Is the Internet A Useful Resource For Indigenous Women Living In Remote Communities In Canada, Australia and New Zealand To Access Health Resources?

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In the emerging Information economy, the internet is a very powerful resource. Yet for most Indigenous people, access to this resource is very limited. This report examines the digital divide in our society and how it affects Indigenous peoples in remote communities in Canada, Australia and New Zealand. Also explored is the issue of whether or not the internet is a viable resource for Indigenous women to access health resources, and other valuable information that promotes a holistic approach to health and well-being.
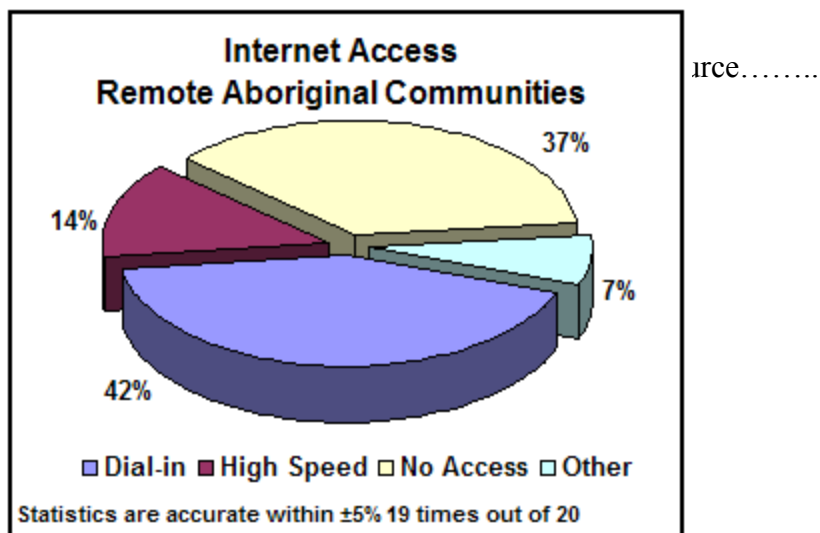
Introduction:

The Internet has gone from a network mainly used by academics, military and industry to something which most of the world would miss profoundly if it ceased to exist. The internet is the most popular communications device around and with converging technologies, it is only going to increase in importance. Although the internet is beneficial to many people in our society, there exists a digital divide.

The term 'digital divide' has been applied to the gap that exists in most countries between those with ready access to tools of information and communication technology, and to the knowledge that they provide access to, and those without such access or skills. The digital divide involves many different categories, including access to computers, Internet connections, computer ownership, and knowledge of how to use e-mail, internet, etc. The digital divide is also characterized by: social class (low income, illiteracy, low education, the unemployed and poor neighbourhoods), generational and racial lines (elderly people, Indigenous peoples), peoples with disabilities, sole parents and females, levels of awareness and knowledge, perceived personal or social benefit, and urban versus rural or northern locations.[1]

This report will focus on Indigenous people in Canada, Australia and New Zealand and will attempt to answer the following questions 1) what kind of access is available to the internet in remote communities, 2) where is the internet accessible in these communities, 3) and if the internet is a useful tool for Aboriginal women in these communities to access health information.

Internet Access in Remote Aboriginal Communities In Canada:

Since 1995, the Government of Canada has presented itself as a global leader in developing solutions to the digital divide. Solutions have been implemented by equipping individuals and communities with the infrastructure, skills, knowledge and governance structures to thrive in an Information Society. The government has also made some strides to increase connectivity in Aboriginal communities, asserting that connecting to the world via the Internet can provide many opportunities, especially for more remote

**Internet Access
Remote Aboriginal Communities**

37%

14%

7%

42%

■ Dial-in ■ High Speed □ No Access □ Other

Statistics are accurate within ±5% 19 times out of 20

communities.[2] Please see footnote for a web link to the Aboriginal Community
Connectivity Profiles webpage.[1]

Statistics regarding Internet access and connectivity can be confusing. For example, in
Canada, the total number of Aboriginal people that live in Aboriginal communities with
access to high speed Internet service is approximately 25%. The overall percentage of
Canadians with access to high-speed Internet services is close to 85%. Using this
comparison a digital divide seems to exist.

However, the percentage of Aboriginal communities with high-speed Internet access is
approximately 20%. The total percentage of Canadian communities with access to high-
speed Internet services is about 24%. The existence of a digital divide using this measure
appears weak.[3]

Regarding northern communities in Canada, survey results have shown that 25% of
northern Aboriginal communities have high-speed Internet services; this is actually
higher than Canada as a whole. However, the rate of no-connection or long distance dial-
in connection in the north totals 41%. Connectivity in the north appears to be either very
good or very poor. Therefore, a digital divide seems to exist in the north for basic Internet
service. Regarding remote communities in Canada; survey results show that 14% of
remote Aboriginal communities have access to high-speed Internet services, while 63%
have at least basic dial-in access without long distance toll charges. Both of these
numbers are significantly below the Canadian averages of 24% and 72% respectively.
For remote Aboriginal communities there exists a digital divide.[4]

Looking closely at remote communities (generally north of 55°, and/or over 50km from
nearest service centre, and/or having no year round road access) we see that high-speed

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[1] Aboriginal Canada Portal: http://www.aboriginalcanada.gc.ca/acp/site.nsf/en/ao31317.html

This link has all reserves and Aboriginal communities and statistics on their connectedness to the internet.

Internet access rates are at 14% while no acceptable connectivity remains high at 37%. 406 Aboriginal communities fit our definition of remote. This is comprised of 342 First Nations, 51 Inuit, and 13 Métis communities.

According to a survey by Indian and Northern Affairs Canada (INAC), 88.7% of First Nations communities, 28.3% of Metis communities and 51.4% of Inuit communities have toll free access to the internet at the community level (A.C.C.I 2003 Report, III, a, i.). Also, 62.7% of First Nations communities, 29.8 of Metis communities and 70.6 % of Inuit communities have access at the household level. Although there may be the infrastructure available to access the internet, it is often the case that these households do not own a computer. Consequently, larger communities are better connected to high speed internet services, as the cost of the provider decreases with the number of customers.

Based on the Aboriginal Communities Connectivity Data and Statistics of 737 Aboriginal communities surveyed, 70% of Aboriginal communities have at least basic Internet connectivity; of which, almost 20% use high speed methods to connect; 5% use alternate methods; thus leaving 30% being disconnected. Moving north of 60°, we can see the effect that the Connect Yukon initiative has had on northern high-speed access rates. The availability of high speed Internet services in the north is 25%; greater than Canada as a whole. Communities with no acceptable access however increase substantially to 41%. We have identified 83 Aboriginal communities north of 60°; 43 First Nations and 40 Inuit communities.[5]
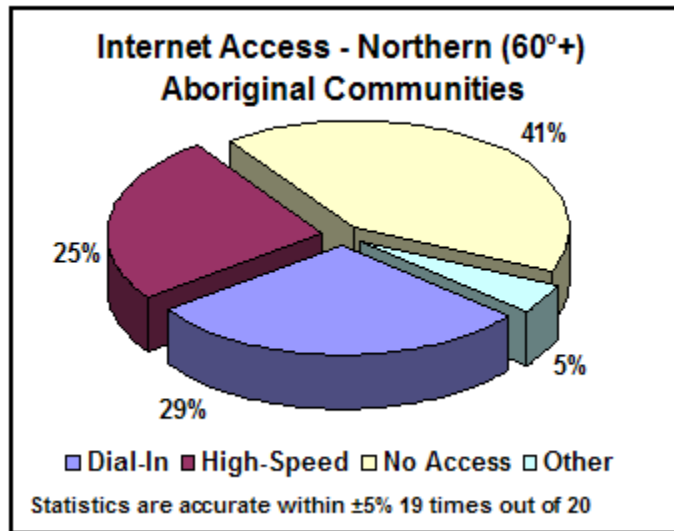
In summary:

- On reserve Aboriginal population vs. rest of Canada - a digital divide exists
- Percentage of Aboriginal communities vs. all Canadian communities – no digital divide exists
- Northern Aboriginal communities vs. all Canadian communities – a digital divide exists on basic access

- Remote Aboriginal communities vs. all Canadian communities – a strong digital divide exists

Internet Access In Remote Indigenous Communities In Australia:

In Australia, politics tends to dominate economic and social needs, and there appears to be little prospect of Australian telecommunications infrastructure and services maturing into a fully competitive market anytime soon. A telecommunications company called Telstra is currently dominating the industry in Australia. Telstra's continued dominance across the infrastructure, wholesale and retail tiers is seriously constraining competition, maintaining artificially high prices, and holding back progress.[6]

There is little statistical information on telecommunication services to remote Indigenous communities in Australia. According to a 1996 Census, 26 per cent of the Indigenous population live in remote or highly remote areas, and 72 per cent of Indigenous people live in urban areas (defined by the ABS as a centre of more than 1,000 people).[7]

There are several problems with creating internet access to remote Indigenous communities in Australia. These problems include, geographical isolation, economically disadvantaged communities and the cost of services, difficulty setting up services to remote Indigenous communities, lack of awareness, lack of skills, and lack of interest due irrelevant cultural content websites for users.

Currently, in remote Indigenous communities in Australia, better telephone services are of a higher priority than that of internet access. Ultimately, when better telephone services are created, the goal of increasing internet access can be realised. Opportunities are being created by the Australian government for larger rural communities to benefit from the provision of Internet access and videoconferencing. The idea behind this goal is that videoconferencing can be effective in the delivery of some government services, such as in the area of legal support and health.[8]

Internet Access in Remote Maori Communities In New Zealand:

In New Zealand, 52% of households own computers and 75 %, (2.5 million people) have access to the Internet. In a 2001 Census study it was estimated that 25% of Maori women lived in households that had access to the internet.[9] Key variables that contribute to having access to the Internet include: total household income, highest educational qualifications and household composition. Households with higher incomes are more likely to be connected than households with lower incomes. Accessibility to the Internet tends to increase with higher educational levels. And larger households or those with children have higher levels of connectivity than one person households. Other variables that influence connectivity levels are: age, ethnicity and geographic location.[10]

Currently, about 6% of New Zealand's Internet users are Maori.[11] Increasingly, the Maori presence is being felt on the internet, New Zealand is the only country in the world that has reserved a second level domain name for its Indigenous people

(.iwi.nz).[12]Unfortunately, while there is more and more Maori information appearing on the Web, it is non-Maori middle-class academics and researchers who are accessing it.[13]

There is concern by many that Maori people will not be able to participate fully in the knowledge economy. This is because the demographic and socio-economic characteristics of the Maori labour force promote greater unemployment in times of economic recession and also inhibit employment growth in times of recovery.

These circumstances occur because of the following characteristics: a youthful age structure; low levels of education attainment; under-representation in formal systematic training; and a high proportion of chronically unemployed. Also, Maori people are over-represented in low-skilled, low technology occupations and under-represented in high-growth, high-technology industries such as business, finance and communications.[14]

Where Is The Internet Accessible In Remote Aboriginal Communities In Canada?

For Aboriginal people living in remote communities in Canada, the internet is accessed for personal use primarily through their Community Administration Office's (CAO) Internet facilities. Of the Aboriginal communities that allow community members to use their community administration office's Internet facilities, 77% are communities with no high-speed access available to the individual households. Also, of the communities that have high-speed access at the CAO, 91/130 (70%) allow community members to use their community administration office's Internet facilities.[15]

Access Points to the internet are found in the following distributions:

Access Point	Percentage Of Community
Community Administrative Office	73.0%
Administrative Office (Plus CAP or Schoolnet)	82.2%
Only CAP or Schoolnet	11.1%

Source: Report On Aboriginal Communities Connection Infrastructure, INAC, 06/12/02, Schoolnet Site. Please see **Appendix 1** for a chart on Aboriginal Community Participation in Federal Connectivity Initiatives.

Where Is The Internet Accessible In Remote Indigenous Communities In Australia?

While access to the Internet in Australia is now more affordable and available, services have not been widely adopted in remote Indigenous communities. Indigenous people in remote communities in Australia rely heavily on community organisations for access to a telephone or computer. The main places where the internet is accessed is in schools, council offices, art centres, libraries, health centres and Government organisations.

Even though it is possible to access computers in some community organizations, this access is limited. Access to phones and computers ends after business hours when these organizations close and in some cases community residents are restricted from accessing phones because of the additional costs and interruptions to business or lines are being constantly 'tied up'.[16] This scenario of limited access to the internet through community resources is also evident in Canada and New Zealand.

Where Is The Internet Accessible In Remote Maori Communities In New Zealand?

1996 census data shows that 96% of people in New Zealand lived in dwellings with telephone service, however, these findings are not uniform across ethnic and income groups. For instance, up to 75% of Maori living in households with incomes less than $15, 000 in some rural areas do not have access to a telephone which could connect them to the internet. Even affluent Maori communities suffer from geographical isolation, low band witch and unreliable connections, and interference from agriculture equipment such as electronic fences. Currently in New Zealand, the internet is accessed in remote Maori communities through community access centres. It is likely that this trend will continue, until the cost of equipment and monthly charges for phone and internet services in remote lower socio-economic areas changes.[17]

Is the Internet A Reasonable Resource For Women In Rural Communities In Canada To Access Health Resources?

The Native Women's Association of Canada (NWAC) [2] recently did a study on Aboriginal women in Canada and the internet. This study is very valuable because from my research this is the only study I have found that focuses on Indigenous women and the internet in such a detailed capacity. Although the results of this study come from interviewing Aboriginal women in Canada, the conclusions could easily apply to Indigenous women in Australia and New Zealand as well. Following is a summary of the findings.

Access: The main barriers for accessing the Internet are economic and geographical barriers. Urban centers generally have better access, in smaller communities the cost is too high to get connected and to get the fastest connection available. Slow connection packages such as dial-up do not allow the full use of the Internet, leaving a lot of information and programs less accessible. The cost is still a major barrier for some women to purchase computer equipment and to acquire Internet connection adequate for enjoying the utmost benefits of the Internet. The cost therefore becomes the major barrier for some women to gain access to the Internet.

Benefits of Internet: Most surveyed women consider the Internet generally welcoming to women. The Internet is mostly welcoming in a sense that it gives women access to information and services, especially when they live in remote areas where such services

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[2] Native Wome's Association of Canada is a national Aboriginal non-profit organization incorporated in 1974, founded on the collective goal to enhance, promote and foster social, economic, cultural and political well being of Aboriginal women across Canada.

would not otherwise be available. Members stated that the Internet offers a multitude of new economic opportunities to women in the field of education, employment, entrepreneurship, etc., presuming that they have access and education they need to use the potentials of the Internet.

Women can now gain degrees and diplomas that can move them forward in their careers, they can look for work on line, or develop their own business. Traditional jobs like data entry can be now done from home, allowing mothers to stay at home to care for their children, saving on day care costs and having their children enjoy the benefits of parenting. Internet offers huge opportunities for women entrepreneurs, and particularly Aboriginal women who can now feature their crafts and artwork on line and market their product all over the world.

The Internet can also be used by Aboriginal women to strengthen local community work. NWAC members reported most activities in following domains: research on women's programs, research for funding, communication, on line meetings, promotion, and quick access to information. The Internet can bring big savings in time and money, and it consequently helps significantly in local community work. Youth members especially reported great use of the Internet for their community work, and their work with NWAC on the national level. However, these Internet potentials would be even greater if all women in the community had Internet access.

Training: NWAC members expressed a strong need for education and training in order to fully use the potential of the Internet. Some women find it frustrating to learn to use Internet on their own, especially older women. Women surveyed also pointed out the need for training end education about the existing Internet resources, benefits of Internet specific to women, and safe use of the Internet. More training for women who want to work in the IT industry is needed as is on-line training and culturally sensitive training in Aboriginal languages. Up-dated computers are also needed. Many smaller organizations often lack funds for up to date equipment. Some of NWAC provincial/territorial offices still use old and outdated computers, which significantly limits their technological abilities.

In terms of on line resources, the women surveyed identified the need for resources that teach website design and 'how to' websites that provide technical training and web training. There is a need for more 'hands on" training and resources that are user friendly and rural user friendly. In terms of content, more resources teaching women how to access funds and women services would be beneficial. There should also be on line resources created that would help women to become more protected on line. It is, however, very important to make available resources be more women focused and oriented as well.

Gender Inequality: When asked about the equality of Internet access, the majority of NWAC members stated that women have in general the same opportunities to get online as men. However, some members are of the opinion that women still face more barriers to get on line than men due to existing gender economic inequality. Women still often get

paid less than men do, and there are many women holding low paying jobs and positions. In addition, women who stay at home caring for children also do not have equal mobility and flexibility to access the Internet from the public computers, especially in isolated areas where the possibilities for access are limited. Also, the perception of technology as male dominated field may discourage some women to participate on line, so they need more education and training in order to achieve equality in access.

The Internet can significantly contribute to women's equality off line as well. It gives women a chance to be heard if they have access, helps them connect with each other, network, and create a larger body and voice. It also broadens women's horizons off line; as women feel more powerful, as an individual and as a whole, they can deal with their lives off line through support offered on line. Some specific positive Internet effects on equality are the creation of the new market for women, the possibilities for women to develop careers at home, and to establish small businesses while they care for children. In that sense, the Internet may contribute to women's independence and confidence as they are becoming more familiar with technology.

Impact of Internet On Women: Almost all surveyed NWAC members described the Internet as having a positive effect on their lives. They stated that the Internet makes them feel more connected to the world at large, and that it helps them stay in touch more with their friends and family. The Internet opens up many possibilities that would not otherwise be available due to cost, geographical position, or time constraints. Some women stated that the Internet widened their technological experience and knowledge, and gave them more confidence in their abilities. In that sense, the Internet affects women positively as it gives them sense of independence.

Impact of Internet On Young Women: The youth expressed great appreciation of the Internet as it helps with research for their schoolwork, finding information about universities, being able to register on line etc. Internet also offers unlimited opportunities for research and access to information available to every user. In terms of work, Internet makes accessible businesses and services that would otherwise be unattainable due to distance; offers opportunities for conducting business on line thus saving time and money and allowing for more effective work; and gives more opportunities for communication and business connections through chat rooms, on line meetings, and web conferences.

Negative Aspects: These aspects included stereotyping of women, pornography portray women as sex objects, lack of privacy and anonymity which opens doors to predators, sexual propositions, exposure to porn sites etc. The biggest concern was, however, trafficking in children and child pornography.

Racism: The majority of women claimed that they did not face racism on line, but that they feel that it does take place since some sites promote cultural, religious and language racism. The youth stated that they sometimes encounter racism toward Aboriginal youth. There is also racism displayed in chat rooms, where one encounters ignorance and where those with racist views become bolder, being protected by anonymity. However, it was

also pointed out that such sites can be avoided, and that there is a lot of counterpart activities on line, such as sites dedicated to anti racism, women equality etc.[18]

Is the Internet A Reasonable Resource For Indigenous Women In Rural Communities In Australia To Access Health Resources?

Telecommunications is a key tool for community development and impacts on improved education, health, business and social cohesion. Also internet access provides links to community and long distance education and training, cultural renew and development, on-line bulk purchasing, e-commerce, information access, governance and accountability, etc.

Internet access in remote Indigenous communities in Australia gives women access to health resources in the form of on-line resources such as telehealth. The main applications of telehealth in the short to medium term are information provision, including patient information databases, mental health, tele-radiology, patient referral to specialists and patient support, including pre and post natal care. Equally important as clinical use, is the professional development and support of health workers.

For remote Indigenous communities in Australia, reliable means of communication have an even greater importance than for people living closer to services. Indigenous communities are isolated from major population centres, have limited infrastructure, are characterised by having extremely low social and economic indicators, face high costs of living for essential goods and are distant from markets and economic opportunities.[19]

The main mode of transport to access key government and community services in remote areas of Australia is by car; however people from 49 per cent of communities must travel for between 1 and 4 hours to reach such services, and 16 per cent of people report travel times in excess of five hours. Due to variable weather conditions, road access into or out of communities may be cut for periods of up to one week, four or five times per year. In some cases there have been continuous periods of road closure for up to three months or more in the most extreme weather conditions.

A large amount of these remote communities are also located 100 km or more away from the nearest hospital, with only 53 per cent of these communities having access to emergency air medical services. Such difficulty in accessing remote communities reinforces the value of telecommunications in alleviating isolation.[20]

Health workers benefit from access to the Internet and e-mail for general communication, access to information resources. Additionally, access to immediate communication through e-mail will reduce isolation, and accessing detailed information on databases of people travelling between communities that have a medical history can improve health diagnosis.[21]

Some benefits of the internet in remote Indigenous communities in Australia:

- improved access to government and business services, education and health;
- access to information, including information about recreational pursuits;
- opportunities to preserve cultural material;
- increasing interest and skills development in current technology;
- opportunities to sell goods and services, such as art and tourism, to a wider market; and
- communication within and outside communities

Is the Internet A Reasonable Resource For Women In Rural Communities In New Zealand To Access Health Resources

The same factors that affect remote Indigenous communities in Canada and Australia also affect Maori communities. Maori information on the internet includes a wide range of resources, including online databases, electronic journals and organizational Web pages, advocacy sites, business and marketing sites, informational sites and news sites. Other popular sites include tourism, television and radio, libraries and archives and full-text media including a wealth of government information and historical Maori newspapers. Also available are reports of the Waitangi Tribunal, which provide a valuable resource for researchers into family histories as backgrounds to claims and for personal knowledge.[22]

Issues of Concern Regarding the Internet:

Understandably, many Aboriginal people, especially Elders, are biased towards having access to the internet in their communities. Many Indigenous people are not comfortable with technology, and see it as a tool of assimilation. Other reasons surrounding this bias towards the internet include issues around cultural invasion, appropriation and cultural loss, intellectual property and copyright. Another reason is the fact that in the beginning stages of implementation, communities would be totally dependent on outside technical and service support, which is quite unsettling for many people.

Another important concern is that ninety percent of the content on the Internet is in 12 major languages; over 5,000 languages are not represented. Language barriers to information access should be addressed through the development of software applications and multi-cultural and multi-lingual content. This involves the production of local content by groups to build their own knowledge base, and encouraging racial, cultural and gender diversity of content.

Topics For Further Research:

My research has shown that women are the primary information seekers in a family in regards to government services, education, etc. Indigenous women from low socio-economic backgrounds in remote communities are disadvantaged in information seeking. Due to these factors, governments need to provide increased funding to provide Indigenous women with access to training and internet use. The implementation of these

training programs should involve programs in Indigenous languages or provide translators for people who do not speak English.

By providing computer training for Indigenous women, their economic conditions can improve significantly. Currently most Indigenous women are in situations where they lack basic education and computer literacy skills. With computer skills they will have access to better paying jobs and higher educational opportunities.

There is a need for increased awareness of gender issues by those who design national-level ICT strategies to ensure that women are amongst these policy-makers. Ideally, women must promote ICT literacy amongst themselves by creating opportunities and awareness.

It is also important that the Internet becomes not only a place where women can access information but also produce and disseminate their own information, and network with each other. Currently on the web, there exists too many negative, stereotyped, inaccurate and violent images of women. Also, many positive women's groups are invisible, such as those from minority populations. Women need to band together and make the internet work in a positive way for the empowerment of all women.

For many Indigenous peoples their primary focus is on managing the basic needs of life, such as food, safe water, a place to sleep. Under these circumstances, the ability to surf the net is a matter of indifference, this is not to say that technology is not needed in remote communities but the approach needs to be tailored to the Indigenous peoples needs. Communities need to be consulted and partnerships formed to find out what approach will work effectively to benefit Indigenous communities and individuals in engaging in the information economy.

Conclusion:

Through my research I have discovered that the key factors affecting the lack of internet usage in remote Indigenous communities in Canada, Australia and New Zealand are basically the same. These factors include:

- lack of awareness;
- lack of affordability;
- low education levels and language barriers;
- low literacy levels;
- lack of culturally appropriate content;
- lack of reliable power supply; and
- lack of technical support and skills

While access to information and communications technologies is a first stage in the development of an information society, it is not sufficient. In my opinion the internet is a good resource for Indigenous women to access health resources. Available resources include list serves, information services websites, government, corporate and educational

sites as well as some very detailed, useful Indigenous web sites. However, the creation of an information society requires full and active participation of women, men, youth, minorities, ethno cultural communities, Indigenous Peoples, people with disabilities, Elders, people of all ages, and often marginalized groups such as the poor. Everyone must have access to the skills and knowledge to work, design and produce information and knowledge in order for the internet to be a truly beneficial resource.[23]

Building a strategy that is holistic, inclusive and based on Aboriginal values is the key to establishing internet connections in remote communities. By responding to short term needs with long term vision the transition can be easier and address the concerns felt by Elders and others in the communities. Such elements as fitting ICT into Nation building contexts, responding to community needs, connecting on and off reserve Aboriginal people, community control, ownership and participation are key to making the internet beneficial to Aboriginal communities.[24]

Indigenous Peoples have the right to be part of the Information Society on their own terms and to shape their future without risking loss of their cultural identity. Indigenous peoples of Canada, Australia and New Zealand need the resources to develop their own content rather than just being recipients of externally generated content. Having a young Aboriginal population that is knowledgeable in today's emerging technologies will go along way in assuring their success in tomorrow's economy.[25] Also, access to the internet could positively affect the standard of living in many communities by improving future economic and social prospects. I believe that without access to the internet communities could be excluded from the growing information economy and this could worsen the circumstances for future generations

Appendix 1:

Aboriginal Community Participation in Federal Connectivity Initiatives in Canada.

Province and Territory	Community Access Program		SchoolNet	
	Communities	Projects	Communities	Projects
Alberta	8	17	33	61
British Columbia	45	70	76	93
Manitoba	14	26	43	50
New Brunswick	2	2	6	6
Newfoundland	2	3	1	1
Nova Scotia	4	4	10	15
Northwest Territories	6	10	0	0
Nunavut	8	10	0	0
Ontario	82	116	66	94
Prince Edward Island	1	1	2	2
Quebec	32	38	21	31
Saskatchewan	2	2	52	76
Yukon	5	5	0	0
Total Communities	**211**		**310**	
Total Projects		**304**		**429**

Note: Urban, closed and terminated sites were not included
(Source) http://www.aboriginalcanada.gc.ca/acp/site.nsf/en/ao28083.html

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