

Including Immigrants in Canadian Society: What Role do ICTs Play? – Draft Report

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1. Introduction

Information and communication technologies (ICTs) are central to the shifts taking place within immigration by providing greater transnational communication opportunities for immigrants, and by providing different and accessible cultural mediums such as online local newspapers in languages other than English and French, newsgroups, chat rooms, and home country internet sites (Aizlewood and Doody, 2002). They also enhance employment opportunities for immigrants through online education, job searching capabilities, the provision of online government and settlement information, and by providing transnational entrepreneurial opportunities (Salaff and Greve, 2003). It is therefore important to conduct critical research that explores the relationship between ICTs and social and economic inclusion for immigrants to Canada.

Very little research exists that identifies the ways in which immigrants make use of ICTs in their everyday lives. More information is needed about who is using ICTs (or are not), for what reasons immigrants are using ICTs, and the ways that ICTs contribute (or not) to participation and social inclusion. Such knowledge will enable us to design information systems and provide ICT and settlement programs and training that will cater to the particular needs of immigrants.

A challenge of current discussions about immigrant social inclusion is the tendency to generalize both immigrants and inclusion. Our response to this challenge is to operationalize the concept of social inclusion into concrete implications for immigrants including employment seeking, social networks, civic engagement, and various types of literacy (including technological and cultural literacy). Caidi and Allard (2005) define social inclusion as “valu[ing] the perspectives and differences of those on the margins and seek[ing] to transform cultural practices and institutions to accommodate differences” (p. 321). They describe social inclusion as a multifaceted process that requires individuals to be included on a number of fronts (i.e., economic, cultural, social, governance). A strength of this argument is the notion that individuals should be included into a society that reflects their own values and according to the terms by which they choose to be included. Besides economic stability, immigrants in particular must develop strong social networks, information literacy skills, and avenues for civic participation.

Because immigration happens in stages, what immigrants need to facilitate their social inclusion throughout the immigration process changes over time. Stages of settlement (defined by Mwarigwha (2002) as immediate, intermediate and integrative) are a means of differentiating immigrant needs based on the common experiences of settlement. This report examines how ICT use by immigrants differs based on stages of settlement, and how different uses of ICTs impact social inclusion in distinct ways (i.e., preparation for employment, social network expansion, planning social outings). We also examine how immigrants’

backgrounds and classes of entry into Canada (refugee, economic class, family class) are further variables that impact ICT use.

This report focuses on four key areas. These four areas enable us to draw a picture of the uses of ICTs by immigrants, and how, in turn, this use (or non-use) affects immigrant inclusion into and contribution to Canadian society:

- **ICT user profiles:**
 - What are the profiles (including country of origin, age, gender, income, and class of entry) of immigrant users and nonusers?
- **ICT usage and needs:**
 - What are ICTs usages by immigrants across stages of immigrant settlement?
 - What are ICT needs of immigrants across stages of immigrant settlement?
 - Information retrieval by immigrants who do not use ICTs.
- **Implications of ICT usage:**
 - What are the benefits and limitations of ICT use for immigrants
 - How does ICT use affects immigrant settlement, adaptation, and social inclusion?
 - What is the role of ICTs in employment seeking, family reunification, social network building, and fostering civic participation
- **Access issues:**
 - What is the impact of multilingual and cultural literacy on immigrant ICT use?
 - What is the impact of public access to ICTs (through CAP, libraries, ISOs, Community Networks (CNs)) on social, cultural and economic inclusion for immigrants?

There is no doubt that changes in information and communication technology have profoundly altered the way that many immigrants find information, communicate, and settle into life in Canada. This report identifies how immigrants are using ICTs and the effect that this usage has on their inclusion into Canadian society. Our report also examines the ways that organizations that provide ICT services can best provide training and services to increase inclusion through ICT use and familiarity.

2. Methodology

Because very little is known about immigrant uses of ICTs and the implication for social inclusion this research is largely exploratory in nature. The aim of this report is to draw a map of the territory, in order to shed light on the gaps that may exist at the intersection of the study of immigrants (in all their diversity), social inclusion into Canadian society, and the potential and challenges of ICTs. In order to better understand this largely unstudied area: we identify what is known to date about immigrant ICT use; we identify theoretical concepts that will assist us make sense of the issues; and, we examine organizations that are currently providing ICT assistance to immigrants. To accomplish this we undertake two approaches: 1) a systematic literature review; and 2) interviews of practitioners in the field.

We first present a systematic literature review, which assesses the state of knowledge in the area of immigrant ICT use and social inclusion. The in-depth literature review also identifies a number of gaps apparent in the literature. We have identified a number of theoretical realms that shed light on this issue. These include: immigrant and refugee studies, social inclusion, information seeking and use, digital inclusion, community informatics, civic participation, social capital, social networks, and transnationalism. We examine these realms for the presence of applicable concepts and research that contributes findings to our topic.

We complement the literature review with preliminary fieldwork to directly address identified literature gaps and the general dearth of information on this subject. We conduct interviews with practitioners at organizations across Canada that provide ICT services to immigrants. We targeted diverse cities where immigrants tend to settle including Vancouver, Montreal, Toronto, Halifax, and Calgary. We chose a variety of organizations including settlement organizations, public libraries, and community networks. Different cities and types of organizations were chosen to provide a variety of perspectives regarding what is a complex and site specific issue. We looked for regional differences as well as the way that these organizations enable or limit a spectrum of ICT uses by their clients.

Semi open-ended interviews took between 60-90 minutes each and focused on the 4 themes identified above including: the demography of immigrant ICT users; how ICTs are being used; the implications of use for social inclusion and settlement; and, access issues related to ICT use (See Appendix for full questionnaire). Although it is recognized that the best way to understand ICT usage by immigrants is to talk directly with immigrants, practitioners provided site-specific context and overviews of the general needs and uses of ICTs by immigrants. They also provide us with an overview of the ways that immigrants are being assisted with their ICT use.

Because our interviews occurred in locations where immigrants go for ICT and settlement assistance, our investigative lens is necessarily focused on the margins. Our method has enabled us to uncover the stories and needs of those immigrants who seek out ICT assistance in a variety of formats. This is particularly useful in a context where it is often assumed that all immigrants are well “connected” and highly technologically savvy. Instead we found that ICT training and programming is required for many, if not all, new immigrants.

3. Literature Review

Immigrant and Refugee Studies

Canada is often described as “a nation of immigrants” because—other than indigenous people (including First Nations, Inuit, and Métis)—the majority of Canada’s current population has settled here from other countries. Over the past century the number of people immigrating to Canada has changed yearly depending on political and economic circumstances; over the past fifteen years immigration levels have increased. Indeed, Statistics Canada estimates that, “between 1991 and 2000, 2.2 million immigrants were admitted to Canada—the highest intake in any decade over the past 100 years” (Schellenberg and Hou, 2005, p. 49).

Recent events in Canada’s immigration history demonstrate efforts to enhance the settlement of this inflow of people. For example, Jean Chrétien’s (1994) government created the department of Citizenship and Immigration Canada (CIC) to “link immigration services with citizenship registration,” and “to promote the unique ideals all Canadians share” (Citizenship and Immigration Canada, 2006).

The Canadian government has identified population growth through immigration as a key development strategy for Canada and its economy (CIC 2006). Because of the increasing number of immigrants and for a myriad of other reasons, the face of immigration in Canada is changing. There has been a shift in source countries; most new immigrants to Canada are now coming from Asia and India rather than European countries. Most enter Canada through the “skilled worker class” resulting in highly skilled and educated newcomers. Advances in communication technologies have resulted in a shift in the ways and frequencies by which immigrants are able to maintain and foster relationships with family and friends from their home countries (Kelly, 2003). Globalization and the knowledge economy have also contributed by demanding a mobile workforce. Opportunities for multiple citizenships have produced notions of “flexible citizenship” and the opportunity for a sense of belonging and inclusion to multiple nations (Ong, 1999).

As a consequence, the Canadian federal and provincial governments have prioritized investing in immigration in a number of initiatives and across several departments (including Citizenship and Immigration Canada (CIC), Industry Canada, Canadian Heritage, and Human Resources and Social Development Canada (HRSDC)). There has also been significant investment from the civil sector such as public libraries, community organizations, and immigrant settlement services (ISOs). Despite these efforts, new immigrants face significant challenges, particularly poverty and credential recognition issues. Although better educated and more likely to be fluent in one or both of Canada's official languages, new immigrants have seen a decline in entry level earnings since the mid-1980s (Preston, Lo, and Wang, 2003). Based on analysis of the 2001 census, new immigrants to Canada earn roughly 30% less than Canada's native born (Frenette and Morrison, 2003). Three decades ago the wages of most new immigrants used to reach income parity with native-born Canadian within 15 years; however current research is indicating that income parity is unlikely to be achieved given the current income gap between newcomers and the native-born and the recent trend in slower labour market integration of newcomers (Frenette and Morrison, 2003).

More recently the tie between immigration and the economy has been strengthened: In 2000, Eleanor Caplan, then Minister of Citizenship and Immigration, announced that, "Immigration made the last century a success for Canada" (Anderson, 2001). At the same time, she announced the federal government's intention to increase the number of immigrants admitted to Canada in 2000 and 2001 to between 200,000 and 250,000. Presently, these numbers have been maintained or surpassed, and September 2005 saw then Liberal Prime Minister Paul Martin announce the need for more immigrants: "Canada needs more immigrants, plain and simple, and we need them to succeed" ("Office of the Prime Minister," 2005).

While these policies take place at the federal level, in larger cities across the country there is concern about the circumstances met by Canada's newest "Skilled Workers". In 2002, this term was created and defined in the *Immigrant and Refugee Protection Act (IRPA)*; "Skilled Workers" are applicants "who may become permanent residents based on their ability to become economically established in Canada" (Tolley, 2003, p. 1). The Act's selection criteria emphasizes "human capital attributes and flexible skills, rather than the specific, intended occupations of applicants", and a point system assesses applicants on the basis of their education, work experience, language proficiency, age, and flexibility. Applicants with enough points (a minimum of 67-75 depending on the year of arrival) to successfully immigrate are granted permission to come to Canada. Principal applicants, or "Skilled Workers" are often accompanied by spouses and children who comprise the "Family Class" of IRPA. Although each immigration candidate's field of work is stated on their application, the point system does not ensure that this is an opportune field of work in Canada. Many people arrive in Canada assuming that because they were accepted as

immigrants, they will also find employment within their field of experience and education.

As it is often challenging for recent immigrants to find work equivalent to their skills and experience, discontentment is expressed by some newcomers. A few people's stories of disappointment have been aired in the popular media, such as CTV's *W-FIVE* documentary television show. A recent episode, "Broken Dreams," recounted several individuals' and families' stories (Trotter, 2005) and brought attention to a website called "www.notcanada.com", which "provide[s] an accurate view of the problems and issues that exist in Canada for immigrants" (Not Canada.com, 2006).

This is not the first time immigrants to Canada have had to struggle to achieve economic stability. Evidence exists to support Caplan's previous statement which credits immigration with Canada's economic success. According to Christopher Anderson (2001), "for much of the country's history, immigration has been used as a means to increase the labour pool in the pursuit of economic growth," but the issue is that, "most immigrants did not share in the wealth that was thereby created" (p. 1). In the past, immigrants have experienced "difficulties getting established in the workforce when they first arrive in their host country, but [have] overcome these difficulties and obtain[ed] earnings comparable to those of domestic-born workers as time passes" (Schellenberg and Hou, 2005, p. 49). Unfortunately, the economic situation for more recent immigrants is not improving as it did in the past.

In Canada, as in many Western immigrant countries, the trend of recent immigrants needing to spend a period of time adjusting to ways of life here, and likely not succeeding economically for several years or perhaps even a generation, has become an expectation, but Harald Bauder (2003) challenges the notion "that this period of adjustment is a natural event" (p. 699). He analyses barriers to the labour market including the "devaluation of foreign education and credentials and the demand of Canadian experience" (p. 699, 713). Bauder describes the labour devaluations of recent immigrants in two forms: credentials earned outside of Canada are not recognized, and in applications for sought-after positions, stark differentiations are made between Canadian-born workers and recent immigrants who lack "Canadian experience" (pp. 707, 711).

According to Statistics Canada, four related factors underlie the recent deterioration of labour market outcomes for immigrants (Schellenberg & Hou, 2005, p. 49). First, there has been a shift in source countries away from "Western" cultures including Europe and the United States. Indeed, until the 1960s when emphasis moved to immigrants' occupational skills and education, Canada's immigration policy overtly used an ethnic organizing policy that "favoured the entry of white, particularly British-origin Protestants except in periods when there was insufficient labour in Canada" (Abu-Laban, 1998, p. 2).

Currently China, India, the Philippines, Hong Kong, and Sri Lanka comprise the top five countries that newcomers emigrate from, with commensurate increased challenges existing due to differences in language and culture, as well as discrimination (Schellenberg & Hou, p. 49-50).

The second factor underlying the challenges for newcomers to find suitable work is, “declining returns to foreign experience and foreign education” which means that degrees and experience attained in these recent source countries are not recognized on the same basis as degrees and experience from Western countries (Ibid). Third, through the 1980s and 1990s “new entrants—including young people, people returning to work and recent immigrants—to the Canadian job market have experienced deteriorating employment outcomes” (Ibid). And last, the education levels of Canadian-born individuals have increased dramatically in the past 25 years. The Statistics Canada report suggests that “in such a competitive market, even marginal differences in educational quality, language or communication skills, or cultural norms could have an impact on employment outcomes” (Ibid).

The impacts of these and other factors are statistically evident. Three-quarters of recent immigrants settled in the urban centres of Toronto, Montreal, and Vancouver. In 2001, in both Toronto and Vancouver, recent immigrants accounted for 17% of the total population, but comprised 32% of the low-income population (Schellenberg & Hou, 2005, p. 51). Between 1984 and 1999, the wealth of Canadian-born families increased by 37% but for immigrant families who had been in Canada for less than a decade, wealth decreased by 16% (p. 51). Results of a survey of immigrants in Vancouver who had been in Canada since 1991, demonstrate that nearly 40% experienced problems entering the labour market, and half “believed that their difficulties were the result of discrimination” (Hiebert, 2003, p. 29).

Recent surveys and other research also identify barriers to inclusion and belonging faced by new immigrants. The 2003 Statistics Canada General Social Survey on Social Engagement (Minister of Industry, 2004) and the National Survey on Giving, Volunteering and Participating (NSVGP) (Minister of Industry, 2004) show that while Canadians as a whole report relatively high rates of civic participation and social engagement, a number of groups, including new immigrants, are less socially connected and participate less frequently in civic and political life. In addition, higher rates of civic participation and social engagement are strongly correlated with higher incomes, suggesting that the economically precarious position of new immigrants dampens their participation. As a group, new immigrants lie outside what Reed and Selby have called Canada’s “civic core” (Reed and Selby, 2000).

[Also See Longitudinal Immigration Study as well as the Adult Literacy and Life skill survey]

Social Inclusion

Many immigrants are at risk of being socially excluded because, as newcomers to Canada, their socio-economic status is precarious. Starting again in a new country is difficult and time is required to develop the economic security and social networks necessary to participate fully and meaningfully in Canadian life i.e. to be socially included. Caidi and Allard (2005) define social inclusion as “valu[ing] the perspectives and differences of those on the margins and seek[ing] to transform cultural practices and institutions to accommodate differences” (p. 321). They, like Aizlewood, Doody, and Jamieson (2005), describe social inclusion as a multifaceted process that requires individuals to be included on a number of fronts (i.e., economic, cultural, social, governance). A strength of this argument is the notion that individuals should be included into a society that reflects their own values and according to the terms by which they choose to be included. Existing research examines the ways in which immigrants are at risk of exclusion (e.g., Kunz 2003; Omidvar and Richmond 2003; 2005; Saloojee 2005). Besides economic stability, immigrants in particular must develop strong social networks, information literacy skills, and avenues for civic participation. Embracing a transnational identity—one that is accepting and inclusive of dynamic notions of citizenship—may also increase immigrant social inclusion.

Information seeking and use

Overall, the literature reveals little in terms of the demographics of Canadian immigrant ICT users. Some Canadian data has been collected through both the government of Canada and a recently released study entitled “the Canadian Internet Project.” (Zamaria, 2005). **Expand on these studies.**

Much remains to be learnt about the ways in which immigrants seek information in multiple formats, and make use of ICTs to find information in their everyday lives. Within Information Studies much work has been around the well established notion that information needs arise from information gaps (Dervin & Nilan, 1986). Also contained within this notion is the idea that often individuals are unable to convey their information needs in straightforward and easily understandable ways. For immigrants living lives in Canada and maintaining transnational connections, it may be that language does not exist to capture this reality and therefore the ability to communicate information needs is an impossibility.

The field of Information Studies has revealed a number of characteristics about how information impacts immigrant's lives. We know for example that information poverty - that is inadequate access to resources or lacking the “literacies” to make sense of needed information (Chatman, 1996) - is an issue with which immigrants deal because they may not possess the social networks or necessary skills to find the information they need in a new bureaucratic system. We also know that access to information enables social inclusion and lack of

information fosters social exclusion for newcomers. (Caidi & Allard, 2005) Lastly, we know that relevant information increases social capital. (Johnson, 2003)

Information provision is a key component of social inclusion. Yet, relatively little is known about the ways in which newcomers and longer established immigrant communities locate and access content in forms that are understandable and usable to them. Little is known also about their attitudes, values, awareness of, and skills in utilizing various information institutions and related technologies. This situation is due in large extent to the heterogeneous nature of immigrants as a user group. Immigrants to Canada tend to belong to various categories (i.e., skilled workers, sponsored family members, business class immigrants, refugees, foreign students or temporary workers), and have diverse backgrounds, educational levels, and familiarity with Canadian institutions and values. Skilled workers or business class immigrants may have differing information needs and practices than sponsored family members or refugees, for instance. Similarly, it is reasonable to believe that newer generations of immigrants are more likely to have access to information in electronic form (e.g., through web sites or mailing lists) prior to their arrival than older generations of immigrants.

Another important aspect of the problem is the dynamic nature of the immigration process. Indeed, immigrating to (and adapting to) a new country is best understood as a process, or a continuum, with various stages associated with specific needs and attitudes toward resources, institutions or technologies. In the early stages (after arrival in the host country) a newcomer presumably will have pressing needs that will contribute to his/her survival. As the immigrant becomes accustomed to the adopted country, finds his/her place in society and actively contributes economically and socially to its welfare, different needs may arise such as the need for 'belonging' more fully and becoming an active citizen (e.g., political participation, civic duties, and cultural celebrations) (Papillon, 2002).

Mwarigha (2002) divides the information needs continuum of new immigrants into three main stages. In the first stage new immigrants possess immediate needs such as food, shelter, orientation to the new city, language interpretation, and language instruction. In the intermediate stage newcomers require "access to various Canadian systems and institutions" (Mwarigha, 2002, p. 9). These include municipal services, legal services, long term housing, health services and employment-specific language instruction. Lastly, in the final stage of settlement, immigrants "strive to become equal participants in Canada's economic, cultural, social and political life" (Mwarigha, 2002, p. 9). Consequently immigrant information needs become more diverse and individual. However, learning how to overcome many systemic barriers to equal participation has also been identified as a unifying information need for immigrants in this stage.

The Canadian *Ethnic Diversity Survey* (2003) indicates that 57% of first generation immigrants have a strong sense of belonging to their ethnic

background (Statistics Canada, 2002, p. 8), 68% value customs and traditions from their ethnic background (Statistics Canada, 2002, p. 9), and 75% are in contact with family members outside of Canada at least once a month (Statistics Canada, 2002, p. 10). These facts indicate that not only do new immigrants need information to participate in Canadian culture, they also have specific information needs relating to their native cultures and ethnic backgrounds.

Chatman's theory of 'information poverty' is useful to understand how certain groups have difficulty obtaining useful information for solving everyday life problems. She argues that there exists a class of information poor -who lack access to information- and that is characterized by their difficulty or inability to obtain useful information either from people they know (insiders) or outsiders to their group or even from the mainstream sources of information such as the media. Chatman's extensive ethnographic studies of female prisoners, female janitors, elderly women, and so on (1985, 1987, 1991a, 1991b; Chatman & Pendleton, 1995) contributed to a better understanding of the situated nature of information needs and sources. By depicting the information environment of the people she investigated, she was able to convey the localized and situated nature of their information needs and sources.

The work of Chatman and others (e.g., Dervin, 1983; Dervin & Nilan, 1986; Taylor, 1991) shed light on how information needs and their resolution (i.e., the situation out of which the information need arises and how people define the need) arise out of the particular social, cultural, and work environments of people, and are better factors for predicting information behavior than demographic characteristics. Included within the environment is the setting within which the information seeking occurs, the attitudes of others that may encourage or inhibit information seeking, the kinds of problems that arise in the setting, and the ease of access to information resources (Taylor, 1991, pp. 226-228).

Other scholars within Information Studies are beginning to study the information processes of new immigrants (Caidi & Allard, 2005) and how libraries should respond to new immigrant information needs (Fisher, Durrance, & Bouch Hinton, 2004; Mylopolous, 2004). The Information Practices of Ethno-cultural Communities (IPEC) study for example, examines the everyday information behaviour of recent immigrants to Toronto from China, India, and Iran. It addresses how new immigrants find the information they need when they first arrive to Canada including the extent and purpose for which they use ICTs.

Another study of relevance to the topic of this study is that on the information practices of individuals of Arab origin and/or Muslim faith in a post-9/11 era (Caidi & MacDonald, Forthcoming). The study has elicited findings related to the uses of ICTs by this highly diverse community. In 2004-2005, a questionnaire survey and in-depth interviews were undertaken with a sample of Muslim students enrolled in post-secondary institutions in Toronto, Ontario. Over a period of eight months (January 2004 through August 2005), 120 participants were recruited and asked

to share their views on various aspects of their information needs and uses in a post 9/11 environment. Information was gathered with regard to country of origin, citizenship, languages spoken, ethnic background, religion, marital status, and gender. 80% of participants were born in countries other than Canada (with 24 countries of origin represented). On average, the sample had lived in Toronto for approximately 9 years.

In the survey, respondents were also asked about their information sources and their experiences with computers and the Internet. They were asked to list and rank the sources of information they accessed most often. The Internet was by far the most popular with 93% (N=111) of participants. The second most popular information source was newspapers and magazines chosen by 66% (N=79) of participants. Television was the third most popular source of information as chosen by 56% (N=66) of participants. The fourth most popular source of information was libraries with 43% of all participants (49% of females chose libraries by contrast to 38% of males). Moreover, almost 50% of female participants indicated that they would consult a person for information, such as a friend, family, or relative, as opposed to only 29% of males. In the case of institutions or organizations, 25% of females indicated they would consult these (e.g. schools or mosques) by comparison to only 11% of males who reported organizations and institutions as information sources.

Overall, the findings from this study enable us to depict a picture of a particular group of young men and women who have a mixed and diverse background (which is not unusual for Toronto), and who are generally highly educated. The participants by and large are fluent in English as well as various other languages, and usually tend to put their knowledge of other languages to good use in their everyday information seeking practices. They are also avid consumers of information in various forms and in different languages, which contributes to exposing them to various perspectives on the events that unravel in the world around them. The participants also express interests in areas and issues that are typical of young people of that age group and/or gender, but they are also more aware about specific issues that have to do with their particular circumstances. In this case, for instance, we note the keen interest in news items (world news, “home country” news, Canada news, local news) and the strong transnational ties held and maintained by many respondents (e.g., they may have families living in other parts of the world; they may be newcomers themselves or foreign students, or seek information sources from other parts of the globe, etc.).

The authors also found that the participants were savvy computer and Internet users, with usage patterns similar to others in this age group and category (i.e., heavy use of email and search engines, uses of computers and Internet for a variety of purposes, daily consumption, etc.). Interestingly, the Internet is at the top of the participants’ list of trusted sources of information, followed by newspapers and TV.

In addition to the more generic uses of the Internet and computers, there are some other uses made of the Internet that emerged from the findings as well, such as accessing some specific websites in languages other than English, or sites that are tailored to groups belonging to a particular cultural group or religious affiliation. The Internet and TV were reported to be the best sources to access materials in languages other than English. Arabic language materials were accessed principally through TV programs and through the Internet. (Caidi & MacDonald, Forthcoming).

This study (and others) contributes to the idea that ICTs are used to supplement other existing media rather than replacing them. It would be wise therefore to assess the broader spectrum of media (including new media) use by immigrants to Canada.

Digital inclusion

Digital inclusion is the term used here to frame the argument that basic ICT skills such as the ability to access the internet and send and receive email are key communication tools, and attainment of them should be considered key to broader economic and social inclusion. Indeed, internet access and communication rights have been discussed in terms of human rights (Loucheur and De Santis, 1998).

This section provides an overview of the federal government's concerns with ensuring that the majority of Canadians have access to ICTs, particularly through the CAP program. As this program draws to an end on February 28, 2007 and some recent immigrants and refugees to Canada remain without access or skills to use ICTs, we must ask what forms of funding can be used to maintain the work that the CAP program was carrying out?

In the mid and late 1990s, establishing ways for Canadians to get connected was critical as widespread use of technology was equated with current and future economic success. The development of internet connectivity in Canada and other developed nations was often compared as an international race for connectivity took place. At the global level, a "digital divide"—a gap between those with access to the internet and those without—was evolving. Developed nations, including the United States of America, England, France, Sweden, Norway, and Japan, allocated national resources toward infrastructure and hardware, with the goal to provide widespread internet access to their citizens.

The "digital divide" became a preoccupation¹, and in the early 1990s, it was the goal of many of Canada's federal policies and programs to ensure that internet

¹ Academic literature focused on the "digital divide" is exhaustive. Major works include Benjamin Compaigne's (2001) edited collection entitled *Digital Divide: Facing a Crisis or Creating a Myth?*, Pippa Norris' (2001) *Digital Divide: Civic Engagement, Information Poverty, and the Internet Worldwide*, and Mark Warschauer's (2003) *Technology and Social Inclusion: Rethinking the Digital Divide*.

access was available to all Canadians, regardless of their geographic or social location. Included in this initiative to Build a More Innovative Economy, which later became known as “Connecting Canadians”, was the Community Access Program (CAP).

In 1994, CAP was established in order to meet the needs of Canadians living in cities and towns with populations under 50,000. The rationale was that without federal support, these smaller communities were not forming CNs as was transpiring in urban centers. CAP sites were commonly located in public libraries and schools and consisted of one to a few computers. In 1999, the support that smaller communities were receiving was extended to urban centers, bringing networked computers not only into already existing CNs, but also into public spaces such as community centers, women’s shelters and seniors’ organizations. In 2004, CAP underwent an internal evaluation whose recommendations were to ensure the continuing relevance of the program and to see how its goals were being met. In 2005, it was announced that CAP would be “sunset”, though some funding—determined through a competitive process—is still provided to those sites serving people facing the “digital divide” (Industry Canada Management Response, 2004, p. 1). Specified “digital divide” targets include “Canadians who do not have access to the internet because of economic, geographic or social barriers,” namely, “low income Canadians, Aboriginal Canadians, residents of rural areas, older Canadians, francophones, Canadians with limited education...recent immigrants and people with disabilities” (Industry Canada CAP Application, 2005, p.2). Recent cuts to CAP funding suggests that the program was meant to initiate peoples’ use and reliance on the internet, and that it was not intended to be federally-sustained means of access.

The policies of developed governments (including Canada) in their race to provide ICT services for their countries are due for consideration, particularly their use of a “digital-divide” perspective. In the race to connect citizens internet usage statistics were collected with vague inquiries such as “Do you have access to, or do you use the Internet or World Wide Web?” Questions like this “systematically conflate very different levels of access and use” by “lumping together experienced home users and people who have tried a terminal in a public location once or twice” (Murdock and Golding, 2004). Findings from these surveys were and continue to be used to demonstrate how internet use—at whatever capacity—is on the rise, thus providing an opportunity for the most developed nations to promote themselves as contenders in the race to be “the most connected nation in the world”, as Canada claimed to be in 2000 (Industry Canada, 2003). This announcement may be a straightforward way of demonstrating Canada’s effectiveness at establishing an internet infrastructure, but it says nothing about how these connections are being used or by whom. Here, the measures must be scrutinized; counting the number of connected computers in public spaces demonstrates very little. Visiting the public spaces to talk with people about why and how they are using ICTs and CNs generates far more input, and from broader perspectives.

Current research such as the Canadian Research Alliance for Community Innovation and Networking (CRACIN) Survey, slated to be released in x, is a much better method for determining how CNs and ICTs are actually being utilized. The CRACIN survey is a nation wide survey of community network administrators and users to determine the size, structure, financial resources, services, and impact of community networks in local communities across Canada. Findings from this survey will also provide important information about immigrant ICT usage and needs.

Graham Murdock and Peter Golding describe the “couplet” as a “handy encapsulation of a complex problem” and note that the term generally refers to the ways that the “digital revolution” adds to “the advantages of the privileged while systematically excluding the poor and marginalized” (2004, p. 246). Other terms like “digital inequalities” (Hargittai, 2002) are used to avoid speaking of a divide as if it exists only in binary or physical terms. Michael Gurstein (2004) further suggests that the “on-going processes of seeing the digital divide only in terms of ‘access’ further aggravates and perpetuates the trend towards an ICT platform” (p. 229).

Gurstein presents an alternate perspective of “effective use” which recognizes the importance of the “lived physical community” and conceptualizes a desirable level of use as “the capacity and opportunity to successfully integrate ICTs into the accomplishment of self or collaboratively identified goals” (2004, p. 229). Through the lens of “effective use” it is possible to see these recent immigrants as more than potential ICT users. “Effective use” is a beneficial alternative conceptualization to the “digital divide” because it measures the effectiveness of ICT use in terms of how tools are used to meet individual and group goals, as determined by these individuals and communities. It creates an ideal target beyond physical access and promotes a locally-driven or “bottom-up” approach, not a set of goals prescribed at a federal level.

Social Capital

Robert Putnam’s (2000) work on social capital—in particular his differentiation between bridging and bonding social capital and their relationships to social inclusion—is also incorporated. He suggests that broad social networks (bridges) are beneficial for “getting ahead”, while close relationships within more homogenous communities (bonds) are necessary for “getting by” (Putnam, p. 22). Putnam differentiates between “bridging” and “bonding” social capital by describing social networks that include or *bridge* people of different races, ages, genders, religions, education, ideologies, geographies and classes as useful for “getting ahead” (Putnam quoting de Souza Briggs, 1993, p. 21). According to Kunz, “Bridging capital is ... essential for immigrants to expand their networks beyond their own ethnic community and to acculturate into the receiving society” (2003, p. 34). Conversely, social networks that *bond* members of a group to the

exclusion of others are useful for “getting by” (Putnam, 2000, p. 22). Kunz states, “in terms of employment, [an] ethnic network is useful mainly in finding jobs with low human capital requirements” (2003, p. 34). For those immigrants who are highly skilled and educated, it is bridging capital that enables economic and social advancement (2003, p. 34). Raymond Breton (1997) suggests that, “participation beyond ethnic or racial boundaries is partially a function of the openness of the associations, networks and structures of the host society.” He adds, “The structure of opportunities for participation is crucial” (p. 9).

Mark Warschauer (2003) offers further examples of social capital theory applied to CN initiatives. Drawing on his work with ICTs in developing countries, Warschauer describes the ways that CNs promote loose networks that are ideal for sharing information and simultaneously diffusing the norms and values of a community.² Jean Kunz (2003) states that, “unlike human capital that is observable through diplomas and certificates, social capital is less tangible because it exists in the relations among individuals” (p. 33). Social capital is a “public good” created through social interactions. Putnam (2000) defines it as “social networks and the associated norms of reciprocity” (p. 21). According to Kunz, “[s]uccess in the labour market depends as much on one’s human capital as it does on the social capital one is able to accumulate” (2003, p. 33). While one can often work on her human capital independently—through study, practice, and information searches—social capital can only be generated through social interactions and memberships. Understanding this provides new relevance to civic participation.

Civic Participation

Longford defines civic participation as “individuals’ active engagement with and involvement in their communities” (2005, p. 5). The most common forms of civic participation are “donating time and/or money to charitable organizations;

² As an “emerging interdisciplinary field concerned with the development, deployment and management of information systems designed with and by communities to solve their own problems” (McIver, 2003, p. 33), **community informatics** (CI) is developing as an academic focus for scholars in the realms of communications and information science (Bieber et al., 2002; Leigh & Loader, 2001). An example of a CI theory is Gurstein’s (2004) argument that discourse must go beyond mere descriptions and discussions of the “digital divide”, and toward the frame of “effective use” which measures the impacts of ICT use by considering how communities’ locally determined goals are met.

“Effective use” is a beneficial alternative conceptualization to the “digital divide” because it measures the effectiveness of ICT use in terms of how tools are used to meet individual and group goals, as determined by these individuals and communities. It creates an ideal target beyond physical access and promotes a locally-driven or “bottom-up” approach, not a set of goals prescribed at a federal level.

According to a survey completed in 2000, three-quarters of Canadians believe that it is “at least somewhat important for everyone to have access to the Internet” (Dryburgh, 2000, p. 4). What is less clear is how that access should be attained. When asked who should remove barriers to access, 45% said it should be the responsibility of individuals while 42% placed the responsibility on the federal government.

belonging to and/or participating in community groups; attending public meetings; voting in elections; attending religious services; and maintaining social networks with friends, neighbours and co-workers” (p. 6). Longford describes civic participation in three distinct categories:

- community service (volunteering and charitable work);
- political participation (voting, attending public meetings, etc.); and
- cultural participation (participating in arts and crafts guilds or cultural groups, communal storytelling, etc.). (p. 6)

Both social inclusion and civic participation are linked to social capital, a concept used to describe trust in others, confidence in public institutions, and a sense of belonging as a community member (Longford, 2005, p. 6).

The significance of a period of civic participation for newcomers to Canada may be far reaching. M. S. Mwarigha (2002) describes the information needs of recent immigrants in three stages: immediate, intermediate and integrative. This articulation is vital to understanding that immigrants’ needs vary not only individually, but also over the course of their settlement. While information can be found online and through print resources, as well as from settlement counsellors, recent immigrants at later stages of settlement may be in need of more tacit types of information, gained only by interacting socially with other members of their local community.

Breton (1997) suggests that, “Social participation can ... sensitize group members to the fact that they are subject to the same economic, political, cultural or social conditions—such as immigrant status” (p. 6). He suggests that through “social involvement, people may realize that they share the same lot, are ‘in the same boat’ as others in certain respects.” Newcomers can then “identify with a ‘community of fate,’ so that social expectations are based on the feeling of *interdependence*, involving mutual obligations, and the idea that cooperation may be generally advantageous” (Breton, p. 6). In this way, participation leads to increased social capital and inclusion.

The impacts of volunteering—even though the actual stint of volunteerism may begin shortly after an immigrant arrives in Canada and end with the attainment of full-time employment—may continue for a lifetime. Lasting benefits of volunteerism include building a social network, gaining exposure to the operations of a not-for-profit organization, and attaining the technical or social skills required in each volunteer role. In some cases, volunteering can shift how recent immigrants perceive Canada.

There is a substantial literature documenting the role played by new ICTs in fostering civic participation and social capital (Longford, 2005; Quan-Haase and Wellman, 2004). What is less known are the ways that ICTs, in particular, foster inclusion for immigrants. There is a small yet growing body of literature that directly responds to this issue. Chien (2005) examines online bulletin boards that

contribute to involve immigrants rather than simply inform them. Dechief (2006) explores the role of community networks as social spaces in which immigrants' roles as volunteers contribute to their social and economic inclusion (by providing them with much needed Canadian experience). Aizlewood and Doody (2001) investigate how ICTs are used by immigrants to sustain and explore their ethnocultural identities. In his analysis of the relationship between community networks and civic participation, Longford (2005) includes recent immigrants as part of a demographic (including the elderly, aboriginals and low income families) that is less likely to be digitally connected.

Recently the notion of "global citizenship" (Frederick, 1994; Lister, 2003) has come into fashion. Proponents argue that because the sovereignty and power of individual nation states is waning, and because communication technologies have enabled global communication and cross border contacts, we are living in a post-national or "non-world" where geography, nationality, and nations as political entities no longer matter. (Frederick, 1994) Additionally, global social justice movements such as environmental and peace movements have been mobilized and enabled through the use of ICTs. (Finquelievich, 2004) Therefore, it makes sense to envision citizenship and civic participation in global rather than local terms. Advocates suggest this would underscore our commonalities rather than differences and enable all citizens of the world to appeal to the same set of rights. (Frederick, 1994)

Salojee (2003) argues that there is a strong link between social capital and the ability of immigrants to meaningfully engage in civic practices (i.e. exercise their civic rights and responsibilities). He argues that we should be advocating for "democratic citizenship" – that is a thick conception of citizenship that includes social inclusion and meaningful participation as part of its meaning.

Gardiner Barber (2003) argues, "Beyond formal requirements and various individuals' interpretations about civic participation, there is an invisible elasticity to how citizenship takes form in the lives of newcomers to Canada." (p. 45) She suggests that this elasticity is impacted in at least three ways including legally in terms of immigration, citizenship, and other policies in both sending and receiving nations; subjectively in terms of loyalties and attachments newcomers retain to the sending country and develop for the receiving country, and; economically in terms of remittances sent home. These factors influence how citizenship is interpreted and lived by immigrants. More research is needed to determine how ICTs foster civic participation and belonging for immigrants.

Social Networks

Social network analysis is an empirical research methodology that seeks to trace and present the exchange of resources between actors, including individuals, groups or organizations, within a social network (i.e. connected set of units). (Haythornthwaite, 1996) In other words, researchers trace both the content and

patterns of relationships among network members (and non network members) in order to evaluate how and between whom resources travel. Resources exchanged may be either tangible or intangible such as goods, services, money, information, social support or influence. (Haythornthwaite, 1996) It is by analyzing how and when particular resources do or do not travel among constituents that researchers are able to draw conclusions about the social context of individual's lives. Studying the social networks of immigrants allows researchers to observe the type, strength and frequency of cross-border ties that immigrants maintain. Unlike interviews and ethnographic case studies, the major criticism of SNA is that it provides quantity but not context. It does not reveal the social contexts or motivations for people's actions and why they do or do not maintain ties across borders.

For example Hampton and Wellman (2001) study online social networks to determine how distance affects online contact. They conclude that contrary to contemporary notions of the global village, online contact is maintained most frequently with those who live in or relatively close to participant neighbourhoods. Although communication is fostered through online communication technologies, this trend was not prevalent to the extent anticipated. The use of SNA does not however, reveal why this is so.

Currently, studies employing SNA are focusing on exploring how computer networks imitate social networks (Garton, Haythornthwaite, & Wellman, 1997; Wellman, Salaff, Dimitrova, Garton et al., 1996). It is presumed that because computer networks link individuals and machines, computer networks function as social networks and can be analyzed based on the same principles as social network analysis.

Hampton and Wellman (1999) use social network analysis to investigate online and in person relationships within geographic neighbourhood communities. They conduct a multi-methods analysis of Netville, a suburban Toronto neighborhood with advanced Internet connectivity, to determine the effect of new communication and information technologies such as email and the Internet on social life both on and offline. Hampton and Wellman ask a number of complex research questions that they hope will be answered in their study, including: how do online relationships articulate with offline relationships, what will be the fate of local communities, and; can supportive and meaningful relationships be maintained online? (Hampton & Wellman, p. 196) It is their hope to prove that social ties are diverse and can be found online and offline through a multiplicity of means.

Their results indicate that individuals are more likely to associate with people who are like them rather than those in their close proximity; most individuals do talk to their neighbours despite current fears that we are becoming a less social society, and; wired people have more friends – those who communicated online with their

neighbours were more likely to know and associate with people in their community. Relationships on the Internet foster neighbourhood relationships.

Social network analysis investigates the social networks that individuals exploit to gain information and social capital. A transnational perspective suggests that new immigrants not only access social networks within their new country, but they also access social networks from their country of origin. Indeed Clifford (1997) would argue that lateral diasporic communities use each other as social networks. Thomas Faist (cited in Yeoh, Willis, & Khader Fakhri, 2003) explores transnational social networks as social capital. He argues that social capital is accessed and gained through transnational social networks. This approach is contrary to circulating notions of social networks that suggest that newcomers find it difficult within their new countries and experience marginalization because they do not have active social networks from which to draw. While the social capital new immigrants may draw from transnational networks may not be exactly the same as social capital received from networks within the host country, it is important to note that transnational ties may be influential and beneficial in the host country.

Barry Wellman's research on transnational entrepreneurship indicates that employment opportunities are created through the maintenance of transnational social networks.

Chatman (1996) explores the accessibility of information for economically vulnerable populations such as janitors and retired women. She deems inadequate access to information and resources "information poverty" and has done a number of studies exploring how the "information poor" make use of their social networks in terms of sharing, withholding, and exchanging information.

Transnationalism

The term transnationalism emerged out of the field of Anthropology in the early 1990's and was conceived by Linda Basch, Nina Glick Schiller and Cristina Szanton Blanc. They defined transnationalism as,

The processes by which immigrants forge and sustain multistranded social relations that link together their societies of origin and settlement, and through which they create transnational social fields that cross national borders.(1994, p. 6)

They argue that immigration is not the straightforward process that many scholars and immigration policies imagined. Instead, many immigrants do not follow the anticipated process whereby one enters a host nation and then forgets about their previous life while being absorbed seamlessly into their new culture. Instead many immigrants retain various ties with their home countries through a variety of means including "social, cultural, economic and political linkages"

(Kelly, 2003, p. 210). It is these various linkages that result in what is now termed transnationalism.

Implied in this concept is a realization that many immigrants live a substantial part of their emotional, social, economic and political lives in their place of origin while working, living and settling in Canada. Thus, theirs are not-or at least not just-immigrant stories of setting up anew for a better life; they are more complex tales of networks of family obligations shaping migration and work decisions, tangles of emotional yearnings frustrated by economic necessities, and ongoing dislocations between 'home', citizenship and identity (Kelly, 2003, p. 210)

Rather than assimilating into their new countries, as previous academics and policy makers imagined and hoped for, new immigrants maintain ongoing and sustained contact with their home nations in a variety of ways, many of them supported by ICTs, including remaining politically active in their home nations, sending remittances back to family members, and remaining in close and frequent contact with family and friends.

Many argue that there are particular salient features of transnationalism that are new to this historical moment. Kelly for example, lists several ways that transnational processes have been enabled in our present historical context (2003). He points to,

the technological and financial feasibility of maintaining close – even instantaneous ties – contact and exchange between distant places is now far greater, and at least some technologies are widely accessible and affordable (Kelly, 2003, p. 211).

He points to the Internet, inexpensive phone calls and airfare, and international financial institutions to illustrate ways that communication and financial exchange is being facilitated among immigrants in a way not previously possible. The impacts that these technologies are having on individuals that remain in the home country and who have left home are multiple. For example they enable “certain social practices to take place across great distances that would not have been feasible before” (Kelly, 2003, p. 211). These include the continuous involvement of everyday decision making in families back home, financial monitoring, and active political participation on a regular and sustained basis. Without the advent of new communication technologies, these practices would simply not have been previously possible. We have found very little literature however that examines the particular ways that new technologies including ICTs affect transnational practices and notions of connection and belonging for immigrants.

Additionally, many nations are now actively encouraging transnational practices among their immigrated citizenry. For example over 70 countries recognize dual-

citizenship, and many nations are extending political participation to immigrated citizens and their offspring (Waters, 2003). Some critics suggest that there are countries, including Canada, that are encouraging immigration *into* their country by “selling” citizenship to rich foreigners; Waters calls this the “commodification of citizenship” (2003, p. 222).

Some argue that although transnationalism may exist, it is in fact a very small percentage of immigrants who participate in transnationalism and this participation fades over time. Guerniz, Portes, and Haller explore this perspective in their study of the home land political participation of Latin American immigrants in major U.S. cities (2003). They study cross border political participation of immigrants to determine more precisely who actually participates in transnationalism and exactly what this participation looks like. Although political participation is only one facet of transnational practice, and one that many would argue is more likely to exclude women than other types of practice, they seek to “draw general lessons modifying conventional expectations of what an immigrant is and what the process of adaptation to the host country is about” (2003, p. 1218).

Their research revealed that although there is in fact a sustained relationship between home and new immigrants in terms of their political participation, this practice only occurred on a consistent and sustained basis for a relatively small percentage of the populations studied. The profiles of those participating regularly in transnational political activities were largely middle class or wealthy, well educated, males and their participation did not decrease over time. It was also found that participation fluctuated slightly based on the nation from which the participant had come. However, the percentage of participants rose significantly to one third when those that participated occasionally were included. They argue that,

By and large, transnational activism is a constructive phenomenon through which people respond to long-distance social obligations and belonging and seek to transform political practices in their sending countries. By the same token, political participation endows immigrants with a renewed sense of efficacy and self-worth that facilitates their integration into the political institutions of their new country (Guerniz, Portes, and Haller, 2003, p. 1239).

Ong makes observations about the nature of transnational participation in her discussion of the “flexible citizenship”(1999) of Chinese immigrants. Within this demographic, Chinese business folk are able to spread across the globe by “buying citizenship” in other nations in attempts to gain material wealth and cultural capital. There is a life of extreme privilege and mobility and is characterized by “astronaut families and satellite kids” (Waters, 2003, p. 223), where parents and children often live on different continents. In this circumstance children are sent to foreign countries in order to gain the family’s

citizenship by living on foreign soil in huge homes with all the amenities money can buy. In Canada this trend is particularly prevalent in Vancouver.

Sassen, on the other hand, studied the transnational practices of foreign born (non North American) women migrant workers and what she calls “counter-geographies of globalization” (2000, p. 503). She describes how women leave their country of origin under a variety of circumstances in attempts to find work. “These circuits are enormously diverse but share one feature: they are profit or revenue making circuits developed on the backs of the truly disadvantaged”(2000, p. 503). Examples of these forms of migration include the international trafficking of women, female domestic workers and child care workers, the organized export of brides, and factory workers etc. Sassen argues that forces of globalization have both enabled and made necessary the legal and illegal migration of women in order to acquire their cheap labour and remittances home.

Sassen depicts a very different form of migration than do Ong and Guerniz, Portes, and Haller. The circumstances of migration for illegal women migrant workers necessarily impact what transnational practices can and will look like for this constituency. However it must be noted that these women leave their countries of origin, willingly or otherwise, so that they too engage in a form of transnationalism that is comprised of (at least) regularly sending remittances to their home country. Transnationalism is experienced very differently among immigrants, and is largely determined by such factors as economic class, immigration class, gender, and source country. To make generalizations is risky.

Much work has been done around how technology influences communication and implicitly community and identity. Within the field of transnationalism, technology has certainly been recognized as one of the main impetuses enabling transnational practices. Appadurai (an anthropologist) coined the term mediascapes to describe the influence new media and communication technologies are having on the world.

Mediascapes refer both to the distribution of the electronic capabilities to produce and disseminate information (newspapers, magazines, television stations, and film production studios), which are now available to a growing number of private and public interests throughout the world, and to the images of the world created by these media (Appadurai, 1996, p. 35).

He argues that although mediascapes have been heralded as the greatest advance of our age, a force that brings together all peoples around the world at any given moment, in fact mediascapes have led to feelings of rootlessness and inauthenticity. Because electronic media is not grounded in real places, is not tangible, it leads to displacement, isolation and a false sense of community rather than the feelings of community it is meant to encourage. Ong echoes this point

when she argues that online enabled activist websites foster a false sense of sameness that eclipses significant difference and erases the necessity to be accountable to particular geographic situations and places (Ong, 2003).

Others, however, argue that technology has enabled transnational communication and contact in extremely positive ways. Vertovec (2004) for example explores how the proliferation of inexpensive phone cards has contributed to transnational connections while Sampredo (1998) discusses how foreign online and print newspapers allow individuals to connect to their homeland through ritual practices and information dissemination. These practices allow meaningful transnational connections to be fostered.

Information seeking has also been changed and enabled by new communication technologies. For example, immigrants often seek information across borders rather than using local sources. Given this, the development of new technologies has made information seeking infinitely more complicated. It has also not been recognized that if individuals are using transnational sources to create “connections” or a closeness with home, information sources may be being used for reasons not previously considered.

The relationships between transnationalism, belonging, and communication technologies are currently receiving great attention. Many, unlike Ong, view these relationships to be primarily positive. For example, Rigoni (2005) argues that Muslim minority media in Britain and France function as a contributor to social inclusion and full citizenship because “group identity politics are revitalized from within and the politics of multiculturalism are advanced.” (p. 577) In other words, minority issues are put on the agenda by minorities themselves who also view their media productions as cultural artifacts of which to be proud. Khatib (2003), on the other hand, argues that the Internet is used by Islamic fundamentalists as a “portable homeland [which] forms an imagined community functioning within and beyond the nation, and therefore communicating local/global identity” (p. 389). Like Ong, Khatib argues that the Internet creates a space that enables a new breed of political activism; this is dangerous because the Internet is both connected and unconnected to actual nation-states.

Srinivasan (Srinivasan, 2006; Srinivasan & Pyati, 2006) has focused his research globally on the development of information systems within the context of culturally-differentiated communities. He has studied how an information system can be developed to engage communities to develop their socioeconomic, educational, and cultural infrastructures. This has included an analysis of how the cultural practices specific to communities can manifest themselves into an information system's architecture, particularly with respect to how it represents, categorizes, and disseminates the information it stores.

Summary of Literature Review

Two things stand out from examining this wide swath of literature: 1) as previously mentioned there is very little material that directly addresses immigrant ICT use; 2) there is significant conjecture about whether ICTs benefit or hinder social inclusion for immigrants. It is well established that ICTs have changed immigration and integration practices including transnationalism, information behaviour, the context of social networks etc. However, there is concern among scholars that this may not all be positive. Our literature review reveals that some scholars are concerned that ICTs will limit rather than increase civic participation and belonging. Others however argue that ICTs increase social capital, and all social capital is beneficial, regardless of whether it develops in a Canadian context.

- i. Gaps identified in the Literature: TBA
- ii. Implications of findings for our research problem: TBA

4. Findings - Practitioner Interviews and Facility Tours

We complement the literature review with preliminary fieldwork to directly address identified literature gaps and the general dearth of information on this subject. We conducted interviews with practitioners at organizations across Canada that provide ICT services to immigrants. We targeted diverse cities where immigrants tend to settle including Vancouver, Montreal, Toronto, Halifax, and Calgary. We chose a variety of organizations including settlement organizations, public libraries, and community networks. Different cities and types of organizations were chosen to provide a variety of perspectives regarding what is a complex and site specific issue. We looked for regional differences as well as the way that these organizations enable or limit a spectrum of ICT uses by their clients.

Semi open-ended interviews took between 60-90 minutes each and focused on the 4 themes identified above including: the demography of immigrant ICT users; how ICTs are being used; the implications of use for social inclusion and settlement; and, access issues related to ICT use (See Appendix for full questionnaire). Although it is recognized that the best way to understand ICT usage by immigrants is to talk directly with immigrants, practitioners provided site-specific context and overviews of the general needs and uses of ICTs by immigrants. They also provide us with an overview of the ways that immigrants are being assisted with their ICT use.

Vancouver

Vancouver is a destination city for new immigrants to Canada. During the first half of 2006, Vancouver received 16,839 new immigrants to the city making it the third most popular immigration destination for newcomers. Indeed, more than one-third of the population is foreign-born. Vancouver is on Canada's west coast

making it a particularly convenient destination for Asian immigrants including those from Mainland China, Taiwan, Hong Kong, Japan and Korea. Vancouver has had a large Asian population since the development of the Canadian Pacific Railway, and is well known for its large and thriving “China Town”. Although most immigrants to Vancouver have historically been Asian, greater numbers of diverse populations are now arriving.

Vancouver, along with Toronto, is also known as a particularly expensive place to live. A respondent interviewed in Vancouver declared that she expected to see fewer immigrants living in the city of Vancouver due to inflating housing costs. Her expectations are that immigrants will move to suburban neighbourhoods such as Langley and Surrey as housing costs increase. Other Vancouver based research indicates that even when immigrants are living in high income neighbourhoods and owning expensive homes, they may be living in poverty and off savings. (DeVoretz, 2003)

Results of a survey of immigrants in Vancouver who had been in Canada since 1991, demonstrate that nearly 40% experienced problems entering the labour market, and half “believed that their difficulties were the result of discrimination” (Hiebert, 2003, p. 29). In Vancouver, like other Canadian cities, immigrants tend to be better educated but have lower incomes than their Canadian born counterparts. (<http://www.cic.gc.ca/english/research/papers/1996-vancouver.html>) Both of the ICT-providing organizations that were visited stressed how ICTs are used to assist immigrants in improving their labour market opportunities.

The sites visited in Vancouver were quite different from each other, and the ways that ICTs were used in each site by both employees and clients varied accordingly. The first site visited was a large and centrally located public library. At this organization ICT terminals and training were one of many services provided to all people in the community, including immigrants. ICT services were embedded within a model of service provision to immigrants, meant to ensure that immigrant populations had the same access to public library services as any other user group. The second site was an immigrant settlement organization, also fairly centrally located, that provided services specifically aimed at assisting recent immigrants settle into Canadian society.

The public library in question is located in the heart of downtown Vancouver and is a large and aesthetically impressive building. A formal interview was conducted with a high ranking administrator and informal conversations occurred with multilingual librarians. At the library, Internet services and basic Internet classes (in English, Mandarin, Cantonese and Japanese) are just one service of many made available to immigrant users. The library offers a number of online options including online language newspapers, language databases, and genealogy searching. Users may also come in and use computer terminals for recreational

purposes. The library also provides reference services in a number of languages so informal Internet instruction also takes place to a certain extent.

The library has two full time multilingual outreach librarians, one for Cantonese language speakers and the other for Mandarin speakers. These librarians work within the library to provide multilingual services and Internet instruction. They also go out into the community to recruit community members to the library and bridge any cultural misinformation about how a Canadian library system operates. For example an outreach librarian posted a library advertisement on a very popular Mandarin website for Chinese people living in Western Canada. This ad has received many hits and questions about how the library works. Respondents stressed heavily that outreach models such as these that target vulnerable populations a priority of the library. They have increased access to ICTs and other information services for these populations.

At the library, ICTs are used for many purposes including email, Internet browsing, reading online library resources, and employment seeking and resume building. Due to the more anonymous nature of the library, the frequency of use of these activities was less known. However, at the ISO Vancouver site, it was made quite clear that the primary purpose for ICT use was job seeking and employment.

At this organization, the focus was clearly on immigrant settlement. In addition to providing a number of settlement services such as language training and family and employment counseling, a computer lab containing around 20 computers was available for immigrants on a drop-in basis during office hours. The computer labs were also used to provide computer based language training. The respondent from this organization stressed that providing computer training in combination with other settlement services was a useful method for delivery that developed both computer skills as well as other training.

Calgary

Calgary is currently the fourth most popular city for new immigrants to choose to live. Receiving four percent of Canada's immigrant's from January 1, 2005 to June 30, 2006, Calgary receives more than half of the province of Alberta's new immigrants. Alberta is currently experiencing an economic boom, and as a result there are also many Canadians moving to the province from other regions in Canada. In partnership with Service Canada and Citizenship and Immigration Canada (CIC) via the Foreign Worker Program (FWP) Alberta is also receiving temporary foreign workers if potential employers demonstrate that they cannot find qualified Canadian workers. This influx of people to Alberta has increased competition for affordable housing and driven up other costs of living. In some fields, there are more applicants for employment positions and factors such as Canadian experience and ICT skills become the basis for choosing one applicant over another, even when these factors have no direct bearing on employee

success. These boom activities foster an atmosphere where newcomers and longer settled individuals alike are keen to improve their employment circumstances- the demand for free and not for profit priced ICT training is evident.

The interview sites in Calgary are both nonprofit volunteer organizations which provide settlement and integration services to immigrants and refugees. Both centres have affiliations with religious organizations, at least in name. They offer first language settlement counseling and Language Instruction for Newcomers to Canada (LINC) classes as well as computer training.

The first site is located just south of Calgary's downtown core and with municipal funding, provides low-cost computer courses from beginner to advanced levels. Nearly all of the beginner level participants are refugees, and for higher level courses there are immigrants, and low-income and senior citizens who are Canadian-born. The instruction at the centre is paced for people who aren't fluent in English and the instructors are trained and experienced to cultural sensitivities. The needs of refugees and immigrants are sharply differentiated. Many of the refugees are Sudanese, and the immigrants are often Chinese. There are also many people who are Spanish speaking. Employment is noted as the most significant reason for learning to use computers, whether it is to gain access to jobs or to get a promotion.

The second site is in Calgary's North East quadrant, which is home to many of the city's immigrants, particularly the more recently settled. This centre does not advertise or promote its only computer training program in any way because it is always filled through word of mouth or referral by settlement counselors. The Computer Literacy Program (CLT) operates through a partnership between Engineers Without Borders (EWB) and the settlement centre. EWB supplies volunteer teachers and curriculum, the centre provides clients, a classroom and computers. Since the programs inception in 2003, around 200 students have taken the beginner and intermediate courses for 6 weeks at a time on Saturday mornings. More confidence and familiarity with computers are the most basic things gained through the training, but with practice students are able to create and format word documents, send an email with an attachment and create a simple spreadsheet. While some participants are Iraqi, Sudanese, Albanian, Chinese, and Vietnamese, as referred by the centre's first language settlement counsellors, the majority of the people who have completed the second language program are Filipino live-in care givers. This is in part because the centre's volunteer coordinator (and the study's interviewee) is well-connected to this community, and she receives many calls requesting places in the class. She strives to maintain a diverse and multicultural mix of students in the program and she has even organized another program through the Calgary Public Library that is dedicated to Filipino live-in caregivers. In Canada, live-in care givers can not study officially while on their 2-year caregiver visa. Once two years are complete, care-givers can take courses or work in other capacities, so many of

the program's participants are preparing themselves for the time when they will be eligible for other work.

During fieldwork, one of the CLT classes was observed. All of the students were women between 28 and 40; most were Filipino. In an environment that was focused, yet encouraging interactions between students, volunteer instructors led students through exercises to increase their skills and understanding of Microsoft Word.

To some degree, the findings from these interviews echo the findings from earlier interviews, though the live-in caregiver situation had not been clearly understood prior to this interview. It also became clear that ISOs are not funded to provide free ICT training to newcomers, yet many immigrants need ICT training for employment purposes. The needs of immigrants versus refugees seem more clearly demarcated here than in Montréal.

Montreal

Based on CIC statistics to the middle of July 2006, Montreal is the third most selected destination city; 14% of the total population of immigrants who came to Canada between January 1, 2005 and June 30, 2006 settled in Montréal. Because the province of Quebec has the power to select immigrants based on language capabilities, it is desirable that newcomers to Quebec to be French-speaking. However, Anglophones and Allophones do settle in Montréal, and one of the centres visited for fieldwork is English-language focused and based in Montréal's non-Haitian black community. The other centre is not in an English speaking area; the majority of its clients are allophone and francophone. Both centres are supported through the Community Access Program (CAP) and benefited from the CAP Youth Initiative (CAP-YI) until its funding ended on February 28, 2007.

Interviews were conducted with one person from each centre. Each of the interviewees had worked with recent immigrants in ICT-related environments in the past and brought those experiences to our discussions. They both had hands-on experience with teaching newcomers and longer settled immigrants as well as Canadian-born individuals how to use computers.

The site hosting a majority (estimated at ninety-five percent) of English-speaking clients is an employment centre and offers courses to prepare people to enter Montréal's work force as well as providing a drop-in computer lab, with coaching and assistance available for a minimal annual membership fee. Ninety percent of the clients at this centre are immigrants who have been in Canada for up to ten years. The most common requests made are for help setting up email accounts, attaching documents to email, and filling in online forms. Many people who come to the centre have not used a computer before, and very few have a computer at

home. When the centre upgrades its computers, older systems are given to clients who do not have their own computer, but are prepared to use one

By providing internet access and other ICT services and training, the second site assists people who are potentially excluded from participation in the information society. Because of its location, many recent immigrants including refugees receive computer training at the centre. The interviewee described refugees coming in waves from particular source countries, "For three months it's Sudanese people, then it's Afghanis, and then Iraqis." The centre offers beginner to more advanced computer courses and social interactions are encouraged through the training activities. Emails are exchanged and social networks are expanded.

Both interviewees said that they do see youth and senior citizens at their centres but the bulk of clients are between the ages of 25 and 45. At both centres more women than men attend training courses. Improving skills for employment and learning how to apply for work online are the two key reasons stated for why immigrants are making use of the provided ICT access and training, though they acknowledge that the skills to communicate online are also being used to communicate with friends and family members in other cities and countries.

There are several key findings from these interviews. First, the economic impetus to use ICTs to access or improve employment opportunities was made clear. Second, the benefits these centres provide to recent immigrants may be under recognized given that cuts to CAP funding, particularly the CAP-YI program have taken place. Observing the work of CAP funded computer teachers at these centres and knowing that their salaries would cease a few weeks later was difficult. Assisting newcomers in gaining practical, requisite skills for resilience in Canadian job markets seems a very valuable role that should be supported. Third, there is an increased awareness of lots of non- or novice users of ICTs existing in urban centres. While descriptions of highly skilled, digitally savvy immigrants who can't find work commensurate with their skills make the news, it is important that the varied needs of immigrants are recognized. Just as people arrive in the 'skilled worker' class, so too do they arrive in the family, refugee, and live-in caregiver classes. While one's 'country of origin' does provide some notion of her exposure to ICTs, investigating her socioeconomic position in that country provides more variables as to the actual ICT skills she has. With the arrival of each group of refugees and even families of skilled workers, it is likely that there are non- or novice ICT users included.

Toronto

Toronto is by far the number one immigrant destination for newcomers. During the first half of 2006, Toronto received more newcomers than the second and

third destination cities combined. Between 2001 and 2005, the Toronto Census Metropolitan Area (CMA) attracted an average of 107,000 international immigrants each year, and the city of Toronto itself welcomed two thirds (69,000) of those. (City of Toronto, 2006) The Census Metropolitan Area (CMA) of Toronto was home to 2,033,000 foreign-born people in 2001. (CCSD, n.d)

Such a large representation of immigrants has meant that service provision such as settlement and information services to immigrants has been a priority of the city and the province for some time. ICT services are offered to immigrants at community neighbourhood sites, ISOs, and libraries. However current research indicates that there is a spatial mismatch between where ISOs and libraries are located and current trends in immigrant settlement (Caidi, Allard & Chiu, Forthcoming). Although immigrants are tending to settle in the inner suburbs of Toronto, ISOs are far more present in the inner city and downtown core.

Like Vancouver, Toronto is a particularly expensive city in which to live. Various studies have documented the increase in poverty in the Toronto CMA. According to the Ornstein Report (2006), poverty in Toronto is highly racialized, and the economic gap between members of European and non-European ethno-racial groups has been increasing over the last 30 years. A 2004 report released by the United Way of Greater Toronto also indicates “a substantial rise in the rate of poverty among Toronto’s families over the last two decades, with almost one in every five families in 2001 living in poverty.” (United Way, 2004a, p. 4.) Indeed Toronto “is losing ground faster than any other city in Canada” in the area of growing poverty and poverty neighbourhoods (p.1). Those living in poverty are increasingly finding themselves concentrated into “poverty neighbourhoods” rather than the mixed income neighbourhoods that represented Toronto communities before 1980. The increase in the number of higher poverty neighbourhoods has been especially profound in the inner suburbs of the CMA, where high poverty neighbourhoods increased substantially between 1981 and 2001 (United Way, 2004a).

Interviews in Toronto were conducted at a large centrally located downtown branch in the public library system and at a community neighbourhood site. At the public library interviews were conducted with both a multicultural librarian and a settlement information specialist. Within this library system partnerships exist between the library and certain non-profit settlement organizations whereby agencies will actually set up their services onsite and provide access to settlement workers on the grounds of the library. This service goes beyond ensuring that there are no barriers preventing immigrant library use, and targets a particular need identified for newcomers – that of settlement services.

In addition to providing settlement services at some branches, this library systems provides a host of services to immigrants and has quite explicitly targeted immigrants as a user group upon which they have placed significant priority. In terms of ICT specific services, they provide general access to

computer terminals, and Internet instruction in a variety of languages at a variety of branches. These classes are always well attended.

One of the most interesting findings from this interview was the realization that the settlement information specialist relied almost exclusively on the Internet to find and provide services to her clients. Given the high rate of information on the web – everything from community centre programming, to bus routes, to government forms and applications – the Internet has become ubiquitous for information service provision. The interviewee stressed that unless clients learn to navigate these systems themselves, they will not be able to adequately participate in necessary information retrieval. She stressed that although most of her clients were familiar with the Internet, many indicated that they did not know how to search for information online, particularly on difficult to navigate sites such as government websites.

Another interesting finding noted by both respondents was that the library branch in question was not located in an area where immigrants were settled. They attributed the presence of settlement services at that particular branch to its size and central location. This points to questions about where best to provide services to immigrant populations. They confirmed that settlement services and Internet classes were much more highly utilized in other branches with higher degrees of immigrant settlement in their neighbourhoods.

Halifax

[To be included in final draft]

Summary of Interviews

[To be included in final draft]

5. Major Findings

Combined findings from our two methodologies of literature review and interviews with community practitioners provide a broader picture than is accessible via just one method. While our ethnographic sites provide further understanding of the circumstances faced by marginalized newcomers to Canada, our literature review offers the perspectives of a range of individuals. What we quickly found was that the mandate of the institution strongly affects how ICTs are being used within particular institutions. For example users at the library will go for more “social” activities such as browsing online newspapers and genealogy searching, while at ISOs computer use is much more job and settlement oriented.

ICT user profiles

Socio-economic conditions of source countries are strong predictors of ICT uptake and use. Those immigrants who come from wealthier, more educated countries are more likely to have ICT experience when they arrive and use ICTs when they are here. Since most new immigrants come from these source countries, many have ICT experience and use them with relative ease. These are also the immigrants more likely to have computers at home and bring their laptops to the library.

However, **beginner computer users still exist**. In terms of immigration classes, people who come as refugees, or in family class, or as live-in care-givers have had fewer opportunities for ICT training. The example of live-in caregivers who work to improve their computer skills in preparation for receiving an open visa after two years of live-in care giving is an apt illustration of this situation.

Seniors were more likely to take basic Internet classes and less likely to “drop in” and use available vacant computers indicating that both newcomer and longer established older immigrants are not as familiar with ICTs. This trend is also reflected in the general population of Canadian born.

Use by gender varied by organization. Both libraries indicated that Internet classes and free standing terminals were used equally by men and women. One library did indicate that men were more likely to be the first members of a family to check out library services, and would bring family members on the second or third visit. At other organizations, gender use varied significantly. In general women were equally or over represented in classroom settings. One organization however, indicated that women are less likely to “drop in” than men, perhaps indicating less familiarity or confidence using computers.

ICT usage and needs

Employment related activities are the main reason immigrants are using ICTs at the organizations to which we went. At a basic level users are learning how to use word for resumes and the Internet for sending them. Others who want to improve jobs took higher level software classes. (e.g. Microsoft project)

ICTs have significantly affected employment practices for immigrants through online education, job searching capabilities, and the provision of online government and settlement information. Our findings reveal that this may not necessarily be beneficial because Canadian bureaucratic structures and online interfaces are difficult to navigate for new users.

When we asked about social uses of the Internet such as reading newspapers or emailing home, practitioners agreed that ICTs are used in that manner, but generally this was not the focus for most new immigrants at their institutions.

They stressed that new immigrants are very busy making ends meet and are making strategic use of their time in public settings where computers and other information and settlement resources are available.

At libraries, more so than at settlement agencies, ICTs are being used for cultural and recreational activities. In particular immigrants go to libraries to read online language newspapers and use language databases. This is a particular niche that libraries can fill, unlike the other organizations interviewed, and should not be undervalued. However, how these activities impact social inclusion did not become clear in our interviews. Some of the literature does point to interesting discussions on this topic.

One of the main objectives of this research was to observe how ICTs are used for social inclusion across the stages of settlement. While the literature review speaks to the debate about ICTs and their impact on civic participation (part of the intermediate and integrative stages), our primary research reveals data largely focused on the intermediate stage. It is during the intermediate stage that immigrants are most likely to be found using ICT services at settlement organizations. It is also at this time that employment resources tend to be sought.

It was found that at the beginning of the settlement process, newcomers were more interested in speaking directly to other people rather than using Internet sources. This finding is contentious as many have argued that anonymity is one of the key benefits of the Internet. However, our respondents indicated that “making connections” and learning how to evaluate the glut of information sources on the Internet were primary motivations for newcomers to make personal connections when they first arrive.

As immigrants live in Canada for longer periods, their income is likely to increase, and with it the likelihood of personal computer ownership. It was the feeling of several respondents that as immigrants live in Canada longer, their ICT knowledge and practices begin to look more and more like the Canadian born, following the same trends regarding income and education correlating strongly with ICT use. The obvious exception to this might well be transnational contact and communication.

Implications of usage

Implications of ICT usage for recent immigrants are broad and multifarious. ICTs are ubiquitously forming the communications infrastructure of the Canadian landscape; part of settling in Canada is ensuring that one has the skills to take part in this environment. From the web sources that settlement counselors use to provide newcomers with beneficial information to the recent immigrant who learns how to use a computer in the course of applying for a job, part of cultural inclusion in Canada is being able to use ICTs as is commonly done here.

Some settlement successes demonstrate new means of “effective use” [as with transnationalism/Wellman’s entrepreneurship study?]. For others, learning to apply for a job online is an example of overcoming an obstacle to settlement.

Ethnographic research at community networking and training sites demonstrates how ICTs can initially establish limits for newcomers’ settlement, though training and access provision are effective ways for immigrants to learn to engage online information sources and communicate electronically. Many refugees arrive in Canada without any computer or internet experience and require basic ICT training to be able to work or go to school in Canada.

[Add Benefits]

The role of ICTs in employment seeking was one of the most discussed issues in our interviews. All interviews ranked employment as the prime reason for newcomers and longer settled immigrants to learn how to use computers. This ranged from the need to create a résumé and upload it to a website as an application to gaining higher level computer skills in order to receive a work promotion or to move from a manual labour position to sales or service work. Aside from these examples of individuals requiring ICT skills in order to take part or strengthen their roles in Canada’s economy, examples of social network building and fostering civic participation exist, and are drawn from our literature review.

Though practitioner-interviewees ranked ICT activities other than employment well behind the primary impetus of employment, for more digitally savvy recent immigrants the impacts of social networking and online participation are profound. Chien (2005) describes the involving and informing that newcomers contribute to as part of the settlement.org online community. Previous fieldwork demonstrates that newcomers often have blogs in their first languages directed to friends and family, and even strangers who are contemplating emigration from a shared home country. As well, Dechief (2006) suggests that volunteers contributing their ICT skills to Vancouver Community Network’s (VCN) provision of internet services increase their social networks and in the end, the likelihood of employment commensurate with their skills.

Access issues

The particular issues of access that we identified focus on language and on funding. Practitioners describe language as a key barrier to internet use. One suggested that computer training courses are very difficult for newcomers with a Canadian Language Benchmark of less than five. Even for individuals with stronger language skills, information-seeking activities such as keyword searches in search engines such as *Google* are very challenging. Without apt knowledge of the breadth of meanings for each plausible term, it is difficult to efficiently

narrow a search. Online forms also contain terms that are not commonly used, providing further challenges.

The second barrier to access is the threat or actual closure of centres providing public access or training for ICT use. One of the practitioners we interviewed ended her contract just two weeks she was interviewed as the CAP-YI program was terminated. Another was very concerned by the low wages that she and her colleagues were paid, and had been for more than a decade. The exception to this concern was the volunteer run program, but it still relied on ISO staff members to volunteer their time on Saturdays to ensure smooth running of the program. Libraries too indicate that multilingual Internet classes are in high demand; funding is the main reason more classes are not offered.

These funding cuts are of concern because libraries and community networks are social spaces providing learning and networking opportunities within a newcomer's own neighbourhood. Cultural inclusion as well as assistance for employment seeking takes place in these spaces. For anyone without their own computer, likely people who are economically excluded, having the opportunity to learn how to use ICTs and to access and provide information is extremely important in terms of creating awareness of broader social and economic opportunities.

6. Recurrent Themes/Key Messages

ICTs now play a key role in Canada's communication infrastructure. Their everyday use in our work and social practices makes them a key, though sometimes underestimated component of Canadian culture. Our recommendations work toward recognition of the ubiquity of ICTs and the need for every newcomer and resident of Canada to have ICT skills and access, if desired.

Although many immigrants are familiar with ICTs when they arrive in Canada, training is needed to teach immigrants how to use ICTs "as we do in Canada." Immigrants from family class, seniors (longer established and new arrivals), and refugees may also need basic computer training.

Providing continuing core funding for ICT access and training provision to community networks, libraries, and ISOs is a key recommendation. Further ways of ensuring that newcomers have requisite training are to provide basic computer training along with LINC training and to encourage training programs which incorporate computer training into regular ISO courses. One example is "How to manage your finances using spreadsheet software." Many courses are offered as either basic computer training or as solutions to practical skills such as financial management, but in actuality, financial management often uses a computer. This combined training approach makes software training much more

practical and easier to remember, as there is a specific reason for learning. Moreover, it reinforces the idea that ICTs have to have relevance for people's lives in order to make a difference.

Future Research

Building on this "state of the research" report, there are a number of avenues that can be pursued to learn more about this interesting and timely area of research. The issue could be addressed with a national study of actual of immigrant ICT users using mixed methods (e.g., surveys and ethnographic methods).

Study should determine more precisely who is using what for what purposes. We were only able to identify "trends" rather than facts. However the strength of our methodology was to determine the services being provided.

We were not able to find any information on non-users. This would be an important area for further research. Further research should also examine meaningful content, another area that we did not find much on.

7. Appendix – Interview Guide

These questions serve as starting points for an open-ended interview.

1. Demography

- A. Who are the users of your facility?
 - a. How many are immigrants?
 - b. How many are recent immigrants (in Canada for 5 years or less)?
 - c. What are the demographics of your immigrant user group (i.e., age, gender, country of origin)?
- B. Are there people who arrive at your facility without any ICT experience?
 - a. How are they assisted at the centre?
 - b. What are their demographics (i.e., age, gender, country of origin)?
 - c. What types of challenges are common amongst these users?
- C. Do you think there are any demographics of immigrants that do not have access or opportunities to use ICTs at your facility or in other locations? (i.e., Who do you not see? Who isn't helped at your centre?)
 - a. If so, please describe this demographic.
 - b. And if so, how could this access issue be remedied?
- D. Is your organization geographically well positioned to serve immigrant communities?
 - a. Do you know of any other neighbourhoods in your city where ICT facilities are currently needed?
 - b. Can your organization benefit everyone who visits it? How so, or why not?

2. ICT Practices

- A. How are immigrants using ICTs at your facilities? Who uses them the most often? For what purpose?
- B. For what purposes are immigrants using ICTs?
 - a. What are some current ICT needs of immigrant populations?
 - b. What were some past ICT needs that have dissipated?
 - c. Do you foresee any upcoming ICT challenges/needs?

- C. Can you see ICT usage differences between people who have very recently immigrated and those who are longer settled? What about differences between female and male users? If so, please provide examples.
- D. Do you see changes in use based on immigrants' movement through stages of settlement? If so, describe how ICTs are used at these stages of immigration:
 - a. Immediate (focus is on essential matters such as finding food and shelter, getting around geographically, and dealing with language barriers)
 - b. Intermediate (focus is on accessing and using various systems including municipal and legal services, long-term housing, employment, and health services)
 - c. Integrative (needs are more diverse and individualized; meeting them contributes to social inclusion through cultural, political and economic terms)
- E. At your centre, what are ICTS mainly used for? Based on your observations, how would you rank the following activities from most to least common?
 - a. employment seeking
 - b. contact with members of home country
 - c. reunification
 - d. social network building in Canada or home country (e.g. blogs, bulletin boards)
 - e. civic participation in Canada (e.g. political participation, volunteerism, community involvement)
 - f. civic participation in home countries (e.g. political participation, volunteerism, community involvement)?

3. Access Issues

- A. In your opinion, what are some of the obstacles met by immigrants in their various ICT activities?
 - a. Language
 - b. Cultural values
 - c. Class
 - d. Gender
 - e. Other

- B. Do you think that current federal and provincial policies are effective for integration of newcomers into the Canadian labour market?
 - a. If yes, which ones in particular?
 - b. If no, what could be improved?
- C. What is your organization's mandate (i.e., to promote social, cultural or economic development for immigrants)?
 - a. From what sources do you receive public funding for access to ICTs (i.e., through federal or provincial funds such as Citizenship and immigration Canada, Canadian Heritage, or Industry Canada's CAP)?
 - b. Do funders create limits or structure the kinds of services you provide? If so, in what ways?
 - c. Could public funding be improved to assist your mandate and services? If yes, how so?

4. Social Networks

- A. Who refers people to your centre? How do your centre's clients learn about the centre?
 - a. Marketing
 - b. Word-of-mouth
 - c. Recommendation from another organization
 - d. Other
- B. How much do you know about the friends and family of your facility's clients, particularly those of recent immigrants?
 - a. What kinds of social networks do users have when they come to the facility?
 - b. Do they know many people in Canada? Do they know people in Canada who speak a first language other than their own?
 - c. Are they working? Do they have the support of family and friends?
- C. Do people meet and become friends at your facility?
 - a. What are the friendships like? Who networks with whom?
- D. Do you know of any immigrants who don't use ICTs? If so, have you observed differences between users' and non-users' social networks?

8. Bibliography

[not all items listed are currently present in our report]

CivP civic participation ComI community informatics DigI digital inclusion GovR government reports InfoSU information seeking and use ImmR immigrant and refugee studies PraD practitioner documents for community and settlement SocC social capital SocIn social inclusion SocN social networks TraN transnationalism

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