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Communication in place: Videoconferencing for First Nation community development

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Abstract

One definition of globalization suggests that the social relations traditionally associated with specific territorial locations have been transformed, and that physical distance is less of an impediment to communication and exchange than it used to be (Held, McGrew, Goldblatt, & Perraton, 1999). However, when the costs associated with travel to and from remote and rural First Nation communities are calculated, social and geographic relations still restrict opportunities for face-to-face communication and access to resources. Technology such as videoconferencing has been a powerful tool for overcoming these barriers; it enables people to stay where they are "from", and still engage in face-to-face audio and visual communication with people at one or more locations anywhere in the world.

Remote and rural First Nation communities are using videoconference facilities and networks to overcome isolation as well as access and share resources. Our research partners - K-Net, Keewaytinook Okimakanak (KO) in Sioux Lookout, Ontario; Atlantic Canada's First Nation Help Desk in Membertou, Cape Breton, Nova Scotia; and the First Nation Education Council in Wendake, Quebec - initially set up these networks for educational and health purposes. Now these networks are being employed for a wide range of cultural, artistic and community development activities using a relationship-building model. This paper draws on interviews with the technical and administrative staff of K-Net and the Atlantic Canada's First Nation Help Desk to explore the ways that videoconferencing between two or more sites has facilitated local community development.

Introduction

Community development has always been a challenge for rural and remote communities. The limitations of local infrastructure and resources may necessitate expensive and time-consuming travel outside the community in a pattern of "leaving", which encourages community depletion rather than development. First Nation communities have faced additional challenges of cultural and contextual insensitivity and systemic racism when dealing with agencies based in distant urban centres.

The VideoCom Project examines how videoconferencing between two or more locations is being used by First Nations people and groups to create "public spaces" and further community development. Our research partners - Keewaytinook Okimakanak (KO) in Sioux Lookout, Ontario; Atlantic Canada's First Nation Help Desk in Membertou, Cape Breton, Nova Scotia; and the First Nation Education Council in Wendake, Quebec - are three First Nation broadband providers. These organizations have established broadband networks that serve a wide variety of community types, sizes and locations. The systems were initially set up for better access to health and education institutions, but as technical capacity and expertise have grown, these providers have expanded the scale, number and types of interactions they support. This exploratory paper draws on interviews with staff and associates of K-Net and the Atlantic Canada's First Nation Help Desk to provide context and establish a baseline for a subsequent research project into community members' views and uses of videoconferencing.

Previous Research

Since 1994 K-Net Services, the telecom and ICT branch of Keewaytinook Okimakanak Tribal Council, has provided and supported the hardware and software that connects First Nations communities in northern Ontario to institutions and agencies that provide different services. Videoconferencing is now being used for language, culture and tradition preservation (Beaton, 2004), connecting family members, and community development efforts (Beaton, Fiddler, & Rowlandson, 2004). The growth of videoconferencing in remote and rural communities is not the result of imposed policy decisions from government agencies. Instead, it has been the initiative of First Nations providers and their collaborative approach to developing the network that has expanded these information and communication technologies (ICT) and their uses.

ICT not only connects communities to service providers, video has been used as a tool to record local, contextually-grounded and immediate interpretations of policy decisions in Canadian First Nation communities in northern Ontario back to policy makers for interactive policy design (Ferreira, Ramirez, & Walmark, 2004). For example, the "Fogo Process" (Ferreira et al., 2004) describes how films made by locals convinced provincial and federal government agencies to reverse relocation plans for the affected communities. In a similar vein, the provision of video and videoconferencing networks by K-Net and the Atlantic Canada's First Nation Help Desk allow communities to develop more interactive connections with government organizations for greater self-definition and control over their own economic and social development (O'Donnell et al., 2007).

For any policy to be effective, it must address the demands of local realities and needs. More interactivity between agencies that set policy and provide services and the affected First nations communities is fundamental to the success of any

policy (RMOs, 2008). In the measurement of that success, as Ramirez (2007) points out, it is not easy to draw causal connections between the implementation of ICT and the outcomes they produce. The benefits and challenges of deploying information and communication technologies in rural and remote communities are not just economic, but also social and cultural. Local stakeholder input at all levels of policy formation and evaluation allows a more accurate identification of how ICT contributes to various aspects of community development (Ramirez, 2007).

K-Net actively facilitates relationship-building between various service providers and organizations according to the needs of the local recipients, and employs a collaborative model of service provision based on First Nation values of decentralized power, respect for local autonomy, knowledge and resource sharing (Fiser & Clement, 2008). K-Net has grown to provide broadband services and network connections to sixty variously sized and serviced First Nation communities, spread widely across Ontario and Quebec (Fiser, Clement, & Walmark, 2006). Network support at the local level grants access for community members to communication technologies, and the benefit of videoconferencing is tempered by the local capacity to overcome technical challenges, user knowledge and comfort, the methods of content production, and social relations within and between organizations (O'Donnell, Perley, & Simms, 2008). An additional factor is how much support comes from external organizations for First Nations' visions for ICT applications (O'Donnell et al., 2008).

Description of Research Method

The VideoCom project uses a participatory research approach that embodies the OCAP principles of ownership, control, access and possession toward self-determination of Canadian First Nations in research (Schnarch, 2004). All of the partners meet regularly to share information, participate equally in decision-making, and provide feedback on research; community researchers collect data for many of the research projects.

This paper explores how First Nations community members are currently using ICT, specifically videoconferencing, for community development. Qualitative data were collected in 15 in-depth interviews with staff and associates of K-Net and Atlantic Canada's First Nation Help Desk. The transcripts were analyzed using Nvivo to explore how videoconferencing between two or more sites has contributed to various aspects of community development. The interviews were coded for videoconferencing about non-health and education related issues, community development initiatives, obstacles and challenges. The recurring themes that emerged from the interviews identified the potential of videoconferencing as an interactive technology for building connections, First Nation identity and self-determination.

The perspective of the third research partner, FNEC, is not represented because it was not part of the VideoCom project at the time. The 15 interviews were with all staff at Atlantic Canada's First Nation Help Desk and almost all of the staff of K-Net. The results are representative of these organizations but can not be generalized to other First Nation organizations providing broadband services. However, insights from this research may be useful for other remote and rural communities facing development challenges.

Community Development

Community development is a highly interpretive and somewhat controversial term, since *"The word 'development' has a certain bias to it, as if what you are starting with is undeveloped ... In another situation in another group of people, it could mean something very different"* (Interviewee K). As another interviewee explained:

> *Community development to me means ... Creating opportunities, supporting local development opportunities, in particular, capacity building, so that the communities ... can be making decisions and doing the work themselves as much as possible, and sustaining their own economy, sustaining their own livelihoods, and building stronger and healthier communities* (Interviewee B).

One definition of community development that encompasses the views expressed by our interviewees describes it as the process by which communities

> *... become more responsible; organize and plan together; develop healthy options; empower themselves; reduce ignorance, poverty and suffering; create employment and economic opportunities; and achieve social, economic, cultural and environmental goals*" (Frank & Smith, 1999, p. 6).

It was suggested that the progress of community development could be assessed using determinants of health[1] such as *"... economic development, looking at housing, looking at education, health and infrastructure ..."* (Interviewee D).

Uses and Benefits of Videoconferencing

In the past, the only way that residents of remote First Nations without roads into the communities could access many resources and services was to fly outside the community (Interviewee G). The alternative now is to use videoconferencing instead of travel to save both time and money. K-Net and the Atlantic Canada's First Nation Help Desk support point-to-point and multi-site videoconference meetings between provincial organizations and community

[1] Health Canada has identified twelve determinants of health: "income and social status, social support networks, education and literacy, employment/working conditions, social environments, physical environments, personal health practices and coping skills, healthy child development, biology and genetic endowment, health services, gender, culture" (http://www.phac-aspc.gc.ca/ph-sp/determinants/index-eng.php, accessed May 7, 2009).

members (Interviewee F). Videoconferencing is seen as a tool that has *"...put power into the hands of the community...They have a choice if they want to attend in person or they want to attend by video"* (Interviewee B). The broadband providers videoconference for daily business and to encourage use by example, so *"...what you're saying is just the kind of practice that you preach...Just showing the people that they should use it because we're using it ..."* (Interviewee N).

Simultaneous audio-visual communication via videoconference is useful for work where demonstration is necessary, and it offers a more *"personal experience"* (Interviewees C, D, M). Using videoconference may also provide opportunities for wider engagement, since *"...sometimes you can afford to send one person out to a meeting, but maybe you could have the meeting via video and more people could participate. So you have more people learning, more people commenting"* (Interviewee L). Health and education videoconferences have been expanded to include different community-based organizations for maximum benefit. For example, when a health organization is *"... getting speakers to present to community on certain issues--speakers that are in Halifax -- usually we'll get them to present through our videoconferencing at our corporate office. I think too, even with the health sessions like on the pandemic puzzle, I think that we had the elementary school hook up to that conference"* (Interviewee D).

Videoconferencing can also encourage more frequent interaction with partners. For example, the Atlantic Health Board typically meets three or four times a year, and wanted to add meetings with health directors. While representatives from Atlantic Canada's First Nation Help Desk could manage to attend in person up to two meetings a year, more frequent meetings were not affordable either financially or in time. In discussion it was agreed that "... *maybe with videoconferencing technology we could. Like this is wonderful I'm just so glad that I don't have to travel five hours to the next meeting; that I can just go over here and just hook up. We've been using videoconferencing probably the last three years ... at those rates, at least 60 times a year, and I know that it just simplifies things"* (Interviewee D).

Non-institutional uses of videoconferencing (i.e. neither education nor health-related) have allowed recording of cultural traditions to increase understanding of community history (Interviewee M), and connecting artists like a drummer, singer and dancer, in different locations for collaborative work (Interviewee D). Some groups are using videoconferencing for language preservation (Interviewee O) because *"The true language is being lost, so that there's a lot of terms and slangs that are overriding a lot of the original language that the elders have. So I think if the language was gathered and captured now, then it would be preserved and that way it wouldn't be lost"* (Interviewee C). As traditional industries decline, technology can present opportunities for communities *"...to*

look into new industries and to support building the capacity to have those industries in their towns" (Interviewee L). Because acute health care facilities are so far away from these rural and remote communities, *"…some health centres or some schools … use the technology so that extended family can visit the child in hospital"* (Interviewee D).

First Nations people are using videoconferencing to take more control over their identity and how it is presented "*… to other people outside of Canada. Not only outside of Canada, but outside of this region within Canada"* (Interviewee C). As cultural and artistic activities build First Nation identity, self-expression contributes to self-determination; when *"… a First Nations person in their Northern community … (is) feeling confident in their abilities, in their culture, and their tradition, and they would express themselves artistically or through communication. And K-Net facilitates those expressions, and also their abilities through training, and also through the communication platforms. So their expression and their training, I would say, support their self-determination"* (Interviewee F).

Videoconferencing and Community Development

The community development model shares a number of characteristics with First Nations culture. The broadband providers link communities technologically and by building relationships. This relationship-based approach allows for *"… more interaction … to build a stronger network of people"* (Interviewee N). Knowledge sharing, another key feature of First Nations culture, the development approach allows for that as one interviewee pointed out: *"I like the fact that a Native person can take this new technology and figure it out and then give it back to his neighbours, you know, without like he's stealing the knowledge, or hogging the knowledge or whatever"* (Interviewee E).

Our partners stress that change has to come from within the community: *"… If any change can be mandated from local levels, all the better. A change from the outside never does anyone any good in those places anyways"* (Interviewee J). The pattern for decisions has been opposite to the community development process above, with *"…government making the big decision and it's just top-down; but ideally you would like to see it from grass roots, up"* (Interviewee D). The most positive changes come about when *"… government people come from the region, and are able to spend time in the region learning about the people, learning about the needs, learned about the communities, and caring about those communities. Not bringing people from outside to come and work in here, which happens an awful lot in all the communities"* (Interviewee B).

All community development goals must reflect the different needs of each community. Identifying projects that are locally important means that *"…the community develop that, and work within it so that it's initiative and a reflection*

of the community, and they're a part of it; it's just not a structure that's separate from them" (Interviewee M). Increased communication between communities via videoconferences raises awareness of important issues, which can *"... motivate the population as a whole to help each other out, to have a better understanding. Because it's the local community that moves the government, and it's the local community that makes the changes amongst themselves, and so awareness, communication, I think, would benefit"* (Interviewee F).

There is always the risk that community goals may not match with the goals of provincial and federal departments, so to increase autonomy, self-governance and self-determination for First Nations means *" ... building the community by building capacity in people and in organizations through training, through experiences, through relationships"* (Interviewee F). As capacity increases, communities can *"... move initiatives forward themselves, to develop their own community and have ownership of that"* (Interviewee L).

The broadband providers take an active role developing community capacity and skill with the goal of fostering self-reliance. The approach is to *"...give them the tools and see what they build ... and then people like K-Net are continually finding new tools to show them how to build stuff"* (Interviewee E). As capacity increases, the community is encouraged

> *... to own that broadband connection, to turn it into their own ISP, internet service provider. And then, in turn, make that a business case and allow them to perhaps hire ... becoming self-sustaining of that network, of their own network that they own, and they can bring in more applications* (Interviewee G).

As time passes, the broadband provider withdraws from the individual communities, and while

> *...we were responsible to come up with some content or promote some content, but ... if we get them to a point where they are comfortable with their equipment, they will come up with these things and ways to use this equipment. They'll come up with the content, all we have to do is be there to support and promote it ...* (and) *turn the network to the communities. It's theirs to do with what they wish in terms of the network* (Interviewee J).

Obstacles to Videoconferencing

Obstacles and challenges to the use of videoconferencing by First Nations communities identified by our partners arise from the relative availability of equipment, since:

> *Every community is different when it comes to videoconferencing. Some communities have a unit in every office. (Laughter) You know, band office, health centre, schools, economic development. And then some First Nations only have it at one site—the band office or the school. The*

majority of band offices and schools and health centres have them (Interviewee H).

Other technical issues arise around firewalls and equipment compatibility (Interviewee J). Associated challenges are related to the overall infrastructure of a community, since:

> *...if we're building pipes into the communities where do those pipes connect to? If you're in Sydney you could go to a public library and you could read resource books and you could download at a fast speed and so on. So at least there's a physical spot where you can go to. On many of the reserves that physical spot where our connectivity is, so far, is the school. So a) the schools don't have libraries; b) they don't have extra meeting rooms or classrooms for people. They are already stressed for space so they don't have the capacity to be able to do their work or their sharing from a particular location. Thirdly, those locations are by and large closed down by four o'clock, by weekends. So you don't have an open and an inviting environment for people to come in and use connectivity even if the connectivity is there, which in a lot of cases maybe it is and then maybe it's not"*(Interviewee I).

The availability of broadband (Interviewee I) and equipment is directly related to the levels (Interviewee A) and reliability (Interviewee B) of funding. Funding is a constant issue because there is no one source of stable funding (Interviewee B) and *"... there's always a cost to bring in broadband, the costs are high, higher than urban centres closer to the main cities. So we have the ability to obtain funding and decrease the actual community cost so the service becomes affordable"* (Interviewee G). Another factor is the efficiency of how the funding is spent, when *"There's too much money built into the administration side of things that actually don't roll into the community itself"* (Interviewee G).

Funding also determines hiring practices, and can limited resources when locations *"...don't have enough manpower to do it, and there's too many communities to work with as a whole"* (Interviewee C). Another staffing-related problem identified was the need for capacity building, training and rotation were identified as necessary so that as one person left a job, the entire effort would not fail (Interviewee D). The varying levels of experience between communities needs to be addressed with a model that offers continual training opportunities, since *"... staff turnover in a community is high. Leadership turnover is high. Every two years there's a new council elected. So, continuous training by perhaps us or other organizations, or us training our partner organizations within Sioux Lookout"* (Interviewee H) would also need to be funded.

Introducing technologies requires some patience and encouragement. Overcoming entrenched patterns is another challenge, because *"...until the*

culture changes so that people are able to work and contribute to people who are willing, and interested, and invested and listening, then all the bandwidth in the world is not going to change that. So it's...the world view, as well as the actual pipes that connect people" (Interviewee I, J). In addition, adopting new practices requires a change in mindset from *"...the complete dependency upon looking after, or being looked after"* (Interviewee J). In one instance, the initial meeting attracted a large turnout, but subsequent meetings drew few people from the community (Interviewee D). The situation was reversed when organizers employed a strategy used by a neighboring community, to offer incentives such as door prizes and a draw for attendance (Interviewee D). It is necessary to raise awareness about the services, since people living outside the communities may not be aware that they are available to everyone (Interviewees A, M). Community initiatives to increase familiarity with the technology would also encourage use (Interviewee F).

Conclusion

Prior research and these interviews highlight the necessity of stakeholder involvement at all levels of policy design, implementation and evaluation. Our partners' activities and successes are proof that the traditional pattern of service delivery by external organizations imposing policies, technologies and practices on First Nations communities is neither effective nor appropriate. It is our hope that as First Nations use whatever means they choose to take greater control over community development and their image in the wider world, endemic racism, systemic and societal bias against First Nations people in Canada will be eradicated.

Agencies, service providers and institutions are an important part of First Nations efforts toward community development. One obvious role is to improve the capacity to communicate via the means chosen and developed by the communities themselves. By following the lead of First Nations communities using ICT to communicate, these institutions and agencies have the opportunity to gain a greater understanding of the local realities of the place that is "home" to their clients, and improve their efficacy accordingly.

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