and to use social media regularly.

The participants' mental resources helped them overcome obstacles such as language barriers and the difficulty of doing job searched in English Canada. Their perseverance pushed them beyond their frustration to continue with learning to use the Internet. Whether this derived from keeping in contact with family and friends abroad, or perceptual changes in the value of the Internet such as social networking, mental resources affected motivational, skill and usage access of the Internet.

Cultural and human resources affected all kinds of access. Most students had been in Canada for at least three years and were willing and ready to enter the workforce, so finding a job in Canada was a very important cultural resource for motivational access. The student participants were looking for employment in Canada. In their course, they had learned search strategies to help them find information on job sites. These strategies impacted the four types of access. Job search strategies learned in class motivated the participants to spend time at home looking for employment and increased their skills. All student participants claimed to look on the Internet daily for work, or for job-related news. Ultimately, improving their job searching skills online increased their motivational access, their skill access, and could lead to further material access once employment was gained. Further, the participant's desire to protect their children from negative influences on the Internet affected their literacy, as parents felt they had to make themselves knowledgeable about existing online dangers hence increasing their skills and usage access.

Age and gender impacted participants' skills access. The oldest student, Lin, experienced difficulty on the Internet. Gender impacted usage access. Young women in this study spent

more time looking at information about the home and children, while men spent more time accessing information about jobs or pursuing personal interests.

In the study, participants named multiple digital resources that they deemed important in their day-to-day use of the Internet. The digital resources participants used helped them look for employment, search for material for class, find local information, and research on their fields of study. The digital resources impacted participants differently. Those designed to describe local communities motivated women to find more information about their new adopted cities. The blog facilitated all four types of access for the participant who participated on the blog.

Censorship had a negative impact on some participants' usage because of information they sought was blocked. One participant actually found this censorship motivated him to increase his skills and enabled him to find new ways to find this information. Security negatively impacted the participants' skill and usage, as they were afraid of identity theft and safety, and avoided online banking and shopping. Overall, impacts on access varied subjectively and contextually depending on the participant and on circumstances.

As demonstrated above, the distribution of resources can affect multiple types of access. Table 5 shows how resources affected multiple types of access.

Table 5

*Distribution of Resources and the Multiple Types of Access Affected*

RESOURCES	<i>Motivational Access</i>	<i>Material Access</i>	<i>Skills Access</i>	<i>Usage Access</i>
Social	X	X	X	X
Material		X	X	X
Temporal	X	X	X	X
Mental	X		X	X
Cultural/Human	X	X	X	X
Digital	X	X	X	X

For further detailed description on the multiple ways that the sub-themes affected access please see appendix L.

Second, as described in our conceptual framework the affect of resource distribution on access to Internet literacy was both cumulative and successive, meaning motivational access could affect material access, which could affect skill access and/or usage access. This was demonstrated in the data. For instance, family and friends overseas as social resource impacted motivational access. The motivation to keep in contact with friends then affected the digital resources they found and/or used to communicate. In Lin's case, she started using email, which increased her possession of digital skills or skills access. As skills access increased, usage access increased too. Such as Rasik's 'discovery' of Facebook™, and more frequent use of the Internet by Nouf.

Conversely, resources did not always affect access successively. For instance, Working in Canada (<http://www.workinginCanada.gc.ca>), was a digital resource introduced to students,

which increased their possession of digital skill and their time spent online. As students became more comfortable with the website, their motivation to use the website increased. Some students started using the website at home. Their understanding and knowledge of the website motivated them to use it outside of class, in their day-to-day Internet use.

Third, the distribution of resources within and outside the ELT program could either facilitate or impede access. For instance, participants would look at family members as a teaching resource to help them with their online learning. In the case of Nadia, her husband helped her navigate the Internet and get in touch with her friends. Nadia's classmate showed her how to find coupons. Rasik's wife showed him how to use Facebook™. In contrast, Lin had difficulty learning from her husband who would often get frustrated with her, and her son who would do the task for his mother but would not show her how she could do it herself. For Lin, her family was a social resource that ultimately impeded literacy. In a self-directed fashion, Lin decided to take a computer class, which helped increase her literacy.

Language was a mental resource that could either facilitate or impede access. Some of the participants found it difficult to conduct searches on the Internet because of their limited vocabulary. Others felt that their English skill was very good, however, because they had learned English abroad, they did not know the right terminology to use when searching. Language impeded their skill and usage particularly in the classroom. One participant discussed how she had a difficult time using her email at school because it was in English, however, when she got home, she had the Chinese version of the email. In this situation, her skill access for certain applications was better facilitated at home than at school.

Gender was a cultural resource that could either facilitate or impede usage or skill access. The young mothers of the study were keen on finding information for their children and

household, as well as teaching their young children how to use the Internet. However, some female participants had experienced a conflict at home. Lin, wanted her son or husband to teach her how to use the Internet, however, their frustrations with her drove her to take Internet literacy courses outside the home. Nouf and her husband would fight for time on their only computer in the house. Nouf said that it was often her husband who would “win” because she had to tend to her children and the household. This impeded motivation, usage and skill access. Though neither participant explicitly related their conflicts at home to gender, two out of the three women experienced conflict with family members.

Fourth, as the distribution of resources influenced access to Internet literacy development, Internet literacy development could also potentially increase or decrease the resources available within and outside the ELT program. For instance, the teacher showed students how to use websites that were designed to give employment information. His instruction increased their ability to find information, to navigate hyperlinks, and to assess materials found online. The Internet skills, which he taught in the course, gave them new leads on where to look for employments and new contacts in their industries, which could potentially have increased their social resources, cultural resources, and digital resources. Conversely, limited access to Internet literacy could potentially decrease one's resources. For example, if a person does not have the skills or the knowledge to use email to communicate with family back home, they may be limited to using the phone for communication with their family. This can be expensive. This may mean limited and irregular communication with family members, thus a decrease in one's social resources.

The findings for this section were based on the data collected in this research. Table 6 outlines the findings for question one.

Table 6

*Distribution of Resources Affect on Access to Internet Development*

Resource	Effect of Distribution of Resources on multiple types of access	Facilitate Access	Impede Access	Effect of Internet Literacy development on Distributions of Resources
Social	Mo, Ma, S, U	X	X	X
Material	Ma, S, U	X	X	X
Temporal	Mo, Ma, S, U	X		
Human/Cultural	Mo, S, U	X	X	X
Digital	Mo, Ma, S, U	X	X	X

*Note:* Mo= motivational access, Ma= material access, S = skill access, U= usage access.

In summary, the data reflected the answer to the first question of this study: how is a group of newcomers' motivational, material/physical, skill, and usage access to Internet literacy development affected by the distribution of social, material, temporal, mental, cultural/human, and digital resources within and outside the Enhanced Language Training program? Access to Internet literacy development by the distribution of resources was affected four ways: (1) resource distribution could affect multiple types of access, (2) the effect of resource distribution on access to Internet literacy was both cumulative and successive, (3) distribution of resources within and outside the ELT program could either facilitate or impede access, and (4) Internet literacy development could also potentially increase or decrease the resources available to the newcomers within and outside the ELT program.

The above four points highlights the findings of this study as it relates to the first research question. In the following section, the second research question, what are the ensuing curricular and pedagogical implications for the Enhanced Language Training Program, will be addressed as well a discussion on how the findings relate to previous research.

## Chapter 6

### Discussion and Implications

Two research questions guided this study. The last chapter answered the first question: how is a group of newcomers' motivational, material/physical, skill, and usage access to Internet literacy development affected by the distribution of social, material, temporal, mental, cultural/human, and digital resources within and outside the Enhanced Language Training program? This chapter addresses and responds to the second research question: what are the ensuing curricular and pedagogical implications for Enhanced Language Training program? This question will be answered in three parts: curricular implications for the ELT program and pedagogical implications for the ELT program teachers. What will follow is a discussion on how findings relate to other studies, the implications for future research, and the conclusion.

#### Curricular Implications for the ELT Program

The curriculum for this particular ELT class was meant to increase student ability in attaining and maintaining employment in Canada. The curriculum was based on a series of textbooks and on other government documents. The job developers of this program were up to date with industries that students in the program were interested in pursuing. They were also aware of the expectations and qualifications needed for entry into those fields. Job developers interviewed students to create their profiles. Then, they used these profiles to help students find placements in their field. From the interviews, observation, and document analysis on the class, findings suggest that implications need to be made to the course curriculum.

It was clear that community was important to the students in Oscar's class. Communities in their home countries motivated the students to use the Internet. The distance that existed between the students and their countries of origin contributed to the kinds of activities they

performed online. For instance, using social media facilitated communication with family, old friends and colleagues. Adding a social media component to the classroom may help students build literacy and a stronger social network in Canada. Creating school or class social networks would be beneficial, allowing students to participate in online communities in a controlled environment, while encouraging them to become social resources for each other. This would have the potential to strengthen the classroom community (McClure, 2007).

Research has shown that blogs in the classroom can promote community building (Huffaker, 2004) and can help students increase their digital fluency (Glewa & Bogan, 2007). Program developers and teachers may consider having students create, maintain, add, and comment on a class blog. This would give them a voice, which may allow them to bridge social relationships, and participate in an activity to increase their digital fluency, their writing skills, researching skills, and critical thinking skills. A school blog would allow students at all levels to participate in the online community, and create a greater social network.

Integrating a lesson which would focus on website validity may help students enhance critical thinking skills when approaching Internet research. Some participants expressed concerns regarding the safety of websites. Showing students how to assess a website's validity, having them find and analyze websites with specific criteria, and having them compare a secure website versus a non-secure websites would enhance newcomer curriculum.

One area of the curriculum to consider are the entrance tests used to place students in the Labour Market Access class. The Canadian Language Benchmarks, the only document used to frame assessments of prospective students' language proficiency, does not include specific Internet literacy skills. There was not an assessment test on students' computer or Internet literacy level. Program developers may want to include an assessment based on the computer

and Internet literacy levels since each student had access to a laptop. In this way, teachers would have better understanding of the computer skills of the students as they enter class and from there, formative assessments of their computer skills would help plan activities to improve their Internet literacy practices.

According to the teacher, there was an expectation that students who joined the program have some Internet capabilities. However, from his interview, the reality of the program was that many students came in with limited or no computer or Internet proficiency. If program developers are not willing to create an assessment of students' computer and Internet abilities, the course should implement an introduction to technology in their curriculum, which would introduce students to the computer and the Internet.

Overall, the class helped increase the Internet literacy development for the students by providing variety of resources. Adding in some new components to the course as suggested above may increase students' motivational access, skills access, and usage access, ultimately leading to enhanced online literacy.

The CLB was used to determine whether students were eligible to enter the ELT class. While the CLB is not a prescribed curriculum for settlement programs, it can be used to create the curriculum of many language programs (Fleming, 2010). For this study, it was the gatekeeper to the ELT course, so it is important to highlight the areas of the CLB that mentions or neglects to mention Internet literacy and practices.

The weakness of the CLB in relation to the ELT course is that it fails to highlight the importance of computer and Internet literacy for new Canadians. For newcomers to enter the Canadian workforce, a level of computer and Internet competency is expected (Statistics Canada, 2007a; Statistics Canada, 2007c). Furthermore, to enter the class, applicants were expected to

have some computer and Internet literacy skills. The CLB does not do a sufficient job of measuring computer or Internet competencies below Levels 6, 7, and 8, thus creating difficulties for students who enter the ELT program without adequate computer or technology skills.

In order for the CLB to be a more useful tool for the ELT, there needs to be a frame of reference to assess computer and Internet literacy skills that is consistently applied to applicants. Tasks that need to be included in the CLB include the ability to conduct Internet searches, to read, write and attain information in emails, and to navigate and access websites. Internet literacy is a moving target having changed dramatically over the past 15 years, which suggests that the CLB's definition of literacy and language skills needs to be constantly evaluated and evolve with technological literacy developments.

A suggestion I have for the CLB include online or digital literacy assessment embedded into the four proficiencies that currently exist. Internet literacy would be part of the description of communicative proficiency and include statements of communicative competencies and performance tasks that learners demonstrate online and with computers. An example of tasks that would reflect a person's Internet literacy would include understanding information on the web, knowing how to use and express different registers, locating information online, negotiating websites and assessing the usefulness of information. The benchmarks could give certain tasks that would correlate with different abilities and create performance indicators demonstrating that the learner has achieved that proficiency. Certain tasks could revolve around Internet based research, setting up email and using it to communicate with others, joining and navigating social networking sites and other tasks that are useful for the students.

It is important to adapt the CLB to the needs of today's society meaning that there needs to be more effort in defining digital literacy and it should be integrated at every level. The use of

technology in language classrooms can help teachers improve other skills, especially Internet literacy, at the same time.

### **Pedagogical Implications for ELT teachers**

The teacher played a vital role for the students in this study. They relied on Oscar to help them with their language skills, their Internet research skills, their questions on Canadian culture, and on how to gain employment in Canada. From the interviews, social networks for these students were either in their countries of origin or in their household. The only Canadian social resource the students' mentioned in this study was their teacher. Subsequently, the teacher played an important role in the development of his students' integration into Canada and Internet literacy skills. This suggests that the teacher selection and preparation for these ELT programs and curriculum design is crucial to support learners and teaching Internet literacy practices and skills.

Language barriers and the use of precise terminology made online searching difficult for many students in this study. One student discussed how Google helped him with his language programs because of the variety of options available in the browser. The literature reveals that teaching students techniques that would help enhance their Internet search abilities is pedagogically sound (Cummins, 2001; Oliver, 1999). Teachers in the class need to be aware of how language can impede on Internet literacy, and should show students how they can facilitate easier searches with their knowledge of English.

The safety and security of websites was a cause for concern for participants in this study. When teaching, the instructor should be more explicit about the kinds of websites to avoid, and help students discern what sites are considered safe. Perhaps the teacher could create a 'Don't' list, which lists websites which students should avoid and why.

The teacher may want to consider integrating the use of social network in class and being part of that network. This may mean participating on social networks, and demonstrating to students how to use networks appropriately and professionally. In this 'space', the teacher could teach learners how to overcome some challenges caused by the uneven resource distribution, for example, a wiki or blog that is centered around student reflections on their struggles and successes with finding employment online. This open dialogue created by the teacher may help students create an online "community" in the classroom, which would add to their social resources.

In my interview with Oscar, he admitted to feeling ill-equipped to handle some of the challenges with technology that students experienced in his classroom. In order to provide teachers with proper tools they need to help enhance student literacy, educational institutions must provide teachers with the proper training, support and resources (Hedberg, 2006) so they can assist students who have a very limited Internet literacy development. This would require programs to invest money and time into developing training, seminars, tools, materials, and support for teachers. Since the Internet is constantly evolving, this would mean that ongoing support programs would have to change with the new technology. Oscar's classroom was well-equipped with computers and other technological devices, so it stands to reason that institutions should support the technology of wired classrooms with teacher training programs.

The teacher of the ELT course should have adequate training in dealing with Internet literacy issues. However, as we have seen with Oscar, not all language teachers in this program were trained in the area of Internet literacy. Oscar found it difficult to work with students with limited technological proficiency and this would slow the class down. Educational organizations

must provide the training teachers need in order to help newcomers improve their Internet literacy practices.

Applying these recommendations to pedagogy in the ELT classroom may facilitate teaching and learning that is more effective for the teacher and the students.

In summary, this section answered the second question of this study: what are the ensuing curricular and pedagogical implications for the Enhanced Language Training program? This research demonstrated that the distribution of resources within the ELT program contributed to participants' Internet literacy development. This is why explicit tasks on Internet literacy development and practice must be integrated into the curriculum and the CLB. Current second language teachers should integrate social media and networking in their classrooms. Furthermore, teachers must be supported with more professional development training.

## **Discussion**

The literature review and the data gathered for this study have highlighted the important issues that affect the Internet literacy of second language learners. The section focuses on themes by tying findings of this research with previous studies and the conceptual framework. The first theme to be examined is social paradigms that include findings from the themes of social resources, temporal resources, and children's safety. The second theme is related to the interrelationship between access and the newcomers' personal and positional categories. This encompasses findings from themes of mental resources, and cultural resources. Local knowledge vs. global knowledge is the third theme, which is drawn from material and digital resources. The final theme explores online culture and community, which encompasses themes such as social networking and blogging, censorship, and security.

**Social paradigms.**

The social paradigm of being part of extended families, as husband and wives, and as parents impacted participants' motivation to use the Internet, how they used it, and the development of their ICT skills. Data from this study provided different examples of newcomers attributing their initial use of the Internet with the desire to communicate with their extended family and friends who lived outside Canada, and they maintained relationships abroad using email, social networking sites such as Facebook™, or voice over IP systems such as Skype™. Their initial Internet literacy started with family and was reinforced on a daily basis by keeping in contact. This research highlights complex social relationships as being a contributing factor to newcomer literacy, a fact not reported in previous research.

As we have seen, the teacher played an important role as a resource with significant influence on the newcomers' Internet literacy. Oscar's goal was to help students with employment search. The class was embedded with tasks that revolved around computers and the Internet, and the teacher helped his students adapt their literacy skills to the expectations of Canadian employers. Even students such as Rasik, who felt his Internet literacy was high, or Nouf, who felt her English proficiency was quite strong, had to adapt their literacy practices to meet Canadian standards. Both attributed their improvement of literacy practices to Oscar's class. He helped students become aware of the cultural norms and expectations of the Canadian workplace, and he demonstrated the significance technology has in Canada's employment industry with the expectations that are placed on newcomers in terms of searching, attaining and maintaining employment.

It is important to understand the role that immediate family has on Internet literacy for newcomers. Previous studies have demonstrated that family support can help improve learner

Internet literacy skills (Chu, 2010; Rosenthal, 2008). This finding was corroborated in this study as both Rasik and Nadia had spouses who played positive roles in helping them improve their literacy practices. Conversely, Lin's husband and son did not support her with learning computer and Internet skills in the way she hoped, and would often get frustrated with her. Lin was not discouraged, and enrolled in a computer class that helped her improve her literacy skills. This goes back to the idea that access to Internet literacy development is a social phenomenon. The social context and the family context can impact access (Castaño, 2008). In Rosenthal's (2008) study on older women learning how to use the Internet, she found that the support of the family or a husband had an impact on the success of these women. 71% of the women in Rosenthal's study called upon family for help and support. This suggests that Lin's experience at home would affect her success with her literacy development.

Studies that examined parents and the digital divide focused on how being a single parent affected material access to resources (Duquaine-Watson, 2006). This research reports novel results as it demonstrates the impact children have on parents' literacy practices. Rasik made a point of blocking some websites geared towards children because he did not like the chat option and he blocked others that used offensive language. This required him to know about these options and have the requisite skills to block sites from his daughter. Nouf and Nadia were acutely aware of the dangers that exist online and they were always present when their children were using the Internet.

As demonstrated above, there was a correlation between the social resources and impact on access in this study and in issues that emerged from previous research.

**Beyond being an immigrant.**

In this study, there were unique findings in how physical and mental properties of the individuals impacted Internet literacy development. The personal and positional categories of the participants had a strong impact on the resources to different types of access. In this study, the participants' personal categories referred to their age, gender, race/ethnicity, intelligence, personality, and health ability; and the positional categories referred to their labor, education, household, and nation/language. These categories affected how resources were distributed which affect access.

Language as a mental resource impacted usage and skill access. Participants highlighted their difficulties with Internet literacy in Canada because of language barriers that existed. For example, Alex felt that his English vocabulary was limited and found some things online were difficult to find and understand. Nouf had quite a strong English ability learned in Britain, but her vocabulary was not relevant in Canada so she had to learn relevant Canadian terms. Only a few studies have examined immigrant usage, prior education (Chiswick & Miller, 2007; Statistics Canada (b), 2007) and the role of language barriers in Internet literacy access (Ono & Zavodny; Webb, 2006). One study on immigrant populations looked at how technology can improve and enhance second language acquisition (Liu, et al., 2002). This fits in to the notion that the choice of web browser may reflect newcomers' limited English ability. This study highlighted that Google was their preferred web browser because of its efficacy. Alex commented on how easy it was to use Google because if he did not know the exact spelling of a word or a phrase, a variety of options in the dropdown menu would appear, making the search easier. Students discussed how getting information from government websites was difficult because of language barriers. Nouf pointed out that many government or settlement websites could only be accessed in English

and French, which led to inaccessibility for those who needed them in other languages, especially in the early months of settling into Canada. With the mosaic of the Canadian population, it makes sense to have broader language options on the Internet.

The category of sex/gender and the Internet literacy highlighted differences in men and women's usage (Kennedy et al., 2003), and whether the Internet provided students with a gender-neutral forum in the online classroom. The younger female participants highlighted their usage being spent communicating with family and friends and using the Internet towards research that benefitted the household. Male participants described their usage as being primarily focused on job searching and websites that matched their personal interests. The personal category of age/generation affected access. Older aged adults have been at the center of recent research on Internet literacy. Lin had less access to Internet literacy than the younger participants because of barriers to motivational access and skills access. Lin at times felt discouraged, not only because of her lack of Internet skills, but due to the lack of emotional and technical support she had at home. The other participants seemed to have access to more social networks than Lin. Peacock and Künemund's (2007) study found that lack of motivation had a significant effect on older adults' development of technological literacy. Jung et al. (2010) described anxiety as a barrier to older immigrants' computer classes. Although Lin was initially uncomfortable with the Internet, she was motivated enough to take computer courses and now uses the Internet every day to communicate with her family and research her professional medical field. It is vital to create awareness amongst educators about such discrepancies, so that they can provide their students with the strategies to go beyond these barriers and to develop confidence in their ICT literacy development.

The positional categories of education and occupation have an impact on the learners' literacy and on their usage. A study by Robinson, et al. (2003) revealed that usage difference was affected by education and long-term use was related to wanting to enhance professional life. Participants in this study identified themselves as university graduates and professionals. Most had significant exposure to the Internet in school thus their Internet literacy skills were quite high.

As important as personal and position categories were to the distribution of resources, other factors such as being part of an online community and having an online presence or identity has also had an impact on usage. Online culture and communities is defined as a culture that has emerged as a result of computer networks for communication, and the characteristics that define that culture. For newcomers, the online culture provided a gateway to their communities either in their countries of origin or in Canada thus allowing the newcomers to create an online identity. Rasik was involved with an online blog that allowed him to communicate information with the Bengali community around the world. He was able to share medical information and political information using his blog as a tool for social networking. Rasik also used social networking sites such as Facebook™ to connect with former colleagues and to network for potential jobs. Being part of an online community was not accessible or desirable for everyone, for instance, Nouf would avoid Facebook™ because she felt that it took too much of her time.

The socio-economic and cultural makeup of the participants has an enormous impact on all four kinds of access to Internet literacy practices; as a person's identity evolves and their context changes, it affects their literacy.

**Local knowledge vs. global knowledge.**

In the literature review, part of the section entitled *Access to ICT* looked at the effort on the part of researchers to understand the inequality that exists between different nations. ICT access and digital literacy practices were summarized as being affected by the social, political, and economic situations of the individual, communities and countries (Snyder & Prinsloo, 2007).

Local knowledge and global knowledge affected material access for the participants in this study. Participants compared material resources between Canada and in previous places they had lived. Most found Internet costs high in Canada and agreed that the Internet would not be accessible to low-income families, yet they were all connected at home. This was interesting because none of them were employed yet they did not consider themselves low-income.

Local knowledge affected the usage access of the participants allowing them to integrate better into their new communities. Many students spent the time searching on the Internet for local information. Students attending this program were showing each other the kinds of information that existed online and how it could be accessed. According to some students, this type of information was not explicitly taught by teachers. Students were actively taking charge of their literacy within their own classroom communities without the support of the teacher. Mehra, et al.'s (2004) research discussed how different marginalized groups used the Internet to improve everyday life and to gain social equity and empowerment. They looked at three marginalized groups, and a common factor that impacted the Internet use among groups was shared community experience, which engaged its members.

For the young women of this study, their desire to enhance their local knowledge was connected with their roles as mother and wife. The two young mothers in this study used their Internet literacy skills to help with their household, transportation, children, and health. These

women would use the Internet to help them save money on groceries, to become educated about Canadian weather in terms of what kinds of clothing their children should wear, and searched for doctors and pharmacies. Before Nouf came to Canada, her and her husband decided to do research on Canada to find out the laws, what kind of lifestyle they would have, and the possibility of either of them getting a job if they moved. She felt that her prior research helped prepare her for her new life in Canada. Nadia started using the Internet after she moved to Canada. She was taught how to find websites by other students in the class, which helped her with daily chores and activities, such as grocery shopping and buying things for the household. The women's roles as the primary caregiver of the children and the house motivated them to search online for information about their new communities. However, for Nadia, it was the community at school that gave her the information she needed to help with her daily activities.

The program was meant to help students find jobs, therefore part of the curriculum focused on local websites meant to help students find work. Some of the websites that Oscar showed were Monster (<http://www.monster.ca>), Workopolis (<http://www.workopolis.com>), and Working in Canada (<http://www.workingincanaga.gc.ca>).

Tsai (2006) found that computer technology provided participants with new occupational opportunities and strategies to overcome barriers and stress caused by resettlement. Few studies have examined how relocation for immigrants has increased literacy skill development (Chiswick & Miller, 2006; Tsai, 2006). Local knowledge empowered the participants in this study. Students were using their skills to gain local knowledge and how to find relevant information was being passed down from student to student and being used to improve their daily lives in Canada.

Censorship affected two participants who had experienced it in their home countries. Participants noted that the "freedom" they experienced in Canada was different than the

ensorship they experienced in their countries of origin. One of the participants was able to do what he wanted despite government blocks, whereas another participant could not get the information she needed. One study by Shen, Wang, Guo and Guo (2009) showed that censorship in China prevented personal free expression in the public domain.

The resources used by participants of the study reflected their desire to gain information about their local adopted communities, as well as communities back home. The knowledge that participants gained through local and global communities helped improve their Internet literacy practice and empowered them simultaneously.

### **Interpretation and Analysis**

The findings and conclusions of this research are limited to the data collected from the observations of one ELT class at NCP, and the five student participants and one teacher I interviewed. The data is unique due to the scope and focus of the research questions. The diversity of participants I chose came from various cultural, linguistic, social, and/or educational backgrounds providing a rich mosaic of experiences. Interpretation of the data was through my personal filters influenced by my cultural, academic background, age, previous teaching experience and my extensive knowledge of the topic based on the literature review. The themes that emerged from the data represented what I believed to be the access to resources that affect newcomers Internet literacy development.

### **Implications for Future Research**

The primary research question of this thesis research was formulated to solicit a description and analysis of the distribution of social, material, temporal, mental, cultural/human, and digital resources that affect motivational, material, skill, and usage access to Internet literacy development for newcomers to Canada. The population used in this study was a purposeful

group of newcomers with specific language abilities, educational background and occupational interests. Future research projects could investigate groups with different educational backgrounds and language abilities yielding other types of knowledge. Information gathered from more focused newcomer populations i.e. newcomers within the first year of arrival, single mothers, older aged men and/or women, family units, or those who have not been formally educated, would enriched the data that currently exists in the area of ICT learning and the digital divide.

This study could investigate the resources of newcomers in LINC programs whose language abilities are limited, and what barriers to Internet literacy affect them. This would yield different results since applicants to the LINC program are not accepted based on the professional background of the students like in the ELT program.

Further studies on parent-children's literacy practices would be useful to educators who want to help build literacy skills in settlement programs. It would give them an opportunity to see how parent-children interaction can act as a social resource, and reveal what kind of access that has to literacy practices. Comparisons between immigrants with higher education to those without higher education would demonstrate the role education plays in the four types of access.

In this study, the participants who participated in social media were those who felt most confident with their Internet skills. I believe, based on the findings of this study, that newcomers who participate in online communities improve Internet literacy. Future studies should examine how social media can be used to help improve Internet literacy.

Exploring how resettlement affects Internet literacy development for some immigrants may be useful for educators developing curriculum for newcomers.

We know from previous studies (Rosenthal, 2008) that Internet proficiency improved the lives of older aged adults, so further research on the motivations and barriers experienced by older newcomers would be useful to teachers in LINC and other settlement programs. The idea of online identities were not part of the framework for this study, but should be considered in future research since having such an identity would affect the distribution of resources.

The second research question that framed this study addressed the implications for curriculum and pedagogy in the ELT program. This research question is particularly significant because it links Internet literacy practices to the curriculum of an ELT course for newcomers to Canada. As mentioned, research in this context could not be found. Case studies designed to explore the best practices of linking resources to Internet literacy practices in the LINC and/or ELT programs is another suggestion for future research. This type of research could involve content analysis of the programs' policies, classroom assignments, methods of testing and assessment, and get feedback from teachers and administrators on their perception of Internet literacy and strategies that make technology more accessible to newcomers. This research could also explore the affects the digital divide has on the newcomer classroom by investigating three main areas: group work and its affect on Internet literacy, the impact of teachers' Internet literacy practices on instruction in settlement programs, and how Internet literacy practices are evaluated. Knowledge in these would assist educators in responding effectively to the needs of newcomers.

### **Personal Reflections and Recommendations**

When I conceived my topic for this research, I had the opinion that ESL students were not as knowledgeable as people who were born and raised in Canada and needed help to develop their literacy skills. I believed that instructors and schools held a responsibility for teaching and resolving challenges that students faced online. However, as I began my observation and

interviews, I saw the students differently. They were in-charge of their learning. They empowered themselves. They helped each other. That is not to say that students in these programs do not face barriers, however, the students I interviewed showed me that even with these barriers, they found ways to cope and improve their language learning and their literacy development with strategies they had learned over the course of their lives.

The research helped me understand how learning to use the computer and Internet is more than developing technical skills, but is very much a social activity. I am now able to merge the social constructivist theories of learning with the education of newcomers to ICT. Social support, however, can be a double-edged sword. Newcomers are motivated to learn the technology in order to stay connected to loved ones, family and community, yet when they turn to family for support in learning the technology, they may be disappointed. I can relate my frustrating experiences trying to teach my mother to use the computer to Lin, who was constantly apologizing to her husband and son because she did not remember how to do what they 'taught' her. I realize now that newcomers who are not digital natives may need patient, consistent, professional support to learn ICT rather than relying on family members.

I did not expect the topic of social media to have the impact it did on students. As Lantolf and Thorne, (2007) stated, if people can transform their social and material environments, they can change themselves and the way they live. After completing this research, I was able to see how the students had progressed in these areas of their lives throughout the span of the course. Social contact provided comfort and connectedness for some, prestige and involvement for others. It was integral for their assimilation into their new lives. I am now very interested in the role that social media has to play on Internet literacy development, and how it can be used in the

future in programs such as the Labour Market Access program and other settlement programs to improve the future for newcomers.

As a teacher, I always used some aspect of technology in my classroom, but I rarely encouraged my students to use strategies and critical thinking while using the Internet. After completing this study, I have implemented more activities meant to improve Internet literacy development for my students. One thing I started was a class blog, which requires student to conduct research and to analyze the validity of that research. So far, my students have reacted positively to this, and I hope to continue with this in the future.

As a new researcher, I encountered many challenges in my research. I found the interview process difficult at times, especially, with students who may have felt uncomfortable speaking in English. It meant that I had to be more forthright with my questioning and more straightforward. The amount of data that I collected was initially overwhelming, and when I started analyzing it, I had great difficulty deciding how to organize and approach the research. The research process helped me focus my thoughts and ideas. I understand what self-directed learning means and how reflectivity is essential to my personal growth and as a researcher. Learning is a continuum and I am enjoying the process.

## **Conclusion**

The purpose of this research was two fold: (1) to understand how the distribution of resources within and outside an Enhanced Language Training Program affected a group of newcomers' access to Internet literacy development; and (2) to discuss ensuing pedagogical and curricular implications for the Enhanced Language Training Program.

It was designed to fill a gap in this area of research, and to help educators understand the needs of students in these programs. The challenge for the researcher was to make sense of the

large volume of information that was collected, determine the relevance of the data and how to report it. The literature on this topic was presented to provide a background for the purpose of the research; the need of addressing the issues surrounding access and Internet literacy for newcomers to Canada.

Four data collection sources were chosen for this study: (1) survey of the students, (2) classroom observations taken during three classes about the student interaction with computers, students-teacher interaction with computers, and student-student interaction with computers, (3) face-to-face interviews with students and a teacher and, (4) document review. A hybrid of van Dijk (2005) theory on the digital divide and Warschauer's (2004) theory on social inclusion was used to analyze the data. Accordingly, six themes emerged to help understand how resources impact newcomers' access to the digital divide. The six resources responded to the two research questions asked:

1. How is a group of newcomers' motivational, material/physical, skill, and usage access to Internet Literacy development affected by the distribution of social, material, temporal, mental, cultural/human, and digital resources within and outside the Enhanced Language Training program?
2. What are the ensuing curricular and pedagogical implications for the Enhanced Language Training Program?

Findings generated three areas of discussion. The first area of discussion presented that social paradigms had a major impact on the motivation and usage access of newcomers and is significant to this population because of their status as immigrants in Canada. The second area of discussion presented the affects newcomers' positional and personal categories had on their access to resources. Newcomers' positional and personal categories could have a positive or

negative impact on all four kinds of access depending on the circumstances of the individual. The usage access for this resource was of particular interest since it highlighted online communities newcomers had joined. This reflected their changing identities in Canada. The last discussion area was the idea of local knowledge vs. global knowledge their impact on the usage and the kinds of information attained by newcomers in Canada. Local knowledge attained by the participants of this study increased their Internet literacy practices and simultaneously helped empower them in their new lives in Canada.

This study contributed to the literature on newcomers' Internet literacy development within and outside an ELT program. Research on the Internet literacy development of newcomers in ELT programs in Canada has not been widely researched. This research was unique because of the context of the learners and the course. This research demonstrated that resources affected multiple types of access, that access was cumulative and successive, that resources could facilitate and impede access, and that Internet literacy development could affect the distribution of resources. Findings from this study found curricular implications for the ELT program and CLB, as well as pedagogical implications.

This research was particularly significant to the field of ESL education in Canada because the conceptual framework was adapted for a population of ELT learners in a Canadian settlement program. This framework may be useful to other researchers interested in studying ESL learners and their Internet literacy practices. This study was unique because it provided insight into the development of Internet literacy practices from the perspective of ELT learners. The complexities of the issues surrounding Internet literacy leads to a need for a re-examination of the questions surrounding access to Internet literacy development.

As a final note, this study was aimed at shedding light on the situation and needs of newcomers to Canada. This is of importance to all Canadians because Canada has historically been a nation of newcomers. In order to successfully assist immigrants to integrate into Canadian society, we must be aware of the importance of technology in Canadians lives, and how we can help them attain and/or maintain Internet literacy practices once they settle in Canada. As Rasik said:

It has become part of our daily lives. We don't want to disconnect with our friends. We don't want to disconnect with our community. We want updated information about our people, news, and events all around the world. It has become part of our existence now. ” (R., personal interview, 19, August, 2010).

Making Internet literacy development accessible for newcomers can empower them and help with their transition into Canadian society.

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## Appendix A

## Request for Site Access

Executive Director of Newcomer Centre of Peel

Dear \_\_\_\_\_,

I am writing to request your permission to access your ELT program and one of its classes in order to conduct graduate level research. I am working on my Masters of Arts in Education at the University of Ottawa, Faculty of Education.

My thesis works focuses on the digital divide and how it affects students' Internet literacy and their practices with the Internet in the classroom. The research would involve one class in your program. To conduct my research, it would require 3 classroom observations, and interviews with 4 students, and the teacher from that class. The classroom observations would take place over the duration of the course. The observations would be one at the beginning, one in the middle and one at the end of the program.

The goal of my study is not to assess your program or your teacher. Your program is an ideal site for research because of your staff's extensive use of the Internet in the classroom. The aim of my study is to gain an understanding of second language learners and their experiences with Internet and literacy. My role will only be as a researcher and not an assessor of the program. I greatly appreciate your consideration in this matter.

The research has been approved by the University of Ottawa's Research Ethics Board, and I have included a copy of this approval. I will gladly share more details of the study through a discussion or a written outline. I'm also available in person or through telephone to answer any of your concerns. You can contact me at (XXX) XXX-XXXX, or by email at

\_\_\_\_\_.

You may also contact my university supervisor, Dr. Francis Bangou at (XXX) XXX-XXXX. I hope that I will get to work with your organization and I appreciate your consideration.

Sincerely,

Catrina Ascenuik

Appendix B

Permission from Site



To the University of Ottawa's Research Ethics Board  
c/o

Dear,

I am writing to you in regards to Catrina Ascenuik's research *The Impact of the Digital Divide on Learning: A Case Study of a Language Classroom in Canada*. After receiving a detailed letter containing Ms. Ascenuik's detailed research, we have decided to allow her to conduct her research at the Newcomer Centre of Peel (NCP). We do require that Ms. Ascenuik follows NCP's codes of conduct, and that she names NCP in her study. We will not pursue any legal actions against Ms. Ascenuik or the University of Ottawa with regards to her study. If you have any further questions, please do not hesitate to contact us.

Thank you,

Newcomer Centre of Peel

to transform • to evolve • to belong



## Appendix C

## Consent Form for Teacher

Researcher:

Dear Mr./Ms.

I am writing to ask you permission to be a participant in my research. The purpose of this research is to learn more about Newcomers' previous experiences with technology, and how it affects their Internet literacy and their performance in your classroom. This study is being guided by specific ideas that relate to learning and technological literacy. My main research questions for this project is 'How does the digital divide impact Newcomers in their learning of ICT as it pertains to Internet literacy?' A secondary question to the research is 'How does material access and motivation access to technological resources impact learning of Internet literacy in the ELT classroom?' A tertiary question is 'How have these kinds of access affected Newcomers social resources in terms of Internet literacy?'

As a participant, you will be asked to be involved in the following:

- Participate in a 45 minute interview regarding your thoughts on the ability of your students and on the materials you use in your class.
- You will be reading a narrative of my individual interview to clarify or change information. This will ensure that the information collected during the interview is a true reflection of your role in the research study.
- Three observations of your class. One at the beginning of the term, one in the middle of the terms, and one at the end of the term.
- I will also be interviewing four students from your class with their permission.

I would like to stress that the purpose of this research is not to evaluate your teaching practices. Your input into this study is of great importance because of your role as a teacher, and your daily interactions with the students. It is hoped that the research will help instructors and learners understand learning in a literacy classroom and contribute to both professional development activities and program planning.

The information that will be gathered from the aforementioned research will only be used for the purposes of the research study. As a participant, you are free to withdraw before or after the interview or refuse to answer questions. You have every right to refuse participation in this study or stop participation during an interview if you feel uncomfortable in any way.

The Newcomer Centre of Peel will be named in this research. To ensure that confidentiality is maintained, a pseudonym will be created for any written text in the research study. Data collected through this study will be in the form of audio, transcripts and other notes. This collection of data will be stored in my advisor's office in a secure file until December 2017 then physically destroyed.

This study is to help improve the conditions of students, teachers, and those who work closely with Newcomers to Canada. The study may yield findings that highlight the issues of access that make the learning of Internet literacy challenging for students. If you decide to participate in this study, there are minimal risks because every precaution will be taken to keep you and the organization you work for anonymous.

The university of Ottawa's Research Ethics Board has approved this research project. If you have any concerns about being a participant in this research study, you are free to contact the Protocol Office for Ethics in Research at \_\_\_\_\_.

If you have any questions or concerns about this research project, you may contact me (the researcher) in person, by phone, or e-mail using the contact information on the top of the first page of this consent form. You may also contact my university supervisor, Dr. Francis Bangou at (XXX) XXX-XXXX. There are two copies of this consent form: one for you and one for me (the researcher).

.....

I, \_\_\_\_\_, willingly agree to participate in the research conducted by Catrina Ascenuik of the Faculty of Education at the University of Ottawa. The project is under the supervision of \_\_\_\_\_.

Signature of Researcher \_\_\_\_\_ Date: \_\_\_\_\_

Signature of Researcher \_\_\_\_\_ Date: \_\_\_\_\_

Signature of Participant \_\_\_\_\_ Date: \_\_\_\_\_

**Would you like to receive a research summary?      \_\_\_yes                      \_\_\_no**

## Appendix D

## Initial Contact Letter for Student Participants

My name is Catrina Ascenuik and I am a university student at the University of Ottawa. Right now, I am doing research on ESL students and their experiences with the Internet and technology. The goal of this research is to help improve the programs that are currently being taught in Canada. An important part of this research is to hear about student experiences with the Internet at home, at school, and at work. If you decide to participate in my research, I will make every effort to keep your identity anonymous. It is important to highlight that the Newcomer Centre of Peel will be named in this study. You can cancel your participation at any time. To participate in the research you will need to conduct a 30-45 minute interview with me.

If you are interested or have any questions, please contact me at (XXX) XXX-XXXX, or email me at \_\_\_\_\_ . I thank you for your consideration.

Sincerely,

Catrina Ascenuik.

## Appendix E

## Initial Student Survey

1. Name:

2. Age:

3. Country of Origin:

4. Language(s) Spoken:

5. Educational Background:

6. Length of Time in Canada:

7. Occupation/Potential Occupation:

8. How comfortable are you with the Internet? 1 being low and 5 being high. Please circle.

1      2      3      4      5

9. How much time do you spend on the Internet? 1 being never on the Internet and 5 being always on the Internet. Please circle.

1      2      3      4      5

10. Other information you would like to share:

## Appendix F

## Consent Form for Learners

Researcher:

The purpose of the research is to learn more about your previous experiences with technology, and how that affects your learning with the Internet in your language class. I will be asking you about your experiences with the Internet at school and in other areas of your life. The purpose is not to assess your language ability in the program. I hope that this study will allow you to reflect on your own experiences as it may lead to new insights in the field of education.

As a participant, you will be asked to be involved in the following:

- An individual interview that will be 35-45 minutes will be conducted by myself. The interview will be audio-taped and transcribed. The questions asked during the interviews will be related to the topic of research.
- You will be reading a narrative of my individual interview to clarify or change information. This will ensure that the information collected during the interview is a true reflection of your role in the research study.

The information that will be gathered from the aforementioned research conducted will only be used for the purposes of the research study.

As a participant, you are free to withdraw before or after the interview or refuse to answer questions. You have every right to refuse participation in this study or stop participation during an interview if you feel uncomfortable in any way.

The Newcomer Centre of Peel will be named in this study. To ensure that confidentiality is maintained, a pseudonym will be created for any written text in the research study. Data collected through this study will be in the form of audio, transcripts and other notes. This collection of data will be stored in a secure manner until December 2017 then physically destroyed.

The university of Ottawa's Research Ethics Board has approved this research project. If you have any concerns about being a participant in this research study, you are free to contact the Protocol Office for Ethics in Research at \_\_\_\_\_.

If you have any questions or concerns about this research project, you may contact me in person, by phone, or email using the contact information on the top of the first page of this consent form. You may also contact my university supervisor, Dr. Francis Bangou at (XXX) XXX-XXXX. There are two copies of this consent form: one for you and one for me (the researcher).

.....

I, \_\_\_\_\_, willingly agree to participate in the research conducted by Catrina Ascenuik of the Faculty of Education at the University of Ottawa. The project is under the supervision of \_\_\_\_\_.

Signature of Supervisor \_\_\_\_\_  
Date: \_\_\_\_\_

Signature of Researcher \_\_\_\_\_  
Date: \_\_\_\_\_

Signature of Participant \_\_\_\_\_  
Date: \_\_\_\_\_

Would you like to receive a research summary?      \_\_\_yes      \_\_\_no

## Appendix G

## Ethics Approval Notice

File Number: 06-10-14

Date (mm/dd/yyyy): 06/24/2010



**Université d'Ottawa**

Service de subventions de recherche et déontologie

**University of Ottawa**

Research Grants and Ethics Services

## Ethics Approval Notice

### Social Science and Humanities REB

#### Principal Investigator / Supervisor / Co-investigator(s) / Student(s)

<u>First Name</u>	<u>Last Name</u>	<u>Affiliation</u>	<u>Role</u>
Francis	Bangou	Education/Education	Supervisor
Catrina	Ascenuik	Education/Education	Student Researcher

**File Number:** 06-10-14

**Type of Project:** Master's Thesis

**Title:** The Impact of the digital Divide on Learning: A Case Study of a Language classroom in Canada

<b>Approval Date (mm/dd/yyyy)</b>	<b>Expiry Date (mm/dd/yyyy)</b>	<b>Approval Type</b>
06/24/2010	06/23/2011	Ia

**(Ia: Approval, Ib: Approval for initial stage only)**

**Special Conditions / Comments :**

N/A

Appendix H

Observation Checklist

Date:

Class Lesson Topic:

Check	Resources	Reflective Notes
<input type="checkbox"/>	Social Resources	
<input type="checkbox"/>	Material Resources	
<input type="checkbox"/>	Temporal Resources	
<input type="checkbox"/>	Mental Resources	
<input type="checkbox"/>	Human/Cultural Resources	
<input type="checkbox"/>	Digital Resources	

## Appendix I

## Student Interview Guide

Name of Participant:

Name of Interviewer:

Date:

Location:

1. How would you describe your past experiences with the Internet?
2. When do you use the Internet?
3. Why do you use the Internet?
4. What are some obstacles that you have had to face when dealing with Internet (at home, at school, at work)?
5. What successes have you had with the Internet (at school, at home, at work)?
6. How would you describe your current experiences with the Internet?
7. What is your motivation in learning with and using the Internet?
8. If and how do you use the Internet for communication?
9. How has the ELT program helped you with the Internet?
10. How comfortable are you now with the Internet in terms your use of the Internet?
11. Any further comments, questions, or concerns?

## Appendix J

## Teacher Interview Guide

Name of Participant:

Name of Interviewer:

Date:

Location:

1. What kinds of Internet sites and activities have you used when teaching?
2. What technological tools do students have access to? What are the terms/limits of that access?
3. From your experiences teaching in this ELT program, what are your reasons for using Internet in your class? Is it required or is it your choice?
4. How do you as a teacher help in your students' motivation to use the Internet in this program?
5. What kinds of tasks are students asked to do with regards to the Internet? Can you describe the tasks (i.e. collaborative, independent, etc.)
6. What kinds of internet/online activities do your students use in the course?
7. Are there any materials online that students are restricted from using? If yes, why have those restrictions been put into place?
8. What are some challenges students have in your classroom with regards to technology? How have you dealt with those challenges?
9. Have you received any training outside your TESL with regards to the technological components to your curriculum?
10. Are students required to take part in any mandatory social networking for the program (i.e. such as Wiki's, class Facebook page, etc.)
11. Do you have any other questions, comments, or concerns?

## Appendix K

Table K1

*Tree Nodes*

THEMES	FINDINGS (TREE NODES)	SOURCES	REFERENCES
Social Resources			
	Staying Connected with Family & Friends	3	15
	The Role of Teachers	6	9
	Family as Teacher	4	6
Material Resources	Internet Cost & Convenience	5	6
	Household Sharing	2	4
	Computers at School	1	3
Temporal Resources		1	3
Mental Resources	Language Barriers	4	9
	Frustration	2	4
	Changed Perceptions	2	2
Cultural/Human Resources	Finding Employment in Canada	6	20
	Children's Safety	3	5
	Age & Gender	5	9
Digital Resources	Working in Canada.gc.ca	2	3
	Google: The Search Engine of Choice	4	5
	Local Knowledge & Lifestyle	2	4
	Social Networks & Blogs	4	6
	Medical Research	2	6
	Censorship	3	4
	Security	3	5

Appendix L

Document Review Rubric

<b>Document Name:</b>		
<b>Resources</b>	<b>In-text Citation</b>	<b>Notes</b>
<input type="checkbox"/> Social		
<input type="checkbox"/> Material		
<input type="checkbox"/> Temporal		
<input type="checkbox"/> Mental		
<input type="checkbox"/> Cultural/Human		
<input type="checkbox"/> Digital		

## Appendix M

Table M1

*Sub-Themes and Affects on Access*

TYPES OF ACCESS				
THEMES/RESOURCES				
	<i>MOTIVATIONAL ACCESS</i>	<i>MATERIAL ACCESS</i>	<i>SKILLS ACCESS</i>	<i>USAGE ACCESS</i>
<b>SOCIAL RESOURCES</b>				
1. Staying Connected with Family & Friends	X		X	X
2. The Role of the Teacher			X	X
3. Family as Teachers	X		X	
<b>MATERIAL RESOURCES</b>				
1. Internet Cost and Convenience		X	X	X
2. Household Sharing		X	X	X
3. Computers at School		X		
<b>TEMPORAL RESOURCES</b>				
	X	X	X	X
<b>MENTAL REOSURCES</b>				
1. Language Barriers	X			X
2. Frustration	X		X	X
3. Changed Perceptions	X			X
<b>CULTURAL/HUMAN RESOURCES</b>				
1. Finding Employment in Canada	X		X	X
2. Children's Safety	X		X	X
3. Age & Gender			X	X

DIGITAL RESOURCES				
1. Working in Canada.gc.ca			X	X
2. Google: The Search Engine of Choice	X		X	X
3. Local Knowledge & Lifestyle	X		X	X
4. Social Networks & Blogs	X		X	X
5. Medical Research			X	X
6. Censorship	X	X	X	X
7. Security			X	X

## Appendix N

### Canadian Language Benchmarks (2000)

Retrieved from: [www.language.ca](http://www.language.ca)

#### **Canadian Language Benchmarks (version 2000)**

The **Canadian Language Benchmarks 2000: English as a second language for adults** provides a set of descriptors of what learners can do with English at various levels, expressed as 12 benchmarks for each of the four skill areas: listening, speaking, reading and writing.

The purpose of the CLB is to describe accurately where the learner's ability to use English places him or her within the national descriptive framework of communicative language.

The CLB describe a person's ability to use the English language to accomplish a set of tasks at 12 Benchmark levels, in four language skill areas:

- Listening
- Speaking
- Reading
- Writing

Each Benchmark contains:

- A global performance, or a short Benchmark performance profile
- Four selected competencies in social interaction, instructions, suasion and information
- Examples of communication tasks that may be used to demonstrate the required standard of proficiency

#### **CLB 2000: Chart Overview**

The following table illustrates how similar competencies require increasing complexity of performance across the three stages of proficiency.

	<b>Stage I/ Benchmark 1</b>	<b>Stage II/ Benchmark 6</b>	<b>Stage III/ Benchmark 12</b>
Competency: Reading Instructional Texts	Follow very simple short everyday instructions in a predictable context.	Follow short common instructions and instructional texts.	Follow extensive, very complex and/or specialized instructions and instructional texts.
Sample Task:	Follow one-step instructions in educational materials in a classroom situation (e.g., print, copy, circle and underline, fill in, check and draw).	Explain/convey to someone health and safety warnings and instructions for use that are printed on chemical product labels (e.g., on dishwasher detergent containers).	Read selected personnel policy regulations and instructions, and apply the information to a specific case study situation.
Competency: Writing Recording Information	Copy words and phrases to record short information for personal use.	Reproduce and record simple to medium complexity information for various purposes (e.g., notes, summaries, main points and other formats).	Select and reproduce very complex information from multiple sources in a variety of appropriate formats.
Sample Task:	Copy information from an appointment note into a calendar (e.g., name, address, time).	Take point-form notes from onepage written text or from a 10- to 15-minute oral presentation on a practical topic.	Write an article or paper for a public forum, presenting a synthesis or overview of an area of knowledge, based on multiple pieces of research or other publications.

Note: Competencies and tasks are only samples indicative of the range of a person's language ability at a particular Benchmark level.

*Note: Taken from Pawlikowska-Smith, G., 2000, Canadian language benchmarks 2000: English as a second language for adults.*

## Appendix O

Table O1

*Labour Market Access Curriculum*

WEEK	THEME	OBJECTIVES	ASSIGNMENTS
1	Introduction/ Employability Skills	<ul style="list-style-type: none"> <li>• Class introduction</li> <li>• Meeting with students</li> <li>• Exploration on workingincanada.gc.ca</li> <li>• Identifying skills</li> <li>• Identifying experience</li> </ul>	<ol style="list-style-type: none"> <li>1. Write and present elevator speeches</li> <li>2. Identify hard, soft, and transferable skills and connect to chosen occupation</li> <li>3. Identify past experience and connect to chosen occupation</li> <li>4. Research a chosen occupation on workingincanada.gc.ca; Present findings to the class</li> </ol>
2	Resumes	<ul style="list-style-type: none"> <li>• Identifying dos and don'ts for resume</li> <li>• Create own resume</li> </ul>	<ol style="list-style-type: none"> <li>1. Write a resume that accurately matches the student's skills and experience to the job requirements. Resume should be ready to be submitted to the JDs by Monday of the 3<sup>rd</sup> week.</li> </ol>
3	Business Communication	<ul style="list-style-type: none"> <li>• Complete resume</li> <li>• Create business letter &amp; email</li> <li>• Understanding purpose and function of cover letter</li> <li>• Dos and don'ts of cover letters</li> </ul>	<ol style="list-style-type: none"> <li>1. Compose a business letter</li> <li>2. Compose a business e-mail</li> <li>3. Compose a cover letter</li> </ol>
4	Job Searching	<ul style="list-style-type: none"> <li>• Provide resources and tools to enhance student</li> </ul>	<ol style="list-style-type: none"> <li>1. Find three job ads that interest</li> </ol>

		<p>job searching abilities</p> <ul style="list-style-type: none"> <li>• Introduce cold calling</li> <li>• Tailor resumes and cover letters to match job descriptions</li> </ul>	<p>the student</p> <ol style="list-style-type: none"> <li>2. Students cold calls companies they are interested in</li> <li>3. Choose 1 job description and tailor resume and cover letter to match it</li> <li>4. Compile a Top-ten list based on research at public library</li> </ol>
5	Job Interviews	<ul style="list-style-type: none"> <li>• Review proper interview etiquette and appearance</li> <li>• Pre-interview, interview, post-interview</li> <li>• Preview standard and behavioral interview questions</li> <li>• Review illegal, inappropriate, and sticky questions</li> </ul>	<ol style="list-style-type: none"> <li>1. Complete 5 STAR stories that are applicable to an interview and demonstrate our strongest qualities</li> <li>2. Find a job advertisement that suits your skills. Write a resume &amp; cover letter</li> <li>3. Attend a mock job interview</li> </ol>
6	Job Interviews/Video Interviews	<ul style="list-style-type: none"> <li>• Help students improve their performance in a job interview</li> <li>• Mock interview analysis</li> </ul>	<ol style="list-style-type: none"> <li>1. Prepare a job interview</li> <li>2. Students are filmed in mock interview</li> <li>3. Analysis of interviews and improvements</li> </ol>
7	Canadian Workplace Expectations, Culture, and Etiquette	<ul style="list-style-type: none"> <li>• Give students resources and tools related to more subtle parts of work life in Canada</li> <li>• To facilitate a smoother entry into the working sector</li> <li>• Discuss effective</li> </ul>	<ol style="list-style-type: none"> <li>1. Research salary expectations for unique job positions</li> <li>2. Brainstorm &amp; practice tactics &amp; strategies for salary negotiation</li> </ol>

		methods to networking	3. Review potential strategies to conflict at workplace
8	Review	<ul style="list-style-type: none"><li>• Review over past 8 weeks</li><li>• Discuss conflicts further</li><li>• Graduation</li></ul>	

## Appendix P

Table P1

*Merged Findings Across Participants*

	Merged Findings (Sub-Themes)	Participants	Kinds of Access Affected by the Resources			
			Motivational Access	Material Access	Skills Access	Usage Access
1	Staying connected with family & friends	A, L, Na, No, R	X			X
2	The role of the teacher	A, L, Na, No, O, R			X	X
3	Family as teacher	L, Na, O, R	X		X	
4	Internet cost & convenience	A, L, Na, No, R		X	X	X
5	Household sharing	No, R		X	X	X
6	Computers at school	O		X		
7	Temporal resources	L	X	X	X	X
8	Language barriers	A, Na, No, O	X			X
9	Frustration	L, Na	X		X	X
10	Changed perceptions	L, R	X			X
11	Finding employment in Canada	A, L, Na, No, O, R	X		X	X
12	Children's safety	Na, No, R	X		X	X
13	Age & gender	A, L, Na, No, R			X	X
14	Working in Canada.gc.ca	No, O			X	X
15	Google: The search engine of choice	A, No, O, R	X		X	X
16	Local knowledge & lifestyle	Na, No	X		X	X
17	Social networks & blogs	Na, No, O, R	X		X	X
18	Medical research	No, R			X	X
19	Censorship	A, No, O	X	X	X	X
20	Security	A, Na, No			X	X

Note: A= Alex, L: Lin, Na= Nadia, No= Nouf, O=Oscar, R= Rasik

## Appendix Q

## Acronyms

CIC	Citizenship and Immigration Canada
CLB	Canadian Language Benchmarks
CMC	Computer Mediated Communication
ELL	English Language Learners
ELT	Enhanced Language Training
EFL	English as a Foreign Language
ESL	English as a Second Language
ICT	Information Communication Technology
LINC	Language Instruction for Newcomers to Canada
NCP	Newcomer Centre of Peel