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Abstract

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The Eastern James Bay Cree nation is at crossroads in terms of social and economic development. Endogenous and exogenous pressures may frustrate developmental schemes if they are not addressed in an effective and timely manner. Information and communication technologies (ICTs) present community members and the administration with feasible and effective tools that may aid in overcoming some of the challenges faced.

This study examines the utilization of ICTs, particularly the Internet, among the youth of the James Bay Cree community of Nemaska, northern Quebec. It presents an account of local native representation, utilization, and appropriation of the Internet, as assessed and expressed by community members. The study concludes with community members' suggestions for enhancing capacity building among Nemaska youth that would aid in their well being as well as contribute to an improved quality of life within the Nemaska community more broadly.

The results show that community members are open and willing to integrate ICTs in daily life but issues of access to information and infrastructure as well as skill development still need to be addressed in order to maximize the potential offered by the Internet.

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Chapter 1

Logging in

1.1 Introduction

A limited number of geographical studies concern themselves with the impact of Internet and other communication technologies on aboriginal communities, and very few of these studies have examined such impacts on local economic and social development. This study seeks to contribute to literature concerned with the appropriation of information and communication technologies (ICT) by northern native communities in Canada, specifically focusing on youth capacity building, by presenting an account of local native representation, utilization, and appropriation of the Internet, as assessed and expressed by local community members.

The cultural integrity of northern aboriginal communities captured my imagination and the challenges they face focused my attention. My particular attachment to the Nemaska Cree community arouse from time spent working as a research assistant to a project on post-fire forest regeneration more than two years ago. During my initial stay I became aware of some of the daily challenges and issues faced by the community: high levels of unemployment, especially among the youth; the high cost of food and other products as well as their limited selection; a lack of access to information; and a general lack of amenities, services, and 'things to do', especially for the youth. I became particularly interested in how community members dealt with the difficulties that physical remoteness engenders, especially since my own experience of working in the area was

fraught with obstacles and frustrations. I wondered if some of these constraints could be alleviated by ICT development at the local level. My efforts to contact the authorities to gain permission to conduct field research in Nemaska underscored the problems of communication among various administrative departments within and beyond the community. This also prompted me to explore the potential for Internet applications in relation to improved communications infrastructure.

The great difference between my personal experiences with the Internet and what various studies and the media have to say about this medium motivated me to debunk some of the current stereotypes associated with the impacts of the Internet and its users. Much of the discourse has tended to sensationalize both the positive and negative aspects of Internet diffusion. Some see unlimited potential for social and economic development, as improvements in ICTs 'liberate' people from the constraints of space and time (Castells, 1999 & 2001; Janelle, 1973; McLuhan & Zingrone, 1995). Others fear that ICT precipitates a decline in civic participation and sociability.

Researchers also recognize the important role that the media plays in the formation and dissemination of information and opportunities for cultural continuity, social development and community cohesion. Until recently, active native participation in the creation of media in Canada and elsewhere has been limited. Myths and misconceptions about native people persist and were perpetuated by this poor and one-sided communication. The Internet is thought

to offer new opportunities for the creation of cultural and social relevant content (Belanger, 2001; Bredin, 2001). The Internet has enabled aboriginal groups not only to increase their participation in the mainstream media but also to actively participate in political struggles for the recognition of their rights and interests (Becker & Delgado, 1998; Carlin, 2001; Delgado, 2002; Fink, 1998).

While the Information Highway has yet to bring about McLuhan's 'global village' there is no doubt that information and communication technologies (ICTs) have significant effects on spatial and social organization. The Internet can reduce the disadvantage of geographical peripherality by providing access to markets (telemarketing) or opening possibilities for enterprise (e-commerce), while increasing the valorization of place or locality through teleworking and other space-adjusting activities such as e-shopping and e-learning (Alstyne & Brynjolfsson, 1997; Froeling, 1999; Gattiker, 2001). These new developments present great opportunities for native communities to establish new economic and cultural relationships, both within the global economy and between native regions and communities.

1.2 This study

My intention in this study is to extend the boundaries of cybergeography by examining the contribution of ICTs, particularly the Internet, in overcoming some of the daily challenges faced by the youth within the James Bay Cree community of Nemaska. Particular focus is placed on youth capacity building in part because few geographical studies have focused on this group, and also because the

youth tend to represent the group with the highest levels of Internet use and appropriation. In the context of this study capacity building is understood as the process that enables individuals to learn and develop in order to achieve relative autonomy for local innovation and to lead a fulfilling life. This requires commitment towards and investment first in the people themselves, but also in the institutions and developmental practices that should enable them to create local solutions that work. Moreover, within a development framework, if any changes for the better are to be sustainable in the long run, and ownership and control of the process involved are to be local, the community members need to understand the nature of their role in development. In this context, ICTs offer leapfrogging potential by facilitating timely access to pertinent information, more effective communication between and within communities, reduction in travel time and associated costs, opportunities for life-long learning, and effective networking with external agents and resources. Nonetheless, ICTs are only tools and their use does not guarantee a positive outcome unless community members actively participate in activities which affect their well-being and work towards joint action.

The first step in this research was thus to examine social and geographical (re)organization impacts associated with Internet use, focusing especially on consequences experienced by local communities and on existing viable potentials for local capacity building. The second step was to examine the potential for local development by focusing on personal experiences in cyberspace; in particular how these experiences shape users' understanding of

this medium, and how the Internet is appropriated and used by people in their daily lives. Any assessment of present conditions of Internet diffusion and appropriation within remote communities requires an understanding of the policy context within which they continue to evolve. Thus, the third step involved an examination of current ICT related policy in Canada and Quebec, and the extent to which it supports local initiatives. Since this study focuses on an aboriginal community, the cultural and identity (re)affirming practices of Crees in cyberspace are also explored to illustrate their close links to locality and culture. As such, the research draws upon theories and concepts from geographical research as well as from the profuse body of interdisciplinary studies on the impacts and uses of the Internet. Several concepts linked to Geography and other Social Sciences, such as 'human extensibility', 'telematics' and the 'Global Village' are central to this research.

The thesis is guided by two main sets of questions:

1. In what ways are local communities affected by the diffusion of the Internet? In what ways, if any, do they respond to the constraints or opportunities imposed? The latter question is addressed in respect to: 1) communication patterns, 2) levels of accessibility to and participation on the Internet, 3) access to logistical support, and 4) mobility.
2. Do community members consider the Internet to play a significant role in local capacity building and cultural development? What suggestions do they offer for Internet implementation that would enhance the quality of life of their community, among youth in particular?

1.3 Thesis structure

An overview of the pertinent literature on Internet diffusion and use is presented in Chapter Two. Within this framework the experiences of local and native communities are explored, especially in relation to practical applications of this medium. Chapter Three presents the methodology used in this research and is divided into three sections. First, the research design and methodology are presented. What transpired during the fieldwork phases of the research as well as personal reflections on fieldwork in general make up the last two sections of the chapter. Chapter Four provides a general background of the history and culture of the Eastern James Bay Cree, their socio-demographic background, and a comprehensive account of the Nemaska Cree Nation. The final chapter outlines my conclusions and presents some suggestions for further research.

Chapter 2
Internet and society: technophiles, technophobes, and technomoderates

This chapter is divided into six sections. The first examines literature on the social and spatial organizational impacts of the Internet. The second presents a brief exploration of the digital divide and is followed by a discussion of aboriginal uses of the Internet that have transcended this divide to effectively use cyberspace in the defense of aboriginal rights and interests. The fourth section discusses the practicability of the Internet for remote communities, including teleworking, e-commerce, and ICT implementation in education. Diverging perspectives between educators, policy makers and students are reviewed. An overview of national and provincial ICT policy initiatives focusing on programs and services available to rural and native communities is presented in section five. A brief summary of the literature is presented in the final section.

Given the scope of this study and its obvious limitations, issues of gender and racial discrimination on the Internet, personal security and civil liberties, and other dimensions of cyberspace such as virtual reality, bulleting boards (BBS), chat rooms and MUDs (multiuser domains/dungeons) are not discussed as they reflect specialized Internet uses characteristic of specific users.[1]

[1] For a detailed discussion of cyberspace subframes please consult Bell, D and Kennedy B.M. (eds) (2000)- *The Cybercultures Reader.*

2.1 The geography and society of Cyberspace: review of the recent literature

For the past two decades, the impacts of the Internet on society have been portrayed either as utopian or dystopian. This dichotomy presents a barrier to the practical applicability of the Internet in day-to-day situations because it neglects locality by way of broad generalizations and operates within a paradigm of technological determinism – speculating on what the Internet can or will do, rather than on how people already use and perceive the Internet (Christensen, 2003).

These opposing principles arise from two *abstract* and *accepted* understandings. First, ICT, and especially the Internet, 'liberates' life from the constraints of time and distance (Adams, 1997 &1998; Adams and Warf, 1997; Barlow, 1996; Castells, 2000; Janelle, 1973; McLuhan & Zingrone, 1995; Negroponte, 1995; Sterling, 1992; Toffler, 1980). The 'Global Village', the 'Information (Super)Highway', and the 'death of distance' are terms often used in the mainstream media's characterization of the Internet. Second, users come upon a placeless social vacuum where they shed their identity and therefore their link to a physical geographic location (Abler, 1990; Adams, 1995; Alstyne & Brynjolfsson, 1996; Falk, 1998; Haraway, 2000; Tomas, 1989; Willson, 1997). The 'disembodying' and 'transcendent' nature of the cyberspace - "the world that lies beyond our computer screens in the vast network of computers" (Dodge, 1999:1) – implies that ICTs will *substitute* propinquity and place-based relations.

> During the mechanical ages we had extended our bodies in space. Today, after a century of electric technology, we have extended our central nervous system itself in a global embrace, abolishing both time and space as far as our planet is concerned. [...] After three thousand years of specialist explosion and of increasing specializm and alienation in the technological extensions of our bodies, our world has become compressional by dramatic reversal. As electrically contracted, the globe is no more than a village. (McLuhan M. quoted in McLuhan & Zingrone, 1995:125)

This liberation from time, place, and body, is seen by critics to weaken the traditional community and sociability, and by extension the meaning of place is diminished. The weakening of public community through decreased participation in gatherings and less involvement in community organizations, as well as disengagement from the neighborhood and family are believed to constitute some of the consequences of increased diffusion and use of the Internet (Alstyne & Brynjolfsson, 1996; Heelas, Lash & Morris; Katz & Rice, 2002; Nie & Erbring, 2000; Tonn & Ogle, 2002; Willson, 1997). "The Internet could be the ultimate isolating technology that further reduces our participation in communities even more than television did before it....[with] more people being home, alone and anonymous" (Nie quoted in O'toole, 2000: 4,11).

Recent literature points to the growing importance of socially, culturally and historically contextualizing the Internet and its uses. Abstract ideas are increasingly rejected and instead of macro-level predictions, empirical research focuses on *actual* uses of the Internet and individual perceptions of this medium. Studies have revealed that daily Internet experiences and uses are specific and practical in nature. Locality or 'place' exert a significant influence on a user's experience in cyberspace, whether expressed in relation to self-representation on the Internet through the production and maintenance of Web pages, or through individual cyberspatial behavior and Internet use (Christensen, 2003; Kwan, 2001; Miller & Slater, 2000; Matei & Ball-Rokeach, 2002). Geographers have pointed out that no matter how much geographic space seems to have 'shrunk', 'collapsed' or 'diffused' as a result of information and communication technologies, social interaction and experiences are still built around places (Dodge, 1999; Dodge & Kitchin, 2000; Gattiker, 2001; Gould, 1990; Janelle, 1990; Urry, 1995; Wilbanks, 2004; Zook et al., 2004). Human construction of material place and space is seen to ground and to provide context for experiences with, and uses of new technologies (Adams, 1998; Graham, 1998; Kubicek & Wagner 2002).

Christensen (2003) found that Inuit web pages tell their own stories that reflect the desire of Inuit to inform and update others about life in Arctic regions – "telling about home" (19). The strong link to locality and cultural identity is also illustrated in Miller and Slater's (2000) analysis of Internet use among Trinidadians. They found that Trinidadians have readily taken advantage of the Internet, which has

especially helped Diaspora Trinidadians strengthen their relationships with their extended families.

> [...]Trinidadians have a 'natural affinity' for the Internet. They apparently take to it 'naturally', fitting it effortlessly into family, friendship, work and leisure; and in some respects they seem to experience the Internet as itself 'naturally Trinidadian' [...] It provided a natural platform for enacting, on a global stage, core values and components of Trinidadian identity such as national pride, cosmopolitanism, freedom, entrepreneurship (2000:2).

As with the Inuit, Trinidadians are also sensitive to misconceptions about their culture and use the Internet to give a more contextualized picture of what it means to be Trinidadian. The Internet is thus not a "monolithic or 'placeless' cyberspace", but one firmly grounded in geography and personal identities (Miller & Slater, 2000: 1). As a result its use and the ways in which it is perceived are as numerous as there are users. These trends indicate that characteristics of local offline communities are still the basis for online interaction, representation and content. Social mores and cultural traits dictate the understanding and use of Internet, therefore the continuation of local communities is not threatened by this medium, although their form and organization may subsequently be altered as use increases.

2.2 The digital divide

A common theme and concern within the discourse on Internet diffusion and its impacts on spatial and social (re)organization, centers on the digital divide. The

'haves' and have-nots' (the so-called 'digital divide') have emerged largely due to the uneven diffusion of Internet access and of telecommunications infrastructure, differences in the socioeconomic status of individuals, individual accessibility, and the diversity of uses.

Initially the digital divide was understood as the gap in access to the Internet dictated by the socio-economic characteristics of a given population (Sciadas, 2002). It implied a polarization between those who have Internet access and those who do not, perhaps as a reaction to critics of technological determinists. However the magnitude of this divide is understood, the most significant divide is global in scale, where the developed countries of the North and West enjoy significantly better access to the Internet, the telecommunication infrastructure supporting it, and the necessary know-how in deploying it when compared to underdeveloped nations in the South. Internet statistics show that only six to eight percent of the world's population is connected to the Internet, leaving approximately *ninety-two* percent of the world disconnected in some way. The World Wide Web is neither as wide nor as worldly as some have hoped (Cuneo, 2002).

Nevertheless, at the micro-level (regional and local) individual experiences and characteristics are believed to shape the representation, utilization, and appropriation of the Internet.

> Clearly, most people are not polar opposites in terms of the digital divide. They have some characteristics that shove them up into the

> "haves", and other characteristics that drop them into the "have-nots". So we may reflect reality better if we characterize the digital divide as a complex gradient or multidimensional prism rather than a dichotomous chasm (Cuneo, 2002:7).

More recent studies have moved beyond questions of access to include issues related to the use of computers in general, whether connected to the Internet or not, and of individual online behavior. For example, Kwan (2001) uses two concepts to understand individual access to online information resources and online behavior: 'individual accessibility' and 'place accessibility'. The former refers to an individual's experience with access to information in respect to means and knowledge for accessing information on the web (access to Internet technologies, knowledge of Internet resources, ease of navigation in cyberspace, and skills in web navigation.). The latter refers to social and spatial constraints at a given locale (Kwan, 2001).

The major determinant of Internet access and use is income. Whether income is expressed as individual, households, or gross national domestic product (GDP) Internet use is found to increase with a rise in income. Moreover, income is also a determinant of other factors, such as education, which is the third significant variable that mediates Internet appropriation (Dickinson, & Ellison, 1999). High levels of formal education and literacy generally result in increased computer ownership and Internet access, if income levels permit (Clark, 2001, The Daily, 2002). Age represents a forth determinant variable in Internet use. The sooner one begins using the Internet the more confidence one has to continue that use

throughout his/her life (Rotermann, 2001; Silver, 2001). Occupational stratification results in a further divide of digital mediums with respect to skills. Highly skilled computer specialists and professionals and managers enjoy vast advantages in terms of skills and liberty in technological use compared to those performing menial tasks and semi-skilled and unskilled workers (Wannell & Ali, 2002; Dryburgh, 2002). A sixth variable relates to individuals of ethnic and visible minorities. These tend to have less access to the Internet, although, some immigrants with high educational and income levels, have been found to appropriate the Internet as a means to improving their career prospects in their host country (Badets & Howatson-Leo, 1999; Dryburgh, 2002). Finally, political power has been found to play a major role in the diffusion and appropriation of the Internet. Political elites have power over economic and political institutions as well as information and communication infrastructure, which make it easy for them to use technologies, especially the Internet, to protect, maintain or enhance their power (Cuneo, 2002; Sciadas, 2002). China's efforts to control the content and access to the Internet, including access to foreign news web sites such as BBC and CNN, stands as an example (Cuneo, 2002).

The digital divide is present at both national and international levels as electronic systems reproduce and sometimes reinforce traditional hierarchical social structures (Delgado and Becker, 1998). The core-periphery paradigm at the national scale in respect to indigenous people, places them, geographically speaking, at the periphery. Thus many communities separated from the core are also excluded from information and communication networks, limiting their

capacity to actively participate on the Net (Becker & Delgado, 1998). Nevertheless, remote communities and aboriginal groups, the so-called "have-nots" of the digital divide, have been able to effectively use the Internet, albeit at various levels.

2.3 Jumping fences: Indigenous participation on the Internet

For indigenous peoples the Internet has become a tool in their struggles to preserve their livelihoods, culture and territories against the incursion of transnational corporations and national governments. In Latin America indigenous groups have used the Internet as a tool for mobilization and direct action. One of the most famous cases is that of the Zapatista uprising in the early 1990's in Mexico that was made possible through effective mobilization via e-mails (Becker & Delgado, 1998; Delgado, 2002). Similarly, the Confederation of Indigenous Nationalities of Ecuador (CONAIE), effectively used computer networking to organize mass mobilizations that resulted in supplanting two presidents (Delgado, 2002).

In Australia indigenous and isolated communities focus their use of ICTs on local capacity building, administrative as well as educational. For example, the Positive Links Between Universities and Schools (PLUS) Project is a small-scale literacy program devised to service the local community in Ipswich, a town near Brisbane (Doherty, 2002). The objectives of the program are to provide aboriginal and Islander youth with access to "critical literacy skills in a technological environment" and "to help students become familiar and comfortable with a

university setting" (51). Improvements in the performance of students were detected, as well as an improvement in service delivery by the community administration. This success has been rewarded by continued funding of the program by the Department of Education (Doherty, 2002). The Local Government Association of the Northern Territory (LGANT) Internet Pilot Project aimed at developing and maintaining Internet "functionality" in four remote communities in the Northern Territory in Australia. The project facilitated: the development of community web sites; improved e-mail access for more efficient administration and communication within state departments; and the provision of access to relevant information, such as that related to health, land conservation, and links to other indigenous organizations and networks (Morrison, 2000). Although many problems have been encountered, such as the loss of trained personnel and infrastructural shortcomings, generally all four communities experienced an increase in e-mail use and most importantly "impressive" ICT skill development (Morrison, 2000).

In Canada, Inuit have made remarkable efforts to connect to and develop a culturally and socially reflective presence on the Internet. For example, in 1998 ARDICOM, a corporation owned entirely by Northern companies, sixty six percent of which are owned by aboriginal groups, connected 58 communities in the Canadian North. Inuvik TV, of the Mackenzie Delta, was the first company in Canada to fund its own satellite link hooking up to the Internet through high-speed connection (Christensen, 2003). Inuit presence on the Net has been firmly established with more then 300 web pages with Inuit content available on the

Web. Moreover, Christensen (2003) found that generally Inuit web pages provide cultural information about communities and people and often aim at counteracting established stereotypes associated with life in the North. The Inuit perceive the Internet as a medium that offers practical and immediate potential for promoting cultural and economic development. Although abstract perceptions of cyberspace, such as disembodiment and transcendence, are not foreign to the Inuit, they choose this medium to assert and negotiate the meaning of Inuit identity and culture. The practicability of the Internet is what attracts the Inuit:

> We live in an isolated town. The airplane ticket to go anywhere is very expensive. We are hope [sic] the Internet will bring long distance education for student research and long distance communication for both individuals and business/corporations/associations etc. Female, Rankin Inlet, Nunavut, Canada (personal communication, 1998). (Christensen, 2003:56-57).

2.4 Taking locality seriously: Internet practicability for remote communities

2.4.1 Teleworking & E-shopping

Despite the fact that working at a distance from head offices and using telecommunications to remotely monitor productivity – teleworking - is not a widespread practice, the potential it offers to small-businesses and individuals in isolated areas is significant (Chapman & Slaymaker, 2002; Grimes, 2000; Perez et al., 2002). The lack of competitive advantage within rural areas and the relative constraints on economic restructuring have left rural residents at a

disadvantage in terms of access to labor and business opportunities (Perez et al., 2002). This situation results in an increased out-migration from rural centers to urban metropolises or an increase in an individual's commuting time (Grimes, 2000). Recent developments in ICTs could enable rural areas to partly ameliorate these disadvantages by reducing the friction of distance, such as through working from home, or by facilitating improvement in the knowledge base by increasing access to information and learning opportunities (Tremblay, 2001). The possibility of reducing commuting time for rural residents also translates to a reduction in the costs of transportation, although studies have found that time is a more important factor regarding individual preferences (Peters et al, 2004). Thompson-James (1999) found that rural households are more likely to use computer communication for self-employed businesses than are households in small towns and cities. The potential of the Internet to contribute to more profitable and effective business operations in rural areas is thus significant.

Some of the benefits related to teleworking from an employee perspective include: flexibility in working hours, an increased sense of autonomy and personal freedom, increased opportunities for self-employment, and various cost savings such as that of transportation. Benefits for companies, even small-businesses are also apparent, the most important being office space savings, productivity increases and competitive recruiting advantages (Chapman&Slaymaker, 2002; Grimes, 2000; Perez et al, 2002; Peters et al, 2004). Moreover it has been found that smaller organizations are more likely to

adopt teleworking as they are more able to accept change and are less concerned with organizational obstacles (Grimes, 2000).

Teleworking also presents some barriers. For the employee, organizational difficulties can arise, especially effective time management and team working difficulties. An increase in isolation from the rest of the non-telecommuting coworkers can create promotional difficulties, perception of status loss, as well psychological problems as a result of work-family conflicts (Grimes, 2000; Peters et al. 2004). Organizational changes, equipment costs, and task selection mistakes, as well as inability to sustain employee motivation, are some of the perceived barriers that teleworking presents for companies (Grimes, 2000; Peters et al. 2004).

E-commerce presents an additional opportunity for remote areas to improve economic prospects and gain access to markets and products. Although Internet trading is generally a business-to-business affair, in recent years e-shopping has become more prominent. In 2002, an estimated $2.5 billion was spent shopping on the Internet in Canada. This represents a 35% increase from the $1.8 billion spent online in 2001. Not only have local shoppers gained access to larger markets but they also infiltrate these same markets by creating niche economies and using guerilla marketing tactics whereby locally produced products are marketed as unique or upscale products (Mundorf & Bryant, 2002). Examples include *compusmart.com*, one of the largest and most user-friendly Internet

retailers; and *adifferentapproach.com* one of the thousands of online wholesalers of locally produced crafts dedicated to fair trade principles.

2.4.2 E-learning

Education supported by new ICTs is becoming the 'tool of choice' and the demand for upgrading the knowledge and skills of the younger generation is on the rise (Lafrerriere, 1997). Moreover as society becomes more knowledge-based, the ability to acquire up-to-date knowledge, skills and education has become a determining factor for economic and social success (Beaujot, 1991; Bourne & Rose, 2001; Chui, 1996). The use of digital networks to deliver post-secondary education and training has become one of the world's largest new industries and coupled with the need to increase student access to higher education has prompted governments and academic institutions in Canada and elsewhere to diversify educational practices to support 'lifelong learning' (Developments, 1997; Cuneo et al., 2000).

E-learning can take many shapes and forms. Most often, online learning is a complementary method that accompanies the traditional classroom experience. For example some educators will use online tests to prepare students for subsequent theoretical inquires, while others place more emphasis on the use of online research where students are encouraged to experiment with a large array of information available on the Internet. Some online classes use the Internet for discussion purposes only, where online forums are formed to deal with specific topics and theories, and the delivery of academic content is conducted in a

traditional classroom setting. E-learning has been seen as a more efficient approach to traditional distance learning because it provides timely service delivery for students and instructors, which were previously hampered by spatial and temporal barriers. It has been argued that e-learning supports both private and social learning as students can learn by themselves while browsing the Net but also engage in collaborative learning through discussion boards. As a flexible environment, online learning can accommodate a wide range of styles and encourage students to use preferred methods. It also encourages reflection as it is not constrained by class time and a cumulative archive of what has transpired in class is generally available for consultation (Hamid, 2002).

Nonetheless, many online initiatives have fallen short of their initial expectations and opinions differ with respect to the value of this new mode of learning (Hamid, 2002). Cuneo et al. (2000) identified many new challenges to online educational delivery: based on eight national surveys of all colleges and Universities in Canada as well as Internet data on corporate and institutional support for online learning, it was found that almost half of all these institutions do not offer online courses, and those that do, have a limited choice. On the other hand there are many other types of institutions that offer online courses and this is seen as an encouraging trend (10). In particular institutions with business, health and medicine, and engineering profiles were found to offer more online courses than coop and applied program centered institutions. The size of these institutions is also a determining factor, as those with larger staff and student pools can better

absorb the many costs related to technological developments (Cuneo et al., 2000).

2.4.3 Challenges of implementing ICTs in education : An educator perspective

The positive aspects of e-learning as a tool for distance education are apparent. Nonetheless the challenge rests in effectively delivering this type of education *while* attaining the educational objectives set out for students. Students lacking basic ICT skills cannot take advantage of e-learning, therefore effective e-learning delivery is dependent first and foremost on the integration of ICTs into curriculum and pedagogy. Ignoring this basic requirement will inevitably lead to failures in applying online learning.

The effective delivery of online learning may be elusive as long as the integration of ICTs into curriculum and pedagogy remains in its infancy. Educators are still debating the educational use of modern technology, and many are reluctant to integrate it into classroom practice (Lankshear & Snyder, 2000; Berge, 1999). This reluctance stems especially from the perceived drive by the corporate business world and neoliberal politicians to commercialize education (Berge & Mrozowski, 1999; Lankshear & Snyder, 2000; McLaren & Farahmandpur, 2001; Robertson, 2003).

This reluctance on the part of the educators to embrace e-learning is understandable given the ongoing cutbacks in the education system (Friendly, 2001), staff shortages and increasing student enrollment (Cuneo et al, 2000; Lafrerriere, 1997; Lankshear & Snyder, 2000). One of the major obstacles

identified in integrating ICTs into classroom practice is the lack of ICT skilled teachers. In their analysis of three schools, Lankshear and Snyder (2000) identified overlapping challenges which hinder the introduction of ICTs into the school curriculum: discrepancy between the objectives set out by the school and the infrastructure available to support such objectives, uneven distribution of resources and expertise within and between schools, limited teacher expertise, and unevenness in attitudes toward new technologies and their take-up (Lankshear & Snyder, 2000; Robertson, 2003).

It has been found that the role of educational instructors can often be undermined by the social environment (the institution's administration, parents, politics and public opinion at large). While encouraged to be flexible and adaptable, educators' roles and inputs are restricted by decisions taken at higher levels in the educational decision-making hierarchy. Coupled with competition for resources and conflicting educational philosophies, cooperation between various stakeholders (youth centers, community members, universities, and school management) may be limited from the start (Braiter, 2003; Burniske & Monke, 2001). Nonetheless, educators are aware of the importance of ICTs in the world beyond school and progress has been made to integrate these technologies into classroom practice.

2.4.4 Teens and the Internet : diverging perspectives

Diverging perspectives on the Internet, its impacts and its uses further undermines ICT implementation in education. An Internet use study among

students from four high schools in Quebec (Pons et al, 1999) revealed that students do not see the Internet as a revolutionary incident, but as an evolutionary process that integrates easily into daily life. "The Internet is an extension of all other media, it includes them without making them disappear" (personal translation, student interview: 45). Moreover, students' use of the Internet does not substitute for daily offline activities; it might displace some, such as watching TV; but compared to the impact that television had initially, the Internet is better integrated into daily life (Pons et al, 1999).

Studies also found significant discrepancies between the Internet use of teens and parents' and teachers' perceptions and attitudes regarding teens' online activities (MNet, 2004). Most parents have a negative perspective on the Internet. They are apprehensive of easily accessible unsuitable material and feel that their personal relationships with their children have suffered as a result. Teens on the other hand do not perceive any impact on their sociability and often do not understand "what the deal is" (MNet, 2004: 9) with their parents' desire to control online activities. Many students recommend that efforts should be made to develop opportunities for young children to learn how to think about choices and develop decision-making skills rather than trying to "keep them away" from unsuitable material (Burniske & Monke, 2001; Hird, 2004; MNet, 2004).

Another area of contention relates to the sentiment that teens are "wasting time" while online. Yet studies reveal that teens are using the Internet in creative ways. Indeed research is the third listed activity that teens say they most like about the

Internet, after chat and downloading music. Many were found to learn photography and image altering software to create new forms of art; others were using video steaming to learn how to play musical instruments; and some were found to be actively involved in the democratic process, learning how to network and are involved in fundraising campaigns for non-profit organizations and sports teams (MNet, 2004:10; Hird, 2004).

Many teens complain that school activities are not challenging enough and that projects do not make demands "on kids' search skills" (MNet, 2004:10; Hird, 2004). They feel that teachers are not qualified enough to effectively incorporate the Internet into school work nor do they understand the technology well enough (Hird, 2004). Most importantly teens found it difficult to communicate their online experiences with their family as they often confront criticism from their parents related to what they do and see on the Internet. They express frustration with their parents' misjudgment since they devote significant time to improving their keyboarding and spelling skills while chatting, skills which they perceive as vital to effectively navigating the Internet (Lamy, 2004; MNet, 2004; Plante & Beattie, 2004).

These studies reflect a gap between generational understandings of the Internet as a tool for communication and learning. Conclusions and predictions vary but there seems to be an established assumption among educators and parents that the Internet has *significant* negative impacts on young peoples' sociability and learning. Conversely, youth' representation, utilization, and appropriation of the

Internet presents a much different and encouraging picture of *actual* uses. As today's youth will become tomorrow's decision-makers it is entirely likely that the Internet's revolutionary mystique would probably fade away and more practical applications of the Internet will dominate in the years ahead.

In the mean time, the Canadian government has taken significant measures to facilitate the diffusion and integration of the Internet in all social, political and economic domains. In light of this literature an exploration of Canadian ICT policy is relevant and instrumental in understanding some of the issues which the government is aiming to address as well as its vision for the future of Canadian cities and towns. Moreover, an analysis of the extent to which the various initiatives have been successful will provide insights into the limitations and issues faced by both decision-makers and users alike, and facilitate the identification of possible solutions. The following section presents ICT related policy that especially concerns or is developed for youth and first nations in Canada.

2.5 "The most connected country in the world"[2]

2.5.1 The Canadian tableau

Canada's *Information Highway agenda* has set out, since 1997, to connect *all* Canadians to the Internet regardless of their socioeconomic status or geographical location. Industry Canada[3], the most active partner in this initiative, took on the task of "spearheading Canada's Information Highway agenda to build

[2] Connecting Canadians Initiative, 2001

[3] See http://www.ic.gc.ca/cmb/welcomeic.nsf/ICPages/IndustryCanadaOnLine#online4 for a complete list of Industry Canada's on-line services - *Connecting Canadians* initiative

the highest-quality, lowest-cost information network in the world" (Minister of Industry, 2000).

The *Connecting Canadians* initiative, launched in 1998, constitutes an amalgamation of programs and services designed to meet Canadians' specific needs: Canada On-line, Smart Communities, Canadian Content On-line, Electronic Commerce, Government On-line, and Connecting Canada to the World.

Canada On-line[4] is primarily concerned with facilitating access and building infrastructure. The main goal of this program is to establish up to 10,000 public Internet access sites in urban, rural and remote communities. Canada On-line programs include: SchoolNet, SchoolNet Grassroots program, First nations SchoolNet, Libraynet, Community Access Program, CANNCONECT, School site builders, CANARIE, and Skillnet.ca.

In 1999, Canada became the first country in the world to connect its public schools and libraries to the Internet through SchoolNet and LibraryNet. Featured on the SchoolNet network is the *First Nations SchoolNet* program, which aims to connect all First Nation schools under federal jurisdiction to the Internet and provide funding and loans for IT development – "First Nations SchoolNet's goal is to help prevent the digital divide by bringing First Nations schools and communities leading-edge technology and equipment that provides high-speed access to the vast resources of the Internet, thus allowing them to participate

[4] For complete list of Canada On-Line programs visit http://www.connect.gc.ca/en/200-e.asp

fully in the new economy and giving them the opportunity to be at the forefront of new technology usage" (schoolnet-rescol.ic.gc.ca). The Badabin Eeyou School of the Whapmagoostui, a Cree community in northern Quebec, is part of the First Nations SchoolNet network, winning an award in 2000 for their website, *Whapmagoostui Art Factory*. The website is a Cooperative Educational Project under the Youth Employment Strategy program which showcases the art and the students of the *Whapmagoostui Art Factory* studio and cooperative (First Nations SchoolNet, 2003; Whapmagoostui Art Factory, 2004).[5] In Quebec, two Inuit schools in Umiujaq and Ivujivik; a Naskapi First Nation school in Kawawachikamach; two Mohawk schools in Kahnawaki and St. Regis; and an Algonquin school in Maniwaki, also partake in the First Nations SchoolNet program (First Nations SchoolNet, 2003).

As part of the umbrella program *Canada On-line,* The Computers for Schools (CFS) project "helps young Canadians gain greater access to computer technology in a learning environment so they can acquire the computer skills to succeed in a technology driven economy and society" (Computers For Schools, 2002). Since its creation, CFS has provided more than 300,000 computers and is planning to continue to distribute more then 60,000 additional computers each year. The CFS also provides a minimum of thirteen to a maximum of twenty-six weeks of paid employment to recent graduates and other IT students in the various refurbishing centers. The Technical Work Experience Program (TWEP)

[5] For more details on *Whapmagoostui Art Factory* consult http://www.geocities.com/badabin99/WAF.html

has so far employed 1750 young people (Computers for Schools, 2002; Connecting Canadians, 2004; McKeough, 2000).

The Community Access Program (CAP), another component of *Canada On-line,* was initiated in 1994 to act as portal to the Internet for rural communities, and provides computer training and support for public institutions such as libraries and community centers (Community Access Program, 2003; Latta, 2000). CAP functions as a liaison network and community development tool, trying to pull together various interested parties for better collaboration in the delivery of services and advancing projects initiated by communities. Services available through CAP include: 1) *access*: assistance for the technical set-up of community access centers; 2) *training*: onsite assistance in computer and Internet training, as well as assistance in buying and operating computers; 3) *your community online*: assistance in creation and maintenance of community Websites; 4) *web-page and e-mail hosting*: provides access to hosting services; 5) *government services*: onsite provision of information on various government services, especially related to job and business opportunities; 6) *e-com*: provision of e-commerce workshops for local entrepreneurs as well as consumer awareness of e-commerce; 7) *e-learning*: facilitation of online learning through provision of lab environments and Internet access for prospective e-learners as well as assistance for funding opportunities; and 8) *youth opportunities*: limited internship opportunities for youth, primarily out of community access centers (http://cap.ic.gc.ca/english/8300.shtml). The Cree Nation has taken an interest in this initiative with the following Cree centers now connected to the CAP network:

the Nemaska Band Office (www.lino.com/~nemaska), the Cree Trappers Association in Eastmain (www.eastmain-nation.ca), the Auberge Kanio Kashee Lodge in Waskaganish (www.aboriginalcollections.ic.gc.ca/waskaganish/), and the Eenuch Association Offices in Ouje-Bougoumou (www.ouje.ca).

Student Connection, a countrywide organization, provides Internet and e-commerce training by linking recent graduates with small and medium-sized businesses. The Student Business Advisors, IT trained students, deliver "on-site customized Internet training, assessments, and e-commerce services" to seniors and professionals alike (Connecting Canadians Initiative, 2001; www.studentconnections.ca).

CanConnect is an initiative that aids in creating partnerships between individuals and organizations for the development of youth's IT skills. It connects schools and communities with various organizations that can provide a wide range of expertise in developing IT skills (CanConnect).

Smart Communities focus on rejuvenating and facilitating service delivery in various communities by linking them through a main webpage or portal from which community members can access information and build cooperative networks to take advantage of the Internet and other 'electronic networks'. This project aspires that by taking advantage of on-line service delivery, communities will improve the "overall quality of life" of their members. With a total proposed budget of 60 million over three years, 12 communities were chosen out of 129 that submitted letters of intent; one from each province, one from the North, and

one Aboriginal; and each received up to 5 million in funding to support their project. The Aboriginal project that was selected is the Kuh-ke-nah or K-net under the Keewaytinook Okimakanak organization, which links six First Nations communities from Ontario. As a result of this initiative a broadband, high-speed Internet network has been put in place and communities can now access timely health information through the KO Telehealth division. The youth can continue their education without leaving their community through the Keewaytinook Internet High School (KIHS) (KNet, 2004; Smart Communities, 2004; Demonstration Projects, 2003).

Finally, *Canadian Content On-line,* as a third major project under the *Connecting Canadians* initiative provides on-line content on Canadian issues and new computer software and applications. The Aboriginal Digital Collections provides financial assistance to aboriginal organizations and business that hire youth to design Web sites. Since 1998 the program has helped employ 150 aboriginal youth that have created over 30 web sites featuring aboriginal content (ADC, 2004)[6].

2.5.2 Landscapes of Quebec's Information Highway

On April 27, 1998, the Quebec Government, in order to 'rally' all spheres of Québec society around a "common strategy for the information superhighway", adopted the "Quebec Information Superhighway Policy". To address the digital divide the policy proposes "generalizing the use of information highways in

[6] For detailed information on other programs available through Connecting Canadians please visit www.connect.gc.ca

Quebec" with programs addressing five major areas: access, education, cultural content, economic development, and online governmental services (Agir, 1998).

In September 2002, the provincial government launched the *Connectivity for Quebec's Communities/ Villages Branches du Québec* program. With a budget of $75 million, the program aims to develop a broadband telecommunication network linking primarily Quebec schools and parent organizations, such as municipalities (Connectivity, 2002). The program's objectives made provisions for further major reforms introduced at all levels of education systems, to improve municipal communications infrastructure, and to support the existing 1,120 Internet stations in 831 libraries, which received $7 million from the information superhighway fund and also contributions from the Bill and Melinda Gates Foundation (Connectivity, 2002; Communiqué, 2002). The second phase of the program for 2004 has been approved and a budget of $75 millions allocated. Given the newness of this program, report studies have yet to be generated, but assessment and statistical studies are currently underway.[7]

Connect Families to the Internet Project, which received $120 million in funding over three years starting in 2001, enables families receiving a family allowance from the Régie des Rentes du Québec to obtain Internet access at a reduced cost as well as subsidies for the purchase of computers. The assistance covers 75% of the cost of a connection package and $450 per year reimbursement for

[7] For a complete list of studies that received funding please visit www.autoroute.gouv.qc.ca/fai/fai2001-03/liste2_2002.htm

families opting for a connection and the leasing of a computer (Quebec OnLine, 2000).

Quebec's Information Superhighway policy is in its infancy and since some of programs are still under development it is too premature to effectively evaluate them at this time. In their entirety the programs are designed to especially assist segments of population identified as part of the 'have-nots' of the digital divide. Special focus is placed on youth and their ICT skill development as well as families in the lowest household income bracket.

2.6 Demystifying cyberspace

Recent literature points to the growing importance of contextualizing the Internet and its uses as an important underlying basis for developing constructive and efficient *modi operandi* for its diffusion and appropriation. The disembodying and transcendent characteristics of the Internet are played down with evidence showing that identity and place play a key role in the way the Internet is appropriated and used. Community cohesion and sociability stand to gain and be reinforced by this medium, albeit at various levels.

The potential for sustaining and improving communication is genuine, especially for isolated communities and regions. Increasing use and accessibility to the Internet, globally and nationally, opens the doors for active participation in political and social discourse, as many examples have illustrated. The genuine benefits of distance education, teleworking and e-commerce could strengthen

local capacity building and alleviate to some degree the impacts of distance for those communities at the periphery.

Nonetheless, many obstacles still need to be overcome to effectively utilize the Internet. Although infrastructural improvements have been made, a large proportion of rural areas in North America continue to be disconnected or weakly connected. Ineffective logistical support is one major hindrance that continues to keep local communities at a disadvantage in terms of effective utilization of the Internet. Lack of ICT skills among members of rural and isolated communities impedes the extent to which they can appropriate this medium and take advantage of the opportunities it presents. Greater levels of active and meaningful user participation in the design and delivery of technology is now widely regarded as necessary for the creation of culturally and user-friendly online environments.

Chapter 3

Giving and receiving: methodology

> Instead of starting from what people or communities lack or ignore, we start from the appreciation of what people and communities have and know... Growing gently new ideas and skills from the contextual needs and choices of the communities (Levy, 1997:3).

This study takes an ethnographic approach in order to avoid gross generalizations of a 'typical' user and stereotypes linked technophile and mythic ideas about cyberspace, by focusing on *real* internet uses and users. The methodology focuses on maximizing the inputs of Cree youth into the research through the inclusion of questionnaire surveys, interviews, participant observation and workshops focused on the documentation of local experiences and concerns related to Internet use.

A questionnaire survey was developed comprising 83 questions divided into 4 questionnaires. The first of these questionnaires was designed to assess the general background of the sample population and was organized as follows: 1) socio-demographic characteristics, such as education levels and employment; 2) general information on activities practiced by the sample such as time spent in the bush and leisure activities as well as questions pertaining to their assessment of existing community organized activities; 3) mobility assessment such as access to transportation and travel patterns; and 4) information sharing and an

assessment of their present access to information resources as well as perceived needs for better access.

Questionnaire two was designed to assess general computing skills, as well as access to technologies and methods of acquiring computing skills. Characteristics of Internet use were assessed through questionnaire three; particular focus was given to how and for what purposes respondents use the Internet. Questionnaire four was developed to assess the impact of Internet, and especially email, on sociability (see Appendix 1 for a sample of the questionnaires). This addresses the fact that the Internet can absorb an individual's attention and reduce their participation in the community in which they live while immersing them at the same time in a variety of short-lived online communities.

A major challenge was to persuade the youth to participate in the questionnaire survey. Because they are very shy and reluctant to express an opinion, I conducted the survey among three separate groups: first, the individuals who participated in the computer workshop I held in the summer of 2003; second on the group of young men who work and train at the firefighters' station; and third on the students enrolled in secondary four and five at the local high school. Of the 27 people who participated in the computer workshops, 9 completed the questionnaire survey and one agreed to be interviewed. Ten out of 20 aspiring firefighters also participated in the questionnaire and one was interviewed. Questionnaires were completed by 11 high school students out of a total of

approximately 60 enrolled in secondary four and five, and interviews were conducted with 4 of them.

In order to elaborate upon the profiles established through the questionnaire surveys and to provide a richer, more textured account of Cree Internet use and appropriation, interviews were conducted during my second field research phase (March 22-April 8, 2004). All interviews were conducted in English; participants were selected in a random manner and all agreed to have their conversations recorded. The interviews were on average 30 to 40 minutes long and were conducted either at the local high school, at participants' corresponding workplace or outside. Participant observation and informal discussions were also a key part of my methodology. On-site photography was also used as supplementary visual information. For example I made efforts to photograph most of my respondents either at work or at school as well as the built environment of the community, to provide a richer context for this research.

3.1 Fieldwork experiences

From the beginning I felt very uneasy about strictly conducting my research from the perspective of an outside observer. I felt that as a researcher and someone of expertise in ICTs I had a responsibility to share my knowledge and skills with those that were willing and interested to learn. Therefore during my first fieldwork phase from June 14th to August 29th 2003, in consultation with the Youth Coordinator of the community of Nemaska, I developed a Computer Training Program. Although, initially it wasn't met with much enthusiasm - only five

individuals came to the first session - by the end of the month the Program was fully subscribed (following significant delays in the receipt of permissions). The program included a basic MS Office applications course (Word, Excel, Publisher and PowerPoint) for three weeks, with three-2-hour sessions per day. The course material was compiled, and the classes were organized and scheduled according to the community's needs. The groups consisted of individuals aged between 20-50 years old. In addition to the 27 individuals who participated in the program, several individuals that are employed by various Band departments were offered training (Finance, Cree Regional Authority, and Trapper's Association).

The Band Office administration and the local high school facilitated me with all logistical and administrative support, such as photocopying and a computer lab. I was free to come and go as I pleased and was given the master key for the high school so that I could use the facilities as the need arose, especially since I held evening classes when the school staff was not present. During my daily excursions to the Band Office and the school I acted as unofficial trouble-shooter for a wide range of computer, Internet and publishing problems. For the first two weeks I made sure that the computer lab (CAP site) at the Band Office was up and running and desperately tried to manage the many viruses that found their way into the network as no system administrator was available on site. During this initial fieldwork period I completed 30 questionnaire surveys with individuals between 16-35 years old, as well as held various informal discussion sessions

focused on the extent of Internet use and computer skills development among the Nemaska Cree youth.

In addition, I collaborated with the Youth Department in the set up of an Internet Café in the community and with the Recreation Department in the design and development of a Web page. Unfortunately these initiatives were discontinued as a result of lack of time on my part, lack of interest on the part of the Recreation Department in the development of the web page; and low economic and infrastructural feasibility concerning the community Internet Café.

Excited about the success of the Computer Training Program, I proposed to conduct a 3-week workshop for Cree youth during my second fieldwork phase between March 24th and April 11th, 2004. Initially I was hoping to use digital and other media to examine the representation of Nemaska youth on the Internet, as well as to increase awareness of ICTs among the youth and document individual perceptions of the Internet. Semi-structured interviews and group discussions were planned for each day. The material would have contributed to a community presentation where the participants could have showcased their work and initiated dialogue with other community members. Unfortunately the youth did not show an interest in participating and the workshops were not held.

Instead, in consultation Farruk Rana, the late principal of the Luke Mettaweskum School, two-2-hour computer training workshops were conducted with the school teachers for each of three days. I also substituted for various teachers at the school when the need arouse and I provided technical support when needed

(such as fixing faulty computers, aiding with the editing of documents and researching promising youth programs and educational resources). During my interaction with the students it had become apparent that they were very interested in accessing the school's computer lab as an after-school activity. The only youth center in the community was shut down during the winter as a result of financial and administrative difficulties. Thus the youth had no access to computers outside the school. I arranged for the lab to be opened everyday after 4pm, and was granted permission on the condition that I would supervise the students. Unfortunately, some teachers complained about the traffic and noise in the corridors and the fact that some students were skipping detention. The arrangement was cancelled on the grounds of student misbehavior.

Six interviews with youth that participated in the 2003 questionnaire survey were conducted during my second field season.

3.2 Reflections on fieldwork and limitations

Fieldwork, and especially participant observation, is an integral part of the research design applied in many studies but surprisingly, with the exception of Johnes, Nast, and Roberts (1997), I found very little discussion of these fieldwork experiences. While this approach is more widespread among anthropologists, I believe geographic research should incorporate this type of fieldwork not only because it provides a richer context for the experience of local communities but also because it provides a more comprehensive picture of the diversity of the research participants.

With respect to my research, I was fortunate to make initial contact with my future subjects a year before work on this present research started. While working as a research assistant for Professor David Greene, Department of Geography, Planning and Environment, Concordia University, I was in charge of site selection for a study of post fire forest regeneration. This involved a stay of 45 days in the Nemaska community. Initial conversations with community members confirmed some of the issues and problems that many native studies have observed. I became particularly interested in how community members dealt with the difficulties that isolation engenders, especially since my own experiences of working in the area were not without a measure of frustration

I soon settled on the idea of conducting my Master's research in Nemaska. The establishment of a number of strong relationships and ties among community members greatly facilitated this ambition and confirmed the value of having pre-existing personal connections to a community (Porter & Grossman, 2004). Moreover, I made efforts to keep in touch throughout the subsequent year with many people that I had met so that I could be up-to-date with what was transpiring in my absence.

Participant observation and interaction with community members was at the core of my research. Indeed I did not maintain a clear separation between my research and my personal life. While in Nemaska I spent most of my time with friends taking pictures, going on canoe trips, participating in community events,

feasts, weddings, funerals, graduations, and official meetings. I hung around the Band Office and the school; I had people visiting me and I visited people; I lived with some families and had dinner with others; I listened to their personal problems and offered advice; I asked for advice and shared stories of my family and life. This approach enabled me to be reflexive, to assess myself and the circumstances in which I was immersed on a daily basis. It also enabled me to understand and be sensitive to the role of social place and my position vis-à-vis those researched and not. This exchange allowed me to acquire information and insights about Cree culture and traditions than may not have been possible otherwise, especially since I made efforts to 'open up' and share my life with them as they have shared reflections on theirs with me.

Chapter 4

Iiyiyuuschii: three decades in the life of the Cree Nation

4.1 Background : The James Bay Cree

The term Iiyiyuuschii, sometimes spelled Iiyiyuu Astchii (or Estchee, Istchee, depending on the region), means "the land of the people (Iiyiyuu)" (Cree Cultural Institute, 2004). Iiyiyuuschii has been the traditional territory and homeland of the Cree Nation for the past 5000 years.

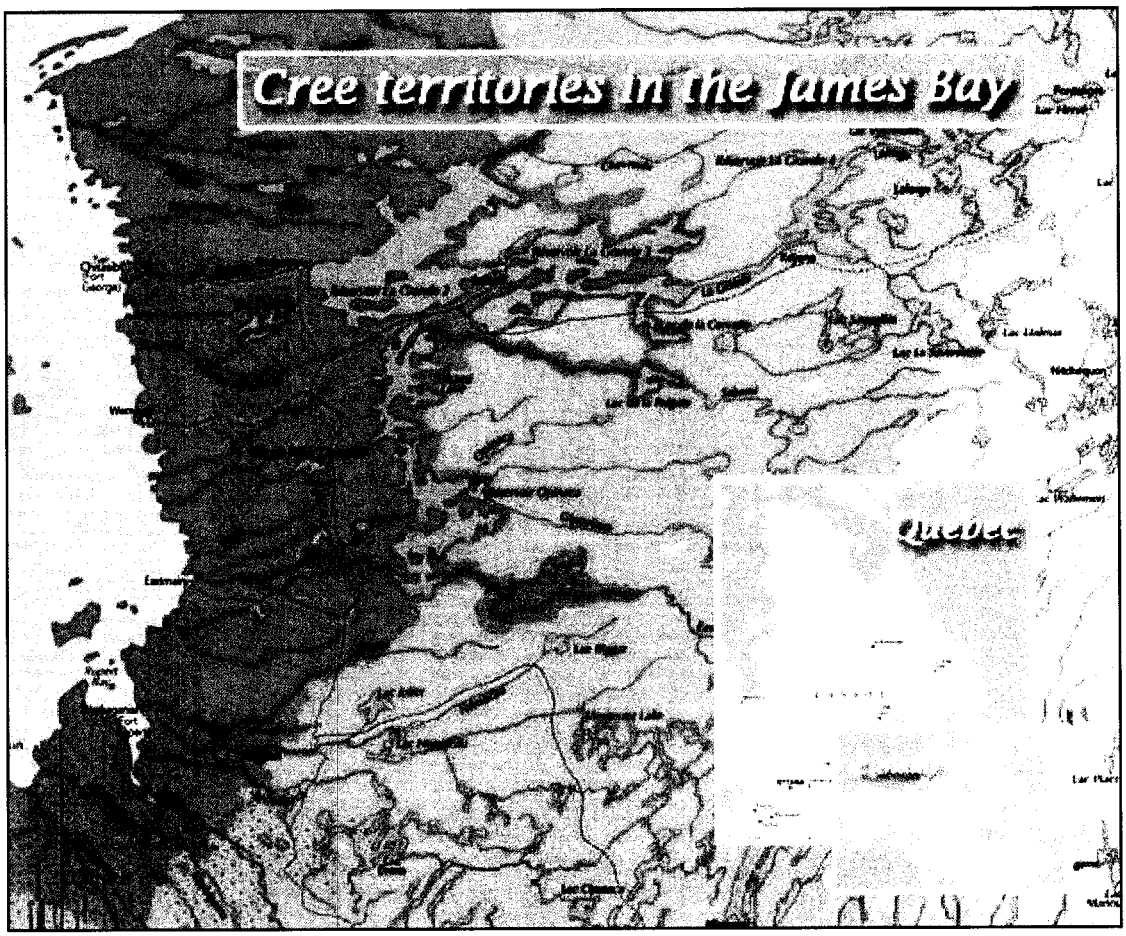


Figure 1. Map of the James Bay (original image source: multimap.com)

The territory is two thirds the size of France and is situated in the north-western part of Quebec (see map Figure 1). Severe cold followed by a short growing season are the dominant environmental factors in the region (Hornig, 1999; Whiteman & Cooper, 2000). The landscape is comprised of numerous lakes and powerful rivers and has a drainage area relative in size to France. Out of the nine major rivers in the region three have become nationally and internationally known following the development of the James Bay Hydroelectric Project on the La Grande River and more recently the Rupert River (Maxwell *et al*, 1997; Hornig, 1999).

Historically the Cree were nomadic hunter-gatherers and trappers that journeyed through the territories in family groups throughout the year. They have been in contact with Europeans since Henry Hudson first wintered in the James Bay in 1611. Direct contact on a permanent basis began when the British Hudson's Bay Company (HBC) was established in 1670 and the fur trade was initiated with the Cree (Hornig, 1999; Whiteman & Cooper, 2000). By the end of the 19th century, missionaries had settled in the area and converted Crees to Christianity. Nonetheless, ethnographers have pointed out that the Cree continue to maintain their traditional spiritual and subsidence practices (Feit, 1995; Hornig, 1999).

The past century marked the greatest changes in the Cree way of life. As the prices for beaver pelts declined many Cree began seeking wage labor. In the 1930s and 1940s they became part of the Canadian political system as the Department of Indian Affairs established official lists of band membership and

elected a chief and council for each band (Feit 1995). Hunting territories were mapped by the governments of Quebec and Canada, each one with a "tally man" who was paid each year to tally the number of beaver lodges on the territory (Feit 1995). This system was based on a preexisting division of hunting territories and the term 'tallyman' was given by the government to those family members that were already the stewards of the territories. It is important to note, however, that the steward did not own the territory as such but was responsible for making sure that it was not over exploited in any given year (Feit, 1995). Currently, the region is divided into 291 traplines; these are family hunting grounds and are managed by a tallyman, although permission to use the land is sometimes given to other hunters and trappers (Whiteman & Cooper, 2000).

Figure 2. Local Cree trapper (picture taken by researcher, July 2003)

The current total regional population is 12,629 people living in nine permanent communities on the Quebec side of James Bay. Four communities are found inland: Nemaska, Mistissini, Waswanipi and Ouge Bougoumou; and five are located along the eastern James Bay coast: Waskaganish, Eastmain, Chisasibi,

Wemindji and Whapmagoostui. For this reason there are two main dialects of the Cree language, one inland and one coastal (GCC, 2002). The population has grown significantly in recent decades; between 1996 and 2001 the rate of population growth was over ten times higher than that of Quebec, 11.3% and 1.4% respectively (Statistics Canada, 2003). The population is characterized by a large cohort of young people, where 34% are less than 15 years of age compared to 18% for Quebec.

In terms of educational attainment, the Cree lag behind their provincial counterparts; 52.6% of those aged between 20 and 34 years of age do not have a high school diploma compared to only 16% of Quebecers, and only 7.6% have a college education compared to 24.8% at the provincial level. The unemployment rate is double that of the province as a whole (17.3% and 8.2% respectively). In terms of income levels however there is no significant discrepancy; the average family income is $41.568 among Cree families and $50.242 for the province as a whole (Statistics Canada, 2003).

4.2 The James Bay and Northern Quebec Agreement

The James Bay and Northern Quebec Agreement (JBNQA) was the first northern comprehensive land claim to be settled and was signed on November 11, 1975 by both federal and provincial governments and the James Bay Cree and Inuit Nation. The JBNQA was the direct outcome of Premier Robert Bourassa's push for the development of the James Bay region so that the province as a whole would become more economically self-sufficient. In the 1960s, preliminary

studies were conducted in the James Bay region for the development of James Bay Hydroelectric Project. These recommendations were considered and in 1971 work started on the La Grande complex, with future development planned for the Great Whale and Nottaway-Broadback-Rupert complexes. The La Grande project was finished in 1978 and represents about 67% of the total area proposed to be flooded by the 3 projects combined,(Maxwell *et al*, 1997; Hornig, 1999). In 1971 the James Bay Development Corporation and the James Bay Energy Corporation were created and were charged with overseeing hydroelectric developments in northern Quebec. These corporations are subsidiaries wholly owned by Hydro Quebec, a public corporation created in the 1940s, and owned by the Quebec government (Maxwell *et al*, 1997).

The work started in 1971 was done neither with regard to nor in consultation with the Cree communities in the region. In 1972, anticipating great impacts on their livelihood as a direct result of La Grande complex, the Cree and Inuit sought an injunction from the Superior Court of Quebec but were not able to stop the construction of the La Grande. As a result of these legal confrontations, negotiations began between the Crees, the Inuit and the provincial and federal governments, which resulted in the JBNQA. Under the JBNQA the Cree and the Inuit surrendered title to 981,610 km^2 of territory in exchange for $155 million in grants and 'royalties' generated from electricity. The agreement also provides for a three-tiered land regime, an income security program, an environmental monitoring framework, community based commissions and boards, and a Cree

capital fund for economic development (Hamley, 1993; Hornig, 1999). The three-tiered land regime comprises: category I lands that are for the exclusive use of Cree, and include the land immediately surrounding the community; on category II lands the Cree have exclusive fishing, hunting and trapping rights but management is shared with the province; category III lands are "a special type of Quebec public lands" where natives and non-natives have the right to fish and hunt according to agreed upon regulations (permits, etc), and where natives have certain harvesting rights for aquatic species and fur-bearing mammals. The Quebec government, Hydro Quebec, the James Bay Energy Corporation and the James Bay Development Corporation have specific rights to develop resources on Category III lands in accordance with impact assessment regulations (Hornig, 1999; Quebec, 1998). One must keep in mind that although protection and recognition of Cree hunting rights have enhanced their participation in hunting, category I lands represent only 1.3% of the region, while category III lands comprise the largest proportion, 84.3% (Hornig, 1999).

In the 1980s evidence became available of the negative ecological and social impacts of La Grande. In 1982, scientists found increased levels of methyl mercury that had negative impacts on the health of individuals who consumed the fish in the region. It was found that 64% of the residents had methyl mercury levels deemed unsafe by the World Health Organization. At the same time, increased intrusion of non-natives and relocation associated with Hydro Quebec's activities in the area resulted in negative social impacts in the Cree

communities. Levels of alcoholism, family violence, and substance abuse increased (Feit, 1995; Hamely, 1993; Maxwell et al, 1997).

Moreover, many objectives of the JBNQA had not been fulfilled, provisions relating to certain resources and areas of development had not worked as intended, and the extent of Cree participation in the development of the region had been very limited (Feit, 1995; Hornig, 1999). For example, Cree employment in forestry and mining has declined since 1971 from 3% to 2.9% of the total working-aged population, mainly because provisions for training were not respected. Forestry concessions were (and still are) given to multinational corporations, which clear-cut annually the equivalent of one family's territory or trapline (Feit, 1995; Hamely, 1993; Maxwell et al, 1997). The bulk of employed Cree work on construction contract jobs, which are seasonal and non-permanent employment opportunities. Moreover Hydro Quebec's 150 permanent jobs that where promised under the JBNQA are still not filled because of qualification limitations; less than 30 permanent positions are currently held by Crees (Hamley, 1993; Horning, 1999). Billy Diamond, the first grand chief, wrote in the 1990s: "If I had known in 1975 what I know now about the way solemn commitments become twisted and interpreted, I would have refused to sign the agreement" (Hamley, 1993:102).

Although there are still many issues to be settled, the JBNQA was effective in politically organizing the previously loosely-knit Cree villages under the Grand Council of the Crees (GCC). For example, the Cree have been able to

successfully mobilize an intense international campaign against the second phase of the James Bay project; it was shelved in November 1994. They brought their case to the International Water Tribunal at The Hague, where it ruled against Hydro Quebec, and during the 1992 Olympics visited Barcelona publicizing their cause. The GCC maintained their presence in the UN and formed coalitions with various NGOs and other organizations such as Greenpeace, the National Audubon Society, the Environmental Defense Fund, and Natural Resources Defense Council (Maxwell et al, 1997).

The Cree campaign was also centered on publicizing their issues among the US public. Grand chief Mathew Coon Come and other Cree officials paddled a ceremonial canoe down the Hudson River into New York to campaign against Hydro Quebec's power contracts (Black, 2001). The JBNQA also led to the creation of the Cree School Board which falls under provincial jurisdiction but enjoys special mandates and powers that enable the adoption of culturally appropriate educational programs. Also, The Cree Regional Board of Health and Social Services of James Bay were created and are responsible for the administration of the delivery of services to the Cree population (Salisbury, 1989). Probably the most positive outcome of the JBNQA was the implementation of the Income Security Program (ISP) which provides basic income for those families following a traditional lifestyle. The ISP compensates any person who spends more then 120 days in the bush, thereby facilitating the

maintenance of traditional way of life (Feit, 1995; Horning, 1999; Salisbury, 1989; Whiteman, 2004).

On February 2nd 2002, the government of Quebec and the Cree signed a nation-to-nation agreement on economic development intended to renew their relationship and meet the provisions made in section 28 of the JBNQA. Among the many terms included in the agreement, the Cree leadership gave consent for the development of the Eastmain1/Rupert Diversion project, a revised version of the Nottaway-Broadback-Rupert Complex (GCC, 2002). An Agreement in Principle (AIP) was signed on October 23rd, 2001, triggering much controversy particularly within Cree communities. Many continue to maintain that public participation in the decision-making has been very limited and time to consider the AIP has been insufficient. Construction on this phase of the project has begun amid the controversy (Black, 2001; GCC, 2002; Roslin, 2001).

4.3 Nemaska, "the place of plenty fish"

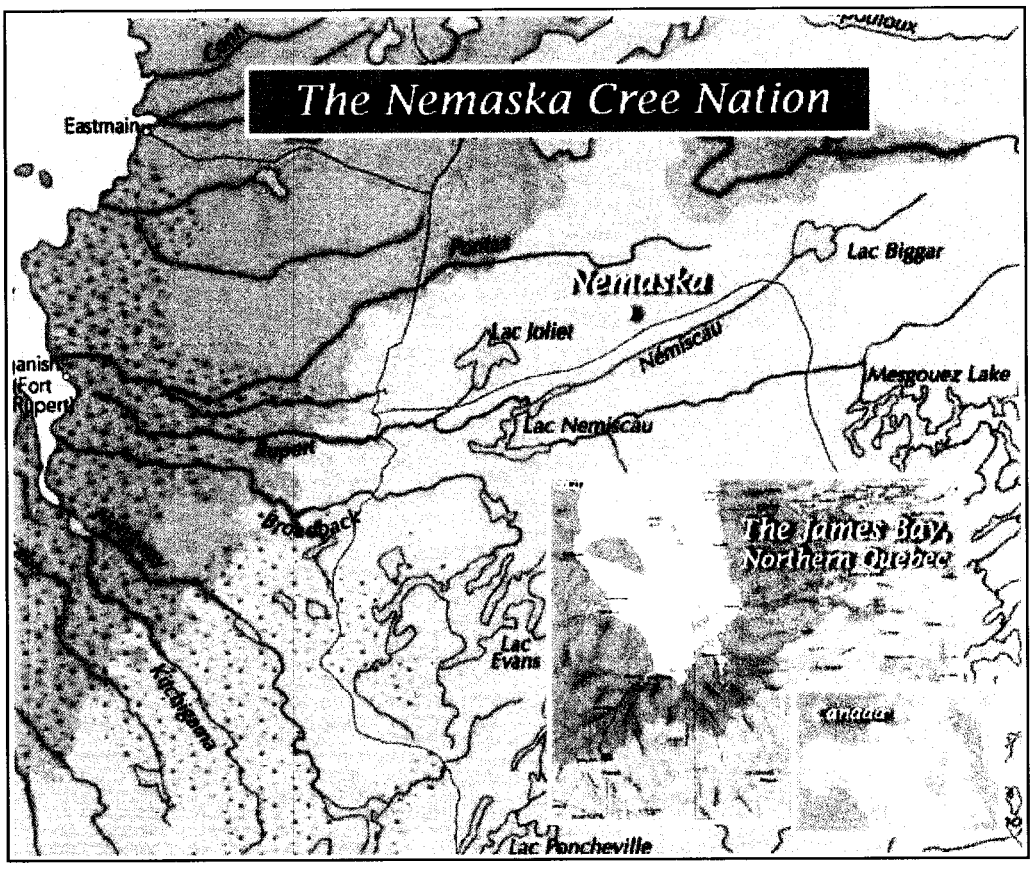


Figure 3. Map of the Nemaska Cree Nation
(original image source: multimap.com)

The community of Nemaska was initially settled on the shores of Nemaska Lake where a trading post was established in the early 18th century. As a result of feasibility studies in the late 1960s for the planned development of the NBR Complex the community was relocated on the Shores of Champion Lake in 1978 (see Figure 2). In the initial stages of resettlement, the community had access to one telephone which was located in a makeshift 'general store' and possessed one generator, which later caught on fire and exploded. There was no running

water available and no indoor toilets. In 1976, 147 band members formally pledged themselves to permanently relocate on Lake Champion. The Band administration was composed of one Chief and two councilors and the annual budget provided by Indian Affairs was $12,000. In 1980 housing construction began. The community church was the first building to be completed and an access road linking the community to the Hydro Quebec gravel road '58' was completed allowing residents to properly commute for the first time (Whiteman, 2004; Wapachee, 'About Nemaska').

Nemaska is now accessible by air through daily flights by Air Creebec and is linked to both the James Bay Highway, which leads into Abitibi Temiscamingue and the Route du Nord leading into Chibougamau. The community features one hotel, and hosts the Cree Regional Authority head offices, a Band Office, a postal office, a community Wellness Center, the Luke Mettaweskum School, and a newly constructed church.

The socio-demographic characteristics are similar to those of the Cree Nation as a whole. As of 2001 there are 566 residents in Nemaska, a 16.2% population change since 1996 when 487 people lived in the Community (see Figure 3 and 4). Youth under 15 years of age comprise 33% of the total population, followed by 21% of youth between ages of 15 and 25.

Figure 4. Demographic characteristics, 1996

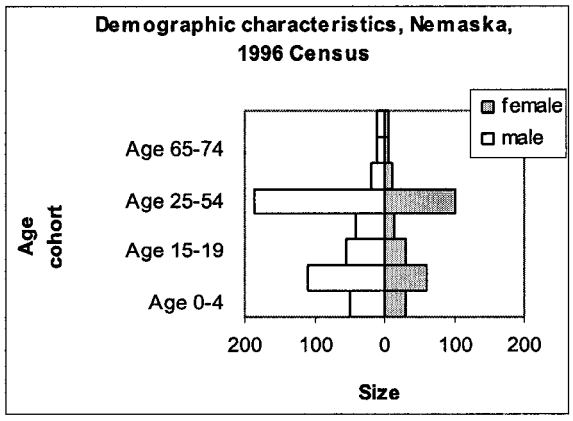
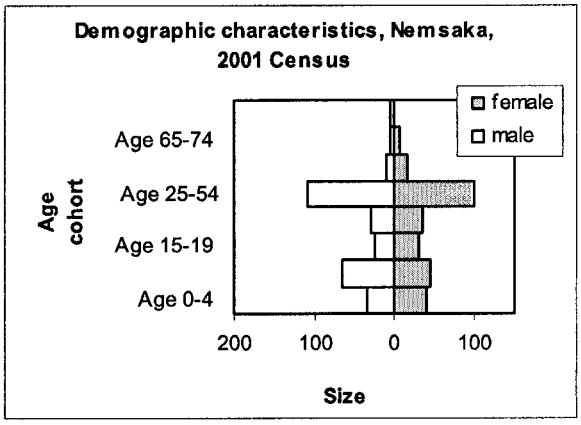


Figure 5. Demographic characteristics, 2001



In terms of educational attainment the Nemaska community fares slightly better than the Cree Nation as a whole, with 43.8% of Nemaska people between the ages of 20 and 34 holding less than high school certificate, compared to 52.6% regionally. The unemployment rate is much lower than the provincial average, standing at 6.3% in 2001 (Statistics Canada, 2003). This is likely due to the close proximity of the Nemiscau Hydro Quebec work camp and to the fact that many Crees are employed at the Cree Regional Authority (CRA) offices.

The Nemaska Cree Nation carries out a number of cultural programs including a fall moose hunt and a spring goose hunt when most community members leave the community for as long as three weeks. Summer canoe trips are a regular activity and are generally followed by community feasts. During the summer the Nemaska community hosts the Cree Nation Fitness Challenge which brings together members of all nine communities in the James Bay (see Figure 5).

Presently, the people of Nemaska rely on a mix of wage employment, subsidence living and external governmental assistance from both the federal and provincial governments (CGG, 2002). The hunting activities mentioned earlier complement the tallymen's hunting where geese, moose and caribou meat are shared, especially providing for the elders. Fishing is also a major food source although fishing has declined in recent years but not as much as in other communities where water has been contaminated by mercury from nearby dams and reservoirs (Whiteman, 2004; Whiteman & Cooper, 2000).

Figure 6. Traditional Activities (pictures taken by researcher, July-August 2003)

Links to the previous settlement on Nemaska Lake are strongly maintained. The area was declared a historic site by the Nemaska community and has been recognized as such by the Cree Nation (see Figure 6). The reconstruction of family houses as they were in 1960s has been under way for the past two years (Cree Cultural Institute, 2004). A more detailed account of activities and communication patterns of the Nemaska Cree Nation are detailed in the following chapter.

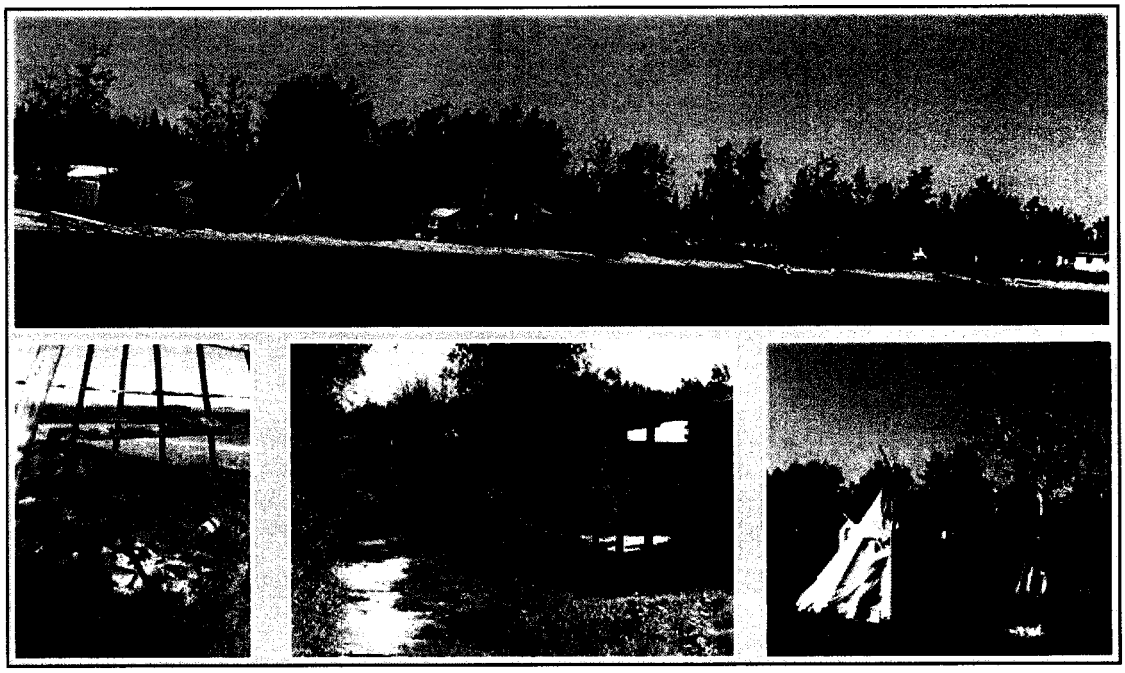


Figure 7. Old Nemaska (pictures taken by researcher July-August 2003)

Chapter 5

Zoom in: policy and data

This chapter begins with a critical evaluation of the *Connecting Canadians* policy programs discussed in Chapter Two. It then presents an exploration of Cree representation on the Internet. The findings of my field research in the Nemaska Cree community, based primarily on the questionnaire survey, interviews with local youth, and participant observation, are presented in the final section of the chapter.

5.1 From Nation to Nation: brief evaluation of Connecting Canadians with respect to native communities

How has the Connecting Canadians agenda, after six years since its implementation and millions of dollars invested, performed so far? What difficulties have been encountered? And what effects have these programs had on native communities?

These are very obvious questions but very hard to answer since there is remarkably very little information on the outcomes of the initiative available. An extensive search among the federal government's publications uncovered only one performance report on the Government On-line program which is one of the components of Connecting Canadians initiative, but it only focuses on online 'service' delivery of information on governmental programs (GOL Advisory Panel, 2003: 12). The regional office of Industry Canada was contacted in the hope that

the department, which is the principal overseer of the initiative, would have produced some kind of performance report. Unfortunately it was confirmed that no such report has been written and I was directed to the respective programs' websites for follow-up studies. The Publishing and Depository Services department was also contacted but were unable to find any performance report; it was suggested that I conduct a general Internet search from public search engines such as Google to review progress on the programs.

The First Nations SchoolNet website did not provide any information on performance although a survey on the integration of ICTs in education was completed (Plante & Beattie, 2004). Unfortunately this report does not cover First Nations schools. While the SchoolNet connectivity and access targets were met, the program failed with respect to the training of the staff for effective implementation of ICTs in learning (Plante & Beattie, 2004).

The 2nd Annual National Connecting Aboriginal Canadians Forum held in March 2003 concluded that First Nations across Canada face complex challenges and a high degree of collaboration between the government and local institutions is needed to enable aboriginals to overcome issues of connectivity (Final Report, 2003). Awareness of the benefits of connectivity and related technologies was found to be low among aboriginals and efforts to disseminate information relating to the costs and benefits of ICT implementation in education, health and culture should be undertaken. It was recommended that national and regional forums become an instrumental method for increasing awareness. End-user training and

opportunities for developing and maintaining local community technological capacity are the most significant issues facing First Nations. Special emphasis was also added to the need for the development of IT training that focuses on engaging youth and meeting their needs. Participants expressed the need for the ongoing development of on-line learning material that meets aboriginal communities and peoples needs (Final Report, 2003). These findings confirm a similar situation in Manitoba (Belanger, 2001).

Bredin's (2001) analysis of aboriginal access to ICTs also identified many challenges discussed at the conference. It was argued that while 'shared-cost' funding is made available for the initial start-up of CAP sites, no strategies for subsequent funds for training the staff and maintaining these sites are available. Ongoing support is crucial for the future of these sites. Moreover, some aboriginal initiatives failed to address existing community needs as they were developed and "imposed" according to capacities of systems and software availability. It has been argued that initiatives are undertaken on an ad-hoc basis and fail to provide relevant aboriginal information (Bredin, 2002:209). Nevertheless, there are initiatives that focus on improving First Nations connectivity and skills. In the Nishnawabe-Aski Nation (NAN) region of northwestern Ontario three organizations have intervened in policy implementation since 1996 (Bredin, 2001). At the forefront of this initiative is Kuh-ke-nah Network (K-Net) which was created in 1994 and in 2001 was chosen as Demonstration Project under the Smart Communities program. K-Net took a leadership position in developing a broadband network for six NAN communities.

It has established collaboration between various native organizations, such as Wataway Native Communications Society and the Aboriginal Working Group of FedNor, federal institutions such as Industry Canada and other commercial organizations. The strength of this collaboration rests on the fact that K-Net and other native organizations are *actively* participating in both policy development and local logistical support and development (Bredin, 2001). It has thus been able to acquire most of the necessary funding; over the life of the project $9.5 million was invested in response to local needs. "The vision is based on community control of network design and application, but also linked to the creation of culturally relevant digital content or 'e-culture prototypes" (210)[8].

My observations with the Nemaska First Nation confirm this trend. The CAP initiative failed. Initially a computer lab with 6 computer terminals, free Internet and printing services was set up at the local Band Office. Staff members were available for assistance and equipment maintenance. When I arrived on site in July 2003, there was no staff available for maintenance, one computer was out of operation and the rest had serious virus problems. Most of the system administration, overseen by an individual from head offices in Montreal, was done via remote access software such as PCAnywhere and did not require on site presence. Locally the person in charge was the head of the finance department and was not qualified to deal even with the most basic problems, such as virus administration or other software malfunctioning. Those few

[8] For more information on K-Net and their projects visit www.knet.ca

individuals in the community with the appropriate expertise were charging at least 65$ per hour and were often reluctant to intervene even if they were called upon.

I made myself available for administering the CAP site to the extent that my skills allowed. Unfortunately given the time frame my efforts made a very small contribution. Plans were also discussed for the development of a community Internet Café. Unfortunately this initiative was not carried out as a result of low economic and infrastructural feasibility. CAP services also include the development of a portal website for the respective community which features administrative contact information and other relevant community information. A Nemaska community website was featured on the Grand Council of the Cree's website but it has recently been offline (last visited: April, 2004). In 2001 a new website was developed under the CAP program. Unfortunately the initiative was not completed as the website developer departed before all the pertinent information could be collected. As it stands now, www.nemaska.ca is outdated and only features the former Chief's message and information on the CAP site (last visited: July 15, 2004). The Nemaska website is the least developed of all Cree websites online, which is unfortunate since the community hosts the regional offices of the Cree Regional Authority and therefore holds the potential to increase access in the region to pertinent administrative information and services.

Based on these findings it is obvious that many programs of the Connecting Canadians initiative do not meet their objectives, although there have been

significant advances. In 1998 the government provided $205 million over three years for the Community Access Program and SchoolNet, and to establish the Voluntary Sector Network Program. The CAP projected the creation of 10,000 CAP sites, mainly in rural communities, and an additional 5,000 sites in urban centers (Budget 1998). Since 1995, 8,800 CAP sites have been created, a little under the projected target. More than 80% of all First Nation schools under federal jurisdiction have been connected to the Internet through the SchoolNet program, and since 1993, 425,000 refurbished computers have been donated to schools and libraries (Industry Canada, 2003). In addition, 11,374 youth were hired: 3,900 were hired through Community Access Program's Youth Internship Initiative, 900 through Computers for Schools' Technical Work Experience Program, 1,200 by the SchoolNet's Youth Internship Program, 1,900 through the SchoolNet Digital Collections, and 180 by Netcorps Canada International (Estimates, 2001).

The budget of 2004 envisions a "shift in focus and a downsizing of the network" (Budget Update, 2004). The budget for CAP was reduced to $25 million per year, from $31.6 million in 2003 (Performance Report, 2002-2003). "The program will focus on supporting public access sites that serve communities of greatest need (digital divide communities) as well as on supporting access to on-line government services" (Budget Update, 2004). In 2003, $7 million was allocated to SchoolNet (Performance Report, 2002-2003). It is projected that the program will receive $25 million per year for 2004-2005 and 2005-2006, of which First Nations SchoolNet will receive $15 million (Budget Update, 2004). Some of the

SchoolNet's operation will be discontinued, these include: GrassRoots, SkillNet, Canada's Digital Collections, Innovation and Entrepreneurship Camps, Canada's Information Technology Week, and LibraryNet (Budget Update, 2004).

The shift in priorities reflects the increased attention given to communities in greatest need. Nevertheless, a more considerable effort should be made in implementing these programs within aboriginal communities. Financial support is but one component. It must be accompanied by strategies that secure local capacity building especially in respect to skill development. A more rigorous policy assessment strategy needs to be put in place for rural and isolated communities, especially First Nations communities. The Information Policy Research Program (IPRP) of the Faculty of Information Studies, University of Toronto submitted to the Social Science and Humanities Research Council (SSHRC) in 2001 a research proposal with the objective of investigating the Connecting Canadians agenda. Unfortunately this project did not receive funding on grounds that "it was unable to determine the extent to which this continuing program of research would produce new knowledge" and "it found the description of the research design vague" (SSHRC, 2002; http://www.fis.utoronto.ca/research/iprp/c3n/project1.html). Nonetheless, the IPRP did receive funds for a research project aimed at developing an evaluation framework for community learning networks created through Connecting Canadians programs (Clement, Shade & Trifonas, 2002). Finally, collaboration between all stakeholders is possible and extremely instrumental as the case of

K-Net amply illustrates, nonetheless such collaborations are few and far between.

5.2 Cybering locality: the Cree Nation on the Internet

> We are at crossroads from traditional and modern communications but the two must continue to flourish with freedom, since freedom itself is nothing without the free flow and exchange of ideas, opinions and information. They must be the cornerstone for our society. JBCCS believes that communications must be an integral part in the development of Cree self-government. (President Thomas Jolly- James Bay Cree Communications Society, Annual Report, 1998).

For the past three years since I took a personal interest in the presence of the Cree on the Internet, many existing activities have been pursued. Given the limited time and resources at my disposal, communication with Web masters was virtually impossible. Moreover there are many web pages with Cree content that were designed and posted by non-Cree individuals, and therefore were not explored.

As the Cree Nation is slowly increasing their participation on the Internet, evidenced by the many websites created in the past six months, culturally reflective content is expanding. The following will present a short exploration of selected Cree Web pages. The focus here is on the types of information made

available as well as indices of culturally related content, which help understand the ways in which identity is expressed online. As Christensen (2003) argues:

> [...] Social boundaries can be expressed and processed on the Web with a minimum of direct social interaction between visitors and Web masters, but a maximum of delayed interaction through the imaging of symbols: text, maps, cultural artifacts, photographs and language. With the loss of dynamic face-to-face relationships, objects of identification become a major resource for the negotiated meaning of identification (72).

Upon entering the website of the Grand Council of the Crees (GCC) the presence of cultural characteristics is immediately conveyed through a centre stage slide of photographs depicting James Bay landscapes and community members 'in action'. The introductory message asserts a strong sense of belonging and a worldview specific to the Cree centered on respect and sharing:

> Wachiya!
>
> Welcome to the Grand Council of the Crees (Eeyou Istchee) Web site, where we share with the world our vision for our nation. Here we explain to interested observers our culture, values, problems and hopes and describe our many political, cultural, social, economic and spiritual activities. In addition we offer readers links to major stories of aboriginal interest in other parts of Canada and around the world. (www.gcc.ca).

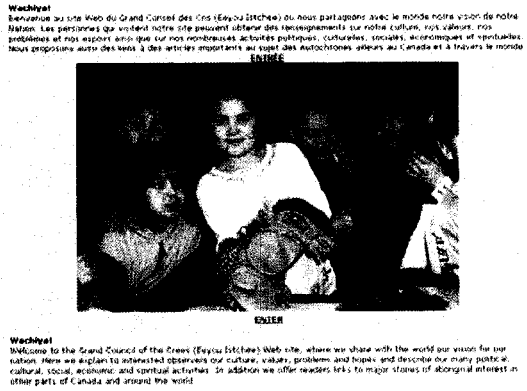


Figure 8. GCC web site, www.gcc.ca

The site has been redesigned and a more user-friendly interface has been applied in the last six months. The previous site did not include the many photographs that are now present and many links were outdated. The site provides historical and current accounts of the GCC and the CRA, as well as information on their management and the services available for Cree communities. A portal of links to all nine Cree communities is available and a photographic gallery has recently been added which depicts the communities of Chisasibi and Eastmain. A link to four issues of the Eeyou Eenou Nation magazine is also available and they can be downloaded in pdf format. A rather extensive archive of publications and news releases is also available. A list of links to relevant Cree Web pages includes among many links the Cree School Board, the Cree Human Resources Development and the Cree Trappers Association. Important to note is that the GCC website provides most of the information in both English and French. The site therefore identifies several dimensions of belonging: place, community, associations, region, culture, and shared history. Taken together the content questions views of transcendence into non-space, where elements of culture and place supposedly do not exist in cyberspace. Cultural and identity affirming characteristics are plainly and explicitly presented by the Cree on the Internet. Moreover, access to

relevant information and services is quite adequate now, with detailed information on the GCC and its various departments and organizations' available services.

> Everyone is aware of the importance of communications. Communications provides a vital link for people to exchange ideas and information. Without communications we are not a Nation. Times and technology change and we must keep adapting, as we have in the past. But we should not let the change dictate to us, instead we should dictate the change. To keep our identity as a people, we must put ourselves, our spirit, into the technology. (Vice President Ernest Webb- James Bay Cree Communications Society, Annual Report, 1998).

Aanischaaukamikw, the Cree Cultural Institute was created to provide a more effective means of coordinating Cree regional cultural planning 'under one roof'. The Institute is for now an online place but soon will become a physical reality as the design for the site has been completed and construction is scheduled to begin in the near future in the community of Oujé-Bougoumou. When viewing the Cree Cultural Institute web page (www.creeculture.ca) one is immediately met by an audio file of the sound of flowing water and the cry of a goose while pictures of an elder and a child, and a landscape are intermittently changing. This site is available in three languages: English, French and Cree.

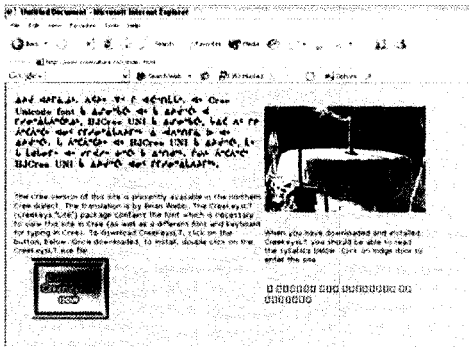


Figure 9. Cree Cultural Institute web page, www.creeculture.ca

To view Cree syllabics one has to download a specific software package which installs the necessary font. Although this may prove to be a cumbersome problem for the inexperienced user, the user-friendly interface is relatively straight forward to install and can be used for other text editing software such as Microsoft Word, enabling the creation of Cree language texts and documents. This site is replete with cultural artifacts and symbols. A conscious effort has been made to present these artifacts to the outside browser in a sensitive contextualized way so that identity and culture can be understood and appreciated by both in-group and out-group agents. The presentation of the logo is an illustrative example:

"Our logo,

Designed by Mistissini artist Marco Voyager, the Aanischaaukamikw logo features the images of three faces; an elder, a young man, and a child, representing aanischaa, the passing-on of culture; geese in flight represent Aanischaaukamikw's ability to bridge the physical distances between the Cree communities and between Iiyiyuuschii and the rest of the world; and the nine marks on the hide stretcher

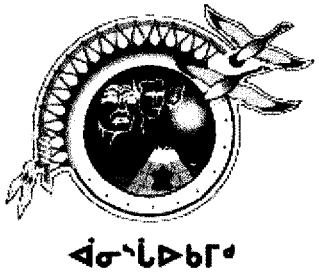


Figure 10. Cree Cultural Institute logo, www.creeculture.ca

represent the nine James Bay Cree communities"

(http://www.creeculture.ca/e/institute/logo.html).

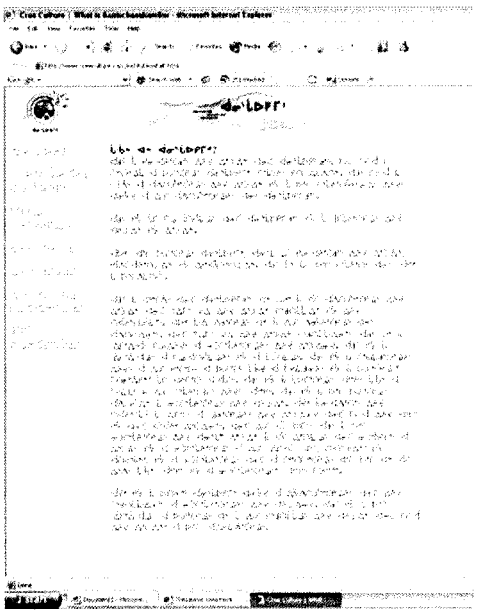


Figure 11. Cree language version of www.creeculture.ca

Apart from detailed information on the Cree Cultural Institute, its programs, and development stages, the site provides a rich historical account of the James Bay Cree people in general as well as the background and history of each of the nine Cree communities. A Cree language section is also available where out-group members can be acquainted with the language and what it means for the Cree at large. A link is provided for an outside site which is geared specifically for online delivery of Cree language lessons (http://www.carleton.ca/ecree/en/).

Another section details information on Cree traditional activities such as ceremonies, legends and hunting and trapping. And lastly profiles of Cree artists and links to their works and grant programs are also featured on the site. The Cree Cultural Institute site is one of the most comprehensive sources of information on the Cree people of the James Bay region. It is constructed to describe the contemporary as well as traditional life of the Cree, including the involvement of their local as well as regional diversity. Language in this case is

not meant to keep others out but to familiarize outside viewers with it. The meaning of culture takes center place and is negotiated through text, images and sounds illustrating the diverse ways of Cree cultural expression and their strong link to nature and locality. Expression of Cree identity is therefore reinforced by sites such as this, with the Internet serving to preserve and perpetuate their common and distinctive identity. Early research and debate about the impact of the Internet on community and identity has contended that on-line communication would inevitably lead to social isolation and the breakdown of the traditional community, where sociability is random and short-lived and face-to-face interaction becomes irrelevant (Alstyne & Brynjolfsson, 1996; Barlow, 1996; Graham, 2002; Haraway, 2000; Namakura, 2000; Nie & Erbring, 2000; Tonn & Ogle, 2002; Willson, 1997). This perspective may hold little relevance to current Cree uses of the Internet where one could argue that they have succeeded in 'putting themselves, their spirit into the technology'.

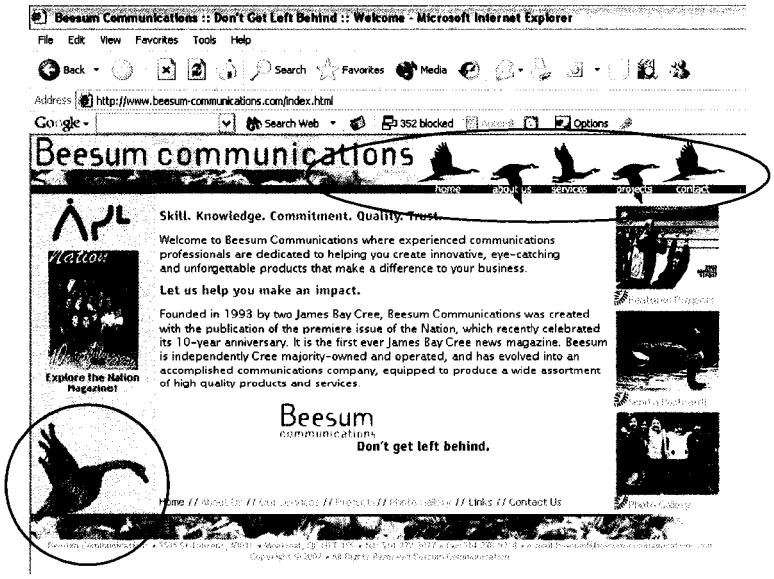


Figure 12. Beesum Communications web site, www.beesum-communications.com

The final Web site to be analyzed is the Beesum Communications company web site (http://www.beesum-communications.com). Although this site is

developed for commercial purposes cultural artifacts and symbols are still prominent in its design. The banner depicts geese in flight against a background of water trickling through river rocks. A picture of a traditional goose figurine made out of tamarack twigs as well as a photo gallery are also featured. The James Bay news magazine *The Nation* is now available online and timely information and news can be viewed from any location. The perceived importance in participating in the 'information society' is reflected in their motto "Don't get left behind", illustrating that the Crees are familiar with the rhetoric of ITCs and their importance to economic and social development.

In summary, these sites illustrate that cyberspace is a process driven by people which can be used as a locus of social and cultural self-expression. The every-day and practical context in which online as well as offline changes take place allows continuity to take center stage and diminishes the relevance of post-modern arguments focused on conflict and fragmentation. The Cree have clearly embarked on the Net and have successfully communicated their cultural and social characteristics through the production and maintenance of Web pages. The development of a specific language software illustrates that significant effort has been made by Crees to incorporate and utilize ICTs in social and cultural development. Various services and programs available to Cree communities can now be accessed via the Internet. While this is a very recent development it suggests that attempts at improving communication and access to information are gaining in support.

Are community members aware of these services? Are there any barriers that might prevent them from effectively use online information and services? Are they interested and ready to participate on the Internet? Could the Internet be an effective tool in communicating within and between communities and families? These are some of the questions explored in the following sections.

5.3 To surf or not to surf? : Nemaska online and offline

5.3.1 Sociodemographic characteristics

Table 1. Age Characteristics of the sample

Age Characteristics	Total	Male	Female	% pop within age groups
Age 15-19	11	5	6	20
Age 20-24	11	7	4	16.9
Age 25-44	6	3	3	3.8
Age 45-54	2		2	3.6
Median age of the population	21	21	21	
Sample data represents 5.3% of tot. Pop				
Sample data represents 9.09% of pop. within age groups				

The final number of respondents to the questionnaire survey was 30, divided equally between the sexes; 15 males and 15 females. Ages varied between 15 and 52 years of age, with a median age of 21 years. Within the sample group 20% were between 15 and 19 years of age and approximately 17% in the 20-24 age group (see Table 1). There were only two individuals above the age of forty (48 and 52 years) and these were included in the analysis as no differences in Internet use dependent on age characteristics were recorded in the questionnaire. This may be due to the fact that both individuals work on a full time basis at the local high school (one being the high school librarian and the

other a Cree language teacher) and therefore were already comfortable using ICTs as their job requires it.

The proportion of individuals with children was almost equally divided between married and single parents, 8 and 9 individuals respectively. Important to note is the fact that there was a larger proportion of single parent men than women, although it was not clear whether the child was living with the male parent or not, which may be due to the fact that the male respondents were predominantly younger than the females (average of 21 years of age and 25, respectively) and therefore may not be married or living in common law relationships. It is impossible to assess how these trends reflect the community as a whole since no official data was available (Community profiles, Statistics Canada, 2004), although this trend stands in contrast with those observed in the community in general where single mothers are predominant.

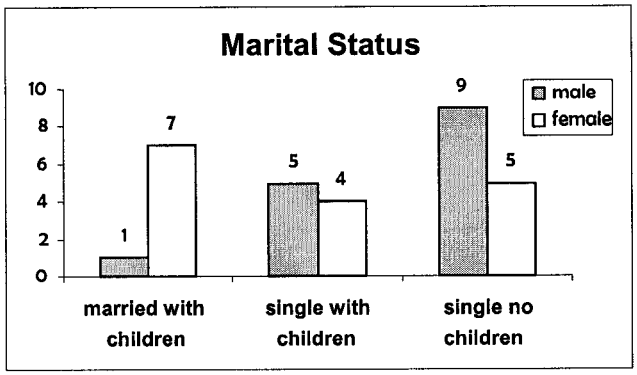


Figure 13. Marital Status

In terms of education, 59% of the sample size has a high school diploma and 14% a college diploma. Those with a college diploma are predominantly female; only one male stated that had completed his college education; and with

exception of one female, all are currently working for the CRA offices in Nemaska (see Figure 13). These figures are slightly higher compared to the community in general, with only 31.3% and 12.5% respectively, which may be due to the fact that participants (especially those that participated in the summer workshop and the young firefighters) are employed and therefore have higher education levels than the average community member.

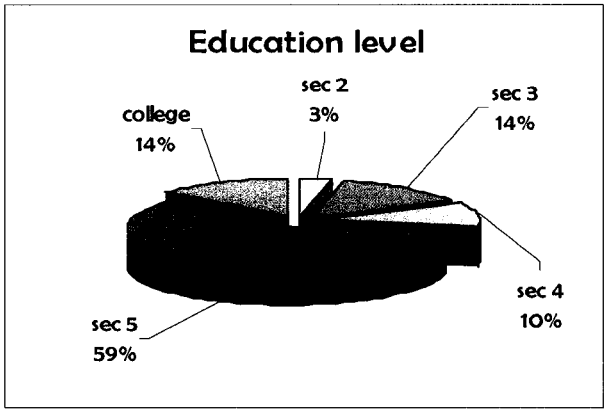


Figure 14. Education levels

5.3.2 Mobility and travel

Table 2. Reasons for travel, expressed as percentages

Reasons for Travel	%
Visit family and/or friends to a nearby community	**66.7**
Visit family and/or friends to a far-away community	46.7
Shopping (groceries, clothing, gadgets, etc)	**83.3**
Legal/ administrative tasks	13.3
Medical	**46.7**
Education/training	36.7
Participate in sporting events	**56.7**
Participate in other events (conferences, community meetings, etc)	26.7
Leisure and fun (parties, traveling, etc)	**80.0**

Although twenty four (80%) respondents do not have access to a car, the majority stated that it is not difficult to get access to transportation nor do they find it difficult to travel, 63% and 83% respectively. This is mostly due to the fact that many carpool or rent cars from other community members. The most frequently cited reason for traveling is shopping (83%), followed by leisure (80%) and visiting family and friends in nearby communities (67%). Two other important reasons for traveling were to participate in sporting events and for medical reasons, 57% and 47% respectively (see Table 2).

Table 3. Distances traveled by reason

	Distance (km) traveled for selected reasons						
	>300	300	400	500	600	700+	
Visit family and/or friends to a nearby community	4	**8**		3	**5**	3	Service available in the community (don't have to travel)
Visit family and/or friends to a far-away community		1	1	4	6	4	
Shopping (groceries, clothing, gadgets, etc)	1	5	4	2		**12**	
Banking		1					7
Legal/ administrative tasks							5
Medical		2		3	2	2	5
Education/training	1					5	3
Participate in events (conferences, sporting, community meetings, etc)	1	1	1	2	1	5	5

More than 700km are traveled to shop for groceries and other articles (40%), to participate in various events such as sporting tournaments and conferences and for education and training purposes (approximately 20%). Travel as far as 600km accounts for visits to family and friends from far-away communities (16%) while more than 25% of travel involves visits to family and friends located 300km (see Table 3).

During a typical year 43% of the sample population spends one or two weeks away from the community (excluding time spent in the bush) and 23% spend as much as five or six weeks elsewhere. A large proportion (47%) of respondents spend at least one or two weeks in the bush during the year, with almost a quarter (21%) spending three to four weeks in the bush. This trend is representative for the community as a whole. The goose and moose hunt are activities in which virtually all community members participate in and most families have bush camps where they spend a good portion of their free time. Most (78%) enjoy spending time in the bush and consider it quite important (68%) especially as an appropriate environment for learning traditional activities:

"I like being in the bush. I learn about my culture. I lean about my ancestors, how they grew up." (female, 24)
"Feels like home there's not a care in the world out there. Very relaxing I love it. Its my Cree way of life!" (male, 22).

This data suggests that community members are intensive travelers whether by choice or not. Although many enjoy going to large urban centers to shop, some have stated that this is driven by necessity especially since the local general store has a very limited supply of nutritional foodstuffs, especially fruits and vegetables, and prices are usually double those found in nearby towns. For example a pack of eight toilet paper rolls costs approximately $7 in Nemaska, compared to $3 in Montreal. Many have also pointed out that transportation

costs, especially increases in gas prices, makes travel difficult and by extension access to reasonably priced goods more limited.

"I [dislike the community] for not having a clothing store or a better grocery store. We have to go down 4hrs of drive before we can buy clothing for the family". (female, 48).

"There is no landscaping [and there is need for] improved grocery services" (female, 31).

E-shopping could be an effective alternative for community members who either don't have access to transportation or would prefer not to travel long distances, especially since the majority of commercial distributors in Canada now offer products online and shipping is often available at no cost, depending on the purchase amount.

5.3.3 Information and communication

Most respondents feel that communication and the dissemination of information on local community events, news and concerns, meets their needs; 80% feel that they have adequate access to such information, as notices are posted on a bulletin board located at the entrance of the Band Office. Local activities, such as fund raisers and meetings are also posted at the local general store. A large proportion (73%) also feel that information concerning job and learning and training opportunities is effectively disseminated, but 33% are not sure about the adequacy of access to local administrative and governmental information and services (see Table 4). Although the majority feel that access to information from

other communities is quite satisfactory, 33% and 30% feel that information about other communities' news and concerns and administrative and governmental information is not adequately disseminated.

A significant proportion (43%) of respondents is interested in leaning and training opportunities available in the province but find that this information is not available locally. 40% believe that provincial administrative and governmental information is not accessible despite their interest in such information. About 30% were not interested in this type of information. 43% were not aware of learning and training opportunities available in the province, but were interested in accessing it and a very small proportion (6%) were not interested in such information. A significant proportion of respondents was aware of provincial and national youth news and concerns, 47% and 33% respectively, and 36% were interested in international youth related information although they were not familiar with it. Interest in international information was quite low (see Table 5) with the exception of learning and training opportunities; 43% expressed interest in accessing such information.

This data suggest that local dissemination of provincial and national information needs to be improved especially since community members are interested in such information. Community members do not rely on the Internet for acquiring information. Presently information on local and regional (James Bay) issues is

Table 4. Levels of access to information by type and location

data expressed as percentage of total sample size	Adequate access to information about					
	In the community			From other Cree communities		
	Yes	No (but I'm interested)	Not sure	Yes	No (but I'm interested)	Not sure
Community events	83.3	3.3	13.3	70.0	20.0	10.0
Community news and concerns	60.0	20.0	20.0	36.7	**33.3**	23.3
Job opportunities	73.3	10.0	10.0	50.0	20.0	26.7
Learning/ training opportunities	70.0	3.3	20.0	53.3	30.0	13.3
Administrative and governmental	43.3	16.7	33.3	30.0	**30.0**	36.7

Table 5. Level of awareness of selected information by region

data expressed as percentage of total sample size	Awareness of information from:								
	Province			Canada			Outside Canada		
	Yes	No (but I'm interested)	Not interested	Yes	No (but I'm interested)	Not interested	Yes	No (but I'm interested)	Not interested
Youth news and concerns	46.7	23.3	13.3	33.3	30.0	26.7	23.3	36.7	30.0
Job opportunities	33.3	30.0	26.7	33.3	30.0	26.7	16.7	**33.3**	36.7
Learning/ training opportunities	40.0	**43.3**	6.7	36.7	33.3	20.0	16.7	**43.3**	30.0
Administrative and governmental	16.7	40.0	30.0	23.3	**40.0**	26.7	16.7	33.3	40.0

mostly disseminated via the radio (CBC North) and a regional new magazine *The Nation*.

Despite this, during my fieldwork I observed that community members were not always aware of local activities although they are posted at the Band Office. For example, the Economic Development department had arranged a training session during the spring of 2004 and invited a prominent business man to share his experiences with community members. Although a notice was posted, only seven individuals came to the meeting, and following my inquiries among the community members I found that many were not aware of this activity, although it took place over several days. Moreover, it was surprising that many community members were not aware of the Computer Training Workshop that I held during the 2003 summer, especially since it was announced on the local radio and notices were posted at the Band Office, the local general store, the community school, and at the CAP site at the Band Office. Many community members approached me and expressed their desire to participate in the workshop after it had been completed.

The positive feedback from the sample stands in contrast with the observed trends within the community as a whole. This may be due to the fact that almost half (13) of the respondents work for various administrative departments and have better access to pertinent information. Within the sample three females work for the CRA offices, one female and three males work or have worked on a part time basis at the Band Office, two females work at the local high school, one

female operates one of the restaurants in the community, and one female works at the Wellness Center.

Regarding access to information, the Internet may prove to be an effective tool for improving and facilitating access especially to governmental services and learning and training opportunities. Since the community has the appropriate infrastructure, hardware, and Internet access already in place, Internet use as a tool for accessing information would not only accommodate large numbers of community members but would also be, from an administrative point of view, a cost effective approach to information dissemination.

5.3.4 Profile of computer and Internet use

A large proportion of the sample (73%) does not have access to a computer at home, but more than half indicated that they have access to computers at school (53%) or the band office (56%), or a combination of the two. The closure of the CAP site located at the Band Office during the summer of 2003 had a significant impact on Internet and computer access. This trend reflects the disparity in ownership and access established at the national level where only 48% of rural and small town (RST)[9] residents had a computer at home compared to 62% of residents living in metropolitan areas (CMA)[10] (McLauren, 2002; Singh, 2004).

[9] Rural and small town (RST rural) refers to the population living outside centers of 1.000 to 9.999 and outside CMA (Statistics Canada definition, McLauren, 2002).
[10] Census Metropolitan Area (CMA) has an urban core of 100.000 or over residents and includes all municipalities where 50 percent or more of the workforce commutes into the urban core (Statistics Canada definition, McLauren, 2002).

The majority of the sample population use computers regularly; 30% use computers on a daily basis and 33% at least two or three times a week. Computers were primarily used to access the Internet (46%), followed by work and school related purposes (40% and 43% respectively), and approximately 37% used computers to play games. The majority of respondents acquired computer skills by learning from friends (56%) or by themselves (50%), and a very small proportion (10%) took specific training at an institution. Although not many considered having a computer to be very important, those that were employed tended to see more value in having one at home:

"It would be very useful when I do my teaching training. If I have more access to a computer it would help me practice with it. I really enjoy working with computers. I learn a lot of things when do research [on the Internet]." (female, 24 – working at the CRA).

"[it is important to have a computer] so I can do my university studies at home on my spare time." (female, 24).

"[it is important for] teaching, so I can prepare work at home, in school you have to wait for others. I am glad I took it [computer training workshop] even if its only for a while, it will help me with my work, if I don't forget what I've learned." (female, 52 – Teacher at local high school).

In terms of Internet use, the majority are already long-time users; 33% have been using the Internet for the past four years, and 20% for the past three. Although most (70%) identified themselves as present users, some stated that they have

either lost interest, have no time, or found it hard to navigate the Internet. Given that only 20% have a computer at home it is not surprising that 83% do not have an Internet connection at home. Out of those that have access to computers in the household, only one is connected to the Internet.

Again, these findings confirm national trends. In 2000 over 45% of CMA households had an Internet connection at home, compared to only 30% of RST households. Rural residents were using email although they didn't have a connection at home, illustrating that community access is important for individual communication (McLauren, 2002). In Nemaska, the school and the Band Office were most frequently used to access the Internet. On average 33% used the Internet daily, followed by 37% who use it at least once a week, and 16% who use the Internet at least two or three times a week.

Table 6. Types of information accessed on the Internet

Information accessed on the Internet	
Employment opportunities	10.0
School/training	**60.0**
Banking	20.0
Shopping	36.7
Medical	30.0
News	**70.0**
Sports	**70.0**
Travel	43.3
Cultural	43.3
Politics	23.3
Leisure	36.7
Games and music	**83.3**

Email and personal communication were the major purposes for Internet use (63%), followed by a combination of school and work; general surfing accounted for 40% of Internet use. In terms of the type of information accessed via the Internet, games and music accounted for 83%, news and sports both accounted for 70% of Internet use, and 60% accessed training and learning related information. Only 30% accessed information on online purchases but did not buy anything online and 10% looked for employment opportunities (see Table 6). This suggests that many community members are not aware of the possibilities that the Internet presents especially for online purchases. The majority (67%) do not bookmark sites for future reference, which may imply that their Internet skills are still low, although given that the majority do not use the Internet from home this activity would not be effective as public computers are usually networked to reset user preferences after each 'logout'.

The most convenient form of long-distance communication is the phone (43%), followed by a combination of email and phone (50%). Almost all (90%) are regular email users, although use varies almost equally between all categories (daily, 4-5 times/wk, 3-2 times/wk, and once/wk – all standing at approximately 20%). In terms of email proficiency, 43% use attachments, 30% know how to use an address book, and only four (13%) individuals use listservers. Although this data suggest that improvements can be made to increase ICT skills, 70% use instant messaging services such as MSN Messenger, and 43% have visited and participated in chat rooms, which indicates that community members use a wide range of Internet services. Many have expressed their satisfaction with

email, especially since it presents a more cost effective medium for long distance communication. Telephone charges are often expensive and the region is served by only one telephone company, Telebec, which is a subsidiary of Bell Canada. Although cell phones have become more numerous, connection costs are often prohibitive for families in financial difficulties, as they often rely on satellite networks and costs can approach $3-$4 per minute.

Although, most respondents (70%) do not consider access to the Internet as very important, the perceived benefits of the Internet for effective communication is illustrated by the following statements:

"Internet [is] resourceful and helpful. [email] is cheaper and quicker and easy to access " (male, 34).

"It's fun using the net. It's like doing research in the easiest way" (female, 24).

"[email is important] so you can communicate with friends and family anytime wherever they are" (female, 52).

E-mail use has increased interaction between family members: 23% percent feel that email use has brought them closer to family members and 26% feel they have learned more about members of their family. 47% percent did not experience any change in sociability, although the majority (66.5%) have experienced an increase in weak-connections with "friends met online". Although email does not have a significant impact on interfamily communication, 50 percent are now communicating more with their friends, 60 percent feel that email has strengthened their relationships with friends and almost half of the

sample (42%) believe they have learned more about their friends. Almost all those interviewed did not experience stress as a result of using the Internet: 30% stated that email did add stress in their family relationships, and 23% experienced stress in their relationships with friends. The majority feel that email is a useful means of keeping in touch with family and friends, especially since most have family members living in other Cree communities throughout the James Bay. Only 13% do not see email as an important communication medium, and 16% do not use email to communicate with family, although they do use it to keep in touch with friends or for making friends online.

These results stand in line with the Netville findings (Wellman and Hampton, 2003) that email communication has strengthened already established relationships and increased the range of weak-ties. It also confirms the view that email and Internet use does not result in a weakening of sociability within the community, it rather complements and sometimes increases communication (Castells, 2001; Dodge & Kitchin, 2000; Wellman and Hampton, 2003).

5.3.5 ICTs and classroom

The computer training workshops conducted as part of the present study revealed the limited level of computing expertise among teachers. All nine participants in the teachers workshop held in March 2004, lacked even the most basic computing skills such as word processing and spreadsheet skills, or computer navigational skills, such as folder creation and management. Moreover some were not proficient in their Internet and email skills. For example, one

teacher had not used email prior to taking the workshop and some did not know how to send files as attachments via email.

Cree teachers were more proficient in some aspects of their Internet skills than some non-Cree educators. For example, one teacher designed a notice in Publisher for a fundraising event to send kids to play hockey in a distant community. Another Cree instructor was creating handouts for her Cree language class, with animal pictures downloaded and printed from the Internet, while a non-Cree teacher conducted his first download during the workshop. Nevertheless, I did not encountered any reluctance from the teachers to integrate ICTs in the classroom. Many were very pleased with their workshop experience, believing they learned a great deal and enjoying what they perceived as an "entertaining and relaxed" learning environment. They communicated their enthusiasm for other similar programs and projects.

Similar to experiences recorded by Lankshear and Snyder (2000), the possibility of discontinuity in computer and Internet use was present in the Nemaska community. One of the teachers with most technical expertise in computing and who has actively introduced ICTs in the classroom is leaving the community at the end of the school year; this will inevitably reduce the exposure school students will have to ICTs.

My efforts to get permission to hold a one hour after-school computer lab to allow students to use the Internet for personal purposes proved unsuccessful because

of teacher complaints about traffic in the corridors and the fact that some students were skipping detention. The low teacher retention rates combined with a lack of continuity in class activities and objectives from one teacher to another undermines the extent and quality of ICT exposure provided through the school. In particular, the technology class is conducted on an ad-hoc basis, which leaves students confused and unable to apply skills across the curriculum. As Lankshear and Snyder argue: "Developing effective portfolios of student learning outcomes involving literacy and new technologies depends vitally on continuity existing from point to point" (2000: 17).

Social and administrative environments seem to further undermine the role of educators as was stressed by Braiter (2003). A lack of structure, especially from the part of the administration and parents, can limit the potential and talent of the youth, and push concerned and competent teachers away. A common underlying cause for failed attempts at developing youth-centered programs that was pointed out by many educators and other community members was that of a weak administrative support from the part of the school as well as little intervention in school affairs from the Band Office.

Some teachers expressed concern about the lack of follow-up of the Cree School Board guidelines, especially regarding disruptive and violent behavior. The previous school administration had developed a point system recording disruptive behavior and attendance, aiming at pressuring students and parents to

address problems. The new administration has given up on this initiative and student behavioral follow-up is not consistent at the administrative level, although serious incidents are obviously reported. There are also incidents of teacher abuse, which according to some teachers have not received the support of the administration. This together with limited parental backing is seen by some as symptomatic of the general attitude and approach taken to the discipline of young people.

5.3.6 Youth Internet perspectives

In order to effectively integrate ICTs a better understanding of individual perspectives on the Internet is needed. The interviews included questions related to this aspect of the research. Questions pertaining to the perceived nature of the Internet, its innovative nature, its utility in daily life, as well as its impact on communication patterns, other media, and the school, were raised.

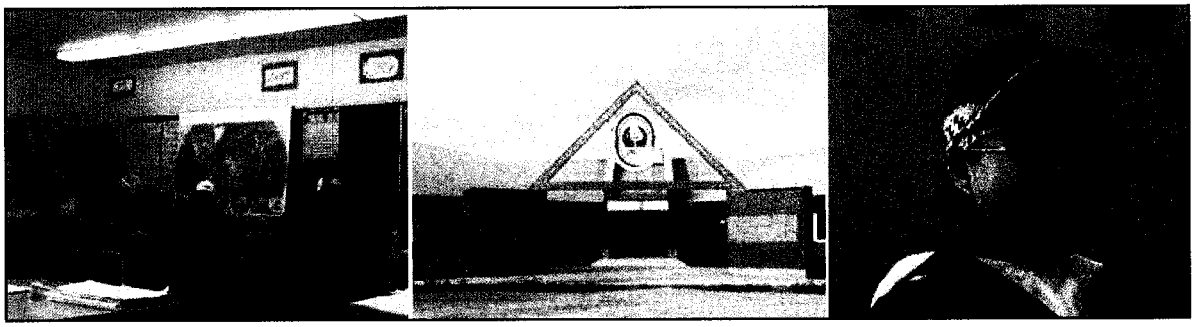


Figure 15. Local high school and students
(pictures taken by the researcher July, 2003 and march 2004)

In their totality the answers indicate that opinions and representations do not vary widely among those interviewed. Most have a very positive opinion of the Internet, especially its potential for sustaining long-distance relationships but also

for enhancing local communication patterns. Chatting is *the* most significant use of the Internet, which gives young people a better alternative to keeping in touch with friends and is perceived as a better medium for expressing their opinions than face to face interaction. Internet also presents many youth with things to do, especially since there is a general lack of activities and facilities within the community:

"[the Internet] is not a waste of time. I chat with a lot of people from other communities and from other cities. I can express myself better and I think that people would take their time to read because when I talk to someone they sometimes don't pay attention to what I have to say" (female, 21).

"Computers and the Internet are cool cause you can do anything, do a lot of things and get a lot of information and do work. People get their hockey stats and information from the radio. Computers are faster for that. Every year it gets better so I think the Internet is revolutionary, like today is ok but in ten years it's going to be even better [...] A lot of people can communicate with a lot of people, like chatting. You can say whatever you want to people but if you meet then face to face you can't really talk to them because it's easier to communicate on the Internet than person to person because they listen to you"(male, 23).

"It's fun, because you can play games and chat. I don't think it's a waste of time because it gives me something to do. Like when I have nothing to do I go on the Internet. I talk more to people, it's easier to talk to people through the Internet than just face to face cause I guess I'm shy and scared to talk to people, but it would be still the same at home with my family" (female, 16).

"The Internet is fun, cause you get to chat with people from other communities. I look for music, information, lyrics, but there's nothing special about it. It's easier to talk to people through the Internet because I'm shy" (female, 17).

The sample population also suggested that the Internet enhances communication between family members. Many use the Internet outside the home, and usually like to share the information they encountered while online with their family members.

"I talk more with my family members since I use the Internet because I tell them about the things that I have seen on the Internet" (female, 21).
"I probably fool around with the computer and share that with them [family members]. That's what I do. I have more things to talk about" (male, 23).

Nevertheless, some believe the Internet has negative impacts on individuals, because it displaces previous activity patterns, especially leisure and work. They are aware that excessive use can lead to disruptions in daily life, but are conscious that this effect does not necessarily apply to everyone:
"I guess the Internet is a waste of time. When I worked at the Band Office I fooled around with the computers, I kinda' got hooked and I used to chat when I was working. So I guess it takes away from my time and work, I would rather chat than do my work, so I guess it's kinda' disturbing. But I can do without it, some people you know get hooked up, it's like an addiction. I don't really take the Internet seriously, cause I have an email address but I don't really bother with it. I just take life one step at a time like they say" (male, 23).

"[Internet] Makes people lazy, they don't do as much as before, they just sit and type. There's some good things to it and some bad" (male, 18).

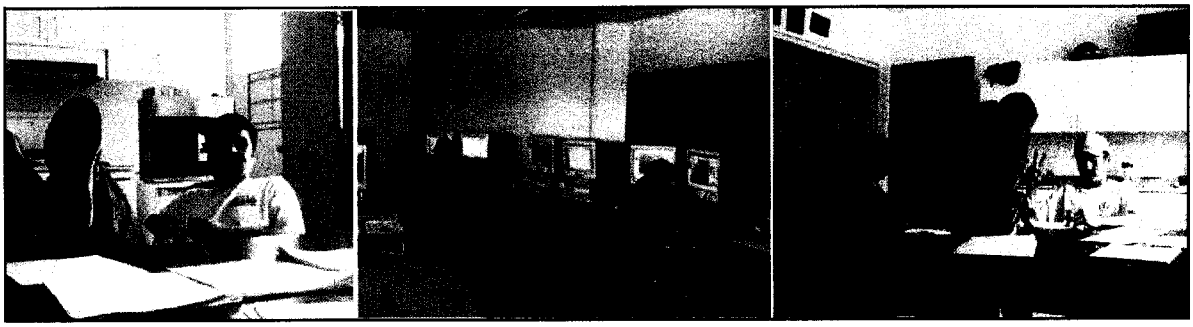


Figure 16. Community youth
(pictures taken by the researcher July-August, 2003)

Young people seem to clearly disassociate the Internet from information technologies in general. For many of those interviewed Internet use does not require specific IT skills, the Internet is seen accessible to all as learning comes naturally and doesn't require significant effort or skills. All those interviewed learned how to use the Internet from friends and family and were able to quickly apply it in their daily life. They do not perceive any barriers to use in terms of language but some believe that skills in using and knowledge of this new technology constitute an important condition for their future integration into society, especially in the workforce:

"I think it's easy to use the Internet. You don't really need to know much about computers to use the Internet but I think people should know how to use it because now to get some jobs you need to know. In a couple of years everybody will have Internet at home" (female, 21).

"It's easy to learn how to use computers. I learned in one day. So if I can do it anybody can do it too" (female, 16).

"It's easy to learn how to use the Internet because it took me one day to learn. My mom showed me how at an Internet café in Chibougamau. You don't need to know much about computers [to go on the Internet] like I don't know about computers but I still go on the Internet. And my brother doesn't know much English but he still goes on the Internet" (female, 16).

"You need to know English well to be on the Internet but I don't think you need to know much about computers because all you have to do [on the Internet] is just click and click and that's about it" (male, 23).

"Internet is too easy to learn, all you have to do is type a couple of words and everything about it is on the Net. It was pretty easy to learn, somebody showed me how to [use the Internet] up here in Nemaska, it didn't take long for me to know about it but I guess you need it when you want a job at the Band Office" (male, 18).

Many agreed that cost is an important barrier to Internet use, especially in isolated communities where unreliable infrastructure does not permit sustained Internet service delivery:

"Today I see some people in the community with computers so I think in the future there's going to be people with computers at home. Both my friends have computer and Internet at home but some other people might get left out because it's quite expensive up here. It's kinda' difficult to have Internet, its kinda' like a cell phone" (male, 23).

"I don't think everybody will have a computer at home because it is not useful for everybody, some prefer not having computers. And it costs a lot, a little too much, cause you have to buy everything else that its included" (male, 18).

Although the majority use the Internet for entertainment purposes, such as chatting, playing games online and downloading music, they consider it as an appropriate tool for research, school, and work. Many have become so accustomed to the Internet that they would feel its absence especially as it is perceived as a better medium than the TV, which is quite surprising as many do not even have computers at home. Possibly access at school or the Band Office has let some to appropriate this medium more quickly then other community members which do not benefit of the same accessibility:

"I do use it for entertainment but I also use it for other things that are more serious like research and news and stuff. Once I start using the Internet I will miss it if I didn't have it anymore because it's fun [...] I watch less TV and I think the Internet will replace the TV" (female, 21)

"It's better to do research on the Internet because the books at the library are outdated, some are 10 years old. Internet is supposed to be for learning [as opposed to entertainment only] but I guess some people abuse it. I do use books because there is too much information on the Internet plus I don't have a place where I can use it often" (male, 18).

"I would miss the Internet because there is nothing to do here, its boring. Computers are more fun than TV. I would watch less TV if I had Internet at home

because you move [interact] more when you are on the computer than just watching TV" (female, 16).

Even though the majority have a positive view of the Internet and seem to be comfortable with the information encountered on line, they do not blindly trust such information, which indicates that they are conscious of the quality of information on the Net either based on their experience or on some other source. When it comes to online purchases none of those interviewed have taken up such activity because they feel sites and online purchasing operations are not secure enough. When asked for clarifications it became obvious that many were not capable of identifying secure and non-secure sites and the general mistrust arouse from 'things heard' from other sources and not from personal experiences *per se*:

"You can do everything on the Internet not only shop but rent rooms or vehicles, you can plan your vacations and stuff. But I usually don't trust the information on the Internet like those things sticking out [popups]. If you don't know how to use the Internet very well people would buy into these gimmicks, like I used to click on these things just to check what happens" (male, 23).

"I don't really trust buying on the Internet, I hear people steal your money that way, they steal your identity. It's more for security reasons, it's not trustworthy" (male, 18).

"I don't trust stuff [information] on the Internet because I don't know who put it there but I would trust the GCC website" (female, 16).

Nevertheless, they seem to be wary of efforts to control the Internet, either by the school or by other organizations, such as the government. They are confident in their skills and their ability to make informed and responsible decisions. Moreover, some believe that encouraging use and increasing access would motivate students to stay in school and participate more extensively in school related activities:

"I don't think the school should control the Internet because I control it myself, like when you chat with somebody and it says something that I don't like I just block them [...] I don't learn some stuff because they show it in a boring way. If I had the chance to learn more about computers I [would] use the Internet better but they have to show it in an interesting way not just talking in front of the class. They should let us use the computer room more often but some kids do stupid things like miss classes so they don't open the [computer] room, like in the afternoon" (female, 16).

"Is [controlling access to certain sites or chatting programs] not better because they do not do good to anybody they just hurt people, they're taking that away and students will do something in return. They should hire the computer time [for students], computers should be useful for something instead of just sitting like that in the room. It would be interesting perhaps you can download to do your own beats and songs. That would make me come to school, because they don't do any interesting things at school. Kids should not be forced to go to school, they should like coming to school" (male, 18).

Finally, with respect to Cree content on the Internet, many among the sample population consider it important, from a cultural point of view, to have Cree websites that illustrate traditional ways of life and portray a sense of Cree culture, even though not many have explored this content in detail. It was surprising to find that none of these interviewed were familiar with the recent services and information made available on Cree web sites. Some did not even know that the local high school has a web page, which suggests that greater effort should be devoted promoting Cree Internet content among all community members. It would be an interesting point to pursue in future research.

"I have tried to look for information about the Cree but I think some things were not interpreted as it should be. I think it's important to have sites that talk about the Cree way of life because the Internet is good for telling people about my culture because there are people interested in us" (female, 21).

"There are Cree websites for CGG and the Cree Construction Company but I haven't checked any Cree websites. I guess it's important for the Cree to have a website, for example I'm a Cree and every time I would see a Cree website I would nose around to see what they say. I think it's important because I guess people across the sea like Asians and Africans want to know about the Cree" (male, 23).

"I haven't looked for Cree websites but I think is important to have Cree information [on the Internet] because other people want to know more about us and it's better than a book because more people can see it"(female, 16).

One respondent was cautious of the impacts of the Internet on culture especially since it is a new medium and many community members are unfamiliar with its inner workings:

"I look for some Cree websites, and they give a lot of information, I am satisfied [with the content]. Sometimes I wish they would show about old native religions, they pretty much give a lot of information but I don't know if it's all true. But I don't think it's too important because computers don't run in our culture. They were brought up just like before so they don't know [how to use computers]. I don't know how the culture will take it, its not up to me to say that" (male, 18).

Chapter 6
Community and space revisited

This chapter presents alternatives and suggestions for Internet implementation that would enhance the quality of life and well being of the Nemaska community, especially the youth. The first section underlines possibilities and constraints in the implementation of ICTs at the local level. The third section presents suggestions for improving the quality of life and well being among the youth as expressed by community members. The final section discusses future research directions.

6.1 Practical applications and local constraints

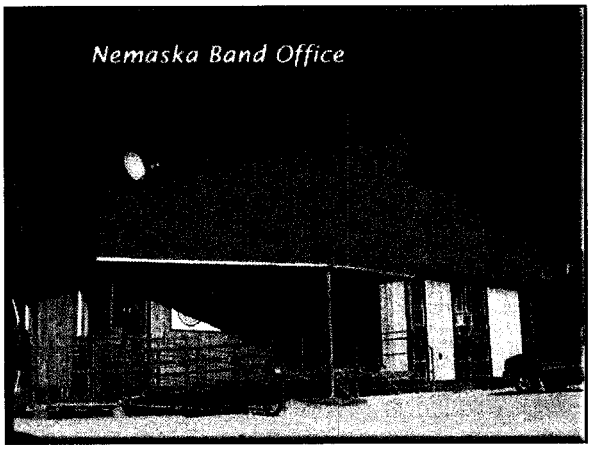


Figure 17. Nemaska Band Office
(pictures taken by the researcher July 2003)

This study has set out to examine the ways in which ICTs could contribute to improving the quality of life of young people in Nemaska. It has particularly focused on alternatives for local capacity building that would enable youth to improve their self-esteem by acquiring the skills and knowledge necessary to participate in the social development of the community as a whole, and especially to participate in the design and implementation of youth programs and projects.

As the research has shown, ICTs are efficient tools for local development. The Internet enables individuals to learn and develop in order to achieve relative autonomy for local innovation. It appears to hold practical potential to strengthen communication ties within and between Cree communities and facilitate a more coordinated and effective exchange of information. The Cree have much to gain in terms of strengthening communication not only between families but also between the various administrative departments as the following excerpt from a study conducted by the Waseskum House on the reintegration of ex-offenders is a case in point:

" Lack of information [was] a major concern; among our respondents, there was disagreement from some community members about the services that were available in their own community and few people were aware of services administered outside the community, such as those offered by Waseskun House. There is much work to be done by talking to each other" (National Forum Report, 1994).

Strong already established relations would ensure that a switch to telemediated communications as the primary long-distance communication medium would not weaken community ties and sociability. Moreover, as discussed in the previous chapter, significant efforts have been made to improve Cree presence on the Internet, therefore relevant content and online services are already in place.

Economic development is a priority for the Nemaska community and the Cree Nation as a whole. High unemployment levels are a reality in every Cree

community and the demand for jobs will increase in the years to come as almost half of the Cree population move into the working age cohort.

Given that the Cree economy is only in its infancy and large scale economic development is not favored among many community members, e-commerce presents a feasible low cost alternative. The community has already begun to explore this option: the economic development workshop, mentioned earlier, was designed to introduce community members to e-commerce. Although participation in the workshop was low it indicates, at least, that community members are open to and consider new options.

Figure 18. Local artist

(picture taken by researcher, July 2003)

E-shopping also presents opportunities. Community members can reduce travel time and costs. Extra time and funds can then be invested in other important areas. Many are already 'catalogue shoppers', therefore they are familiar with the process of buying at a distance. The market potential of online shoppers in Canada is 2.8 million (The Daily, 2003II). If the Cree embark in e-commerce by focusing on high-end products, this market could supplant additional revenue for the local community.

The following services available through Connecting Canadians are just a few that can provide the much needed initial logistical support:

1. Community Access Program (CAP): *e-com* services provide workshop for local entrepreneurs and consumer awareness and *web-page and email hosting* services.
2. Canada OnLine Student Connections: Internet and e-commerce training.
3. CanConnect: a valuable source of networking especially geared for development of youth IT skills.

Many community members have expressed their desire to develop environmentally sustainable economic ventures and to employ green technology in daily life, which is representative of traditional values with respect to the environment. The Internet can provide pertinent information and could facilitate networking with relevant industries and organizations.

In what concerns the Cree nation as a whole, the literature has shown that they wrestle with multiple interrelated issues that have the potential to threaten the integrity of their culture and society. Large scale hydroelectric development in the James Bay has caused serious negative social and environmental impacts. The uprooting of most communities and the intrusion by non-natives in the area have caused increased levels of drug and alcohol abuse which in turn result in family violence, teen pregnancies and suicide rates. Mercury contamination and poor nutritional foodstuffs have contributed, among others, to increased incidents from diabetes and cancer. In Nemaska almost 45% of community members suffer of diabetes; one elder died after a long battle with cancer and two others that I've met struggle with the disease. Many community members have not come to

terms with the psychological impacts of the maltreatment and abuse suffered in residential schools, which probably contributes to their mistrust of the present education system and the apparent apathy towards it. These attitudes might be taken up by their children, which could explain in part the low level of engagement of youth in school activities.

At the local level these social pressures have created an environment which leaves little room for trust in others, especially in the youth. The local dynamics have resulted in a lack of access to information and infrastructure. Alcohol and drug abuse, and limited parental and administrative involvement have precipitated increased vandalism on the part of the youth. The local youth center has been closed many times as a result of break-ins as well as the school's computer lab, which explains in part the failing attempt at keeping the lab open after school hours. Coupled with a general lack of facilities and long term activities, apathy and low self esteem impedes the youth to actively participate in the social development of the community. Many youth have complained about their limited involvement in community decision making and the dynamics of the administration. They do not see value in pursuing a career, although educational costs are covered by the Cree School Board, because they feel that the job selection process is based on their life style choices rather than on their skills and aptitudes. From their part, the administration and community members at large, although very concerned about the youth's well being, feel frustrated by unsuccessful passed efforts and are discouraged to undertake further measures.

Nonetheless, concerned parties and individuals are still involved in facilitating services for the youth. The Band Office facilitates a summer employment program for the youth, some which assist Band employees and others are employed as staff for various summer activities such as the Fitness Challenge. About 26 young men participate every year in the firefighter training program which culminates in a regional competition. In 2003 the Nemaska firefighters came third. No more than 6 or 7 youth are also employed at the local arena, which hosts hokey training workshops and various activities all year round. Canoe expeditions and other traditional activities such as feasts also provide youth with some extra income. The local high school also employs youth as substitute teachers or office assistants whenever needed. During the winter though some of these programs are discontinued as youth go back to school and the weather becomes an obstacle for most activities. Hunting becomes an activity taken up by some but few youth consider it an option.

Increased exogenous pressures for resource extraction and exploitation, such as the new Rupert Diversion project, will surely exacerbate these present conditions and will increase the level of habitat loss. The very survival of the Cree traditional activities is at stake. Community members need to acknowledge and understand these issues and challenges in order to respond in an adequate and timely manner. But most importantly community members need to set aside their differences and begin an honest an open dialogue as observations revealed that inadequate communication between all parties involved – youth, parents, the school administration, elders and the community at large – frustrate the outcome

of many programs. For development to be successful, joint action is necessary in order to respond the most needs and priorities. ICTs are but tools that can facilitate networking, communication and mobilization, but they have to be incorporated into an overall social developmental scheme. What follows illustrates some suggestions given by community members in respect to improving the welfare of youth in general.

6.2 Community issues and suggestions for improvements

When asked to describe the changes and challenges faced by youth, there was a general agreement that much work is needed for improving the quality of life of young people in the community. Among the most important issues, alcohol and drug abuse was the problem that aroused most concern. Teen pregnancy and violence (mostly vandalism) have also been discussed. Low school retention rates as well as high teacher turnover are also seen as significant problems. It was interesting to note that many youth addressed their criticism to their peers, while the older respondents expressed grievances towards the community administration.

"[suggest] To have an active lifestyle instead of being lazy, smoking up, doing nothing" (male, 22).

"Many of us are just sitting around. They better get their act together cause nobody is going to. Like drugs and alcohol, everybody does it and then complain they have bad grades" (male, 17)

"These days young people are faced with more demands from parents but less supervised activities which allows our children to start doing drugs, abusing alcohol, sexual activities at an early age. I am extremely concerned in the development of our youth in general" (female, 24).
"Less drinks and alcohol, more motivation and inspiration, listen to them [young people]" (male, 18).

Most suggestions for improvement centered on developing youth-centered programs and activities, especially sporting events. The development of various venues for sporting or educational activities was also suggested. Some believed that activities that improve youth's self-esteem and work related skills would be much needed, especially since community members at large have much experience to share with young people. Long term activities were also seen as a channel for the well being of the young generation, especially since present programs only take place for a limited period of time, such as the firefighter training that young men participate in during the summer or the summer employment program. These programs only take place during the short 3 months of the summer and do not continue year round.

"Have more free activities for the youth, like Ping-Pong tables, baseball games, roller ball, especially organize activities for the younger ones. I think the games that involve money it's hard for the other children to play these games for parents with low income. And the children get bored and get involved into mischief problems" (female, 48).

"Program/project department for youth and recreation organizations. It's hard to make changes for youth. They are so negative and have low self esteem" (male, 32).

"Provide more spaces to do sport activities. Outdoor basketball court/track and field and baseball" (male, 16).

"Educate moral values and appreciable manners early in the school classrooms. Also ask the community members who have attended school elsewhere high school/college to do voluntary (class) room presentations to help children (students) learn the importance of education and develop positive self esteem" (female, 24).

"There should be more activities that last more than just for the summer like classes (dancing, singing, sports, etc)" (female, 24)

"Get more jobs for the young people [and] have a community center...think is coming" (female, 52).

Many have also expressed interest in participating in computer training workshops such as those that I conducted while I was in Nemaska. Students often expressed their desire to acquire more access to the school computer lab, especially as an after-school activity. They feel that incentives such as access to the lab and more organized activities would motivate them to participate more actively in school and probably behave more responsibly during regular school time. It was suggested to have such activities incorporated in the regular class curriculum.

6.3 Looking ahead

This study had attempted to give some indication of local dynamics and how these could affect Internet diffusion and appropriation in Nemaska. Although a substantial length of time has been spent in the community many questions still need clarification, especially issues related to access to infrastructure and information. Although some community members seemed to be unaware of services and programs it was impossible to determine if this was really the case or if they just choose to appear ignorant in exchange for having to explain their motives for not participating, especially to an outsider. Biases in the sample may also contribute to some contrasting trends between the respondents and the community at large. As it has been mentioned earlier many respondents were employed by various administrative departments and thus it would be expected to have a greater access to infrastructure and information than other community members. Moreover given the nature of their work they may also be more open to increase integration of ICTs in daily life. Further research is needed to better understand the perspectives of the community at large.

Another important issue that needs to be addressed is the effective and continuous evaluation and follow-up of many services available through the Connecting Canadians initiative. This could be effectively achieved through cooperation with communities. It would not only speed up the process but also create employment opportunities for local youth, which could conduct surveys and various studies within their communities. In regards to cooperation, efforts should be made to properly coordinate programs aimed at acquiring IT skills.

Students conducting internships under such programs should actively collaborate with local youth and share their knowledge throughout their stay. My own experiences during fieldwork have shown that such initiatives are feasible for and beneficial to local communities. Quebec's programs offered through the Information Superhighway policy are especially geared for youth and families experiencing financial difficulties. These programs should be tapped and used by communities as they provide much needed additional support.

There is a need for further research into ICT development potential. Much of the literature that concerns itself with potential impacts of the Internet is based primarily on abstract ideas of what *could* happen, instead of what is *already* happening and how individuals are *actually* using the Internet. There is also much to be learned from the youth and much to give in return. This is especially important since the youth of today will become tomorrow's decision-makers. The development of ICTs is a very dynamic process and this study only provides a snapshot of this process. It is expected that future research will continue to focus on practical applications of Internet technology to provide effective and feasible opportunities for all. However, as the literature makes clear, the development of ICTs is not a panacea for the ills of local communities, and any such technology needs to be incorporated into an overall development scheme. It is expected that the research contained therein, and the suggestions made, will make a valuable contribution to assisting both local communities and government organizations in augmenting the potential to adopt ICTs for improved social and economic development.

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Cree Website list

The Grand Council of the Cree www.gcc.ca

The Cree Cultural Institute www.creeculture.ca

Beesum Communications www.beesum-communications.com

Appendix 1 Questionnaire Survey

Questionnaire 1

Name_____
Age_____
Education level _____
Languages you speak _____
Employment _____

General background:

1. Which of the following describes your current circumstances?
   Single, no child/children
   Single, with child/children
   Married, no child/children
   Married, with child/children
   Divorced, no child/children
   Divorced, with child/children

2. Have you ever lived more than 6 months outside Nemaska? If yes:
   Where: _____
   When: _____
   Why: _____

3. Which of the following describes what you currently do? Provide details
   Full-time student _____
   Part-time student _____
   Full-time employed _____
   Part-time employed _____

4. Which of the following is the highest level of formal education you have?
   Primary school
   Secondary school
   Post-secondary school (college, university)

5. What other formal training/work experience have you had?
   _____

6. What other formal training/work experience would you like to get in the future?
   _____

7. Which of the following best describes how satisfied you are with your current job or job prospects, explain:
   Not at all satisfied _____
   Fairly satisfied _____

Very satisfied _____
Don't know _____

8. What sports, if any, are you involved in?_____
9. Which traditional/bush activities are you involved in? Explain
   Hunting/trapping _____
   Fishing _____
   Canoeing _____
   Crafts _____
   Dancing/music _____
   Listening to stories _____
   Other (please specify) _____
10. Approximately how much time (hours per week) do you spend on each of the following activities:
    Watching TV or videos _____
    Gaming (computer, Nintendo, play station, etc) _____
    Gaming (pool, fuzz ball, arcades, etc) _____
    Playing sport _____
    Hunting/fishing/trapping [(not including goose or moose break)]_____
    Hanging out with friends_____
    Other (please specify) _____

11. For the following please check those that apply to you

	Have access at home	Have access at a friend's place or in the community
Satellite TV		
Console games (Play Station, Nintendo, etc)		
Radio (regular AM/FM)		
Short waves radio (CB)		
Computer		

12. How satisfied are you with the type of activities available for young people in the community? Explain
    Not at all satisfied _____
    Fairly satisfied _____
    Very satisfied _____
    Don't know _____

13. What suggestions do you have to improve life for young people in the community?
    _____
14. What do you like about living in the community?
    _____
15. What do you dislike about living in the community?

Information sharing and communication

16. Do you have adequate access in the community to information about?

	Yes	No	Not sure
Community events			
Community news and concerns			
Job opportunities			
Learning/ training opportunities			
Administrative and governmental			

17. Are you aware of the following information from other Cree communities?

	Yes	No (but I'm interested)	Not sure
Community events			
Community news and concerns			
Job opportunities			
Learning/ training opportunities			
Administrative and governmental			

18. Are you aware of the following information from other urban centers in the province?

	Yes	No (but I'm interested)	
Youth news and concerns			
Job opportunities			
Learning/ training opportunities			
Administrative and governmental			

19. Are you aware of the following information from other urban centers in the Canada?

	Yes	No (but I'm interested)	Not interested
Youth news and concerns			
Job opportunities			
Learning/ training opportunities			
Administrative and governmental			

20. Are you aware of the following information from outside Canada?

	Yes	No (but I'm interested)	Not interested
Youth news and concerns			
Job opportunities			
Learning/ training opportunities			
Administrative and governmental			

21. How do you get information on the following? (Check those that apply)

	Community events	Community news and concerns	Job opportunities	Learning/Training opportunities	Administrative and governmental
News tellers & other publications (flyers, brochures, etc)					
Bulletin boards					
Band council meetings					
Word of mouth					
Phone					
Fax					
Email					
Web postings					
Radio					
TV					

Mobility

22. Do you have access to a car? Yes No
23. Is it difficult to get access to transportation? Yes No
24. Do you find it difficult to travel? Yes No
25. How many weeks do you spend in a year away from the community (excluding time spent in the bush)? (circle one)
    1-2 weeks
    3-4 weeks
    5-6 weeks
    more than 6

26. Why do you have to leave the community? (circle all that concern you)
    Visit family and/or friends to a nearby community
    Visit family and/or friends to a far-away community
    Shopping (groceries, clothing, gadgets, etc)
    Legal/ administrative tasks
    Medical
    Education/training
    Participate in sporting events
    Participate in other events (conferences, community meetings, etc)
    Leisure and fun (parties, traveling, etc)
27. What do you like to do when you are way (in the city)?

---

28. How many weeks in a year do you spend in the bush?
    1-2 weeks
    3-4 weeks
    5-6 weeks
    more than 6

29. Do you enjoy being in the bush? Yes No
30. Could you explain why you like or dislike spending time in the bush?

---

31. How important is it to you personally to spend time in the bush? (circle one)
    Very important
    Somewhat important
    Not important
    Don't know
32. In a typical month how often do you travel for the following?

	1-3 times	4-6 times	More than 6
Visit family and/or friends to a nearby community			
Visit family and/or friends to a far-away community			
Shopping (groceries, clothing, gadgets, etc)			
Banking			
Legal/ administrative tasks			
Medical			
Education/training			
Participate in sporting events			
Participate in other events (conferences, community meetings, etc)			
Leisure and Fun			

33. In general how far do you have to travel for the following?

	Please give an approximate distance (km)	Service available in the community (don't have to travel)
Visit family and/or friends to a nearby community		
Visit family and/or friends to a far-away community		
Shopping (groceries, clothing, gadgets, etc)		
Banking		
Legal/ administrative tasks		
Medical		
Education/training		
Participate in events (conferences, sporting, community meetings, etc)		

34. How would you describe the changes faced by young people?

Questionnaire 1.2 - General computing

35. Do you have access to a personal computer at home? (circle one) Yes
    No

36. If you do not have access to a personal computer at home do you have access to one? Either at:

School.....☐
Friend.....☐
The band office.....☐
Other (please specify) _____

37. On average how often do you make use of a computer?
    Daily.....☐
    2-3 times a week.....☐
    Once a week.....☐
    Less than once a week .....☐

38. In general, for what purposes do you use computers? (check all answers that apply to you)
    School related.....☐
    Work related.....☐
    General Internet surfing.....☐
    Gameing.....☐
    Other (please specify)_____

39. What would you say is your computer skill level (? (circle one)
    Novice
    Average
    Above average
    Excellent

40. How did you acquire computer skills? (check all that apply)
    Self-taught
    Learned from friend(s)
    Took classes at school
    Took special training in another institution
    Other (please
    specify)_____

41. How important it is for you to have a personal computer?
    Not Important.....☐
    Relatively important.....☐
    Of consideration.....☐
    Quite important.....☐
    Very important.....☐
    Not sure.....☐

42. Why is it important for you to have a personal computer?

_____

Questionnaire 2.2 - General Internet

43. Have you heard of the Internet (also known as the information or electronic superhighway)? Yes No

44. When did you start using the Internet? _____

45. Which of the following best describes your use of the Internet? (circle one)
    Not used
    Have used in the past but not anymore
    Presently a user

46. What would you say is your Internet skill level? (circle one)
    Novice
    Average
    Above average
    Excellent

47. If you were a user in the past but not presently, why did you stop using the Internet? (check those that apply)
    Cost: monthly bills too high.....☐
    Access: lost access from home or work.....☐
    Time: no time.....☐
    Interest: lost interest.....☐
    Hard: too hard.....☐
    Other (please specify) _____

48. Do you have a personal Internet connection at home? (circle one) Yes
    No

49. If yes can you specify the IP provider and the connection speed?
    CreeNet
    Bell Sympatico
    Satellite (please specify)_____
    Don't know

50. If you don't have a personal Internet connection do you have access to one either: School.....☐
    Friend.....☐
    The band office.....☐
    Other (please specify) _____

51. How reliable is your Internet connection?
    Very reliable (no problems with the connection).....☐
    Somewhat reliable (connection gets lost sometimes).....☐

Not reliable (connection gets lost very often).....☐
Don't know.....☐

52. Is the line slow? Yes No

53. Is it difficult to connect to the Internet (connect to the IP provider)?
Yes No

54. What are some of the problems that you encountered with using the Internet?
Don't know how
Costs too much
No access available
Too complicated & time consuming
Other (please
specify)_____

55. How often do you make use of the Internet?
Daily.....☐
2-3 times a week.....☐
Once a week.....☐
Less than once a week .....☐

56. In general, for what purposes do you use the Internet?
School related.....☐
Work related.....☐
Email and communication (buleting boards, chat, etc).....☐
General surfing.....☐
Online Gameing.....☐
Online shopping.....☐
Other (please specify)_____

57. Do you web-surf? If yes, what kind of information do you look for while online?
_____
_____

58. Have you looked for the following information online?

	Yes	No
Employment opportunities		
School/training		
Banking		
Shopping		
Medical		
News		
Sports		
Travel		
Cultural		

Politics		
Leisure		
Games and music		

59. Do you bookmark sites/pages for future reference? (circle one) Yes No

60. Is there any kind of information that you needed and could not find on the Web?_____

61. How important it is for you to have access to the Internet?
    - Not Important.....☐
    - Relatively important.....☐
    - Of consideration.....☐
    - Quite important.....☐
    - Very important.....☐
    - Not sure.....☐

62. Why is it important for you to have Internet access?

Questionnaire 2.3 - General E-mail

63. What is your most convenient form of long-distance communication? (check one)
    Phone Fax Email

64. Do you use e-mail? (circle one) Yes No

65. If so, for what purposes?
    - School related.....☐
    - Work related.....☐
    - Personal communication.....☐

66. Can you describe your e-mail proficiency?
    - Short text messages.....☐
    - Attachments.....☐
    - Address book.....☐
    - List servers.....☐
    - Other (please specify)_____

67. On a weekly basis how often do you use e-mail?
    - Daily.....☐
    - 4-5 times.....☐
    - 3-2 times.....☐
    - Once a week or less.....☐

68. Besides e-mail do you use any other long-distance messaging services? (check all that apply)
    msn messenger.....☐
    yahoo.....☐
    icq.....☐
    Chat rooms.....☐
    Bulletin boards (BBs).....☐
    Other (please specify)_____

69. Do you ever send emails to family members? (if not skip to q. 42)
    Yes No
70. How useful is email for communicating with family members?
    Very useful
    Somewhat useful
    Not too useful
    Not useful at all
71. Do you communicate more with family members now that you use email?
    More often
    Hasn't made a difference
    Less often
72. Has email brought you closer with family members? True Not true
73. Have you learned more about family members since using email?
    Yes Not sure No (too impersonal)
74. Has email added stress in the family? Yes No
75. Do you ever send emails to friends? Yes No

76. How useful is email for communicating with friends?
    Very useful
    Somewhat useful
    Not too useful
    Not useful at all

77. Do you communicate more friends now that you use email?
    More often
    Hasn't made a difference
    Less often
78. Has email brought you closer with friends? True Not true
79. Have you learned more about your friends since using email?
    Yes Not sure No (too impersonal)
80. Has email added stress in your relationships with your friends? Yes
    No

81. Have you established relationships with other people over the email (people that you haven't met in person but with whom you correspond)? Yes
No

82. In your opinion, is it important to have e-mail access?
Not Important.....☐
Relatively important.....☐
Of consideration.....☐
Quite important.....☐
Very important.....☐
Not sure.....☐

83. Why is it important to you to have email access?_____

Comments: