

**HOW HAS THE INTERNET TOUCHED YOU?
THE IMPACT OF INTERNET ACCESS ON A NWT COMMUNITY**

By

LINDA J. HAYDEN

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HOW HAS THE INTERNET TOUCHED YOU? THE IMPACT OF INTERNET ACCESS ON A NWT COMMUNITY

Table of Contents

Chapter One - Study Background	1
Issues and Opportunities Involved in Connecting The North	1
The Organizations	5
• Participating Organization: Igalaaq Community Access Centre Volunteers in Rankin Inlet	5
• Project Sponsor: Government of the Northwest Territories, Department of Municipal and Community Affairs (MACA)	6
Chapter Two - Literature Review	7
Review of Organization Documents	7
Review of Supporting Literature	9
• Literature Review Constraints	10
• Underlying Themes of Hope, Fairness and Fear in the Literature	11
Chapter Three - Conduct of Research Study	24
Research Methodology	24
Data Gathering Tools	26
• Focus Groups	26
• Interviews	27
• Questionnaire	28
• Data Management and Analysis	29
Study Conduct	31

Chapter Four - Research Study Results	39
Study Findings	39
Study Findings (Part 1): The Impact of the Internet	39
• Table 4.1 Positive Impact of the Internet	40
• Table 4.2 Negative Impact of the Internet	42
Study Findings (Part 2): A Look at Igalaaq's Success and A Little Advice	44
• What Does Success Look Like?	45
• Does Igalaaq Measure Up?	46
• Advice From Igalaaq Community Access Centre To Other NWT Communities	55
Study Recommendations	60
• Looking Ahead to Igalaaq's Future	60
• Observations and Final Recommendations	64
Chapter Five - Research Implications	66
Implementation	66
• Igalaaq Community Access Centre Volunteers	66
• Municipal and Community Affairs (MACA)	67
Future Research	68
Chapter Six - Lessons Learned	69
Research Project Lessons Learned	71
Program Lessons Learned	71
• Required Competencies	71
• Other Competencies	72
References	74
Appendices	78
• Appendix A: Invitation to Participate	
• Appendix B: Focus Group and Interview Questions	
• Appendix C: Questionnaire (English Version)	
• Appendix D: The Impact of Igalaaq Community Access Centre	
• Appendix E: Map of the NWT and Nunavut	

CHAPTER ONE - STUDY BACKGROUND

Issues and Opportunities Involved In Connecting The North

Internet use in Canada is on the rise (Carroll and Broadhead, 1997). It has been promoted as having many benefits, yet there are many people who urge users to beware the seduction of new technology. Given the efforts underway in Canada and the Northwest Territories (NWT) to help Canadians access the Internet, there is a need for information that will help communities make decisions about this technology.

Is the Internet a helpful tool or highly overrated? What are the benefits? Are there any negative impacts? What has been the experience in the NWT? This project will answer these questions.

I believe this project is timely for many reasons:

- The Government of Canada's "Connecting Canadians" strategy offers an opportunity for the NWT.

The goal of the strategy is "helping Canadians to become the most connected people on earth, ready for the jobs and opportunities of today's knowledge based economy" (Industry Canada web site).

Under the strategy, federal funding is available to develop 10,000 Community Access Sites; places that offer free or low cost public access to the Internet. Community Access Program (CAP) funding expires in 2001. Already, there are more than 4000 CAP sites expected to be in operation in rural and remote communities by March 31, 1999, and the Community Access Program (CAP) is on target to meet its goal of establishing up to 10,000 sites in rural and urban communities across Canada by March 31, 2001 (Industry Canada web site).

My job with the Department of Municipal and Community Affairs (MACA), this project's sponsor, involves providing communities with information, advice and assistance about using technology for their community's development. I felt it was necessary to find out as much as I could about the operation and impact of a successful community access site before my colleagues and I began encouraging communities to take advantage of the CAP funding opportunity.

- NWT residents are hearing about information and communication technology and want the technology for themselves.

Information and communication technology development has been prevalent in the NWT news over the last year. Development of a digital communications network (DCN) and its resulting use by government has raised Northerners' awareness of technology options now available to them. Demand for the Internet in particular is growing across the NWT. Government initiatives such as Wire North, a strategy to use technology to improve our quality of life, is also contributing to Northerners' awareness of, access to, and skill in using this technology.

Data from this project about the use and impact of the Internet may be of interest to the northern public, the private sector and not for profit organizations.

- The Government is examining the use of technology as an alternative service delivery method.

The Government of the Northwest Territories is no longer in a position to provide the same level of support and service to residents as it did only a few years ago. In MACA, staff and travel resources have been significantly reduced even though community requests for assistance have not declined. The NWT and Nunavut cover approximately one-third of Canada's land mass; see Appendix E. New program and service delivery options must be explored.

The Government believes the Internet and other technology options will be a cost effective alternative for conducting government business over vast distances; hence the government's commitment to use the DCN for government business. The Government has committed to spending approximately \$4 million in each year of its five year contract with a private company to ensure that digital communications are available for government business. Expenses for equipment, staff, training, and connectivity costs will significantly add to the investment the Government is making in information technology for program and service delivery.

For MACA, learning more about how NWT residents use the Internet and the impact it has on them, even in one northern community, will be valuable.

- MACA recently broadened its scope to include a focus on technology as a tool for community development, and research is required to fully understand the issues involved.

MACA's Wire North initiative is resulting in partnerships and projects designed to:

- support community access to the Internet
- increase access to information, resources and services
- build community technical capacity
- increase Northerners' comfort level with information technology
- provide a coordinated approach to the delivery of programs and services.

Under the initiative, regional coordinators have been hired to provide communities with information, technical support, training, and other help to achieve the goals listed above. Since any intervention in a community is bound to have repercussions (McKnight, 1994) it is critical that regional coordinators have valid information, especially since they may be in a position to influence community decisions regarding use of information and communications technology. Knowledge about Rankin Inlet's experience will be useful for regional coordinators and may help us avoid unintended consequences that could result if these facilitators do not have relevant information about the Internet and CAP site development in the NWT.

- The Wire North initiative is still developing, and support mechanisms and methods of building community technical capacity must be incorporated into the initiative.

As coordinator of the Wire North initiative, development of a CAP volunteer network is one of my future objectives. I know that Igalaaq (pronounced EE-gaa-lack) volunteers would be excellent role models or advisors for other NWT communities interested in setting up their own community access site. Building my own relationships with CAP site volunteers is the first step in my role of “connecting the dots” and facilitating development of a CAP volunteer network.

- Nunavut, Canada’s newest territory, came into being on April 1, 1999. The new government will rely on information and communication technology, including the Internet, to do business within a decentralized model of government. Although Iqaluit (i-kaal-oo-it) will be the territorial capital, 11 of the 25 Nunavut communities will become government administrative centres. Decentralizing has required the government to develop an extensive information and communications technology infrastructure plan to achieve their goal. Connecting government offices are the first priority, but after speaking with colleagues in Nunavut, I do not believe it will not be long before residents in all Nunavut communities demand connectivity. Lessons learned from Rankin Inlet’s experiences with Internet access for the public might be of interest to Nunavut leaders.

- Project data can help Igalaaq volunteers.

In April 1998, Igalaaq volunteers started a planning exercise that will continue in 1999. Participating in this project gave Igalaaq volunteers an opportunity to reflect on their efforts and talk about areas for improvement and future growth. Data gathered through this project can contribute to their planning process and can be used in future funding proposals or whenever it is necessary for Igalaaq volunteers to demonstrate the impact of the Internet and Igalaaq Community Access Centre in Rankin Inlet.

- The timing is always right for volunteer recognition.

Igalaaq Community Access Centre relies on volunteers. As a volunteer, I know how recognition or encouragement have helped to keep me motivated and involved, so I am always aware of how necessary it is to give recognition when possible.

I knew going into this project that some of data would be seen as a tribute to the work being done by Igalaaq volunteers and supporters; however that was only a small part of the results I expected. Throughout the project, I worried that Igalaaq volunteers would not see the value of the project to the extent that I did. I worried that participants might not feel the project was worth the time they invested by talking with me. However, an e-mail from Sharon Shultz, the coordinator of Igalaaq volunteers, made me feel good about being able to provide some recognition for Igalaaq and those involved with it.

“You’ll be glad to know your report is recharging my batteries. I once again feel we have done a good job and can continue to improve. Thanks” (S. Shultz, personal e-mail communication, 1999).

This project can also add to MACA's arsenal of information on volunteer development.

"From our perspective, this learning alone is worth the investment because it not only relates to CAP ...but many other things we try to do.... If we had a magic formula for creating local interest, imagine what we could do" (I. Legaree, personal e-mail communication, 1998).

What Is The Impact Of Internet Access On Rankin Inlet?

This project focuses on the experiences of Rankin Inlet, a remote northern community that has developed what is considered to be the most successful community access site in the NWT (Industry Canada, undated).

The project explores the development and impact of Internet access as perceived by people who are involved in Iglaaaq Community Access Centre and the people who use it.

Project findings include:

- advice from project participants to other NWT communities wishing to develop a CAP site; see Chapter Four.
- data representing the perceived impact the Internet has had on project participants; see Chapter Four.
- recommendations for future action for consideration by Iglaaaq volunteers; see Chapter Four.
- questionnaire results; see Appendix C.
- comments from project participants on the perceived impact that Iglaaaq has had on individuals and the community; see Appendix D.

Project findings will be:

- shared with Iglaaaq Community Access Centre volunteers and MACA, the Project's Sponsor for their information and use
- shared with project participants as a link from Iglaaaq's web site, if so desired by Iglaaaq volunteers
- shared with other NWT communities that would like to learn more about Rankin Inlet's experience
- shared with Wire North regional coordinators for use in their work with NWT communities.

The Organizations

Two organizations had significant roles in this project. Igalaaq, the unincorporated organization that developed and operates Igalaaq Community Access Centre in Rankin Inlet, was the participating organization, and the Government of the Northwest Territories, Department of Municipal and Community Affairs (MACA) was the project sponsor.

Participating Organization: Igalaaq Community Access Centre Volunteers in Rankin Inlet

Rankin Inlet is a small community located in the Kivalliq Region of Nunavut. It is the administrative capital and transportation hub for the region, and with a population of 2058 Inuit (75%) and non-Inuit (25%) residents, it is the second largest community in Nunavut. Rankin Inlet describes itself as "business capital" of the region, and a glimpse at the Arctic Travel web site reveals a variety of local businesses and services, including Igalaaq Community Access Centre. Although Rankin Inlet has a reputation for nasty weather, including blizzards, wind and cold, I received a warm welcome to the community from project participants and other residents (Onalik, undated).

Rankin Inlet's Community Access Centre was given its name after a community wide contest was held; "Igalaaq", pronounced "EE - gaa- lack", is an Inuktitut word for "window". A window is an especially fitting name and analogy since users report that the Centre with its Internet access is a window through which they can view the world and a way for the world to learn more about Rankin Inlet.

Igalaaq is located in Leo Ussak Elementary School, and along with the schools very supportive staff, is currently operated by a group of 30 dedicated volunteers. Six volunteers have assumed coordinating roles and the remaining volunteers act as Centre supervisors during public access hours.

My primary contact person from Igalaaq was Sharon Shultz, coordinator of Igalaaq volunteers. Sharon provided valuable information, support, encouragement, and comments on the various drafts of this report. I very much appreciated her generosity with her time during this project.

Igalaaq's Mission:

"To introduce the computer as an open window to our future. To be accessible to all so that our community learns together"

(Igalaaq Express, 1997).

Purpose/Objectives:

- To ensure students use information technology to preserve Inuit culture
- To allow students to use information technology to bridge the gap between youth and elders
- To teach students critical information technology employability skills
- To improve community participation in the educational system
- To use the school as a vehicle for offering opportunities for economic development and community wellness
- To stimulate students interest in lifelong learning and encourage regular school attendance
- To offer students an exemplary school computer program that exposes students to critical information technology skills
- To create a resource where all students, staff and members of the community can have access to current information technology regardless of their previous formal education, financial resources or technological skill (Belsey, undated).

For more information on Rankin Inlet, Leo Ussak School and Iglaaq Community Access Centre, check out their web page at <http://www.arctic.ca/LUS/CAC.html>

Project Sponsor: Government of the Northwest Territories, Department of Municipal and Community Affairs (MACA)

Municipal and Community Affairs (MACA) was the project sponsor. MACA's mandate is to provide community governments with the support to deliver public programs and services essential to good community life, to assist with the development and maintenance of community governments, and to provide the resources necessary to achieve community government goals (Municipal and Community Affairs web site).

I am employed by MACA as Manager, Community Technical Services, part of the Community Development Division. Mr. Ian Legaree, Director, Community Development Division, provided valuable advice and direction for the project, as well as providing significant resources and support to complete both this project and my M.A. in Leadership and Training.

Further information about Municipal and Community Affairs can be found on the Department's web site at <http://www.maca.gov.nt.ca>.

CHAPTER TWO - LITERATURE REVIEW

Review of Organization Documents

Igalaaq is not an incorporated society, so although formal documents regarding their organization's structure or policies were not available, a number of other information sources proved to be invaluable in helping me get a feel for Igalaaq before I visited the community.

I reviewed the following documents and information sources for this project:

- Leo Ussak Elementary School newsletters. These newsletters gave me a feel for the relationship between the Centre and the school. I felt that I might be able to get a feel for how strong, supportive, or rocky the relationship between the Centre and Leo Ussak School was by the way the school news was reported, or even by what was not reported! Reviewing the school newsletters also gave me leads for follow up interviews with school staff, supporters, volunteers or Centre users. After reading the school newsletters I was looking forward to meeting the people from the articles in person.
- Igalaaq meeting minutes. I reviewed all available minutes from October 1996, February 1997, March 1997, June 1997, February 1998 and November 1998 meetings. I have found that reviewing minutes from volunteer groups helps me gauge a group's level of activity. I was also able to gather names of volunteers and supporters for follow-up interviews.
- Igalaaq volunteer list. Sharon Shultz provided me with lists of current and previous volunteers, along with contact numbers and e-mail addresses. This gave me a glimpse into the level of volunteer involvement and also helped make my job of contacting and communicating with some project participants much easier than anticipated.
- Igalaaq planning session report. Igalaaq volunteers held a planning session in April 1998. Their report gave me an glimpse into where the group hoped to go in the future. During the data analysis phase, this information was compared to the data obtained from project participants and incorporated into the "Future Focus" section in Chapter Four.
- Leo Ussak Elementary School web site. Igalaaq Community Access Centre's web site is located on the school's web site. Surfing the site gave me a feel for the community and the kinds of things they did with the Internet. Both the Igalaaq Access Centre story and the Centre's CAP application were posted to the site.
- The Igalaaq Access Centre story. This document was written by Bill Belsey, the Centre's early champion. The story provided a detailed description of the site's development, key achievements, and challenges from an insider's point of view. I found it very helpful as a starting point for learning more about Leo Ussak, the Centre and ways in which the Internet was used, as well as for identifying potential project participants.

- **Igalaaq's CAP Application.** This document was worth reviewing because it detailed some of the financial investments required to make the Centre a reality as well as giving me a glimpse into the vision or early hopes and dreams for Igalaaq.
- **Kivalliq News.** Once I knew the project was going to proceed, I paid attention to Kivalliq News, the region's newspaper, for articles related to Igalaaq or the Internet. Although I only found a few articles of limited value, I did learn a lot about the community and the region.
- **CTV video segment.** Leo Ussak School and Igalaaq Community Access Centre were featured on "2000+ The Millennium Report", a video segment produced by CTV which aired on January 26, 1998. This video reinforced my perception of Igalaaq and the Internet as a window to the world for Rankin Inlet residents, and a window through which the rest of Canada can view this arctic community.
- **Industry Canada information.** I reviewed the press release announcing Igalaaq's grand opening on Industry Canada web site. I also read Industry Canada's "Success Stories" booklet which featured a one page write up about Igalaaq. I also read Prime Minister Chretien's "Connecting Canadians" speech, delivered to the Federation of Canadian Municipalities in June 1998, which highlighted Rankin Inlet's achievements with Igalaaq. In addition, Industry Canada provided me with copies of Igalaaq's Milestone Reports, administrative reports which must be submitted by CAP sites in order to receive CAP funding.

The profiling of Igalaaq in these documents, web sites and speeches, and Industry Canada's labelling of Igalaaq as an NWT success story was a contributing factor in my decision to work with Igalaaq for this project.

These organizational documents and resources provided me with background information about Igalaaq's development and helped to tell Igalaaq's ongoing story. They also helped me frame questions and identify potential project participants.

One study limitation was the lack of quantitative data available about use and users of Igalaaq Community Access Centre. Although "The Igalaaq Access Centre Story" document from the web site referred to information resources such as volunteer log books, e-mail account sign up sheets and sign in/sign out books, this information was not available, making any quantitative analysis about Centre usage impossible to complete.

Reviewing literature sources pertinent to the organization was the first of two steps in my literature review. The second step involved a thorough review of supporting literature.

Review of Supporting Literature

I found the literature review process to be a case of playing detective, or perhaps gold miner is a better analogy. I had a question I wanted to research, "The Impact of the Internet On A NWT Community", ideas about where to start looking, and tonnes of information to sift through for the nuggets I was seeking. After completing an initial search for Internet related topic areas, I narrowed my focus to four potential areas: access and equity, the Internet, information technology, and community. The four topic areas were very broad, so I set guidelines for myself and looked for literature that met these criteria:

- literature on the Internet and its impact.

I critically reviewed literature sources to ensure their relevance since I needed to focus on the Internet and not on computer technology in general. The Internet is a fairly recent phenomenon, so I looked for literature published or posted within the last 5 years.

- literature on access or equity issues around connectivity and the Internet.

This included barriers to access, factors that contribute to access, and literature on issues related to perceived inequity between those who have access to the Internet and those who do not.

- literature by authors who are considered leaders when it comes to the Internet or computer technology.

I reviewed selected works from Esther Dyson, Nicholas Negroponte, Bill Gates, George Gilder, Don Tapscott, Cliff Stoll, David Rothman, Howard Rheingold, Jim Carroll and others.

- literature reflecting the Canadian experience.

I searched for Canadian books, journal articles, research and web sites. The Government of Canada web site and printed documents were good sources of information on the Community Access Program and data related to Internet use in Canada, as was the 1998 Canadian Internet Handbook.

I monitored messages posted to the Community Access Program listserv from September 1998 to February 1999. This listserv proved to be a worthwhile source of information on access policy development and issues in Canada.

My Project Proposal outlined my intent to conduct a search for literature related to Internet impact in developing countries if there was little Canadian and NWT data available. I thought that some of the socio-economic conditions in developing countries might be similar enough to Canada's north to warrant further investigation. Limited research was done in this area.

Literature Review Constraints

The availability of relevant Canadian literature sources was a study limitation. I found literature about the Internet, access, equity and community in Canada, but very little of it specifically referenced the NWT. Although I was told by one project participant that at least 12 other researchers had interviewed him for PhD dissertations, he could not recall either the researcher's names or the schools they were affiliated with (B. Belsey, personal communication, 1998). Even after hours of searching, my quest for relevant theses and dissertations had disappointing results.

Underlying Themes of Hope, Fairness and Fear in the Literature

One of the challenges in conducting a literature review is finding an effective way to sift through and critically analyze the facts, opinions, and predictions presented by the authors. I knew I would need a way to mentally sort the literature into meaningful categories before I found myself drowning in the sheer volume of reading I set out for myself, but I didn't want any of my preconceived notions to get in the way. I knew I'd be reading about positives and negatives related to impact of the Internet. Beyond that, I was hoping for revelations! Regardless of what I found, I knew I'd need a framework within which to categorize and analyze the literature. While reviewing literature, I noticed that common themes began to emerge. It seemed to me that at the most basic level, the literature I read focused on three main themes: hope, fairness and fear. I decided to use those three themes throughout this literature review as a common thread, binding the literature on access and impact together.

The next part of this chapter deals first with the literature related to access and equity, followed by a review of literature on the positive and negative impacts - or the hope factors and fear factors - associated with the Internet.

Hope, Fairness and Fear Factors in Access to the Internet

How many of us have an @ behind our name? How many people in Canada and the world are actually using the Internet? My literature review pointed out discrepancies in the estimates of current Internet users and in predictions about Internet use in the future.

The Government of Canada's Internet Guide states that worldwide, "estimates of the number of Internet users range from a low of 3 million people to a high of 70 million" (Government of Canada web site). Carroll and Broadhead (1997) place their estimate at approximately 40 million Internet users around the world. They also note that a March 1996 survey by the Angus Reid Group found that 30% of Canadian adults were estimated to have accessed the Internet from home or work. According to the Internet Society press release of August 2, 1995, Canada had approximately 2,652,644 Internet hosts, with a 6 month growth rate of 29%. By all accounts, the number of Internet users in Canada and around the world is in the millions, and growing.

If Internet use is growing, access to the Internet will continue to be an issue. The number of Internet users cannot increase unless people first have access to it.

In systems terms (Senge, 1990), this situation reflects a limits to growth scenario. Internet use is on the rise. The number of Internet users is expected to increase as more of the world's population gain access to the Internet, see its benefits, and start to incorporate it into their daily lives. "Early adopters" or "internauts" (Clark and Walters, 1996), the people who are first to embrace new technology, will fuel this growth. Growth will be limited or delayed by the rate at which access is acquired. People who can pay will use the Internet, but people who cannot afford access because of personal finances or due to the state of their country's priorities or infrastructure constitute limits to growth. If a community access site is the only way some people will ever have access to the Internet, what happens if a community chooses not to develop a site?

This very real limits to growth scenario may play itself out in the years ahead, lending support to concerns expressed by Stoll (1995) and Wresch (1996) about the widening gap between “haves” and “have nots” in the information age.

In Canada, as well as in the NWT, an effort is being made to connect Canadians to the Internet. Although I may not use the same words as leading authors, I believe the reasons behind the thrust toward connectivity can be attributed to what I call the hope factor, fairness factor, and fear factor. The *hope factor* is the perceived positive impacts or benefits expected of the Internet. The *fairness factor* is the belief in equity; access to the Internet for all. The *fear factor* is a need to safeguard Canada’s competitive position in the global economy, as well as the concern felt due to the perceived negative impacts of the Internet.

The Government of Canada is a valuable source of information about the Internet in Canada. In a document prepared for the Internet Steering Committee of the Information Highway Advisory Council, access is identified as a public policy issue. I see this as strongly relating to both the hope and fairness factors in that positive expectations for the Internet is a cornerstone argument for equity or universal access.

“As the Internet will most likely provide Canadians with many of their basic services - health education and government services - all should be assured some level of access” (Industry Canada web site).

The following message, referencing an Industry Highways Application Branch report, was posted to the CAP listserver, also highlights policy issues around access to the Internet.

“Telecommunications policy and regulation have typically addressed the issue of access and universality in terms of simple network access. Broadcasting policy and regulation have usually viewed access in relation to both broadcast signals and programming services. Neither model seems adequate in the new environment. Markets and technologies are now evolving so rapidly and their impacts are so pervasive that new approaches may well be needed to meet critical social, economic and cultural needs.

The fundamental social and economic transformations accompanying Canada’s transition from an industrial to a knowledge society underscore the need to focus on access viewpoints beyond those of the federal government and the usual participants in the CRTC regulatory process. This argument becomes even more persuasive when one considers that federal, provincial and territorial governments are turning ever more to the electronic delivery of services. Access to Information Highway services may well become critical to full participation and, indeed the exercise of democratic citizenship in a knowledge society” (Information Highway Applications Branch, undated, p. 55: Gurstein, 1999).

Closer to home, in Rankin Inlet, equity is also a factor.

“The Internet in this town is being viewed as a chance to bind the vast northern territories and hopefully put the children of Nunavut on equal footing with the south” (Industry Canada web site).

Institutionalizing access through public policy, programs like the Community Access Program (CAP), and through lobbying efforts undertaken by groups such as the Council of Canadians are positive steps in ensuring equitable access. The Council of Canadians is working on a Consumer Communications Charter to ensure that a connected Canada is inclusive of all Canadians, whatever their financial circumstances (Gurstein, 1998, CAP listserv). These efforts make me optimistic that the fairness factor is at play and that equity of access will be achieved in this country.

Then there is the fear factor, evident in both the Canadian and the American literature and experiences. In June 1998, I attended a meeting chaired by Mr. Alain Defosses, chairperson of Industry Canada's Information Highway Task Force, around Y2K issues. During the course of the meeting, I asked him about the paradox that seemed to be playing itself out across the country; through the Connecting Canadians Strategy increasing numbers of Canadians will be connected to the Internet by the year 2000, yet at the same time the Y2K problem needs to be addressed. Resources are being committed to get more people using the same computers that could be severely affected by Y2K problems. My question, from more of a devil's advocate standpoint than anything, was "aren't we asking for trouble?" Mr. Defosses agreed, but added that the overriding concern from a national perspective is that Canadians need to be capable of competing in the global market. We can't wait. The fear factor is at play because we need access, and we need to build capacity so that Canadians will have the technical skills to compete in what Nuala Beck has termed the New Economy (Beck, 1993).

According to Rheingold, the fear factor may be a more pressing concern than anything else in the United States. "The reason the U.S. Congress continues to allocate funds to develop increasingly powerful networks is that it has been told that America is in danger of falling behind, either in supercomputer research or in competitive economic advantage. Educational and citizen uses, and rights of access - are a relatively recent issue" (Rheingold, 1993, p. 84).

Other authors also raise access as an issue. Nicholas Negroponte (1996) takes a global view and makes a serious pitch for a United Nations for Cyberspace to make the digital world available to everyone. He touts the need for half a million young people who can teach kids in underdeveloped countries in an effort to ensure they do not become "digitally homeless". Negroponte's concern that the information rich will get richer and the information poor will get poorer is only tempered by his hope that the youth of developing nations will catch up very quickly once access is available. Youth are typically early adopters (Clark and Walters, 1996) of new technology and Negroponte's vision of a connected planet sees young people as catalysts at the heart of it all.

Don Tapscott, a leading Canadian author, and "the man anointed 'the world's leading cyber guru' by U.S. vice president Al Gore" (McWilliams, 1996) tempers his hope with worry that Internet use will not be universal, resulting in a "bipolarization of wealth and segregation of people into 'net have and have nots'" (McWilliams, 1996). Even Cliff Stoll (1995), one of the skeptics in terms of the impact of the Internet and technology in general, would agree that access is important. He would like to see everyone have an opportunity to decide for themselves whether or not they like it, if it offers what they want, and if it's worth spending time on.

The question that keeps bubbling up for me is this: if access is so important, why is it not free and available to all of us, at bank machines, in libraries, and in our homes through our telephone lines or cable TV? Perhaps it is because the Internet has only recently become available to substantial numbers of people and its impacts have not been widely studied or recognized. Perhaps the concerns people have about the Internet are still too worrisome, the fear factor at play, or it is because access can be a money maker for its gatekeeper? Rheingold (1993) would argue that access can only be assured if governments continue to play a role. A recurring theme in his book, The Virtual Community, is that once governments turn things over to big business, access cannot be guaranteed. Equity is not an issue. Price becomes a barrier.

“What will people have to pay, and what will we have to agree to say or not say, in order to both feed information to the Net and take information from it? Pricing determines access” (Rheingold, 1993, p. 87).

Jim Carroll and Rick Broadhead, authors of the Canadian Internet Handbook, would not agree with everything the government is doing in regards to Internet, but they do have words of praise for the way the government is trying to shape the Internet for Canada’s benefit with programs like the Community Access Program (CAP), CANARIE and School Net in particular (Carroll and Broadhead, 1997, p. 24).

“Efforts need to be made at all levels of government - federal, provincial, and municipal - to emulate the approach taken by Industry Canada with respect to the Internet” (Carroll and Broadhead, 1997, p. 25).

In Canada, Internet access appears to be a priority, at least temporarily. The original goal of the Community Access Program was to connect 5000 remote and rural communities; in 1998, that goal was increased to 10,000 communities, and at least half of the financial backing needed to ensure access in those 10,000 communities has been dedicated by the Federal Government for community access site development.

“As announced in the last federal budget, the government will continue to support expansion of the Internet. The federal government announced a new \$800 million funding program for ‘infostructure’. In a knowledge society, this includes ‘information and the means to store and access it.’ This program and others will speed the growth and use of the Internet in Canada” (Industry Canada web site).

Perhaps one way to ensure access is to continue working in partnership with government and industry. CANARIE Inc. continues to build strong ties with a private sector consortium as it develops CA*net 3, the world’s first national optical network (Government of Canada, 1998).

“CANARIE Inc. is the not-for-profit, industry-led and managed consortium was created as an innovative way for the federal government, the research community and the private sector to collaborate in stimulating the development of the Information Highway in Canada.

CANARIE's mission is to facilitate the development of Canada's communications infrastructure; stimulate next generation products, applications and services; and, communicate the benefits of an information-based society” (CANARIE web site).

Business is not the bad guy here; as with any new technology there is a price to develop and refine it. Partnerships between government and business may be the only way to ensure access in Canada.

Stoll points out that there are extremes when it comes to access. He wonders whether or not access means we'll all have equipment, the know-how and an Internet account, or whether it means we'll all be welcome online as long as we have the money to get online. He points to the way in which telephone companies advertised universal service in their early days - having a telephone would allow you to connect to anyone as long as you both used the same telecommunications provider (Stoll, 1995, p. 51). Sounds familiar.

In most parts of the NWT it still costs more than in southern Canada to connect to the Internet. Small, remote communities are especially hard hit because of the high-cost, long-distance telephone call required to connect. Calling long distance can range from \$0.35-\$0.63 per minute during the day, with discounts of 25% between 6-11 p.m. and 50% between 11 p.m. and 8 a.m. (NWTel Operator, personal communication, March 1999); considerably more than what many southern Canadians pay for telephone access to the Internet. In the last few months I have personally spoken to a number of people who are very careful with their online time, in order to keep their long distance bills affordable. In the NWT, access may be possible, but pricing is still an issue.

There is a need to clearly understand and address access issues in the NWT and in Canada. Participants involved in this research project commented on the lack of Internet use by Inuit elders and some long term residents of their community. They expressed concern that these residents were not using services available through Iglaaq. They wanted to do what they could to ensure there were no barriers to full community involvement and use of the Centre and the Internet. This scenario is not unique.

“Francophones, people with low incomes and those in remote and rural areas have not adopted technology as quickly as other segments of the population. There is a need to learn more about the situation so that public policy reflects the special needs of these groups as well as the rest of Canada” (Industry Canada web site).

Learning more about the impact of Internet access across the NWT and across the globe is a step in the right direction.

The Impact of the Internet - More Hope than Fear

“How Has The Internet Touched You?” was a working title for this project and as I delved further into the research it became clear that many people felt the Internet had touched their lives.

My analysis of the literature is that authors tend to place themselves into two distinct camps: the cheerleaders (mostly positive or hopeful about the impact the Internet is having), and the skeptics (concerned, fearful, or somewhat negative about the impact of the Internet). The cheerleaders are very persuasive, extolling the social, economic and environmental benefits to such an extent that I found myself nodding as I read, full of hope for the future and the society we can create together because of the Internet. However, after reviewing the work of skeptics like Stoll (1995) and Wresch (1996), I once again found myself nodding at the sense their words made. I always say there are at least two sides to every story and this one is no different. Rawlins (1996) seemed to me to be the most pragmatic. At first read, I thought he was an extreme skeptic, but in his book, Moths To The Flame, it is clear that his view of the Internet and all computer technology is one of extreme pragmatism - he sees both the benefits and the dangers, the hope and the fear factors.

In conducting this literature review, I thought it extremely important to recognize my own mental models, my own beliefs and assumptions based on my own mostly positive experiences with the Internet, and actively look for the negative impacts. I am more of a cheerleader than a skeptic so it was important to keep my personal bias in check, and actively look for information that was different from my own perspective. As well, since data gathered from project participants was overwhelmingly positive, I felt it was up to me to outline the negative impacts, the fear factor, in the literature review so that both sides of the story could be represented.

Cheerleaders Espouse The Hope Factor

Howard Rheingold, Esther Dyson, Jim Carroll, Rick Broadhead, Bill Gates, Barry Leiner and Nicholas Negroponte can clearly be categorized as cheerleaders or proponents of the Internet and firm believers in the positive impact it can have.

“The Internet has revolutionized the computer and communications world like nothing before. The invention of the telegraph, telephone, radio, and computer set the stage for this unprecedented integration of capabilities. The Internet is at once a world-wide broadcasting capability, a mechanism for information dissemination, and a medium for collaboration and interaction between individuals and their computers without regard for geographic location” (Internet Society web site).

The experiences and observations of the project's participant uphold the cheerleader's claims. In fact, their words painted a clearer picture than any of the literature could have; their anecdotes made the impact of the Internet real. However, in literature, opinions were mixed. The excitement or cynicism of the authors, the hope and fear factors, are presented next under the following areas: research, education, information and entertainment, electronic democracy, business, community building, and the environment.

The Impact of the Internet - Research

Rheingold (1993, p. 80) details the positive impact the Internet has had on the advancement of science. He states that "science is a communication dependent exercise" and that the Internet has enabled scientists to cooperate and collaborate much more easily than ever before. Rather than working in isolation, unaware of research being done around the world, the pace of scientific research is accelerating due to the Internet.

The Impact of the Internet - Education

It is in the area of education that many cheerleaders feel the Internet's biggest impact will be realized. Rheingold (1993, p. 104) describes Project Gutenberg, a mass digitization of 10,000 volumes of classic and public domain literature to the Internet by 2001 as an example of the impact the Internet can have on education of the masses. In Canada, SchoolNet's digitization project should have a similar effect by contributing to our educational and cultural resources.

Esther Dyson (1997) is another proponent of the Internet and technology for educational purposes in general. She notes that in that a recent U.S. study that looked at the costs and benefits of connecting K-12 schools to the Internet showed that connected kids learned almost one full year's worth of material more than students who did not have access to technology (Dyson, 1997, p. 87).

Data gathered during this project supported many of the positive impacts of using Internet for education, but there were also concerns about reliability of content, and whether kids were in fact learning or whether they were just reading, cutting and pasting. Some project participants directly attributed passing grades to the Internet whereas others felt that although the Internet might be helpful for project research and homework assignments, it wasn't the Internet that made kids better students, students had to do that themselves.

Distance Education is one area in which proponents agree the Internet's benefits can be felt. John Nicklen stated "new technologies have and will continue to revolutionize access to education... students are now able to access courses on the World Wide Web from anywhere, making geographic boundaries less and less an issue" (J. Nicklen, unpublished paper, 1998). This is an area of untapped potential in the NWT. Online learning is an option offered by Aurora College, Nunavut Arctic College and the Sivuliuqtiit Inuit Management Development Course and MACA. As more northerners are able to access the Internet, I am hopeful that it will become a powerful and useful learning tool.

Literacy can also be impacted through the Internet. Negroponte (1996) comments on the ease with which kids take to computers and notes that before the Internet, a computer's usefulness as a communication and learning tool was limited. He now believes that the world has changed because of the Internet. Kids can learn from each other and with electronic communication, the need to read and write is obvious. Literacy in both English and Inuktitut may also be positively impacted in Rankin Inlet as a result of the Inuktitut keyboard overlays. Rheingold (1993, p. 185-186) noted that the Internet promotes communication between people from other countries and cultures and describes its impact through an example of cross cultural dialogue that occurred between Kuwaiti students, Israelis and the media during the Gulf War. He uses this example as an illustration of the awesome power of the Internet as a learning and communication tool.

Ever the skeptic, Stoll (1995) suggests that we all may have to wait a while for a literary revival. He notes that people do write more, but suggests we look at quality of the language used before deciding that the Internet's impact on literacy and writing skills is a good thing (Stoll, 1995, p. 25). There may be a need to balance the novelty of electronic communication with other considerations. Rankin Inlet students correspond with people around the world on a regular basis, and although there is an educational benefit, there is also a potential downside; one project participant noted that the success of a web site and e-mail penpals can be overwhelming for students when requests for information and penpals are received weekly!

Dyson (1997) wraps up the aye's and nays with a sobering comment on technology's place in education. "In the information world, people need not just information, but the skill to handle and interpret it. The complexity of our society and the powers of the digital age impose corresponding demands on individuals. They need to be better educated to survive economically and to thrive socially. They will also need a moral education in order to make the increasingly complex ethical decisions the digital and eventually the genetic ages will present" (Dyson, 1997, p. 80-81).

The Impact of the Internet - Information and Entertainment

A 1997 North American survey noted that searching for news and information is the number one activity for web users; they state that reading news online was the primary activity for 69% of men and 61% of women (The Northwest Herald, Monday, August 10, 1998, p. 4). They get that news from journalists, two-thirds of whom use the Internet for research (Carroll and Broadhead, 1998).

Authors and project participants both noted how the Internet is used for news and entertainment. This was demonstrated in Rankin Inlet where surfing is big sport. Surfing the Internet, for information on favorite hockey teams and the latest scores, booking travel and researching travel destinations, sending photos to friends, searching for the newest quilting patterns, playing online games, finding lyrics, researching health information, listening to music, joining a chat line, shopping, reading a newspaper, finding jokes, and building a personal web page, are fun.

Tapscott (1996) makes an interesting claim that "virtual reality travel will only increase demand for the real thing" (Tapscott, p. 184) and a northern author looks at travel with a twist. In her article "Cyber-Inuit", Nunatsiaq News columnist Rachel Qitsualik comments on the glee with

which she has noticed Inuit taking up the Internet. She states that the traditional nomadic lifestyle of the Inuit and the fact that they are still travellers at heart, even though they have become residents of a community, are the reasons for it. "Then it is no wonder the Inuit treasure the Internet, for if they cannot bodily leave their communities, at least their minds can wander at will...Inuit rejoice in the ability to compare opinions abroad, as they did when travelling at will. For the hamlet is the new iglu, and the Internet is the new Land" (Qitsualik, 1998, p. 10). Perhaps the allure of virtual travel will draw Inuit Elders to Igalaaq in the future.

Tapscott (1996) further notes that only one area will likely see less travel as a result of new technology, and that is business travel. With increased use of every kind of technology from e-mail, collaborative technologies that allow groups to network, to video conferencing, businesses will use the digital capabilities now available to reduce travel costs that impact their business bottom line.

Health information is of particular interest to Northerners. In many communities, nurses run the health centres because doctors only visit occasionally. Access to health information is critical. The Internet is seen by some as an access point to health information and a conduit for digital health initiatives such as the tele-health and tele-medicine initiatives currently being piloted in the NWT.

The project "focused on the immediate exchange of health-care information via a computerized communication system. With the aid of audio, video and data-scanning technology, patients in Inuvik and Fort Smith will pay virtual visits to orthopedic and internal medicine specialists located in Yellowknife. The experiment will be monitored in areas such as function, cost, service, maintenance and acceptance" (Colbourne, 1998, p. A3).

But is surfing the Internet good for you? Rawlins questions whether or not the news we get on the Internet can be trusted. "Imagine a world where no news is trustworthy - since it can all be manipulated" (Rawlins, 1996, p. 82). As Dyson (1997) noted earlier, new technology requires new skills, including the ability to critically analyze information obtained from the Internet.

There are also physical considerations. Can the Internet impact health and fitness? Using the Internet means sitting and clicking, a sedentary pastime. The fear factor surfaces here. Will the Internet have the same impact on Generation Xers as TV did for their parents? "TV was once seen as a similar brave new frontier of widespread education and justice and equality for all. Soon though it turned into the friendly monster that sidled up to us every evening and by dangling pretty images to distract us from the earnestness of life slowly, methodically, began to eat our minds" (Rawlins, 1996, p. 84).

A relatively new phenomenon which Carroll and Broadhead (1997) take a snipe at in their 1998 Canadian Internet Handbook is Internet Addiction Disorder (IAD), the tendency for Internet users who lose touch with reality due to too much time spent surfing the Internet. Their criticism of IAD believers rings a bell with me; the "haves and have nots" concern resurfaces again in this area, but with a slightly different twist. Carroll and Broadhead (1997) think the arguments about Internet addiction are silly. They are amazed that some people choose to believe the worst rather than learning more about Internet users and what technology offers first hand. Their concern is

for the gap that they feel is emerging between the “wired and unwired generations” in Canada (Carroll and Broadhead, 1997, p. 4).

It is not difficult to find literature about either the benefits or the dark side of the Internet and the unsavory uses to which some people put it. News, information or recreation, who should judge how another person spends their time on the Internet?

The Impact of the Internet - Electronic Democracy

Is the Internet a tool that will encourage more people to get involved in political decisions and movements affecting their lives, or is it just another example of the hype factor promoted by the cheerleaders? Rawlins (1996) and Dyson (1997) are enthralled with the awesome potential the Internet holds for us individually, and collectively.

“On the net, theoretically at least, millions can hear you - no matter who you are and no matter how little social or economic power you hold. And that perhaps, is the foundation of freedom: the freedom to speak your mind” (Rawlins, 1996, p. 84).

“The Net will involve a growing portion of the population in this kind of governance, and their feeling of empowerment will spread to other parts of their lives. The secret is that the Internet doesn’t actually do much; it’s a powerful tool for people to use. It’s not something worth having, but it’s a powerful lever for people to use to accomplish their own goals in collaboration with other people. It’s more than a source of information; it’s a way for people to organize themselves” (Dyson, 1997, p. 35).

In Canada, electronic democracy is alive and well. Recently, the Consumer Charter for A Connected Canada was circulated through the CAP listserv. The Consumer Communications Charter is being promoted by a number of concerned groups to ensure that a connected Canada is inclusive of all Canadians, whatever their financial circumstances. The Charter was to be forwarded to Minister Manley of Industry Canada and then presented to the CRTC as part of its ongoing deliberations concerning the “Service to High-Cost Serving Areas” hearings. Concerned Canadians were invited to “sign on” to the document and make their voice heard (Gurstein, 1998, CAP listserv).

Electronic democracy is introducing a new level of accessibility to voters and others. Cerf (1995) and Rheingold (1993) both speak to the new informality that exists between elected officials and the public. Cerf notes the “leveling” impact that communication over the Internet has on governance and democracy when he describes how elementary students and government officials can correspond on an equal footing. He calls this the “egalitarian character of e-mail” (Cerf, 1995).

In a related vein, Rheingold (1993) describes how the Internet breaks down social barriers. There can be anonymity, yet there can be access to people you might normally never meet in person. Rawlins (1996) concurs, noting that “Rank, appearance, social standing mean nothing unless they help guarantee someone’s knowledge ‘on the net’” (Rawlins, 1996, p. 74).

Electronic democracy is in its infancy and it is in this area I see hope and fear factors jockeying for position. Electronic democracy has enormous potential to both mobilize and marginalize. If equitable access is not assured, if politicians respond only to those who have the resources to be online, then at this time, they are only speaking with, at most, 29% of Canadians.

The Impact of the Internet - Business

According to The Canadian Electronic Commerce Strategy (Government of Canada, 1998), electronic commerce offers advantages for both businesses and consumers. For business it offers lower procurement costs, reduced processing errors, inventory costs and time to market, extended business reach and improved customer services. The news for consumers is just as optimistic, offering greater choice, lower prices, more complete information, and convenience.

North American estimates predict that by the year 2001, more than US \$1.1 billion in insurance premiums will result from online transactions (The Northwest Herald, August 5, 1998). The Northwest Herald (1998), also reports that Internet shopping and commerce are growing faster than the Internet itself, that the average amount online supermarket shoppers spend per shopping trip is \$113, and that 82% of shoppers would shop online again. In fact, the article goes on to state that 22% of North Americans consider the Internet indispensable in their daily lives.

Carroll and Broadhead cite a market research study by ActivMedia that projects "by the year 2000, 2% of global GDP (gross domestic product) will be through Internet-assisted sales, and among the top 25 economies, Internet-assisted sales may account for as much as 5% of GDP" (Carroll and Broadhead, 1997, p. 104). They also reference Forrester Research with predicting that by the year 2000, "business-to-business electronic commerce on the Internet will reach \$66 billion. Business-to-consumer electronic commerce will reach \$7 billion" (Carroll and Broadhead, 1997, p. 104).

While the cheerleaders talk about the money to be made on the Internet, skeptics seem to be taking a wait and see attitude. Don Tapscott is cited as saying ... "the 'net has the potential to destroy old businesses nearly as quickly as it is creating new ones" (McWilliams, 1996). One project participant noted that her major concern about the Internet in the NWT was the potential that existed for people to shop online, negatively impacting economic health of their community.

Other participants expressed security and privacy concerns, a concern also noted by Carroll and Broadhead (1997); they indicate that many businesses overestimate the readiness of customers for an online relationship. Their advice to business is "Do not underestimate the security and privacy concerns of your customers when it comes to the Internet" (Carroll and Broadhead, 1997, p. 102), and warn online businesses to be prepared for the negative feedback from customers that will occur if stringent security and privacy measures are not in place.

Carroll and Broadhead (1998) conclude that the Internet is both an opportunity and a threat. They surmise that Canada's big banks are anxious to merge because the Internet permits foreign banks to conduct business in Canada; they are concerned about losing customers. Whether this is an opportunity or a threat may depend on who is asking the question.

The Impact of the Internet - Community Building

Community building is an area in which the hope factor plays a large part. It is difficult to find authors who focus on the community building or strengthening capacity of the Internet in a strictly geographic community. In fact, the literature on community building tends to focus on the development of virtual communities, or communities of interest and affiliation, as a result of the Internet. Dyson (1997), Clark and Walters (1996), and Rheingold (1993) advocate the impact and benefits of virtual communities. Rheingold (1993) credits virtual communities with providing members with a 'home' for alternative, spiritual, recreational, educational interests for fellowship, inspiration, affiliation and comfort, based on his personal experiences with the WELL.

“Not only do I inhabit my virtual communities; to the degree that I carry around their conversations in my head and begin to mix it up with them in real life, my virtual communities also inhabit my life. I’ve been colonized; my sense of family at the most fundamental level has been virtualized” (Rheingold, 1993, p. 10).

Dyson (1997) goes even farther. She strongly believes in the potential for Net communities and describes the Internet as a powerful tool because it encourages human interaction, the cornerstone of community building. She defines community as “the unit in which people live, work and play” (Dyson, 1997, p. 31), but prefers to speak about virtual worlds rather than physical locations. “The Net is a home for people. Our common task is to do a better job with the Net than we have done so far in the physical world” (Dyson, 1997, p.2).

The residents of the community of Rankin Inlet appear to be a little more grounded. My questions about their involvement in virtual communities or online communities revealed very little to support either Dyson or Rheingold’s experiences. Although a few participated in chat lines or discussion groups, one participant noted that she had never felt stronger ties to a community - virtual or otherwise - as a result of the Internet. Community is a place very much on the ground for the project participants.

The Impact of the Internet - Environmental Considerations

In a digital world, the environment will benefit; e-mail will result in faster and cheaper communication, and in fact, we’ll save trees because we won’t need paper! Have you ever heard that argument before? Tapscott is cited as talking environmental impacts and a paperless society when he refers to both the new skills that leaders in the future must have to thrive in the new economy, and on the impact it can have. He discusses the paperless design process used by Boeing Co. in designing its Model 777 aircraft which resulted in “90% less scrap and rework than previous ones designed with paper-based methods, translating into significant cost savings and quicker time to market” (McWilliams, 1996). All of the collaboration was done using networked workstations, communicating with colleagues around the world. Where Internet technology and other forms of technology merge in this example may be hard to tell, but this example does illustrate positive environmental impact.

In an effort to cut down on both the cost of document printing and distribution, the Federal government has chosen to publish electronic documents, build web sites, and to support the Connected Canadians initiative. In a similar scenario, Teletel, precursor to France's Minitel, the national telecommunications company, made a decision in 1980 to try out electronic directory services, in part because the projected costs involved in publishing the country's phone book were too high in terms of time, money and paper (Rheingold, 1993, p. 227). Senge (1990) might say these situations are classic examples of shifting the burden; government can't afford to operate in a certain way, so the costs will be picked up down the line by someone else, namely, the public. The problem with this thinking is that it only works if everyone has access to the distribution network.

The Literature Review in Perspective

"We are all beginning another great journey. We can't be sure exactly where this one will lead either, but I'm certain it will touch many lives and take us all even farther. The major changes will be in how people communicate with each other. The benefits and problems arising from the upcoming communications revolution - which in its early stages we might call the "Internet Revolution" - will be much greater than those brought about by the PC revolution" (Gates, 1996, p. xiii).

Whether a cheerleader or skeptic, influenced by a hope, fairness or fear factor, one thing is certain - there are at least two sides to every story. Leading authors all have their opinions on the benefits or dangers of the Internet, as did project participants, but there appears to be more optimism than pessimism, more hope than fear, when it comes to opinions about the impact of the Internet. One definite area of consensus is the need for equitable access to the Internet, regardless of the motivating factors. If the Internet is to continue to grow, access issues must be resolved.

CHAPTER THREE - CONDUCT OF RESEARCH STUDY

Research Methodology

Selecting an appropriate methodology is a critical, yet difficult step in any research project. Dickson and Samier state that researchers must be satisfied that their research approach is epistemologically sound, be able to demonstrate soundness by showing that findings are valid and reliable. They note that researchers must ensure the appropriate fit between:

- “the purpose of the project
- the role of the inquirer
- own personal view of reality,
- the appropriateness of the methods employed with the type of inquiry, and
- the nature of the environment being studied” (Dickson and Samier, 1998, p. 2-16).

I felt the project had elements of both action research and evaluation research, but neither approach was a perfect fit. Upon reflection, it is evident to me that personal bias played a role in my choice; I have always been far more interested in the stories behind the statistics. The nature of this project and the words I’ve chosen to describe it such as “impact”, “advice”, “dreams”, and “how has the Internet touched you?” illustrate this preference. Other considerations that guided my selection of an approach were: my perception of my own role, the level of participant involvement I envisioned, and my intuition about how to obtain the answers I sought.

Dickson and Samier’s (1998) overview of major research designs was useful in determining my research methodology. Naturalistic inquiry, my methodological approach, is grounded in post modern theory, “a perspective that begins with the premise that no method, theory, discourse, or genre has the right to proclaim itself *the* royal road to truth” (Palys, 1997, p. 422). “Relativism” or the belief that there are “as many truths as there are perspectives” is an element of post-modern theory in social research (Dickson and Samier, 1998, p. 2-2).

Naturalistic inquiry is a form of inquiry in which:

- the purpose is explanatory and descriptive
 - multi-perspectives are explored: quantitative and qualitative methods are used
 - the preferred approach to inquiry is inductive/deductive
 - the role of the researcher is participant observer
- (Dickson and Samier, 1998).

Guba and Lincoln are widely cited in literature about naturalistic inquiry and in “Competing Paradigms in Qualitative Research” (Guba and Lincoln, undated: Denzin and Lincoln, 1994) acknowledge their own commitment to naturalistic inquiry, or constructivism as they are now wont to call it. This approach to inquiry is idealist; what is real is a construction in people’s minds; hence, there could be a number of realities, all which must be considered meaningful.

With a naturalistic inquiry or constructivist approach, the researcher has a key role to play in that she makes judgments on the basis of her values, knowledge, experience, and beliefs related to the research topic. The researcher is not an objective inquirer sitting on the sidelines. She makes decisions and judgments throughout the data collection phases, which tend to be discovery, explanatory and exploratory in nature, and these judgments occur throughout data management and analysis phases. The researcher's analysis or meta-construction is confirmed or internally validated by participants through review and confirmation of project results (Dickson and Samier, 1998).

Qualitative methods are suited to naturalistic inquiry. "Qualitative researchers stress the socially constructed nature of reality, the intimate relationship between the researcher and what is studied, and the situational constraints that shape inquiry. Such researchers emphasize the value-laden nature of inquiry. They seek answers to questions that stress how social experience is created and given meaning" (Denzin and Lincoln, 1994, p. 4).

Data Gathering Tools

I decided to use the following data gathering tools in this project:

- a learning circle with key Igalaaq volunteers to gather historical context;
- focus groups with other volunteers to gather qualitative data on the impact the Internet, advice for other communities, dreams for the future, and uses of the Internet;
- personal interviews to gather data from key people involved in Igalaaq who were unable to participate in a learning circle or focus group.

Ultimately, focus groups, interviews, and a questionnaire were used.

Focus Group

Although the term “focus group” was coined by Merton et al. in 1965, this data collection method has been used since the 1930’s (Lewis, 1995). Lewis cites Kreuger with defining focus groups as “carefully planned discussion designed to obtain perceptions in a defined area of interest, in a permissive, non-threatening environment” (Lewis, 1995, p. 2).

Focus groups are most effective when:

- the groups consist of 6-12 people; smaller groups of 4-6 people work well when participants have a lot to say.
- more than one group is convened around a topic area
- a welcoming environment exists including a comfortable setting, a brief overview, an opportunity for questions from participants, a discussion of ground rules before the first question is asked
- group moderators are skilled listeners, attuned to group dynamics, time conscious, and able to effectively facilitate group discussion
- fewer than a dozen questions, ranging from general to specific, are used
- unstructured, open-ended questions starting with “what”, “how” and “where” are better than “why” questions
- discussions are taped or otherwise recorded for review later.

Lewis further states that “focus group methodology must be employed in a manner to promote validity” and concludes “the issues listed above are essential elements for credible qualitative (action) research” (Lewis, 1995, p. 5).

Focus groups offer two unique advantages: they allow opinions to be expressed, often sparking discussion and debate, and they also offer an opportunity to observe a lot of interaction between participants in a short period of time (Palys, 1997). Sometimes actions speak louder than words, and in focus groups, tone, body language, and level of involvement are indicators of participants’ true feelings.

Focus groups were an appropriate data gathering tool for this project because they allowed me to bring a target group together to discuss a common topic. Since I did not know most of the participants, I felt they might be more comfortable in a group setting. I was also anxious to see the level of excitement that participants had for the topic. Focus group sessions allowed me to experience this as well as gather data.

I planned to conduct one focus group session with current Igalaq volunteers. I ended up conducting three sessions; two with current Igalaq volunteers and one with Igalaq supporters. Two lists of focus group questions were used, one for Igalaq volunteers and one for Igalaq supporters. Both instruments were designed to gather qualitative data. A list of focus group questions is included in Appendix B.

Interviews

An interview, a common tool in qualitative research, “is a conversation that includes the art of asking questions and listening” (Denzin and Lincoln, 1994, p. 353).

Inductive approaches are “scientific inquiry in which the researcher surveys, within a circumscribed environment, the broad array of individual circumstances and situations, and intuits, or induces, a broad generalization that will explain the dynamics unique to that context” (Dickson and Samier, 1998, p. 1-20). Interviews, as inductive approaches, are effective methods of exploring, discovering and constructing reality in naturalistic inquiry.

Miller (1991) logically suggests that if you want to learn what people think, the best approach is to ask them. He notes that interviews, questionnaires, and attitude scales are the most appropriate research techniques. I wanted to know about Igalaq and about how the Internet had touched participants, so I asked them.

Eleven in-person and telephone interviews were conducted. I used the focus group questions as an interview guide, and asked additional follow up questions to clarify respondent’s answers or to build their comments.

Interviews offer flexibility in that they are more conversational than a questionnaire. This is both a strength and a drawback; I found it gave both me and the respondent an opportunity to follow up interesting threads of the conversation, but I found I had to be aware of asking leading questions.

Although Fontana and Frey (Fontana and Frey undated: In Denzin and Lincoln, 1994) include questionnaires as a type of interview, I have separated them out for the purposes of this report since they were both significant components of this research project.

Questionnaire

Questionnaires involve written answers to a series of written questions and can be one of three varieties: self-administered, group administered, or mail-out questionnaire (Palys, 1997). A one page questionnaire was used for this project. It consisted of information on one side of the page and a series of nine single and multi-part written questions on the other side. The questionnaire was distributed through five venues and could be dropped off or mailed in to any of the venues.

Questionnaires offer many advantages and some limitations. Strictly quantitative questionnaires make for relatively easy analysis yet may be seen as limiting respondents' ability to answer freely. Questionnaires employing qualitative questions may require more complex and time consuming analysis, yet they offer respondents freedom to answer as they wish. The questionnaire we used was designed to gather both qualitative and quantitative data. Palys (1997) notes one challenge in using questionnaires is not just gathering data, but gathering meaningful data. He further notes that face to face contact in questionnaires allows for higher response rates and gives respondents a chance to ask questions, ensuring full comprehension before answering questions. These limitations were evident given the decisions made about the questionnaire.

Mail-out questionnaires in particular have other minor advantages, but significant disadvantages which were apparent in this project:

- “researcher cannot clarify ambiguities or misinterpretations
- usually low response rates
- can't tell whether it was intended respondent who actually completed the questionnaire” (Palys, 1997, p. 148).

It was necessary to find a way to gather information that would be both useful and representative of the target population we wanted to question. I drafted an information sheet and one page questionnaire for approval by the coordinator of Iglaaq volunteers. The approved questionnaire was then translated into Inuktitut to ensure that all community members could participate and distributed through the schools in Rankin Inlet. This distribution strategy was identified as a good way to reach both users and non-users since students in Rankin Inlet are very good about taking information home to their parents and was an effective way of reaching almost all of the 465 households in Rankin Inlet (Government of the Northwest Territories, Bureau of Statistics web site). I was also advised that students are very good at bringing forms back to the school again. We also placed fifty questionnaires at the John Ayaruak Public Library and distributed 20 more to out of town users of Iglaaq. An announcement about the availability of the questionnaire and an invitation to participate was placed on the community information TV channel with contact phone numbers for both Sharon Shultz and me in case people wanted more information. Neither Sharon nor I received any inquiries. The questionnaires went out on November 16, 1998 and were returned to me by December 7, 1998. A “hook” was used to encourage people to complete the questionnaires; a random prize draw was made from all of the returned questionnaires. The prize? A fifty dollar (\$50) gift certificate from the Northern Store and an Iglaaq sweatshirt. Mr. Kimbo Okpatauyuk of Rankin Inlet was the lucky winner.

Data Management and Analysis

Huberman and Miles define data management as “the operations needed for a systematic, coherent process of data collection, storage and retrieval” and data analysis as “the three linked sub-processes of data reduction, data display and conclusion drawing/verification” (Huberman and Miles, undated, p. 428-429; Denzin and Lincoln, 1994). They label the process the Interactive Model.

The model has four steps: data collection, data reduction, data display, and drawing and verifying conclusions. Data reduction refers to the work done during the project’s design phase when methodology, the research question and appropriate instruments are selected. Data reduction is repeated once data is collected. Data display refers to the process used to display the information so that conclusions can be drawn. Data display was critical to data analysis and theme identification during this project. Conclusion drawing and verification are where interpretation and intuition come into play; they refer to work done by both researcher and project participants in confirming project results or recommendations.

Within this model, I also used what Crabtree and Miller (1992) call Immersion/Crystallization Analysis Style. In this process, the three core steps of developing an organizing system, segmenting data, and making connections “are collapsed into an extended period of intuition-rich immersion within the text. It is the interpreter, as editor who serves as the organizing system in the editing style” (Crabtree and Miller, 1992, p. 346; Denzin and Lincoln, 1994). This analysis style was used to categorize data into themes, and to compare themes to literature review themes.

Data analysis is an iterative process. Although I designed questions so that a number of pre-identified themes could emerge, I remained open to new directions or emergent themes. I gave myself permission to see where the data took me, as is appropriate for naturalistic inquiry.

“The qualitative researcher uses inductive analysis, which means that categories, themes, and patterns come from the data. The categories that emerge from field notes, documents, and interviews are not imposed prior to data collection. Early on, the researcher will develop a system of coding and categorizing the data. The researcher may follow rigorous guidelines... but the ultimate decisions about the narrative reside with the researcher” (Janesick, undated, p. 215; Denzin and Lincoln, 1994, p. 215).

All 11 interviews and three focus groups were tape recorded. This allowed me to live in the moment while gathering data; I was able to listen carefully to participants’ comments, facilitate as required and not try to write at the same time. I also then had the luxury of replaying tapes to reflect on what was said.

The tapes were transcribed by two different people. I reviewed the tapes for quality control, replaying them to ensure integrity between the print and recorded words. Once data were transcribed, I was able to review each transcript for comments related to the four themes I was working with: uses of the Internet, impact of the Internet, advice to other communities, and dreams for Iglaaq. Comments related to these themes were color coded for further display, clustering, and conclusion drawing. Data reduction was evident in that data unrelated to the themes were retained but not included in the final analysis and conclusion drawing phases.

Data from the questionnaire required more complex and detailed analysis given that both qualitative and quantitative data were collected. Four hundred and fifty questionnaires were distributed; 105 were returned for a 22% response rate. Questionnaires were completed in both English and Inuktitut, although participants who completed the questionnaire in Inuktitut also completed it in English, making data analysis slightly easier than I expected.

The Interactive Model provided a logical framework for managing the data and for initial analysis. The Immersion/Crystallization Analysis Style was a complementary process, appropriate for this project.

Graphically representing results can be a tricky and lengthy process when qualitative data is collected. I was concerned about carefully analyzing and graphically representing results so that they would be both accurate and useful to the Igalaaq volunteers and MACA. A series of charts depicting project findings is presented in Chapter Four; detailed questionnaire results can be found in Appendix C.

Study Conduct

At times, this project seemed to have a life of its own. I am a person who sometimes works to deadlines so having a plan to guide me was helpful.

August 1998 (Victoria, BC at Royal Roads University)

- Introductory phone calls to Rankin Inlet to identify key Igalaq volunteers and confirm their participation in the project.
- Project Proposal finalized.
- Literature review commenced.

September 1998 (Yellowknife, NWT)

- Project Proposal Summary e-mailed to key Igalaq volunteers for information and review.
- Project timeline firmed up. Two trips to Rankin Inlet planned and approved by project sponsor.
- Literature review continued.
- Researched process to obtain NWT Research License.

October 1998 (Yellowknife and Rankin Inlet, NWT)

- Introductory phone calls and information sent by e-mail to key Igalaq volunteers and supporters.
- First trip to Rankin Inlet. I met with Igalaq volunteers to discuss the project, project timelines, research methodology and data gathering process, expected outcomes, use of data, and ethical considerations.
- Discussed and agreed to additional components Igalaq volunteers wanted to see included in the project and how logistics would be handled.
- Visited Igalaq Community Access Centre to observe users.
- Set up initial interviews for November 1998 return trip to Rankin Inlet.
- Drafted questionnaire for review and approval by coordinator of Igalaq volunteers.
- Finalized data gathering tools.
- Commenced application process for a research license through the Nunavut Research Institute.
- Letter of Agreement signed off by project sponsor and participating organization and sent to faculty supervisor.
- Literature review continued.

From the time the project was planned and my project proposal accepted, to the time I actually met with Igalaq volunteers in October, I lived with a level of uncertainty. My initial project planning was done in Victoria, not in Rankin Inlet, and because I don't live in Rankin Inlet, I anticipated there being some concern about my intentions. I also expected that after our first meeting it might be necessary to expand the scope of the project to accommodate Igalaq volunteer needs. I felt flexibility would be required to ensure that the project met both the needs of MACA, the project sponsor and Igalaq, the participating organization.

This flexible approach was required.

I attended an Igalaaq volunteer meeting during my first trip to Rankin Inlet in October 1998. I was able to explain the project's purpose and the proposed research methodology, negotiate timelines for data gathering, discuss the volunteer's wishes for the project, and answer questions. During the meeting I was asked if the project could involve contacting non-users to find out why they were not coming out to Igalaaq and find out what could be done to encourage them to come to Igalaaq.

Their desire to investigate why non-users were *not* attending was completely opposite to my proposed project, which was to find out what the impact of the Internet was for people who *were* using Igalaaq Community Access Centre. This situation is a perfect illustration of the creative tension that exists between an researcher's needs and participant needs. Stringer (1996) states, and I concur, that research must be a collaborative approach "that takes into account the impact of activities on the lives of people engaged in or subject to investigation. Its intent is not only to 'get the job done', but to ensure the well being of everyone involved" (Stringer, 1996, p. 19).

Sharon Shultz, coordinator of Igalaaq volunteers, generously told me not to worry about the group's needs if their request did not fit within the scope of the project. However, I wanted to make the research relevant and useful to everyone involved so we found a way to meet both our needs. We agreed that I would draft a questionnaire that asked people if they used the Centre, and if not, why not. It would also include a question on impact of the Internet. I also recognized the questionnaire as an opportunity to recruit new volunteers so I include a question that resulted in 21 positive responses. Sharon volunteered to review the draft questionnaire to ensure it met their needs and offered to help with the logistics of administering it within the community once I returned to Yellowknife.

Another decision I made during that first meeting with Igalaaq volunteers was to drop the idea of conducting a learning circle. I wanted to experiment with learning circles because I thought they could be an effective tool suitable for qualitative research. Dewar notes that "learning circles are a way to give voice to people, to recover a sense of community, to celebrate the past and reawaken traditions....and ultimately, are used to recover and construct knowledge" (T. Dewar, "Learning Circles As Catalyst: Exploring Adult Educators' Training and Development", unpublished paper, 1994).

During the first meeting it was apparent that everyone was not completely comfortable with the idea of the learning circle. Some volunteers felt that since they hadn't been involved when Igalaaq was founded, they couldn't participate effectively in a learning circle whose purpose was to re-capture Igalaaq's historical development. Rather, they encouraged me to talk with Bill Belsey, the man considered to be the driving force behind Igalaaq's development, for a complete historical overview.

The volunteers did feel comfortable talking about their own experiences, observations, and the impact of Igalaaq and the Internet on themselves and the community, so I revised my plan and used focus groups instead. Our decision to drop the learning circles was a bit of a personal disappointment. I had hoped to learn more about learning circles through the experience, but this situation illustrates once again the need for flexibility during research. The project may not have materialized exactly as I envisioned it on paper, but I feel it was better in the end because the volunteers influenced decisions about their participation in the project and the process.

During my first visit to Rankin Inlet, I hoped to spend time at the Iglaaq Community Access Centre observing users and perhaps even interviewing them, time permitting. The plan did not materialize. During both visits to Rankin Inlet I was able to spend time at the Centre observing users, but not to the extent that score cards or observational behaviour scales were used. I did however, make notes in my Research and Reflections Log on numbers of users, the young age of most users, the kinds of activities they were generally engaged in, whether or not they were using the Internet, working alone or in groups, having fun, talking, and whether they were asking for help or not.

November 1998 (Yellowknife and Rankin Inlet, NWT)

- Finalized questionnaire and had it translated into Inuktitut.
- Data gathering trip to Rankin Inlet. Conducted personal interviews, focus group sessions and distributed questionnaires.
- Literature review continued.
- Provided project update for project supervisor and project sponsor.

My five day trip to Rankin Inlet to gather data was exhausting but worthwhile. Spending even a few days in the community gave me a better feel for the community than I had from previous visits. Project participants were welcoming and cooperative despite being asked to participate over the weekend. Cheryl Forbes, Principal of Leo Ussak Elementary School was especially helpful, even providing me with a key to the school so that I could use it over the weekend for focus group sessions and interviews.

Technology troubles occurred despite my contingency planning. Both tape machines malfunctioned during an interview. Fortunately, I planned sufficient time between interviews and was able to double check the equipment, ensure it worked, and draft notes from memory about the interview. Although this meant that direct quotes from that project participant could not be used, it was still useful to keep notes from the interview for reference and referral.

December 1998 (Yellowknife, NWT)

- Conducted additional personal and telephone interviews.
- Tapes transcribed.
- Data analysis began.
- Literature review continued.
- Provided project update to project supervisor, project sponsor and project participants.

January 1999 (Yellowknife, NWT)

- Conducted additional personal and telephone interviews.
- Tapes transcribed.
- Data analysis continued.
- Literature review continued.

February 1999 (Yellowknife and points south)

- Draft 1 of project paper forwarded to faculty supervisor, project sponsor and participating organization for review and comments.

March 1999 (Yellowknife, NWT)

- Draft 2 completed.

April 1999 (Yellowknife, NWT)

- Project signed off by project sponsor, faculty supervisor and participating organization.

I tentatively planned a follow up meeting, either in person in Rankin Inlet or by teleconference with the Igalaq volunteers if requested. I knew that two factors would determine whether or not a final community visit would occur: interest by Igalaq volunteers in meeting with me; and support from my project sponsor for a third trip to the community given that at least 3 days and \$2200 are required for the trip.

Although a follow up meeting would have been an excellent way to wrap up the project, an opportunity for closure presented itself in April 1999. Sharon Shultz, the coordinator of Igalaq volunteers traveled to Yellowknife, and I was able to meet with her to discuss the project. I offered to discuss the project, via conference call, at a future Igalaq meeting, if there was interest. We also discussed the possibility of linking project data or the project report to Igalaq's web site for public access.

In addition to the time schedule and decisions noted above, a number of other factors influenced my decisions and actions throughout this project, namely: validity, value of results, timing for use of results, ethical considerations, and opportunities for reflection and learning.

Validity

Dickson and Samier credit Lincoln and Guba when they note “For those interested in internal validity and external validity, but who believe that there is no argument for independent reality believing that truth is in the eye of the beholder, then naturalistic approaches suit. Internal validity and external validity are termed credibility and transferability in the naturalistic lexicon. In a naturalistic approach methodologies tend to be more qualitative; yet qualitative /quantitative are also used” (Dickson and Samier, 1998, p. 2-8).

Dickson and Samier also identify key factors, taken from the Tri-Council Working Group (1996) and Monette, Sullivan, and DeJong (1994) that should be considered in judging the scientific validity of a study:

- “Research purposes: Does the purpose, its intent, have socially significant value?
- Design credibility: Is the design an acceptable (by virtue of accepted scientific/research practices) approach to resolution of the research purpose?
- Method used: Have any methods been used to gather information, or to make judgments that are inconsistent with the epistemological structure of the design itself?
- Procedures followed: Have the steps taken been properly carried out, and has care been taken to ensure appropriate accuracy of records, data and findings?
- Human subjects: Have the right people been identified, involved and affected by the study?
- Results: Have the results been appropriately communicated and accurately represented in that communication?” (Dickson and Samier, 1998, p. 1-13).

Validity generally questions whether research actually measures what a researcher thinks is being measured (Palys, 1997). In naturalistic inquiry, positivist terms such as internal and external validity, reliability and objectivity are being replaced by terms such as credibility, transferability, dependability and confirmability (Guba and Lincoln, undated; Denzin and Lincoln, 1994). Regardless of the term used, the underlying meanings remain. Did I measure what I was supposed to measure? How generalizable are the results to other NWT communities? Would project participants agree that the results reflect their experience and comments? Will other communities see the value of the advice from Igalaaq?

One participant provided his own opinion as to whether or not project results would be valuable.

“What have you learned while working on this project, although I know you are the one asking questions? Do you think your final report will be used a lot? I think either way it goes, once it’s done, it would be silly for somebody or a community that wants to start, not to use it.”

(Participant November 23, 1998)

Representativeness, a component of validity, was also a consideration. How many people were appropriate to involve in the project? In terms of Igalaaq volunteers, the sampling frame was the active volunteer list, which included 27 people. All 27 volunteers were contacted at least once and invited to participate in the project. Twenty volunteers agreed to participate but in fact, only 15 participated for a sampling ratio of 5:9. The mortality rate was 5 in 20 or 25%.

In the Igalaaq supporters category, the initial sampling frame was 52 Partners In Education listed on Igalaaq's web site. While reviewing the list with the coordinator of Igalaaq volunteers, it became apparent that a number of supporters who were listed had either left the community or were not known to her. We agreed on 16 supporters to be contacted; all 16 supporters were contacted, some numerous times. In the end, 10 supporters were interviewed in the project; 2 supporters agreed to participate but did not show for the focus group, 3 did not feel they had contributed in any significant way to warrant being interviewed for the project, and 1 did not return my phone calls or e-mails. The sampling ratio was similar to that of Igalaaq volunteers at 10:16 or 5:8.

Representativeness also concerned me in regards to the questionnaire. I asked for and acted on advice from Igalaaq volunteers, the resident experts about how to reach non-users, how to ensure that all residents would have an opportunity to participate in the research, how to get good response rates, and timing for the project, among other things.

The only time I didn't take their advice was when I decided against doing a household questionnaire. A household questionnaire would have required more time than I had to complete the entire project and would have meant more resources than I had at my disposal. I was very conscious of the amount of training and supervision that would be required to ensure the proper conduct of the study using that approach. Given that I would not be able to provide that level of quality control from Yellowknife, and given my concern about relying too much on the kindness of strangers to do the legwork for me, I looked for other approaches. The decision was made to distribute the questionnaire through schools, the public library, and make it available through other venues.

Value of Results

I felt a bit of anxiety about whether the results would seem worth the effort for the participating organization and project sponsor. I think this was mainly a case of wanting to do the best possible job I could for everyone involved. I know that some of my anxiety came from my belief that regardless of how carefully I might design the project, final results would be somewhat beyond my control. Results depend on the effectiveness of tools used and on voluntary involvement.

Early on in the project, I considered conducting an online questionnaire. I thought that since the project focused on technology, using technology to conduct research would be appropriate. However, I chose not to do it once we decided to add a questionnaire to the project. I knew that the additional work required to collate and analyze online questionnaires would add significantly to the project's scope. As well, since Iglaaaq's focus was on getting information from non-users, I did not think that an online questionnaire which would most likely be completed by Centre users would meet their needs. It certainly would have met my needs, but a compromise was required. Looking back, I am satisfied with the decisions I made in consultation with Iglaaaq volunteers because we all got something out of this project.

Timing For Use Of Results

In addition to the timelines the university set for project completion, other timelines loomed large. I knew that in the project sponsor's opinion, project results or recommendations would be needed for discussion at the Wire North regional coordinators inaugural meeting, March 15-19, 1999.

"Advice from Iglaaaq Community Access Centre, Rankin Inlet, NWT" was shared with regional coordinators and others during the March meeting. This document can be found in Chapter Four - Research Study Results.

Ethical Considerations

I was very careful to conduct this project according to established ethical guidelines:

- the Project Proposal was made available to everyone involved in the project.
- an Invitation to Participate was widely distributed to all people I contacted about the project.
- at the beginning of every focus group session and interview I made sure that I reviewed the Letter of Invitation to Participate, described how confidentiality would be protected, and answered questions from participants.
- signed consent forms were collected from all participants.
- based on comments received after the first draft of this report was circulated, I re-visited quotes attributed to project participants to ensure anonymity.

This project also met all requirements under the NWT Scientists Act. Before my research license could be issued, the Nunavut Research Institute had to be confident that ethical considerations were met. One of these considerations was that project information be translated into Inuktitut so that participants whose first language was Inuktitut fully understood what the project involved and what would be required of project participants. I met all requirements and a research license was issued. Once the project is complete, a final report, also translated into Inuktitut, will be submitted to the Institute.

Opportunities for Reflection and Learning

I kept a journal which I called my “Research and Reflections Log” during this project. Although I sometimes found it just another chore at the end of a long day or week, and sometimes wondered why I bothered, in the end it was a worthwhile learning exercise. I used my journal in various ways, to theorize, question, vent, review, check facts, reflect on progress, or just record details. This parallels Richardson’s view (Palys, 1997, p. 211) that there are four main types of field notes: observation notes, methodological notes, theoretical notes and personal notes. I completely agree with Palys’ observation that “such notes are important because they create an ongoing record or personal archive over the course of your study, they act as a diary of the process you’ve gone through” (Palys, 1997, p. 211). It was an exercise worth the time I invested.

CHAPTER FOUR - RESEARCH STUDY RESULTS

Research study results are presented in two parts: Study Findings and Study Recommendations.

Study Findings present conclusions in two areas:

- **Study Findings (Part 1): The Impact of the Internet.**
This section details what project participants told me about the impact of the Internet on themselves and the community of Rankin Inlet.
- **Study Findings (Part 2): A Look At Igalaq's Success And A Little Advice.**
This section illustrates what success looks like in Rankin Inlet. It also includes "Advice from Igalaq to NWT Communities".

The last part of the chapter, Study Recommendations, is future oriented data intended for Igalaq volunteers. I asked participants "what are your dreams for Igalaq?" Responses were compiled and compared to the results of Igalaq's April 13, 1998 planning session, and are intended to provide Igalaq volunteers with additional food for thought in planning for the future.

Study Findings

Study Findings (Part 1): The Impact of the Internet

Project participants told me about the difference the Internet has made in their lives and in their community. Their responses were overwhelmingly positive, yet concerns were evident in the areas of availability of inappropriate information and the accuracy of information, Internet security issues, and issues related to personal use, over-use or dependence on technology. There were also areas in which no response or no impact was noted.

One challenge in gathering qualitative data is the need to accurately reflect what was said when presenting findings. Narratives or written forms are common, but I have chosen to use a graphical representation to identify impacts in areas identified in the literature review and in areas identified by participants themselves.

My literature review focused on six impact areas: Science/Research, Education, Information/Entertainment, Electronic Democracy, Business, Community Building, and the Environment. Project participants identified two more impact areas which I have labeled Societal Impact and Personal Efficacy.

I have included a brief description of the categories to assist in understanding the graphs.

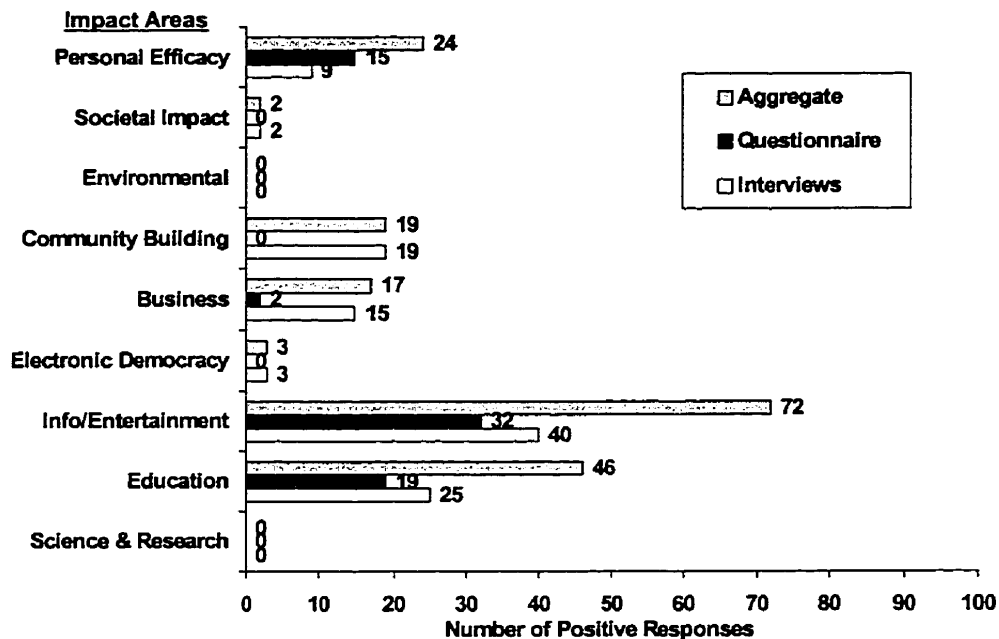
Science/Research refers to the advancements in science attributed to the Internet as a result of research sharing and publication. *Educational Impact* refer to ways in which the Internet is perceived to impact school based activities, distance learning, or educators.

Information/Entertainment is related to the impact the Internet has on a person's ability to be informed or spend their leisure time. *Electronic Democracy* describes the active ways in which

people use the Internet to make their voices heard; it is the way they choose to stand up and be counted. *Business* refers to the ways in which the Internet is perceived to impact an individual or the community related to spending, the creation of wealth, or other economic development activities. *Community Building* refers to those ways in which the Internet is perceived to impact a community by: bringing it together, helping to make it stronger, or contributing to its well-being in some manner. Community building refers to both virtual and geographical communities. *Environmental* impact refers to the ways that Internet use can halt depletion of earth's resources. *Societal Impact* of the Internet reflects participant's recognition of the growth of the Internet. *Personal Efficacy* refers to those ways in which the Internet affects a person's effectiveness, efficiency, productivity, or capability.

Data are represented three ways in Tables 4.1 and 4.2: data from participants involved in focus groups and interviews, data from the questionnaire, and aggregate data which combines responses from both sources.

Table 4.1 Positive Impact of the Internet



Analysis and Observations

Aggregate data was overwhelmingly positive; 183 responses (74%) were positive, 36 responses (15%) were negative, and 28 responses (11%) were not codeable. As seen in Table 4.1, the most significant impact was perceived to be in the areas of Information/Entertainment, followed by Education.

"A lot of the northern communities have limited resources for the students, and that's where the Internet is really good. You don't have the population to have an extremely large library, but once you have access to the Internet, that opens up all sorts of doors for you."

“They can find the newest information, while people who don't have a computer at home, they would have to use an encyclopedia, which is like 10 years old or something.”

“I think it is good for transient people too. There is a fair transient population in most centres in the north. Like I say, for checking e-mail, keeping in touch, or something to do quite often if you are not from a particular community, there is no theatres, you know, things to do in the evening are pretty limited. So, it does give people that are transient something to do.”

Interview respondents identified their top five positive impact areas as Information/Entertainment, Education, Community Building, Business, and Personal Efficacy. Questionnaire respondents only had four positive impact areas: Information/Entertainment, Education, Personal Efficacy, and Business.

Interview participants noted positive impacts in all areas discussed in the literature review except for the Environment and Science/Research. Although numerous references were made to “doing research”, activities described by participants were better categorized as information gathering rather than scientific research. Interview participants noted two additional positive impact areas: Societal impact and Personal Efficacy.

“I think it was back in 1984, David Suzuki had gone to Jasper and given a talk to business people at that time, and his theme was, that we're going to develop into two classes of people: the computer priesthood, disseminating information to the rest of us. Well, the Internet has completely turned that around now, so, those who are growing up, and the young, have turned that around so the computer literate people are going to be the vast majority in the future. So, that's a lot better than his example of how it could have been.”

“I just got e-mail and Internet access at work and I have been able to send files from my home computer that I was using for work purposes to my machine at work, so I think that that will be something that will be quite handy as well.”

Questionnaire respondents did not note positive impact in the areas of Electronic Democracy, Community Building, Environmental or Societal Impact, but did note a positive impact in the area of Personal Efficacy.

“I keep in touch with my friends down south.”

“In our community it helps us send mail faster than letters through the post office.”

“Get quicker responses.”

I believe that age played a role in the results. Ninety-six (96%) of interview participants were adults, whereas only 26% of questionnaire respondents were adults; the remainder were children and youth under 19 years of age. The high number of school-age children and youth responding to the survey, may have skewed results toward activities related to learning, playing and getting homework done.

“Made me pass grade 8.”

“Better grades because of research.”

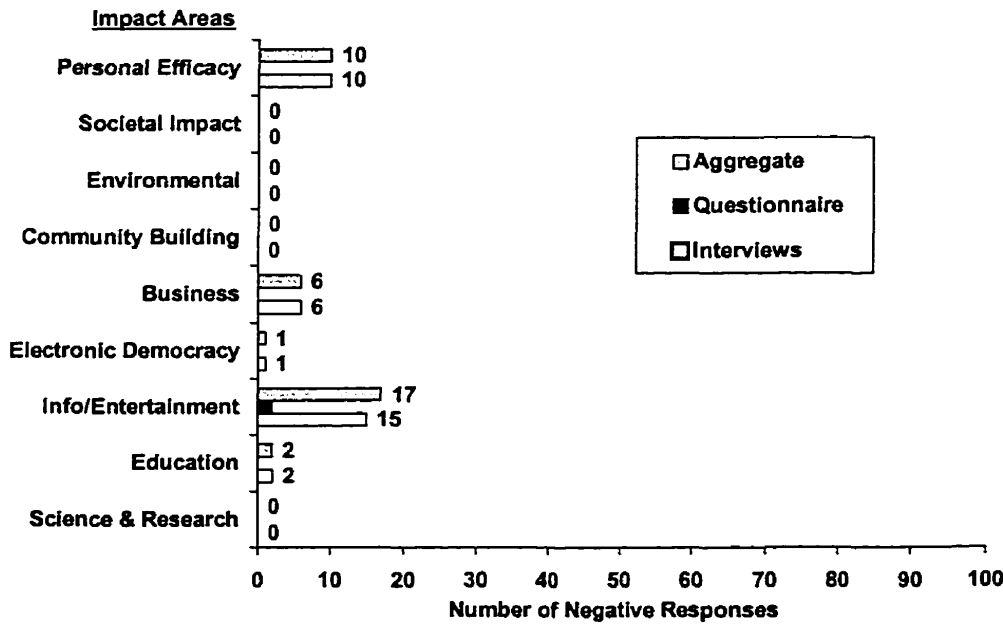
“Helps me complete assignments.”

As well, given the youthful age of most of questionnaire respondents, it may be unlikely to expect that they would perceive or use the Internet as a tool for social influence (environment, community building, electronic democracy, science and research), or in business. This is not to say respondents would not see the Internet’s potential impact in these areas, it may just be that they have not had access to the Internet for long enough for its impact to be demonstrated in these areas.

It is interesting to note that questionnaire respondents noted a positive impact in the area of Personal Efficacy more often than other respondents. This could be due to the fact that electronic communication and e-mail *“make it funner for life”* as one respondent noted. It may also be likely that the slightly higher number of responses are due to the number of questionnaire respondents, 105, compared to the 25 respondents who participated in interviews.

Some data were not codeable. I believe this may have been due to the wording of the impact question used in the questionnaire, but it could also be related to the age of the respondents. “How has the Internet touched you?” was recommended as the best approach to ensure that both English and Inuktitut speaking respondents could understand the question. I received 10 “It hasn’t” responses and 18 responses that were partial answers or otherwise uncodeable.

Table 4.2 Negative Impact of the Internet



As seen in Table 4.2, the aggregate, perceived negative impact of the Internet was greatest in the Information/Entertainment area (17 responses), indicating concern, but more than four times that number of responses were received for the Internet’s positive impact in this area. Common negative responses were the availability of offensive material, questions about the reliability of information posted on web sites, and the difficulty in finding information on the Internet.

“It’s so big that it sometimes boggles the mind. I mean, there is so much information, days and days and days you can spend on it and not even scratch the surface. I find that sometimes the categories are very general. And when you get into a specific category things pop up. And you just don’t expect things like that.”

“The ease and access to some really weird crap.”

“I think that the number of sex related sites is a big downfall, especially when you can look for pretty much anything and somewhere in your search you’ll come across sex, even if it is not related to it at all.”

“It’s different, I’m on the research aspect, when I was in university, because anyone can make a web page, and you have to be very careful where you’re getting your information. Because not all of it is true, and you have to realize, you know, that you can’t believe everything that you read. So, that’s the only thing, you know, just because it’s on the net doesn’t mean it’s true.”

Over reliance on the technology, feeling lost when e-mail is not available, overuse particularly in the area of online gaming are some of the reasons given for negative impact in the area of Personal Efficacy.

“You get to rely on it a little too much at times. When it goes down you just have no idea what to do.”

“The Internet has gotten me addicted to this online game called Ultima Online. It has made me lose marks in school.”

Throughout the literature, hopes were high for the positive impact the Internet could have; there was less concern about the dark side of the Internet. Project data supports the literature to some extent, but not entirely, since some impact areas were not mentioned at all, and two new impact areas were noted by respondents.

Study Findings (Part 2): A Look At Igalaaq's Success And A Little Advice.

I have found that it is sometimes easier to give advice than to receive it. I always wonder about the credibility of the person giving the advice; what do they know about things anyway? I wondered if people reading this project report might have the same thoughts, so I decided to see how Igalaaq measures up before presenting Igalaaq's advice to other NWT communities.

I used the "Checklist for Success" posted on the Community Access Program web site as the standard against which to measure Igalaaq's success. I then used comments from project participants, related to each item on the checklist, to paint a picture that shows how Igalaaq measures up.

This section is intended to provide additional context and ideas for other NWT communities wishing to develop a community access site. It is also included to recognize the community effort that went into making Igalaaq a success.

What Does Success Look Like?

The Community Post published the following Checklist for Success (Community Access Program web site).

Checklist for Success

- Build sites on broadly based community partnerships.
- Seek public input and support by conducting community needs assessments and developing responsive action plans.
- Include learning about community cooperation and development and about the technology of networking and the Internet a part of everyone's experience during the process of establishing a community access site.
- Do your homework. You have to be able to show that the project is technically and economically feasible.
- Rely on volunteers to keep the costs down so that you can make it an affordable service.
- Use the CAP project to build the community's capacity to manage its economic growth and development locally.
- Provide a way for members of the community to "internalize" technology. Build into your training plan a way for people to see how they can transfer computer and information technology into fields they had not thought of using it in before.
- Plan carefully for financial self-sustainability.
- Personal enthusiasm and commitment are essential for successful community access sites.
- Partnerships between the different levels of government are key elements.
- Foster a visionary approach to finding new sources of employment and economic growth.
- Create your own publicity, generate lots of excitement, and do some good P.R. work.
- Use students to help with the site set-up, technical support, training, and home page development.
- Act as an Internet broker for any kind of a business.
- Promote advertising on the Web since Internet can be targeted to a high-end market.
- Judge the impact of the community access site by monitoring computer sales in the area.

Other NWT communities may look at the advice provided in this section on Study Findings, or even at this Community Post - Checklist for Success and still wonder how Igalaq did it. I trust this next section, in which participant's own words have been used to tell Igalaq's story, will provide additional context and help readers understand what success can look like, as well as show just how well Igalaq measures up.

Does Igalaq Measure Up?

Build sites on broadly based community partnerships.

"I think we were lucky to have buy in from Day One, and have the Community Education Council say, yeah, you don't have to pay anything for utilities, you don't have to pay anything for rental of the space. We'll use it during the day, and you can open it for public hours in the evenings and weekends. Because we sat down I think, for the report, and tried to figure out, OK, who are our partners in this and what have they put in dollar wise? And we figured out utility wise, and rental wise and daytime supervision and maintenance and that kind of stuff, the CEC just was off the roof as the top sponsor."

(Participant November 14, 1998)

"But there was a lot of support from businesses in town. Certainly Tittaq put in a lot, donated a lot. There's a lot of machines in there that have commercial support, which might be harder to get in the small community where you might have the Hamlet, the government office and that's it."

(Participant November 14, 1998)

The other outstanding thing they did was the relationship that they managed to develop with business and with their local ISP [Internet Service Provider]. ISPs normally start out very friendly and become increasing hostile as time goes on because they seem to be quite exploited by this whole process and that hasn't happened in Rankin so whether that reflects on the Igalaq center or on Sakku, I'm not sure who is responsible for that.

(Participant January 25, 1999)

"Sakku has made all this so terribly possible, and from within Sakku's ranks, it was Ron's vision, for creating the ISP in the first place. To go ahead and create the arctic.ca domain... .. he'd say, OK, so what can I do? How do I make that happen? And that is exceptional. That is why Leo Ussak and Sakku won the national Partners in Education Award from the Conference Board of Canada."

(Participant November 30, 1998)

Seek public input and support by conducting community needs assessments and developing responsive action plans

"Whoever is trying to organize it, you better have a clear idea of why they want it, what they're going to do with it, who's going to supervise it, what are the costs involved. And all the other common sense things that you would hope people would think about when they go to set up something new. A lot of times you have people who jump in with both feet, and they get half way through the water and they say, oh we never thought about that, we never thought about this. That happens occasionally too. But a lot of planning will help it out."

(Participant November 14, 1998)

"And so, we began a consultative kind of process, a grassroots kind of process, where we held a series of Internet cafes, and between the tapes and the, looking at it now with this agonizingly slow connection, we developed this wonderful ground swell of support....and as people would come to these cafes.... they could sign petitions. We asked if the business people or parents or government leaders that happened to come, we asked if they could write letters of support. And over the course of weeks and months, we were able to get this wonderful collection of letters and endorsements, and business people coming forward and saying, yes, this is a great idea, and some would actually cough up some dough."

(Participant November 30, 1998)

Include learning about community cooperation and development and about the technology of networking and the Internet a part of everyone's experience during the process of establishing a community access site.

"We even had, one weekend in the spring, if we could get funding to get wired, to put in a network in the school.....almost like a modern day barn raising....and they put in all the electrical infrastructure so it could grow."

(Participant November 30, 1998)

"Igalaaq is very beneficial. At the school it's very beneficial and that's where you get the partnership.... that's where the education boards and everybody else in the community sees ...OK, the badminton club, I mean, if you have just Badminton players, the Badminton club, what benefits does it support? Just those people who want to play badminton. Well, this is far more reaching than that - it's benefiting every classroom. Every classroom comes through that Centre now, at least once or twice a week and spends an hour on those computers. The school is benefiting from it too, the businesses are benefiting from itthey're getting thank-yous and welcomes, because of that, Rankin and all the businesses have got a world-wide, you know, everybody knows what's in Rankin Inlet because it's posted out there."

(Participant November 14, 1998)

"The Community Access Program as I see it, is not about getting money from the government for computers. The CAP program, as I see it, is about community building. It just happens be that the tools tend to involve information technology."

(Participant November 30, 1998)

Do your homework. You have to be able to show that the project is technically and economically feasible.

"I think one of the big things about Igalaq, is they don't really rely on government funding. Government funding will run out. Look to the local businesses. I'm sure if there is somebody with a keen interest in starting up a Community Access Centre, approach the local businesses and say, hey, we want to do this, would you donate a little something? Whether the company wants, maybe they could put their stickers all over the machine if they want as long as they...it will be great advertising for the company and basically free equipment for the Community Access Centre. Don't rely on government funding."

(Participant November 13, 1998)

"Maybe the key to being able to last as long as we have, to last into the future, is that connection to the school. Because the kids treat the school differently than they treat the drop-in centre. If the computers had been in something like the Yacht Club where we have the drop-in centre, I think you would have a higher incidence of mortality to our hardware. Because there is a certain level of respect that you get in the school environment, they know the rules that come with the school. And those rules get put onto Igalaq when Igalaq is in the school."

(Participant November 14, 1998)

Rely on volunteers to keep the costs down so that you can make it an affordable service.

"We have had both people from cultural backgrounds, we've had volunteers who say yeah, yeah, I'll be there, but who don't show. So, we went with the buddy system for awhile to try and cover that, but, yeah, you're going to have quirks no matter what you do. But we'd be dead without our volunteer base."

(Participant November 14, 1998)

"Just try to get the community involved, make sure everybody knows about it, and I would imagine that sometimes these things get up and going and they use it more for the kids in the school. Just make sure that the community knows about it and keep improving and get as many people involved as you can, because I know there's a lot of volunteers through here, and it's once a month. And people say, oh, I can give two hours a month, that's not much, and it just comes from there and we talk about it. Just make sure everybody in the community knows."

(Participant November 14, 1998)

"Again, you've got to find a way to attract people from the community who are long-term residents of the community. Not disrespectful to any who come and go, but a lot of us come and go, and these others, the long-term residents are here for their life. Maybe they could attract some of the kids from the junior high, and high school now and get them volunteering or working there. Then maybe as they get older and get a job, maybe they would still contribute a couple of hours a week."

(Participant November 14, 1998)

Use the CAP project to build the community's capacity to manage its economic growth and development locally.

"I think though, that you have to work within your own community's resources, and that not every community is ready to take this on ...Perhaps people need to wait another year before they just put in an application and then blowing it and finding out there is no sustainability.... People really have to look at their own community and say, are we ready for this and if so, how can we make this broadly based so that's everybody is on the same page and that it is a shared vision and then it will be sustainable."

(Participant November 30, 1998)

"It is really worth somebody in the community searching out additional funding. You can have your CAP site in the Northern Store and use the school for the CAP employment, youth training centers, you don't have to have everything in the same spot, you know it is community's choice. You can use your entire community if you want. You can have one CAP site in the Northern Store, one in the school, one in the municipal office so that people have access sort of no matter where they are. But there are lots of different funding that isn't being use because people a) don't know about it and b) simply don't have the time or knowledge to go about applying for it."

(Participant January, 25, 1999)

"People have to know, is this a shared vision in the community of what this is about. Or, is it one group of business people who think they can just get some computers and have some kind of economic development-training thing. If it has only one angle, then it's probably not going to fly. If it's going to happen, it has to be sustainable, and if it's going to be sustainable, you have to have a broad sweep of people in the community who are willing to support the vision."

(Participant November 30, 1998)

"The problem is that we don't have Internet access, local Internet access in town. So one day while chatting with some colleagues at the local hotel and I said you know maybe this is a project we should be getting into, turn it into a business opportunity so everybody agreed. I contracted some people to do a little bit of research on the market, the technology, expenses and the procedures for doing all this and they came back with a report, it looked good. I spoke to my Board of Directors and they said they wanted to invest money and I said it could be \$60,000, you know I'm getting servers, some staff, space, phone lines and modems and everything and some software to run all this and the board listened to me for a while and after I explained it all to them they got the idea that I wasn't talking about the moon here I was talking about something that would actually benefit the community so they agreed."

(Participant January 20, 1999)

<p>Provide a way for members of the community to "internalize" technology.</p>

"Maybe we'd have something for the older people...because a lot of them are very nervous to come out, never touched a computer, you know, haven't seen them in the workplace that much. Just have a seminar, we'll show you how to turn it on - cause I didn't know how to turn it on when I came, and just simple stuff like that so they feel more at ease about coming. And after that they come back, they're comfortable coming back, they say, OK, I know how to turn it on, and that sort of stuff. Because a lot of the older people, they just don't know."

(Participant November 15, 1998)

"And they're actually having fun, you can't deny it, even if there's 40 kids in there and yeah, there's always a couple of trouble makers and yeah, and there's always a couple that you want to transplant on a different planet. But for the most part, you know, there'll be some kids that will come up to you and says, look what I have, I just printed this out or look, I just finished this math thing, and sure, yeah, you did."

(Participant November 14, 1998)

"I'd have to say, that if they do start something, offer some sort of introductory courses, or, just bring people in, offer doughnuts and coffee and just get them introduced that way and show them it's not that scary. Offer them a list of interesting web sites that they can check out. Like one of the first things is, there's so much information where do I start? Well, here's some topics and here's some really good sites, go check these out. Then don't be afraid to link to this one or that one or wherever. Introduce it to people, just open it up and say, there it is, go ahead."

(Participant November 15, 1998)

Build into your training plan a way for people to see how they can transfer computer and information technology into fields they had not thought of using it in before.

"I like teaching children about the Internet. I don't know, I think I want to be or a teacher when I grow up, so it's sort of like my practice sort of, for teaching kids and adults. I enjoy it."

(Participant November 14, 1998)

"So, as word got out that the dream was coming alive and that this thing was happening, it wasn't such a hard sell now to talk to the business people and say, you know we have this dream of doing this thing for the community and this place for the school kids and teachers can use it during the day, but then, each evening and weekend we'll open it for the entire community, what do you think about that? How would you like to have employees that are more computer literate, how'd you like to have the opportunity to be a part of something that serves everyone in the community and a lot of wonderful things started to percolate."

(Participant November 30, 1998)

Plan carefully for financial self-sustainability.

"There's a lot more to it than just throwing a bunch of computers in a room. It takes a lot of money."

(Participant November 14, 1998)

"Donations. Certainly for hardware purposes.... Money, there's lots of programs, Brighter Futures program, make sure you access everything that's out there.... Don't ever neglect the south for foundations, bursary programs in the south, there's a lot of money out there."

(Participant November 15, 1998)

"Government funding is just too arbitrary I mean, there one day and absolutely gone the next. If you don't have some kind of community support for it, a) you won't be able to find the money and b) you won't be able to get the support to harass the government to go into that business. So I think that the community development part for me is the biggest, the technical, if you have the community well, the technical can be dealt with. But without the community, well you have great technology sitting in a room not being used."

(Participant January 25, 1999)

Personal enthusiasm and commitment are essential for successful community access sites.

"The thing that was mentioned though about having somebody as really sort of a spokesperson I guess, to garner that support. I know Bill was very good at that, you know, calling people up and saying we'd like your support and we'd really like you to volunteer, and if your business could help out. ...I hesitate to use the words arm-twisting, but really, you know, convincing and lobbying for support, from individuals and businesses and government."

(Participant November 14, 1998)

"I think it is absolutely critical, that if the community doesn't have someone who is willing, one person, to take it and run with it - I do not think it can be done by a committee, because then nobody has the real sense of responsibility for it - If you don't have a teacher or a person ...who is willing to take it and be responsible for it, until it is built, until it is running, then you can start to expand the circle. But if you don't have that...I don't think that the community is going to be successful if it is done as a bureaucratic function. You'll start losing programs, you'll start having things go wrong with your hardware, things go wrong with your software, you'll get a virus in there. If somebody doesn't know how to deal with it, it will trash the whole thing. Irresponsible use and lack of security on the hardware, the software and everything can ruin it. So, if a community wants to have this, then they should have a person, or at least an extremely small group that really says we will go with it. We will do it."

(Participant November 15, 1998)

Create your own publicity, generate lots of excitement, and do some good P.R. work.

"I think it's the newsletters that are sent out to the public, making them aware that Igalaag is available for everyone. All ages, all walks of life, to come in and access - use the facility."

(Participant November 15, 1998)

"And I know that a lot of the time even when I'm there, people come up to you....people can approach you. And then the word of mouth, everybody in town just knows what's going on, there's so many people that know about it and volunteer here. And you get people recruiting and then you have new people. Like, I knew about the Access Centre within two days of being here. It was someone or other. ...said, oh there's an Access Centre here, it's just over at the school."

(Participant November 15, 1998)

Partnerships between the different levels of government are key elements.

"I think you've got to make sure those people are on side, like you say support from the DEA. I know when I approached the Hamlet in regards to funding and I asked for their support. ...and they did the payroll for us this summer I believe, and they took over stuff like that, so just by having the DEA and the Hamlet on board worked out quite well."*

(Participant November 14, 1998)

"DPW was good, they provided the wire and the cabling, if I recall."*

(Participant November 14, 1998)

Note: DEA = District Education Authority; DPW* = Department of Public Works, Government of the NWT*

Foster a visionary approach to finding new sources of employment and economic growth.

"Right now Rankin is probably starving for some technicians. There's a lot of work to be had. Maybe software, database access, the town needs a little bit of everything. Software is great, if you learn a particular piece of software. You could probably train a whole group of people to do it. Because computers are selling practically every day. Somebody will want to learn something about their computer, whether it's a new feature or an old feature that they've never used. Programmers wouldn't hurt any, web page designers, anything, if you've got a keen interest in computers I'm sure you can get a job somewhere."

(Participant November 13, 1998)

"They could go out and do their own things and realize that there was a sort of entrepreneurial aspect that could come out of this for some of the young people. ... There's so many things that have yet to be developed that could be done."

(Participant November 30, 1998)

Use students to help with the site set-up, technical support, training, and home page development.

As for web site development, everybody is starting to notice that anybody can have a web site. We've got a few customers who are starting to post web pages on our server. Unfortunately we don't make them yet, but they can hire someone through the net!

We do have a group of people in each communities called the Web Weavers who are creating web pages."

(Participant November 13, 1998)

Act as an Internet broker for any kind of a business.

"There's just a ton of these kind of things that we did, we collaborated on. ...this whole tele-service thing is just in its infancy. I believe it's going to be huge, just huge. I think, we were, we didn't realize it at the time, but we were so far ahead of our time."

(Participant November 30, 1998)

"We don't offer any training service on the Internet, so you either you learn it by yourself or you learn from somebody else like Igalaq. ... Igalaq could probably teach a lot of people a lot of things, whether it be Internet or they're big on Macs. But Internet is universal, it doesn't matter which you use."

(Participant November 13, 1998)

Promote advertising on the Web since Internet can be targeted to a high-end market.

"Well, aside from being just a part of the community and helping, I mean the Centre was open to everybody, so that was a big benefit. But anytime they did any kind of fund-raising, or put our logo on the web site, people could dial in, they could get our e-mail from there, they could ask us questions. So, there were a few little contacts that came through that way."

(Participant December 7, 1998)

Judge the impact of the community access site by monitoring computer sales in the area.

"I have given the Centre free access and letting them give out free Internet at the school, I think it's on Tuesdays and Thursdays. Actually a lot of them have gotten hooked and they want access at home also. So, it's promotional."

(Participant November 13, 1998)

"Oh yeah, when we first started we expected to get about 10% of the population signed up on Internet. Which is what, basically from what we've heard the stats were on Internet sign-up, for throughout basically the rest of Canada. We've hit 20% so far, so it's great."

(Participant November 13, 1998)

"The number of computers in town and the number of people that know how to use a computer is quite huge. Lots of people know how to use it. ... so I'd say it's higher up here than it is pretty much anywhere else."

(Participant November 13, 1998)

"Yeah, we do sign-ups [e-mail] probably once or twice a day. There's people signing up. ... it's pretty solid right now. People signing up outside the community are starting to increase slowly."

(Participant November 13, 1998)

Advice From Iglaaq Community Access Centre to Other NWT Communities

LAYING THE GROUNDWORK

- **PLAN**

Planning is everything. Take your time. Develop your CAP proposal slowly so that it becomes a guide for future actions. Think of eventualities and unintended consequences.

- **FIND A LEADER**

You need a leader or a champion. Find someone who will help the community organize, answer questions, and build enthusiasm for the project.

- **GATHER A CORE GROUP**

At some point, the leader or champion must bring in a core group of people to help develop the project. One person cannot do it all on his or her own. The leader or champion must also know when to let go. Be careful not to create an impression that the leader or champion is handling everything and there's no need for others to get involved.

- **COMMUNITY SUPPORT IS KEY**

You must have community support and commitment for the project. Expect to take time to explain what the project can mean and how people can contribute. Without support and commitment from many people, groups and businesses, your community access site will not last long. Commitment is built through involvement.

- **BUILD EXCITEMENT**

Show the potential for a community access site in the community. What could be? Create awareness, build excitement and look for ways to get commitment from community members. Create a logo and a name for the site with input from the community.

- **DETERMINE COMMUNITY READINESS**

Is your community ready for a community access site? Developing the site takes work and sustaining it takes even more effort. Ask questions, encourage community discussion, and listen to what the community is telling you.

- **CREATE AWARENESS**

Keep people informed throughout the sites development. Host information sessions and fund raising events.

- **PARTNERSHIPS**

Develop win-win partnerships that value the contribution each of you make. Encourage partners not to only put money into the project, but people as well.

- **FINANCIAL PLANNING**

Recognize that you will need money for the site to succeed. Don't rely on government grants. You will need ongoing financial resources to sustain the site. Always be on the look out for funding opportunities and sources of donations. Connectivity costs will most likely be your biggest financial drain, be prepared for it.

- **START SMALL**

Build your site before you get federal funding for it, then you'll know you have community buy in and support. Look at the things you can do now to improve technical capacity in your community in preparation for connectivity.

- **YOUR CAP PROPOSAL IS YOUR PLAN**

Take your time preparing your CAP proposal. Fill your proposal with dreams, the community's shared vision, and the plan for making the site a reality. Make sure that people who support the project have said so in writing.

- **LOCATION! LOCATION! LOCATION!**

The best location is a shared resource. Look for ways to tap into resources that already exist. For example, if you want to put your community access site in a library, is it already staffed? Can facility staff help out with cleaning or supervision? Can technical staff's help out occasionally? Find a way to build on your community's assets.

- **IF YOUR SITE IS IN A SCHOOL**

If you're building a community access site in a school, make sure to develop strong relationships with the school staff and administration. Look for ways to share resources. Procedures for use and security must be considered. Try to ensure that students from other schools get equal access to the site during the school day. This is especially important in small communities where the community access site might have the best and most equipment in the community

- **HAVE FUN!**

Plan a work bee! Make sure the work times are fun times as well.

THE DAY TO DAY

- **VOLUNTEERS - HELP THEM HELP YOU**

Volunteers might be intimidated by computers. They need not be. Let them know that an interest and a bit of time are all that is needed. Provide a brief orientation session for new volunteers. Make sure volunteers know they will learn while they are volunteering. Make the volunteer commitment minimal, one or two hours a month can work well.

- **LOOK TO YOUTH**

Recruit youth volunteers. In the north, many youth stay in their communities, they could be good, long term volunteers. Try to find ways to involve hard-to-reach kids. Work with teachers to see which kids don't seem to be into sport or other activities and invite them to the site. They might have an interest in information technology and become a volunteer.

- **BUDDY UP**

Consider a buddy system for new volunteers. Pairing up new and experienced volunteers will help everyone feel good.

- **TAP INTO YOUR COMMUNITY'S STRENGTHS**

Develop a volunteer base reflective of your community. Look for ways to involve long term residents in the project.

- **HELP PEOPLE LEARN**

Encourage volunteers to be helpful supervisors, a resource for people who come to the site and want to learn more about computers and the Internet.

- **CALLING ALL TECHIES**

Find out who the technical people are in your community, ask for help, then try to learn more about the technical side of things from them.

- **THANK YOU!**

Give credit where credit is due. Recognize volunteer contributions.

- **EQUIPMENT MATTERS**

Try to get up to date equipment with a combination of both PCs and Macs for your site.

- **LET A KID BE THE TEACHER**

Kids know a lot about computers so don't be afraid to ask them for help. They may know something that you don't!

- **SUPPORT LOCAL BUSINESS**

Build a good relationship with local computer companies (if you have any) so if you do need them, they'll help you out immediately. Local business is also a good source of volunteers. If you have an arrangement with an Internet Service Provider (ISP), try to consider your needs down the road. What will you need to ensure growth? What will the ISP or supporter need to be continue supporting you? Recognize that at some point you may have to negotiate change. Find ways to work together.

- **ORGANIZED BUT NOT STUFFY**

Keep your organization fairly informal if you can, but know that you will need to discuss how to handle difficult situations that arise. Develop a few policies for volunteers and users. Will you charge for printing? Can users book a computer in advance? Is there such a thing as an inappropriate web site? What will you do when people start looking at them?

- **KEEP YOUR SUPPORTERS INVOLVED**

Continuously involve supporters. Supporters have something to offer throughout the Site's development and ongoing life. Don't forget about them after the Grand Opening. Recognize their contributions on an equal, ongoing basis. Make sure they know about upcoming activities and events. Host special evenings for the local businesses and their staff that contributed to the site. Try *not* to make a habit of contacting your supporters only when you need something.

- **PROMOTION CAN NEVER END**

Promote the access site within your community through newsletters, word of mouth, newspaper, radio, on your web site, through posters, on the community TV channel and in local hotels so that both visitors and residents know about it.

- **THE PLACE TO BE**

Make the site an inviting place to visit with room for jackets, room for kids to color and do homework, community bulletin boards, suggestion boxes and a resource area are all welcoming touches. An access site that is considered a hang out is okay if its making a positive difference to kids in the community, but try to discourage kids from running around because it makes it hard for others to work or do homework. Make sure the access times are clearly posted.

- **SPECIAL GROUP EVENTS**

Consider special times for special groups: families, Elders, adults, children, and youth.

- **TRAINING**

Consider stocking your site with educational CD-Roms that can be used with the Internet or as stand alone resources. Consider one-on-one time to give new users an introduction to the site. Host "Introduction to the Internet" sessions or "Internet Cafes" for the community. When hosting an introductory session, give people basic instructions, then give them time to play. Pre-search web sites that might be of interest to special groups - e.g. Elders.

- **A FEW PAPER CUTS WON'T HURT**

Keep a few records about important aspects of your site's development and operation. This information will come in handy if you want to compare where you are to where you've been.

- **HIRE A STUDENT**

Try to hire students to take pressure off the volunteers. It's also a great way to help students build skills for the future.

MAKING IT WORTH THE EFFORT

- **GIVE YOURSELF A PAT ON THE BACK**

Be proud of your efforts. People will be more likely to support you.

- **LET THE WORLD KNOW WHAT YOU'RE DOING**

Promote your community and the community access site to the world. Web sites are one way to attract visitors and business to your community.

- **LOOK FOR SUPPORT FROM OTHER CAP SITES**

Network with other communities. You can learn from them and they can be good sources of support.

- **BE FUTURE FOCUSED**

Things change. Plan for the future. Build for growth or expansion if necessary. Be open to unique solutions.

Study Recommendations

Looking Ahead to Igalaq's Future

Igalaq had advice for other communities, but project participants also had advice for Igalaq.

This section includes recommendations to Igalaq volunteers about what they could do in the future. People involved in Igalaq are not the kind of people who rest on their laurels. They are looking for ways to build on what they already have. Igalaq has already done some planning. In April 1998, 13 Igalaq volunteers held a planning session to create ideas for the future of Igalaq. Their "Hopes/Desires for 5 years from now", taken from the minutes, were:

- *Perception of Igalaq as a school-based activity. Would like to see a truly community organization.*
- *Bigger, more public.*
- *Reach out to Inuit, adults, non-digital population.*
- *Attract adult population, Inuit adult population.*
- *Long-term written agreement with District Education authority (DEA) about physical space utilization for Igalaq.*
- *Agreement (written) with Sakku for long-term support/connectivity.*
- *Have Igalaq, DEA, Sakku, Hamlet lobby Nunavut government to make tele-centre for Rankin based at Igalaq and obtain dollars to hire a coordinator for the tele-centre.*
- *More programs, courses.*
- *Complete inventory of assets belonging to Igalaq.*
- *Continue link with school to better utilize computers i.e. school uses during day, Igalaq uses during night.*
- *More training for adults on simple introductory things i.e. using the computer, word processing, etc.*
- *Training of volunteers.*
- *Diversity i.e. Mac and PC computers.*

(Igalaq Meeting Minutes, April 7, 1998)

The group then asked themselves "what areas can we improve on?", and "what suggestions can you make to bring about these improvements?" Ideas which emerged were:

- *Higher level software i.e. Adult software (e.g. spreadsheets, taxes, Quicken, marketing for small business).*
- *Revenue Canada trains volunteers in the community to do taxes. Next year we should approach them and offer to make Igalaq the volunteer tax centre and use software provided by the government.*
- *Use standardized programs (i.e. Programs which are in offices in the community e.g. Microsoft Office).*
- *Look into purchasing or asking for donation of self-paced courses to be offered through Igalaq.*
- *More organized, more structured (formalize procedures, formalize partnerships)*

- *Creation of sub-committees (funding, web site, policies and procedures, training).*
- *The funding committee could compile a mail out package to send out to potential sponsors.*
- *The web site committee should use the site to advertise resources and services. Also check to see if we can get an easy to remember domain name like www.igalaaq.ca (Igalaaq Meeting Minutes, April 7, 1998).*

Six months later, as part of this project, participants were asked two things: their dreams for Igalaaq, and what could be done to encourage more people to use Igalaaq. The responses have been gathered, organized and analyzed and are included below to assist Igalaaq volunteers with future planning.

Participants' advice or recommendations to Igalaaq have been clustered into five areas: Sustainability, Physical Changes, Services Offered, Hopes for Nunavut Government, and Specialized Promotion.

Sustainability

- *Make Igalaaq self-sustaining and self-sufficient; keep the doors open (4 responses).*
- *Find a steady funding source. Fall under the education umbrella and get funding on a more permanent basis.*
- *Make money at some point. Possibly consider a \$20 annual membership fee or charge for paper (printing).*
- *More formal structure is needed outside the boundaries of volunteerism.*
- *Coordination is needed. Everyone needs to get on the same page and recognize these are shared resources.*
- *Keep promoting the Centre within our community.*
- *Celebrate our new beginning; a key person has moved on but Igalaaq is still going strong.*
- *Igalaaq could become the virtual hub of the community.*

"That Igalaaq becomes the virtual hub of the community - not physically, but it could be the hub in a sense, where everybody dials in and checks on this and that. The local news, the local weather, if you want to rent a snowmobile or ATV or put a local business through the Internet, or through the town's intranet. Then if you want it to go out to the Internet, whether you go through your own service provider or whether Igalaaq is the service provider. That's how I picture access centres."

(Participant November 14, 1998)

Physical Changes

- Move Igalaaq to a location outside the school or disassociate it in some way from the school. This would help residents know it's a community resource and students would understand that the Centre is also for the community's use. Moving out of the building would help with security.
- Physical expansion is needed; Igalaaq is not big enough.

Services Offered

- Ensure the Centre has both Macs and PCs (2 responses).
- Teach people how to use both Macs and PCs.
- Development of a community intranet.
- Igalaaq could become a service provider.
- Igalaaq should not become a service provider. The town is not big enough for two.
- Would like to see people able to log in from home to Igalaaq.
- Host Saturday afternoon "how to" sessions every other month on the basics of software and web page design.
- Offer Internet Cafes; they were good ways to bring adults to the Centre.
- Continue to employ the students that volunteer at the Centre all year long.
- Reinststate special nights for different groups. Make it a little more organized the way it used to be - too many people in there scares off volunteers and new users.
- Work on improving children's reading ability. Ensure that pre-testing is done (baseline data needed).
- Need to find ways to channel and use technology as a tool to strengthen and support Inuit Culture. E.g. work with Inuit Cultural Institute to archive Inuit culture in digital form, create CDs about Inuit culture.
- Igalaaq can be a multi-media resource centre for Inuit cultural resources.
- Develop web sites to promote tourism potential and arts and crafts available in the community. These web sites could be direct sales points for artists.
- Igalaaq could be a training centre like Nunavut Arctic College.
- Use Igalaaq as an information technology training centre for teachers.

Hopes for the Nunavut Government

- When the new Nunavut government is created, maybe it will mean computer upgrades for the school, and therefore the Centre.
- Would like to see Nunavut government commit to hiring and training a local Inuit person to be a full-time resource person for Igalaaq.
- Learn more about how Igalaaq can become the Nunavut government's tele-service centre for Rankin Inlet.
- Libraries need to be bolstered and strengthened because they're in the information business too. They need a full time librarian and a multi-media resource centre available to all.
- Rankin can be a prototype for other community access centres in the Keewatin.

Specialized Promotion

- Need more adult involvement at Igalaq.
- Would like to see computer literate high school students graduate then move into volunteer positions at Igalaq.
- Continue to focus on volunteers and sponsors.

We also asked questionnaire respondents “What could we do to encourage YOU to come out to the Centre?” Eighty (80) participants, or 76% of all respondents answered this question. Interestingly enough, twenty-one percent (21%) of the answers were non-committal, either “I don’t know” or “nothing” answers, which could mean that things are fine the way they are, or that people are not familiar enough with Igalaq to have an opinion.

Responses from participants, about what Igalaq could do to encourage them to come out to the Center are listed below in priority order, according to the number of responses received.

- Increased promotion of Igalaq within the community.
- More training opportunities.
- Review the hours of operation (open more often, for longer hours, etc.).
- Schedule specialty times for specific age groups like adults, teens, and families.
- Include structured activities for various specialty groups during Centre operations.
- Better software is needed.
- Better equipment is needed.
- Better Internet connection is needed.
- Rearrange computers in the room to accommodate different activities.

How does the planning done by 13 volunteers compare to the comments made by project participants? The level of detail in some responses differed, but suggestions for action in the areas of solidifying partnerships, training and services offered through the Centre, upgrades to equipment, promotion and funding all mesh. There were however some contradictory suggestions made by respondents. Igalaq volunteers will have to carefully weigh the value of these suggestions before implementing them, since there is potential for a fixes that fail (Senge, 1990) scenario; implementing, some suggestions could change the something that contributed to Igalaq’s success.

Observations and Final Recommendations

When project participants were asked “What are your dreams for Igalaq?” they voiced hopes for a future that current Igalaq volunteers are already planning toward. In my opinion, Igalaq volunteers have their finger on the pulse of the community’s needs, because respondent’s suggestions echo ideas put forth by Igalaq volunteers in their April 1998 planning session.

I noticed that the future-focused question about dreams for Igalaq made respondents pause before answering. Perhaps the question was confusing or too ethereal for some, or perhaps, by simply asking the question, it put an unspoken connotation on the question - as if something is wrong with Igalaq that needs to be fixed. As one project participant noted

“I’m not good at dreams actually. I’d like to see them do really, really well, they have done great up to now...I can’t see them bettering it but I’m sure they will. They’ve done a great job, I don’t know what else they could actually do.”

(Participant November 13, 1998)

This comment reflected the overall positive nature of the responses, and even though there might be a few comments that stood out, I believe that the answers reflect the Centre’s state of development; the Centre is experiencing growing pains common to all organizations as they mature. The ideas and suggestions offered by respondents reflect Igalaq’s growth and sincere effort being made by volunteers to build on what they’ve already accomplished.

Project participants note ways to improve on an already important community service which offers free access to the Internet. What will now be required is a dedicated effort by volunteers, partners and the community to build on their success. Community involvement and commitment is the key element to implementing all of the suggestions.

I believe that action in two areas could help realize the dream of seeing Igalaq become the virtual hub in the community and might eventually result in more residents coming out to the Centre. The two areas are:

- 1) Igalaq has the potential to be recognized as Rankin Inlet’s teleservice centre.

Teleservice centres, also referred to as telecentres or teleoffices, are multi-purpose centres that provide telecommunications and computer facilities and support in small communities. The Nunavut Implementation Commission (1995, 1996) explored the community teleservice centre concept for its use in meeting telecommunication needs for both the public and private sector. Their reports concluded that “the cost to government need not be great if telecommunications services are leased from the private sector, and if public and private sector telecommunications service and training needs are combined at one location in each community” (Nunavut Implementation Commission, 1996, p. i).

The Nunavut government will be decentralized, relying heavily on information and communication technology to conduct business. Now is the time to investigate the status of the Nunavut teleservice centre proposal and ensure that Iglaaaq is able to take advantage of any potential opportunities to extend the services it offers within the community. The teleservice centre concept, if implemented, could also be a potential source of long-term, stable funding for Iglaaaq.

2) Iglaaaq and the technology it offers can be used to preserve and share Inuit culture.

One concern I heard repeatedly was that long term residents, particularly Inuit adults, were not using the Centre very much. Users typically tended to be children, youth, families, and some visitors. Perhaps there is a larger role for Iglaaaq to play in using technology to preserve and share Inuit culture. There may also be an increased opportunity for Iglaaaq to become more involved in language or literacy initiatives, since they have the technology in place to play a role.

Iglaaaq is on the right path. They've asked themselves and their community what is needed, now they need to turn to the community for help in implementing their recommendations, and realizing their dreams.

CHAPTER FIVE - RESEARCH IMPLICATIONS

This chapter includes my observations about what Igalaq, the participating organization, and Municipal and Community Affairs (MACA), the project sponsor might do with the project results.

The underlying problem prior to this project was a lack of information. We wanted to know more about the impact of the Internet and we wanted to know more about successful CAP sites so that we could provide quality advice, information and assistance to NWT communities. In addition to exploring those questions, we also found out more about:

- how project respondents feel about Igalaq and its impact on the community
- how people are using the Internet
- what Igalaq could in the future do to encourage more users to the Centre.

Now that we know all of this, what do we do? How should we operationalize information, understanding, and advice? My suggestions are listed below.

Implementation

Igalaq Community Access Centre Volunteers

What steps should Igalaq take to implement the suggestions included in this report?

Igalaq is a successful community access site; they have received numerous awards, and when we compare their experience to the CAP Checklist For Success it is evident that Igalaq measures up.

Igalaq is a volunteer group. This group of volunteers is supported by committed staff and administration at Leo Ussak Elementary School, the junior and senior high schools, the District Education Authority, local business and others in the community. The Centre's success is indicative of the community's spirit, effort and commitment to make Igalaq an essential resource in Rankin Inlet. As volunteers, work with Igalaq is a part-time effort and many of the people involved wear more than one volunteer hat. These project results are offered to Igalaq as an aid to help those involved continue the good work they are doing and as a tribute to their work to date.

Project participants noted a number of ways that Igalaq could be improved. Some of their recommendations are minor, some will require careful consideration before deciding to implement them or not. Igalaq volunteers have already undertaken one planning exercise, so the recommendations offered in Chapter Four will give them more information to work with in future planning.

I would also suggest that Iglaaaq use these project results whenever it is necessary to demonstrate the impact that both Iglaaaq and the Internet have had on their community.

Iglaaaq has a reputation as being a “can do!” community. Their track record for doing things well can be put to good use now as the Nunavut government looks for innovative ways to lead residents into the new century. With the technology know-how building in Rankin Inlet, and the resources available through Iglaaaq, there could be an opportunity to play a role in technological development and training within the region and in Nunavut. Now is the time to be talking to the Nunavut government about potential roles that Iglaaaq can play.

I would suggest that Iglaaaq give consideration to the developmental or mentoring role they might assume for other NWT and Nunavut communities. Setting up and sustaining a CAP site can be a daunting task. Iglaaaq volunteers have already traveled this electronic highway, now they can help pave it for others.

Municipal and Community Affairs (MACA)

As project sponsor, there are a few things that we at MACA can do to implement study findings.

Study findings can be used to help other communities learn from Iglaaaq’s experience. We are in a position now to use what we have learned from Iglaaaq when providing advice, assistance and information to other NWT communities wishing to establish CAP sites. Advice to NWT Communities will be provided to regional coordinators and will also be published on the Wire North web site. Sharing project findings will be part of the advice, information and assistance provided by MACA staff and Wire North contractors.

Municipal and Community Affairs has responsibility for communities in the NWT. In Nunavut, the Department of Housing, Transportation and Community Government has responsibility for working with community governments, but it has yet to be seen which department will lead community information technology initiatives. This report will be provided to the Nunavut government so that government staff can be better informed about CAP site development, operation and sustainability issues, and better prepared to assist communities interested in establishing CAP sites.

Future Research

The body of research on the Internet is growing as more and more people use it and it becomes an everyday part of our lives. My search for Internet related research revealed studies on the household use, studies on the ways in which people used the Internet, and research on the Internet in education. However, little of the research was Canadian, and even less was about the NWT. This project will add to the body of knowledge in that it reflects an NWT community experience.

Although this project is complete, there are other questions that could be asked:

- Do the results of these findings ring true for other communities? What has their experience been? Perhaps as more CAP sites are developed across the NWT their experience will differ. What has been the impact of the Internet and the experience in communities that have not been as successful as Rankin Inlet has been?
- How is the Internet impacting culture in the NWT? This may not be easy to gauge but as technology plays more of a role in the every day life of many northerners, there are bound to be consequences. What are they?
- Is the perceived gap between “haves and have nots” really widening? Is information more readily available on the Internet than it is in print or other formats?
- Three years from now, technology will surely be different than it is today. Will community access sites still be needed? Will the advice provided in this project report still be relevant and helpful?
- Does an anti-Internet sentiment exist? What factors contribute to its growth? What would cause an individual to ignore the Internet in favor of more traditional methods of communication, entertainment, research?
- What are the barriers to Internet access in the NWT and Canada?
- How effective a tool is the Internet in electronic democracy, economic development, education, environmental preservation, personal efficacy or other areas?

Other researchers may want to investigate these questions, and add to our understanding of the Internet, its implications and use. The Internet is a tool that has many uses. It's having an impact in Rankin Inlet and around the world; and it's here to stay. In my opinion, it's better to learn about it than guess about it.

“Computers won't bring about a better world, perhaps nothing can do that. But they certainly can change the world: some ways for the better; in others, for the worse. That's the nature of today's new technology. By changing things in fundamental ways right before our eyes, it lets us see more clearly who we really are by showing us what we truly value. Sometimes, perhaps far more often than necessary, what we see is the ugly side of human nature. Still the net today is a glorious experiment” (Rawlins, 1996 p. 87).

CHAPTER SIX - LESSONS LEARNED

Research Project Lessons Learned

If I had to do this project all over again, what would I do differently?

I would consider doing a project in Yellowknife. Working with people in Rankin Inlet was a wonderful experience, but there were costs to the project sponsor that would have been reduced had the research been conducted in Yellowknife. As well, I would not have had to rely on Igalaq volunteers as heavily as I did to assist with project logistics. I might also have chosen another way to survey non-users if I was doing a project in my home community.

That said, I would have had to choose a completely different project since I was interested in learning from the experiences of the most successful NWT community access site, and that site is Igalaq in Rankin Inlet.

I also would have applied for my research license much earlier in the process and avoid the stress of waiting for it to arrive after the research was mostly finished.

I learned many lessons as a result of this project. My words of advice to other researchers undertaking similar projects are:

- Research projects require commitment, compromise, flexibility, and creativity. There are many aspects of conducting research that I really like. I like getting the answers to my questions. Finding out what Igalaq wanted to know was outside the scope of my project, but resulted in a better project. It's important to establish good working relationships and find a way to work together to meet everyone's needs.
- Be prepared for tension that exists in trying to meet perceived or real expectations of project sponsor, participating organization and university.
- A researcher must know when to ask for and accept advice. The people who live in Rankin Inlet are better informed about approaches or methods that work best in their community, and what to expect in various situations than I am; hence, it was imperative to listen to their advice. I asked for and acted on advice from these resident experts about: how to reach non-users, how to ensure that all residents would have an opportunity to participate in the research, how to get good response rates, and timing for the project, among other things.
- Research is a time intensive undertaking, be prepared to invest many nights and weekends.
- The focus groups were my most enjoyable data gathering method; the energy of the participants and their willingness to share their stories and opinions was exhilarating. Participating in a group interview seemed to put people at ease. Participants built on each others' comments and asked "Can I add just one more point?" The focus group method allowed me to ask a few key questions and guide discussion if necessary. This method does

however, generate a lot of data! My advice? Be prepared to limit yourself. In the excitement of learning, be aware of the mountains of data that will have to be analyzed.

- I learned that it is important to have “warm-up questions” to set the stage for questions that followed. I didn’t analyze data from all the two warm up questions I asked, but I found they were important because they helped put people at ease, and made it easier, I think, for them to answer subsequent questions. The two questions I considered “warm-up” questions asked about participants’ experience at Igalaq and on current Internet use.
- It’s easier to read and research than to write.
- Research and Reflection Logs are useful. I used mine to vent, to record meetings, project decisions and comments. I found it really helpful to review the document as I wrote this paper.
- Be grateful for the kindness of strangers. None of the project participants knew me yet they gave me their time on a weekend to participate in the project.
- Keep in touch with your project sponsor, participating organization and faculty supervisor. You may have very little contact with other learners; keeping in touch helped keep me focused. These key people have an investment in the project too, and need to be involved and informed.
- Workplace support is crucial. I received financial support, morale support and encouragement from my workplace. It would have been awful if that support had not been there.

Program Lessons Learned

In August 1998, I identified a number of Major Project Competencies for this project which I firmly believe I have achieved.

Required Competencies

1c) Provide Leadership

Working well with others to achieve common goals, seeking information before making decisions, communicating effectively, and following through on commitments are all leadership characteristics I demonstrated throughout this project. My leadership style was demonstrated during meetings with Igalaq volunteers, during focus group and interview sessions, and in my management of this project. My approach of sometimes working to deadlines caused me a little stress at times, but did not negatively impact the project. My Research and Reflections Log was a good tool for documenting my thoughts, observations, questions and concerns about the project.

2b) Apply Systems Thinking To The Solution Of Leadership And Learning Problems

A number of situations reflecting underlying systems were identified in this project including shifting the burden and limits to growth scenarios, as well as potential for fixes that fail (Senge, 1990). In terms of relationships, I also felt the beginning of an ends/middle system (Oshry, 1995) at play in my own relationship as researcher, trying to accommodate different needs and expectations between myself, the university, the project sponsor and the participating organization.

5a) Identify, Locate And Evaluate Research Findings

I recognized both my own positive feelings regarding the impact of the Internet and the need for an objective, balanced approach to research that took into consideration negative as well as positive impacts. I spent a significant amount of time searching for research projects related to the impact of the Internet, to determine how much or how little had been done in the area. Canadian research was found, but only one paper related to the impact of the Internet on Aboriginal culture was found although not used or referenced in the report.

5b) Use Research Methods To Solve Problems

Naturalistic inquiry was the research approach used in this project, even though the project involved elements of both action and evaluation research. Data collection methods were appropriate to the exploratory, discovery and explanatory purposes of this project and resulted in information, advice and recommendations for both Igalaq and other NWT communities. I was very careful to maintain accurate records of project research and management activities.

7b) Communicate With Others Through Writing

Throughout the project, I made every attempt to keep participants informed. My project proposal was made available to every project participant, the Letter of Invitation to Participate covered the purpose of the project, confidentiality issues, the amount of time required and use of results (see Appendix A). I also provided a project update to project participants in December 1998, and maintained communication with the participating organization, project sponsor and faculty supervisor. Both the first and second drafts of this project report were provided to the coordinator of Igalaaq volunteers, project sponsor and faculty supervisor for review and comments. In person, telephone and e-mail communication were also used.

Other Competencies

1e) Recognize Ethical Considerations And Values And Take Account Of Them In Making Decisions

I was careful to apply the guidelines related to ethical conduct of research involving humans. Before I could get my research license from the Nunavut Research License, it was necessary to prove that the project had been reviewed and approved by an ethical review committee. All project participants provided signed consent forms. In addition, I asked the project sponsor and coordinator of Igalaaq volunteers to review both drafts of this project paper; one comment about anonymity and one comment about inappropriate phrasing were addressed in the second draft. Organizational values were also taken into account throughout this project. When it became apparent that participants were not comfortable with learning circles, a data collection method I proposed, we made changes.

4f) Manage Own Learning To Achieve Maximum Added Value

My own learning was significantly enhanced, particularly in the area of conducting research. In addition, my Research and Reflections log is my personal record of my learning throughout the project.

6a) Evaluate The Impact Of Technology

This project focused on the impact of technology. In addition, the impact of Igalaaq, as a community access point to the Internet was also explored. Igalaaq volunteers use e-mail to communicate with each other, as I did, throughout this project.

6b) Selects And Uses Telecommunications Technologies

I relied on e-mail, phone and fax to communicate with project participants because they were in Rankin Inlet and I was in Yellowknife. Project results were also posted to the Wire North web site (<http://www.wirenorth.com>), and may be posted to the Igalaq web site, if Igalaq volunteers so desire. In addition, questionnaire data was managed using a computer spreadsheet program. My plan to use an online questionnaire did not materialize once we decided to conduct a questionnaire which would be completed by users and non-users of Igalaq.

7a) Interpret Oral Communications

Listening and accurately reflecting on what was said in focus group sessions and interviews was possible because I taped the sessions and had the tapes transcribed. Taping sessions allowed me to live in the moment, focusing on what participants were saying or not saying, without trying to write notes at the same time. Comments which reflected both positive and negative perceptions were gathered and presented. These comments related primarily to the impact of the Internet, the impact of Igalaq and ideas for Igalaq's future.

Conclusion

I feel like I've just completed a long journey, but as my project sponsor noted on the final draft of this paper, "It's the journey, not the destination", and I guess that's true. The knowledge I gained as a result of this project, about conducting research, about myself, about working with others, and about the impact of the Internet and CAP site development, are valuable. I enjoyed the trip, the sights and the people I met along the way and will be ready to go again soon. This is however, the longest post card I've ever written, so I'll sign off now.

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APPENDICES

Appendix A Invitation To Participate

This information package was provided to all potential project participants involved in focus groups and interviews.

Appendix B Focus Group/Interview Questions

This section includes the data gathering tool for the focus groups and interviews with Igalaq volunteers and Igalaq supporters.

Appendix C Questionnaire (English version)

The questionnaire, in English and Inuktitut, was distributed through five venues in Rankin Inlet. Full results are included in this section.

Appendix D The Impact of Igalaq Community Access Centre

Data collected about the perceived impact that Igalaq Community Access Centre has had on individuals and the community is included in this section.

Appendix E Map of the NWT and Nunavut

This map depicting the NWT and Nunavut, is included with permission from the project sponsor.

APPENDIX A

INVITATION TO PARTICIPATE

The Impact Of Internet Access On A NWT Community

INVITATION TO PARTICIPATE

The Impact Of Internet Access On A NWT Community

My name is Linda Hayden and I am currently working on a Master of Arts degree in Leadership and Training. One of the program requirements is an action-oriented major project which provides solutions or recommendations to one or more practical problems in a community or workplace.

In my job with the Department of Municipal and Community Affairs in Yellowknife, I have been working on a number of projects related to the Internet - such as development of Community Access Sites in NWT communities, so my interest in the impact of Internet technology partially arises from my work. I keep hearing about all of the things the Internet can do, and I've read what the leading authors in the field have to say about it, so I wondered... what's true and what's not? What kind of impact is it really having?

The Iglaaq Community Access Site is considered a successful example of a CAP site. I'd like to look at what you've done to be successful and look at the impact Internet access has had on your community. Part of this project gets at the history or developmental process you went through to get where you are today. This information could be of interest to communities just starting to implement CAP sites, and I would like to share what we learn through this project with them.

The literature I've reviewed describes both positive and negative impacts of the Internet, so another part of this major project involves talking to people about what they've seen, felt or done differently as a result of having Internet access. This will involve talking to Iglaaq volunteers, businesses, your development partners, your Internet Service Provider, key school staff and Iglaaq users.

What's in it for you? There is an opportunity for you to have some research done, at minimal cost, except perhaps for your time. As well, the results of the research could also potentially be used in future funding proposals or in other ways if it becomes necessary to demonstrate the impact of your efforts. If sustaining Iglaaq is a concern, you might want some data on the impact you've had.

So that's how I came to be in Rankin Inlet and that's why I hope you'll talk with me about your experiences with Iglaaq and the Internet. I've also compiled a list of Frequently Asked Questions (attached) to help you decide whether or not you'd like to participate in this project.

Project FAQ's

What is expected of Project Participants?

Just an interest in being involved and speaking with me about your experiences. Your involvement might be through a small group session or it might through a personal interview. It could also mean completing a brief questionnaire.

Depending on how you participate, I do not expect it will take more than 1-2 hours of your time.

What Guarantees Will I Have that What I Tell You Will Be Used Properly?

My conduct as a researcher is guided by standards outlined by Royal Roads University. It's my ethical responsibility to do 4 things to ensure that you get the respect you deserve as a participant in this project:

1. Inform participants that they are part of a research project and what type of data is being collected.
2. Describe to participants how the data may be used and who will have access to it.
3. Have participants sign a consent form that acknowledges they are a willing research participant and that they authorize the researcher (me) to employ the collected data in support of the research project.
4. Protect the confidentiality of participants in either presentations during analysis or in written reports.

** The next 4 questions deal with these topics. Please read on!*

How will participants be informed that they are part of a research project?

That's what this document is for. After reading it you should have a good idea about the project. I will also attend an Igalaaq volunteer meeting to explain the project, answer any questions you may have, and get people to sign up to participate. A copy of the Major Project Proposal Summary will be available at the meeting and upon request.

What type of data is being collected?

I hope to use a learning circle, focus group (s), and questionnaires to gather data. During our discussions, I'll be recording your stories, remembrances and comments (qualitative data). I'll also be gathering statistical information (quantitative data) as part of the project.

How will the data be used and who will have access to it?

The data will be compiled into a project report. The project will then be available for anyone who wants to read it. Since my workplace (Municipal and Community Affairs) is sponsoring the project, they may have an interest in distributing the report. It is my hope that other NWT communities who are interested in setting up CAP sites will be able to benefit from your experiences, as reported through this project. I also expect that what we learn from you will help the people who assist communities in setting up their community access sites.

What about the Consent Form? Why do I have to sign it?

When you sign the attached consent form, you acknowledge that you have been informed about this project and that you are willing to help out by being a participant. By signing the consent form you allow me (the researcher) to use the information you give me for the purposes I've outlined.

What about Confidentiality?

Some projects may be of a confidential or highly sensitive nature. I don't expect that this project will be, but as the researcher I am required to be aware of confidentiality concerns and build in ways of respecting confidentiality into the project.

Protecting confidentiality does not mean that I can't tell anyone what you told me. It means that the identity of participants needs to be protected during analysis or in written reports, if participants so desire.

I'll be talking about confidentiality as we go through the various phases of the project, and I'll ensure that your concerns are met.

Do You Have Any Other Questions? Please call me at home or at work!

Linda Hayden
4914 - 52 Street,
Yellowknife, NT
X1A 1T3

Phone: (867) 873-2941

Linda Hayden
Municipal and Community Affairs
#400, 5201 - 50 Avenue
Yellowknife, NT
X1A 1T3

Phone: (867) 920-6205
Fax: (867) 920-6467
E-mail: lhayden@maca.gov.nt.ca

Consent Form

I, _____, do hereby agree to participate in research activities to determine "The Impact of Internet Access On A NWT Community".

I have been informed about the Major Project being conducted by Linda Hayden and sponsored by Municipal and Community Affairs in partial fulfillment of requirements for an M.A. in Leadership and Training for Royal Roads University. I understand:

- the purpose of the project
- how the data will be gathered
- how the data will be used
- what signing this consent form means
- confidentiality considerations employed in the project

I would like the following pseudonym to be used when I (or my comments) am referred to in the above written work _____.

Signature: _____

Date: _____

Project Researcher: Linda Hayden

Project Sponsor: Municipal and Community Affairs
c/o Mr. Ian Legaree
#400, 5201 - 50 Avenue
Yellowknife, NT
X1A 3S9
Phone: (867) 873-7245

APPENDIX B

Focus Group and Interview Questions
for
Igalaaq Volunteers and Igalaaq Supporters

**FOCUS GROUP / INTERVIEW QUESTIONS
for
IGALAAQ VOLUNTEERS**

Introductions

Consent Forms

How a Focus Group Works - "rules"; my role and your role (if applicable)

Tape recording and what will be done with the information

Questions?

-
1. Please tell me about your involvement and experiences as a volunteer with Igalaaq Community Access Centre.
 2. How do you use the Internet?
 3. What are the benefits or impact to you AND to your community in having access to the Internet through Igalaaq?
 4. What concerns you about the Internet?
 5. Please tell me briefly about any negative experiences you have had with the Internet.
 6. What are your dreams for Igalaaq?
 7. Other communities across the NWT are interested in setting up Community Access Sites. What advice would you offer them?
 8. Final Comments?

FOCUS GROUP / INTERVIEW QUESTIONS
for
IGALAAQ SUPPORTERS

Introductions

Consent Forms

How a Focus Group Works - "rules"; my role and your role (if applicable)

Tape recording and what will be done with the information

Questions?

1. You have been identified as a person who is supportive of the Igalaaq Community Access Centre (either through your own efforts in the development of the Centre or through your ongoing support). Please tell me about your involvement or experience with Igalaaq Community Access Centre.
2. What have the Igalaaq volunteers done right in developing and/or maintaining Igalaaq as a successful Community Access Centre?
3. What could have been done to make your involvement in Igalaaq a better experience?
4. What is your current relationship with Igalaaq?
5. How many times have you visited Igalaaq?
6. How do you or your business use the Internet?
7. Has your use of the Internet changed since your involvement with Igalaaq? Please explain.
8. What are the benefits and impact to you AND your community in having access to the Internet through the Igalaaq Community Access Centre?
9. What concerns you about the Internet?
10. Other communities across the NWT are interested in setting up community access sites. What advice would you offer them?
11. Final Comments?

APPENDIX C

**Questionnaire
Questionnaire Results**

How Has The Internet Touched You?

How Has The Internet Touched You?

A research project being done on the impact of the Internet in Rankin Inlet. The project is sponsored by Igalaq Community Access Centre and the Department of Municipal and Community Affairs.

It only takes a few minutes to answer the following questions and everyone in the community is invited to participate.

P R I Z E ! !

Every person who completes the survey will be entered in a prize draw! The draw will be made before Christmas.

Please return your completed survey by Monday December 7th to Leo Ussak School Office, the Igalaq Community Access Centre, Maani Ulujuk School Office or the Library.

Only the researcher will see your comments. Your name will be kept confidential.

If you have any questions about the project please contact:

Sharon Shultz in Rankin Inlet at 645-2689

Linda Hayden in Yellowknife at (867) 920-6205

Thank you for your help!



This project sponsored by Igalaq Community Access Centre in Rankin Inlet and the Department of Municipal and Community Affairs

How Has The Internet Touched You?

1. What year were you born? _____
2. Have you ever used a Computer? Yes No
3. Have you ever used the Internet? Yes No
4. Where do you use the Internet?
 - Home Work
 - School Igalaaq Community Access Centre
 - Other ? _____
5. What do you use the Internet for?
6. Have you ever been to Igalaaq Community Access Site at Leo Ussak School?
 - Yes How Many Times? _____
 - No Why Not?
7. Igalaaq volunteers would love to see you come out to the centre! What could we do to interest YOU in coming out?
8. How has the Internet touched your life or your community?

Igalaaq Community Access Centre is open to everyone who wants to come in and use the computers and the Internet! Igalaaq Community Access Centre is located in Leo Ussak Elementary School and is open Tuesdays 7-9 p.m., Thursdays 7-9 p.m., and Saturdays 2-4 p.m.

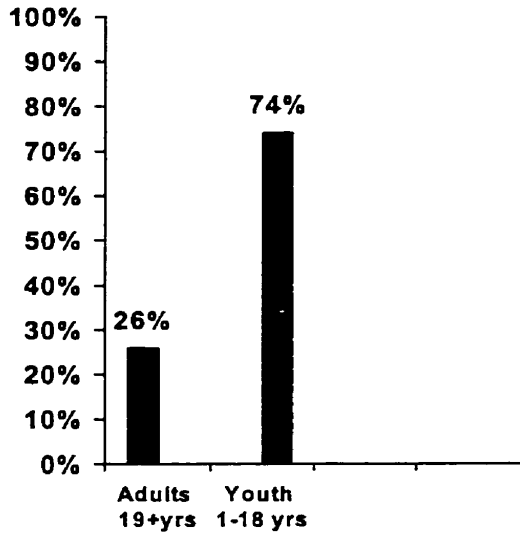
Are you interested in volunteering with Igalaaq? Yes No

For the prize draw:

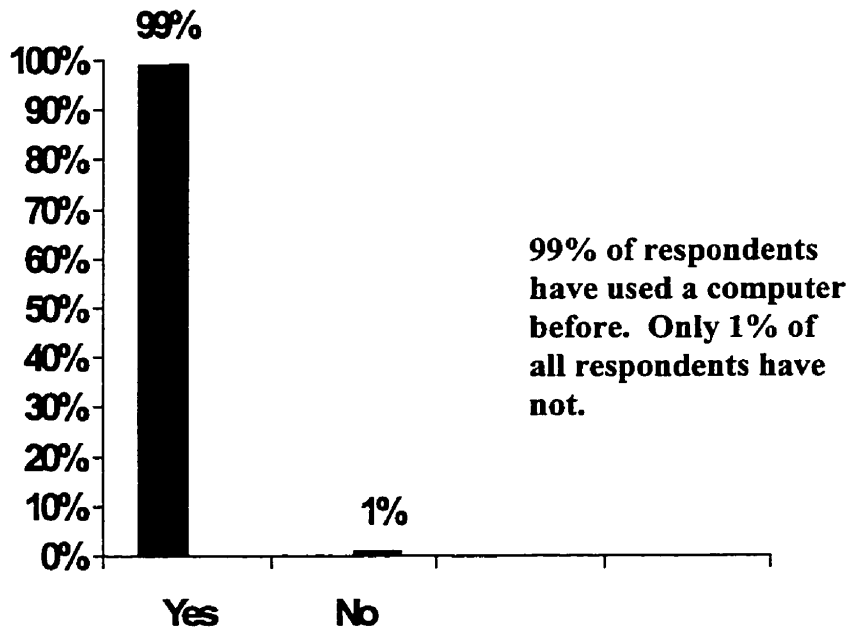
Your Name (please print): _____ Phone: _____

Appendix C Questionnaire Results

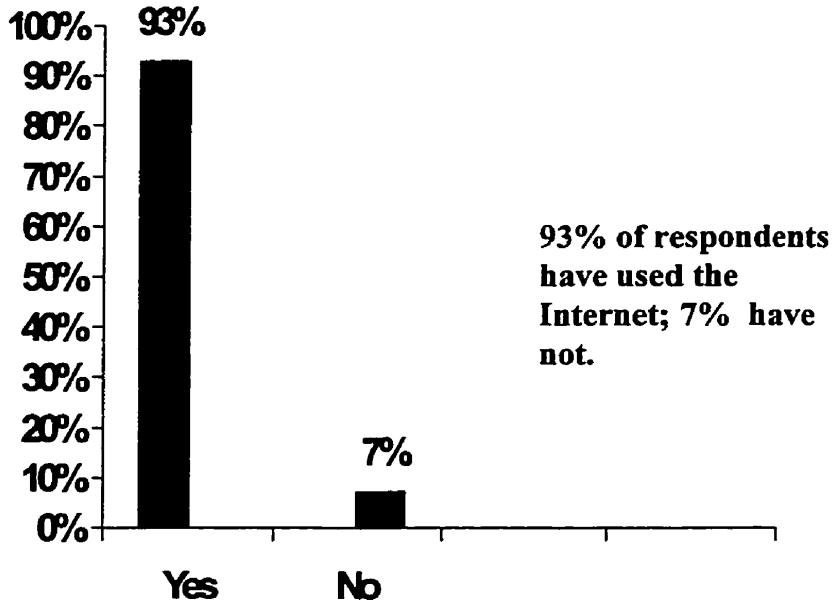
Question #1 : What Year Were You Born?
102/105 respondents (97%) answered this question.



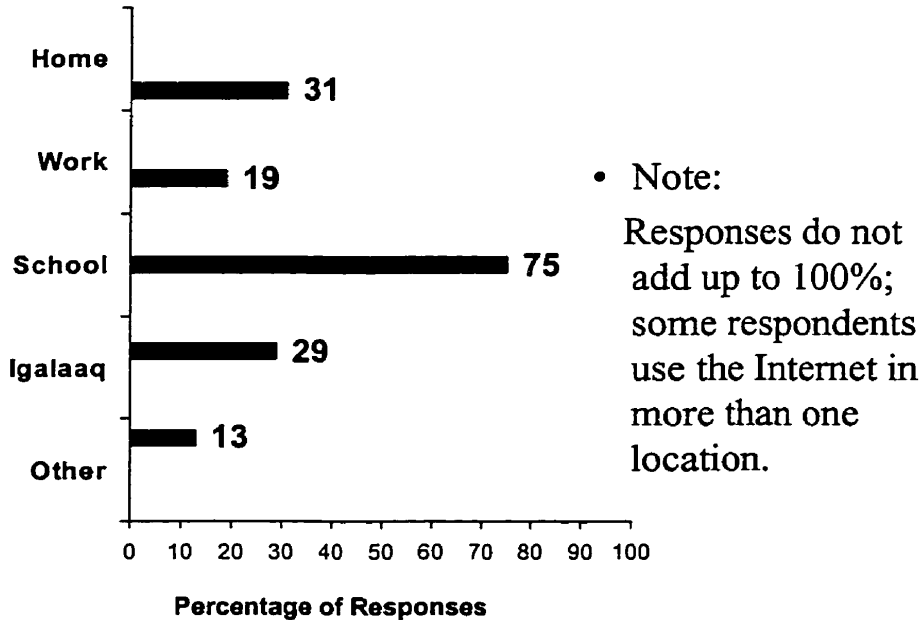
Question #2 Have you ever used a Computer?



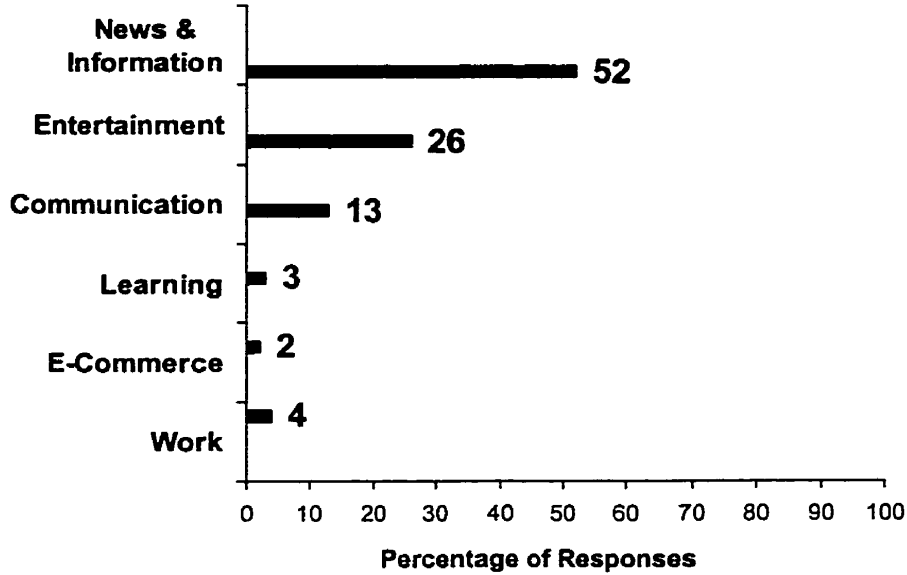
Question #3: Have you ever used the Internet?



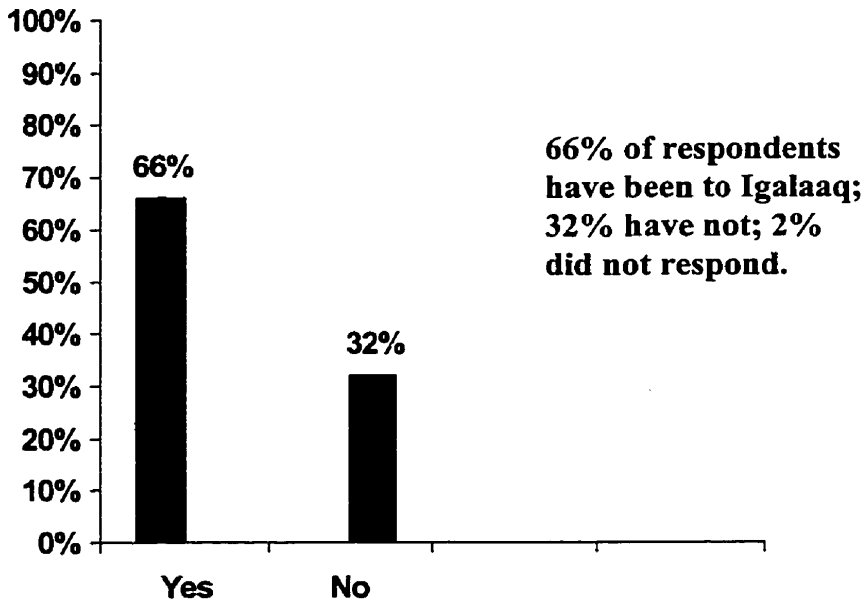
Question #4 Where Do You Use The Internet?



Question #5 What Do You Use the Internet For?
(156 responses from 105 respondents)



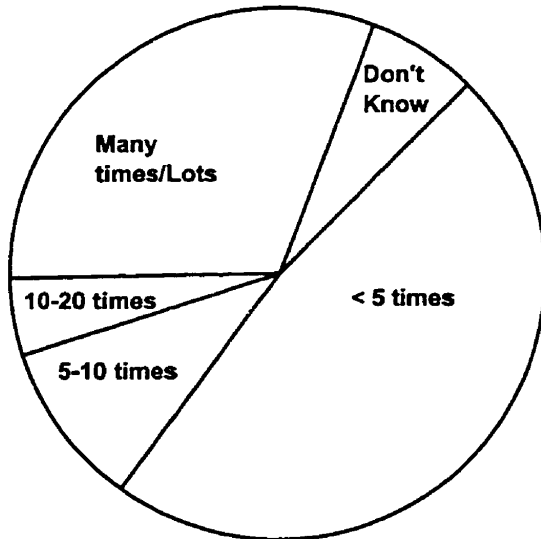
Question #6 (part a):
Have You Ever Been to Igalaq Community Access Centre at Leo Ussak Elementary School?



Question #6 (part b):

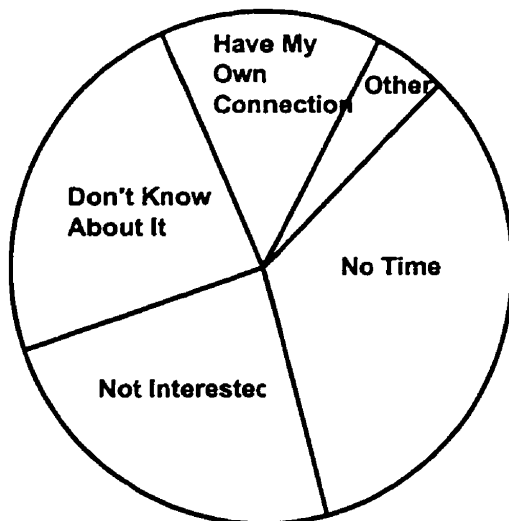
How Many Times Have You Been To Igalaaq?

61 people or 58% of all respondents answered this question.



Question 6 (part c): Why Not?

21% of all respondents answered this question.



**Question 7: Igalaaq Volunteers would love to see you come out to the Centre!
What Could We Do To Interest You In Coming Out?**



Eighty (80) participants, or 76% of all respondents answered this question, although some respondents provided more than one suggestion (87 suggestions). Interestingly enough, 18/87 suggestions were non-committal, either “I don’t know” or “nothing” which could lead to an assumption that things are fine the way they are, or that respondents did not know what could or should be changed.

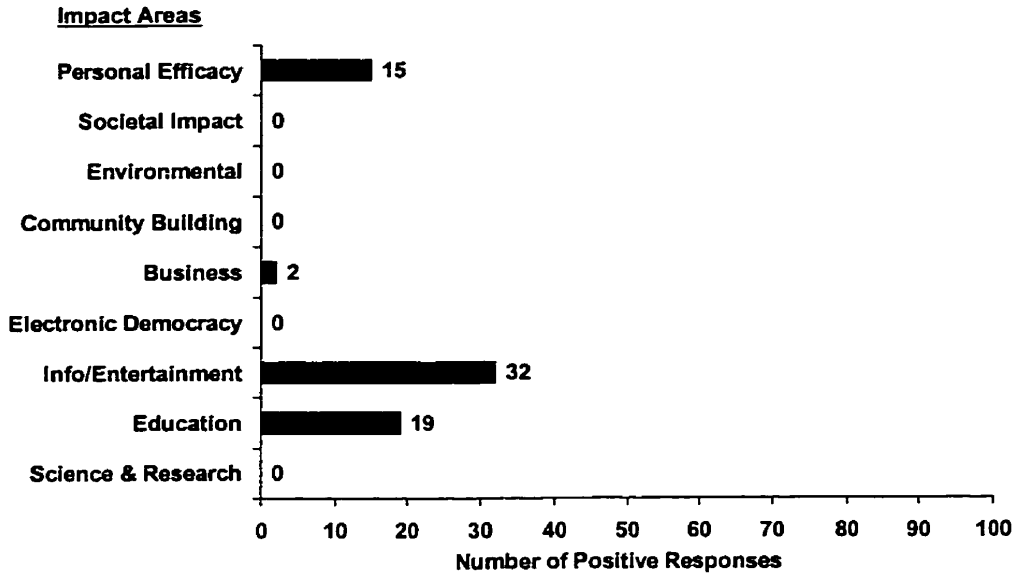
The top five actions which could be taken by Igalaaq volunteers include: increased promotion of Igalaaq within the community; more or continued training opportunities; reviewing the hours of operation to be open (more, longer, etc.); scheduling specialty times for specific age groups like adults, teens, and families; and, including structured activities for various specialty groups during Centre operations. Implementing any or all of these initiatives would impact Igalaaq’s resources.

This “What could we do” question could also be seen as “dreams”. It has been added to the data in Chapter Four.

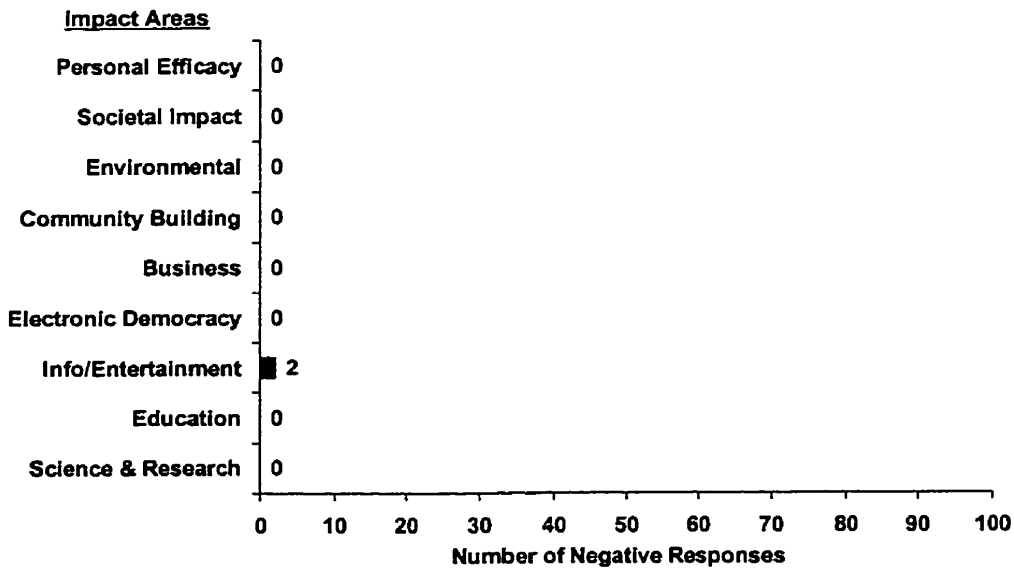
Question 8: How Has The Internet Touched Your Life Or Your Community?

Note: This data has been collated, merged and included with Research Findings; see Chapter Four.

Q# 8a) Positive Impact of the Internet (Questionnaire)



Q#8b) Negative Impact of the Internet (Questionnaire)



APPENDIX D

The Perceived Impact of Igalaaq Community Access Centre

Appendix D

The Perceived Impact Of Igalaaq Community Access Centre

During the focus group sessions and interviews, participants were asked about the impact Internet has had on them personally or on their community. Many of their responses were not related to the Internet, but to Igalaaq itself. The comments listed below are respondents' perception of the impact that Igalaaq has had on themselves, other users or the community in general. Comments from participants have been grouped into three impact areas: social impact, educational impact, economic impact and the community building impact attributed to Igalaaq.

Positive Impact of Igalaaq Community Access Centre

Social Impact

- Igalaaq has a positive social atmosphere (2 responses).
- Igalaaq is seen as a good place to spend time.
- Centre is a drop-in centre and hang out for kids.
- Igalaaq is somewhere for young people to go so they're not getting into trouble.
- Its a safe, warm place for young people to go.
- Igalaaq gives transients something to do, somewhere to go get e-mail and a place to work (2 responses).
- Its a good place for newcomers to town to meet people.
- Igalaaq promotes voluntarism (5 responses) - makes it easy for volunteers to get involved (minimal time required); helping people feels good.
- Igalaaq interests youth. It draws specific age groups. The teenage age group is mostly male and the under 10 group is mostly female.
- Igalaaq promotes family time through dedicated time at the centre.
- Because of Igalaaq we have a more computer literate community.
- Being involved in Igalaaq has had a personal impact for some people (personal recognition, community recognition, travel, new opportunities).
- Kids seen as role models and ambassadors of their school and community.
- Raises kids' self esteem because they can do well in this area and it carries over into other areas of their lives. (e.g. kids helping users).
- Igalaaq representatives have had an impact at the national policy level, which has in turn impacted how the CAP program is delivered.
- it has leveled the playing field for kids from poor homes who lack space and supervision.
- Continued commitment to community even after leaving the community, in part due to involvement in Igalaaq.
- Pride in Igalaaq is evident. Compared to communities of similar size in other provinces, Rankin Inlet is way ahead in terms of facilities and equipment (2 responses).
- Having Igalaaq in the community makes it accessible for everyone - free Internet access is good; lessens gap between haves and have nots (2 responses).

Educational Impact

- Working at Igalaaq helps students doing distance education feel like they're part of a team.
- Igalaaq increases kids' comfort level with new technology.
- Career exploration - volunteering at Igalaaq is seen as good practice for a future career (e.g. teacher).
- There are lots of things to do at Igalaaq besides use Internet. This is a good thing for people who do not have computers at home or work.
- Users feel proud when they are able to complete tasks using computers (e.g. resumes).
- Leo Ussak Elementary School students have been exposed to travel, world leaders, new ideas at conferences they attend as a result of involvement in school and Igalaaq.
- Learning about Igalaaq and what it takes to make this access centre work is being shared (through web sites, through speaking engagements, and interviews).
- Going to Igalaaq has decreased pre-schoolers fear of attending school.
- Literacy is promoted. Inuktitut keyboards mean people are able to communicate in Inuktitut to learn and preserve language.

Economic Impact

- Employment opportunities provided for young people (6 responses)
- Igalaaq has an economic impact for employers. If employees are computer literate, they do not have to be trained to type to use a computer.
- People are doing consumer research at the Centre - try before you buy computers.
- Young people learned business skills by building web pages.
- Igalaaq is seen as a staff perk for some companies that support Igalaaq.
- Some business contacts have been made because Igalaaq corporate supporters are promoted by Igalaaq in events, promotions and on Internet.
- Igalaaq has helped to build the customer base for local ISP and improved sales (5 responses).
- Igalaaq fills a market niche. Igalaaq can provide a training function that private ISP is not offering.
- Families move here because of services available in the community (like Igalaaq) and because of information they found on the Internet (2 responses).
- Igalaaq and Internet availability is a marketable feature for the community.
- Igalaaq got businesses involved in this community project; business one-upmanship.

Negative Impacts of Igalaaq Community Access Centre

- Igalaaq is a babysitting service for kids.
- Resentment over one person getting all credit for a community effort that many contributed to.

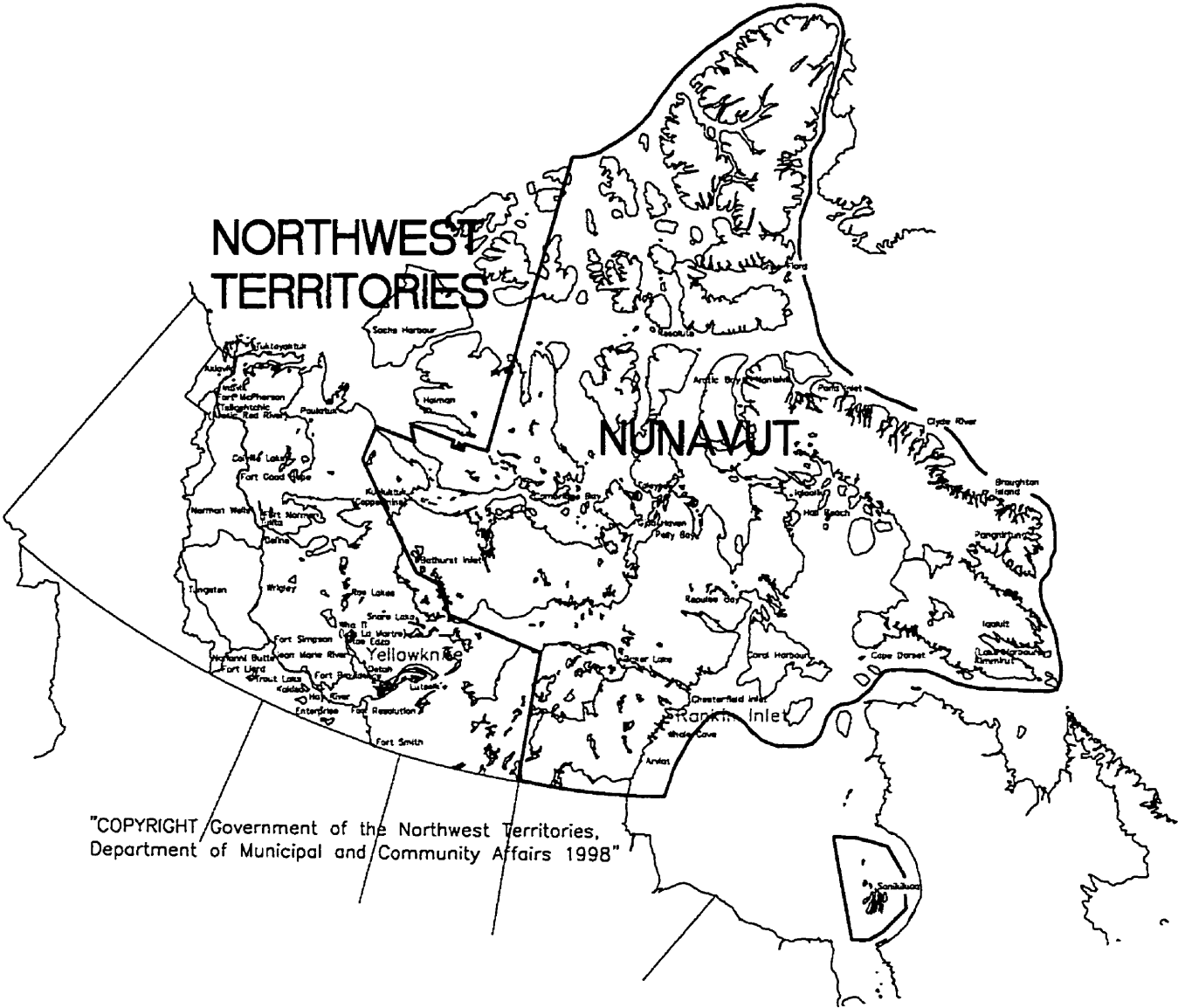
The Importance of “Community” In Community Access

“I think the biggest thing, if we were start this all over again, we would need a Rankin Inlet, to look at, because we’ve done some really good things here.... And that’s the whole thing, the community works,.... if they don’t have that there, then it will never work.”

(Participant November 14, 1998)

APPENDIX E

Map of the NWT and Nunavut



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