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A critical understanding of adult learning, education and training using information and communication technologies (ICT) in remote First Nations

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Abstract: Through a critical settler colonialism lens we explore how information and communication technologies (ICT) supports learning, education and training and First Nation control of these processes in remote communities. The central theme of the current study is that decolonization is about land and creating the conditions necessary so Indigenous peoples have the opportunity to connect with and live sustainably on their traditional territories. Remote First Nations across Canada face considerable challenges and opportunities related to adult learning and quality education and training programs for local citizens. Our study, conducted in partnership with the Keewatinook Okimakanak (KO) tribal council, explores how community members living in five remote First Nations in northwestern Ontario are using ICT for informal learning and education and training opportunities. KO and the researchers conducted an online survey of residents of the KO First Nations in early 2014 that included many open-ended response questions to ensure the voices of community members are heard. The critical analysis considers how the survey findings relate to the ongoing project of decolonization, and in particular, how these new ICT opportunities support the ability of community members to stay on the land.

Keywords: Critical studies, adult learning, training, land, settler colonialism, decolonization, information and communication technologies, First Nations, remote, Ontario, distance education

Introduction

I use the internet access with just about everything I do. I research and check up on the things that I do online. One example is I looked up on how to clean a carburetor on a chainsaw. I use the internet most of the time while trouble shooting just about everything. I honestly do not know what I would do without internet access now.

KO community member (from online survey)

Information and communication technologies (ICT) offer new formal and informal learning and education opportunities. The use of ICT in remote First Nations is changing how the people create and share their experiences and teachings with others (McMullen & Rorhbach, 2003; Molyneaux, O'Donnell, Kakekaspan, Walmark, Budka & Gibson, in press; O'Donnell, Kakekaspan, Beaton, Walmark, Mason & Mak, 2011; Simon, Burton, Lockhart & O'Donnell, 2014). This study explores how ICT supports decolonization work in remote First Nations in northwestern Ontario through its support of adult learning, training and education opportunities in these communities.

With the development of broadband networks and ICT, people living in remote First Nations are innovating and creating choices in the delivery of new learning, training, and education programs and services. With locally owned, managed, and operated ICT tools and networks, remote First Nations are now supporting a variety of training and education programs addressing the needs of the communities (Beaton & Campbell, 2014; Carpenter, 2010; Kakekaspan et al., 2014; Potter, 2010). Parents and children are able to choose whether to remain in their community to complete their education or leave for a high school program in a far-away urban centre that can be foreign to young people who rarely leave their small isolated communities. Professional development and new learning and sharing opportunities along with other adult training programs are now delivered online. These programs are planned, accessible, and cost-efficient for staff and community members to upgrade their skills and network with their peers in neighbouring communities. First Nation community members are active users of social media and many other online tools for informal learning opportunities (Molyneaux et al., in press; Potter, 2010; Simon et al., 2014).

Our article presents and discusses the results of an online survey of residents of five remote First Nations in northwestern Ontario conducted in early 2014 in collaboration with the communities and their tribal council, Keewaytinook Okimakanak (KO). The chiefs of these First Nations passed a tribal council resolution authorizing this research and the publication of the results following guidelines managed by their research institute. The study explores two questions from a critical perspective: how are the people living in five remote KO First Nations using ICT for learning and education; and what have been their experiences with these opportunities and their perspectives on ICT in the community.

The survey was designed using participatory research methodologies to ensure ownership of the survey and its data by KO and the communities and to encourage the respondents to share their thoughts and experiences. When provided with the opportunity to share their recommendations and concerns, many respondents provided thoughtful comments about learning, training and education and the use of ICT in their communities. The comments presented throughout this article are selected to present a balanced perspective. Keyword searches of the online comments to identify references to learning, training, land-

based activities, and education helped to collect these common threads and highlight experiences and perspectives.

The critical theoretical approach undertaken in this paper involves a critical assessment of the power and knowledge relationships and dynamics between the colonial Canadian state and First Nations. By highlighting the existing oppressive manifestations of power, we provide an alternative understanding of the work being done by the First Nations to counter the dominant discourse. From the research, we are suggesting ways to destabilize these relationships for the purpose of increased equality in distribution of resources and respect for others. Identifying and challenging existing regimes of truths presented by the state, corporations, and the media is an essential requirement to influence and change contemporary hegemony.

The decolonization of education in First Nations

We need someone to teach the youth and kids about how to survive in the bush, about hunting, trapping, the old way of life, and how to get medicine from the land, what kind of plants to use, so many plants are out there. Our legends and stories from the past are getting lost, we need to teach our future kids about our traditions and culture and mostly our language, today, young kids are not interested in it.

KO community member (from online survey)

The design and analysis of the study was informed by Tuck and Yang's "Decolonization is not a metaphor" (2012). That phrase is the central theme of the current study: decolonization is about land and about creating the conditions necessary so that Indigenous peoples have the opportunity to connect with and live sustainably on their traditional territories. In a well-known critical text, *Pedagogy of the Oppressed*, Paulo Freire's analysis of the relationship between the colonizer and the colonized sees the need for critical pedagogy in which students are co-creators of knowledge in a process of liberation (Freire, 1970). Tuck and Yang are critical of Freire's analysis because of its positioning of decolonization primarily as an individual psychological process. The unsettling work required is the repatriation of Indigenous peoples to their land and their traditions for those who are able to undertake these lifestyles. Tuck and Yang, as well as other authors, use the term "settler colonialism" to describe the ongoing colonial relations of First Nations peoples within settler states. In this context, the lead author of the current study identifies himself as a settler-researcher and the co-author is an Indigenous woman.

Numerous other academic Indigenous authors recognize the importance of the land and its relationship with Indigenous people (Alfred, 2009; Battiste, 2013; Corntassel, 2012; Coulthard, 2007; Grande, 2004; Palmater, 2009). First Nation leaders continue to battle with colonial governments for nation-to-nation status and justice for communities to protect their rights and access to their traditional

lands. Leanne Simpson (2012) described this battle over the land that continues today as the longest resistance struggle in Canada since the first settlers arrived in North America. Corntassel (2012) describes how Indigenous people understand their responsibilities (rights) and relationships (resources) with the land and their role in protecting the land and waters for future generations. The resurgence (reconciliation) being undertaken by Indigenous people is evident in a renewed strength and commitment to traditional knowledge and practices among the youth (Corntassel, 2012). As this article highlights, the people living and working in remote First Nations continue to practice their traditional lifestyles that require them to be close to the land.

Along similar lines, in her book *Decolonizing Education* Marie Battiste (2013) explains the importance of an Indigenous learning experience grounded in the language and traditions of the First Nations to support decolonization. The historical and contemporary settler government-imposed education curriculum oppresses and marginalizes the First Nation communities and people by working to remove them from the land and disappear from the Canadian landscape (Battiste, 2013). The KO First Nations in northwestern Ontario who are partners in our research created and are successfully supporting and operating locally owned and managed education environments that support the language and traditions of the communities. These activities can be understood as efforts by the KO communities to decolonize their learning and education systems. The effective use of their locally owned, developed, controlled, accessible, and operated ICT tools and network support their learning and education environments and their decolonizing efforts (Beaton, Campbell, 2014) and can be understood as an extension of the broader principles of Ownership, Control, Access and Possession (OCAP) (Assembly of First Nations, 2007, 2010; Schnarch, 2004).

The writings of Battiste, Corntassel, Tuck and Yang suggest that creating local and regional First Nation owned and managed educational and learning opportunities that address local needs and priorities, language and historical challenges is a decolonizing practice. The importance of the current research is framed by understanding the political and historical forces that shape how the communities and the people came to this point in their existence. A critical theoretical approach highlights that the First Nations' work with learning and education, traditional languages, and lifestyles is being achieved under challenging conditions but with renewed determination (Battiste, 2013; Corntassel, 2012; Tuck and Yang, 2012; Grande, 2007).

First Nations control of First Nations education is the goal of all Indigenous communities across Canada. Local First Nation education programs and services struggle to deliver culturally appropriate opportunities for students while trying to work with the federal government bureaucracy. Their schools and learning environments are under-funded, demand extensive reporting, work within the legacy of residential schools, often operate in poor facilities and many other

obstacles (AFN, 2010; Battiste, 2013; Royal Commission on Aboriginal Peoples, 1996). Finding innovative strategies to overcome these obstacles is a constant effort by community leaders and educators in remote First Nations. Local schools and education programs are using ICT in many ways to address many of these challenges (Kakekaspan, O'Donnell, Beaton, Walmark & Gibson, 2014; Lockhart, Tenasco, Whiteduck & O'Donnell, 2014; O'Donnell, Johnson, Kakepetum-Schultz, Burton, Whiteduck, Mason, Beaton, McMahon & Gibson, 2013; Whiteduck, Tenasco, O'Donnell, Whiteduck & Lockhart, 2014).

The KO First Nations and their online learning, education and training opportunities

[We need] more land based activities for the younger generations to learn how to survive out on the land where our ancestors taught us how to survive.

KO community member (from online survey)

The beautiful but harsh Canadian Shield in the farthest northwestern region of Ontario is the location of the six First Nations that the Keewaytinook Okimakanak (KO) tribal council serves. The six remote First Nations are only accessible by plane or canoe throughout most of the year. For a few weeks each winter a temporary road is constructed on the frozen lakes and across the Canadian Shield to haul in supplies of fuel and construction materials. Five of the First Nations are permanent (year-round) communities. McDowell Lake First Nation only has seasonal residents conducting traditional lifestyles of hunting and fishing as they work to develop their local infrastructure.

Fort Severn, a Cree community in Treaty 9, is the northernmost settlement in Ontario located on the shore of the Hudson Bay and the former location of the first fur-trading fort in Ontario. The other five KO First Nations – Keewaywin, Deer Lake, North Spirit Lake, Poplar Hill and McDowell Lake – are Oji-Cree communities located in Treaty 5 along the western Ontario border shared with Manitoba. Both Treaty 5 and Treaty 9 include education as a treaty right. In the KO communities, education, both formal and informal, is recognized as a right and has a high priority (AFN, 2010; Walmark, 2010).

The total on-reserve population in the five permanent communities is approximately 2,900 with another 850 members living off-reserve. The on-reserve population is very young, with approximately 50% of the people under the age of 18 (AANDC, 2014). The five year-round communities all have K–8 elementary schools with the Deer Lake School going to grade 10; Deer Lake is the largest community with 1,000 residents and the other communities have resident populations between 400 and 500. Each of these First Nations also operates a local high school classroom as part of the Keewaytinook Internet High School (KIHS). As well, adults also have the choice of completing their high

school requirements in the local Wahsa Distance Education classroom (Carpenter, 2010; Walmark, 2010).

The KO tribal council delivers second-level support services and programs as directed by the chiefs of these First Nations who make up the Board of Directors for the not-for-profit organization. They are all members of Nishnawbe Aski Nation, their regional political organization, the Chiefs of Ontario, the provincial political organization and the Assembly of First Nations, their national political organization. All of these representative organizations include education as an important policy priority (AFN, 2010; Carpenter, 2010; O'Donnell et al., 2013).

Living in these small, remote communities can be a challenge for the teachers and others who come from outside and often are unfamiliar with the remoteness, the various levels of services, challenging facilities, and the different infrastructure. But the First Nations people who live in these communities do so because this is where their families and ancestors have always lived and where they want to raise their children to know their history and traditions. They have a deep connection to the land and their history of being there (Battiste, 2013).

Many of the challenges of providing learning and education opportunities in these unique remote environments are completely unfamiliar to people living in cities – for example, the lack of a reliable power supply. Poplar Hill First Nation needed a new school for many years to replace their 60 year-old wooden, mold-infested structure. But with their rapidly growing population, upgrading their existing diesel powered generators was necessary to build and support a new school. They have been working on their power development requirements for many years and only recently succeeded in accessing the required funding. Their long-awaited new school is now moving into the planning and development phase with construction to begin in the summer of 2014.

Lifelong learning initiatives and opportunities continue to be a priority in each of these remote communities. Within the local schools, the importance of the local language and traditions is emphasized in local elder teaching programs, traditional activities, and native language classes. Using ICT for formal and informal education, distance education, and online learning makes it possible for everyone in these communities to stay close to their traditional lands and continue participating in the land-based activities using the local resources that have always been practiced by the people in this region (Kakakespan et al., 2014). All of these opportunities are possible because of the broadband networks owned and controlled by the KO First Nations and supported by their tribal council KO (Beaton and Campbell, 2014; Carpenter, 2010).

Each First Nation school has an early childhood education program for four and five year olds. Deer Lake First Nation was able to secure funding from Health Canada to establish a Head Start education and childcare program for the young children and their families. Health Canada funds a limited number of Head Start

programs in First Nations to help prepare young children ages 3 and up, along with their families, for successfully attending school. There is a strong demand for childcare programs and services in all the communities so parents can take on employment opportunities whenever they arise; however, formal childcare services do not exist in any of the communities. Family and community gatherings and special occasions provide the primary opportunity for the young children to participate, contribute, and learn about the importance of the local traditions and culture.

Along with the local primary school operated by the First Nation, another formal education opportunity includes the Keewatinook Internet High School (KIHS) that has a classroom in each community for teenagers and young adults. KIHS, operating since 2000, is an ICT-enabled Ontario accredited secondary school environment where students can now receive their diploma in their home First Nation (Potter, 2010; Walmark, 2010). Students in KIHS classrooms in each partner First Nation are required to attend school and complete all the required work that is presented online. Student support is provided by the local qualified high school teacher who teaches their area of specialty online to students in the other First Nation KIHS classrooms across the region and acts as a local mentor for the students in the community where they live. Specific questions about the school or courses are supported by regional administrative staff and the teachers in the other classrooms using a variety of ICT tools.

The Wahsa Distance Education (high school) learning centre is also available in these First Nations, supporting adult students who can work independently to complete their high school program. The ICT tools in these classrooms are often used for other online training and education courses and upgrading programs. Both the elementary and high school classrooms are well equipped with ICT equipment (Kakekaspan et al., 2014). Working with locally trained technicians and classroom facilitators makes it possible for community members to get the support they require to complete formal courses as well as skills upgrading programs. Other regional programs are supported by regional First Nation organizations working together to provide skills training in areas such as band administration, tutor escort and classroom assistant, and teacher trainer, as a few examples. Contact North, Ontario's distance education network, also works with different institutions to provide education programs in these communities.

Videoconferencing is a popular tool used by community members to meet with students, instructors, and administrators when required. Videoconferencing is also used for professional development courses offered by KO, primarily to staff working in the community health centres. Keewatinook Okimakanak Telemedicine (KOTM) offers videoconference workshops and training for its staff and community members on a regular basis (O'Donnell et al., 2013; O'Donnell et al., 2009; O'Donnell et al., 2008).

Community members use ICT for informal and self-directed learning. The use of cell phone services for safety and for learning about and sharing information while on the land is now an important component for planning these land-based activities (O'Donnell et al., 2011). Many community members share information online about hunting, fishing, and many other traditional economic activities. From their cradles to their graves, the local residents in these First Nations learn about and share stories and experiences of surviving on the land that they love while living in harmony with the resources available. These stories are passed along from generation to generation forming a rich history connecting everyone and everything in their traditional territories. Community members are producing videos, sharing pictures, writing about their experiences, and posting stories online to document and record for others to know about their traditional activities and developments (Budka, Bell & Fiser, 2009).

There have been very few community-based studies of the experiences with ICT for learning, training and education in these remote communities. Our study's aim is to contribute new knowledge based on information obtained from adult learners in these remote First Nations about formal and informal learning, education and training experiences with ICT. The literature reviewed supports the questions examined in this study and highlights the challenges involved in conducting the research in remote First Nations. The two primary research questions considered in this study are:

- How are adults living in five remote KO First Nations using ICT for learning and education?
- What are their experiences with these opportunities and their perspectives on ICT in their communities?

Participatory research: the online survey with KO

Our methodological approach is holistic, community-centered and participatory. The Chiefs of the KO First Nations established the KO Research Institute (KORI) in 2004 to partner with other research institutions and researchers while ensuring their stories, knowledge, and data are protected and properly represented. Following the principles of OCAP – Ownership, Control, Access, Possession (AFN, 2007; Battiste, 2013; Beaton & Campbell, 2013; Schnarch, 2004), the research, the process, and the data obtained from the study along with the papers and reports produced are owned and controlled by KO and the KO First Nations.

The development and delivery of the survey instrument was a lengthy and close collaboration process between the researchers and the Keewaytinook Okimakanak (KO) tribal council, KO staff, the KO First Nation community leadership and members. KORl supports the KO First Nations in identifying their research needs and priorities while developing local skills in creating and using local knowledge and information. Research conducted in the KO First Nations is

also required to support local and regional developments by creating reports and publications that can be used for accessing, enhancing, and protecting local resources.

Working with KORl, we identified research priorities and designed the most appropriate method to collect data from community members in these remote First Nations given our travel and cost limitations. We decided to use an online survey, as this method was validated previously in 2011 (Beaton, Gibson, Kakekaspan, O'Donnell, 2012a; Beaton, Kakekaspan, O'Donnell, 2012b). Similar to the 2011 survey, the 2014 survey collected both qualitative data through open user responses and quantitative data through closed multiple-choice questions. The 2014 survey used some of the same questions as the previous successful online survey for comparative purposes and increased the number of open-ended questions to encourage community voices and perspectives.

Starting in the fall of 2013, information about the online survey was circulated, reviewed, revised, and re-examined by KO program managers, the KO Chiefs and board of directors, and the community researchers. Most of this internal KO communication work was led by the director of KORl with our support. We worked closely with the KO program managers (education, health, technology, research, administration, etc.) to design questions that would support ongoing KO program development work. Another important design feature of the survey and the questions was the information being shared was to inform participants about the various services and programs available from their tribal council. The questions were tested and further developed with KO First Nation research assistants to ensure they would support community planning. The survey was lengthy, with 29 questions, many of which had multiple sub-questions, taking from 30 to 40 minutes to complete with some people taking over an hour.

Working with the First Nation organization partners to determine the final questions to be asked is an ethical and respectful process that ensures the information obtained, and the publication deliverables, are owned and useful to the communities. The survey and research protocol met the KO requirements for community engagement. It was reviewed and accepted by the research ethics board at the lead author's home university. The research respects the guidelines outlined in Chapter 9 of the Tri-council policy statement for ethical conduct and research involving First Nations, Inuit, and Metis peoples of Canada (Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada & Social Sciences and Humanities Research Council of Canada, 2010) along with Indigenous research methodologies (Battiste, 2013; Smith, 1999; Wilson, 2008).

The online survey was launched at the start of February 2014 and remained open until the end of March 2014 (eight weeks). The survey promotion was targeted specifically at the members of the six KO First Nations; data for this study includes only the five KO communities with year-round permanent

residents. SurveyMonkey was used to deliver the survey. We worked with the Keewaytinook Okimakanak Research Institute (KORI) to engage the community researchers in the six KO First Nations to promote the survey and support community members to complete it. A job description and contract was created to provide a clear definition of roles and expectations for everyone. The research team worked with the community researchers to identify the tools required to promote the survey and to create posters and information bulletins for community members. Appropriate prizes were identified as incentives. The survey was promoted primarily through online means, such as mass emails to KO-KNET email account holders who identified as living in KO communities, messages posted to the KO First Nations e-community and other Facebook pages, and personal Facebook and email messages to encourage community members to complete the survey.

Given that the survey was promoted almost exclusively through online methods, one of the limits of the survey is that community members not using online tools were unlikely to complete the survey without the local research assistant's help. Community members were made aware of the survey through offline methods (posters, community researchers, local community TV and radio ads). After completing the online survey, respondents were directed to another page to enter their name, community and contact details for the prize draws. The names were validated as community members and, therefore, there is a high level of confidence in the validity of responses.

Throughout the survey period, we prepared regular updates to the community researchers and our KORl partner. When the survey was completed, we worked with KO to prepare reports for the community that will be presented in person and discussed with community members and leadership, and the KO program managers. Follow-up interview and reports using the survey information and meetings with each of the KO First Nations are planned during the summer of 2014 when we travel into each community. Future papers, research, and reports are anticipated outcomes from these community visits. These questions and the feedback provided on the survey by the KO community members support local community and regional program and service planning and developments addressing local needs and priorities. In the discussion that follows the presentation of the responses from the online survey, we examine how these research findings relate to the decolonialization work that is being undertaken and the extent to which we can say that learning and education in KO First Nations is decolonized.

What the survey tells us

Demographic profile of respondents

[We need] continued upgrading on technology services to be up to speed as the cities. And future cell service along existing winter road alignments

to be able to call for help for travelers that have vehicle breakdowns or accidents.

KO community member (from online survey)

The current study considers only the people living most of the time in the KO First Nations. According to the latest government records, the total on-reserve population in the KO First Nations is 2,903 (AANDC, 2014). Of these, about 50% are under the age of 18 and were therefore ineligible to do the survey, leaving approximately 1,450 eligible adults; of these, 209 started the survey and answered some of the questions. This represents an overall 14% response rate from the KO on-reserve adult population. Of the 209 people who started the survey and live in the KO First Nations, only 15 were not KO First Nation band members. These could be band members of other First Nations or non First Nation people (teachers, nurses, etc.) living in the community.

One of the communities had a low number of respondents, likely the result of community disruption because of three suicides of young people during the eight-week period the survey was open. In this community, there were 17 people who started the survey with 14 surveys being completed with an adult population of approximately 250 people representing 7% of the people. The high number of suicides in these small communities is a tragic outcome of the challenges of living in a colonial relationship (Palmer, 2012). The impact of suicides on a small remote community is severe.

Respondents represented a range of ages, from 18 to 69, with the majority 40 years or younger. More than 43% had completed less than a high school diploma, about 19% had completed high school, and the remainder had some post-secondary education or qualifications. This formal education profile is representative of the on-reserve population, where many do not complete high school for a variety of reasons. It should also be noted that the number of adults going back to complete their high school qualifications is increasing, largely due to the distance education programs on-reserve such as Wahsa and KIHS.

Most of the survey respondents (62%) worked full-time or part-time in their community and most (79%) rarely or never travel outside their community. Among the common regular activities indicated were taking care of children, sharing skills and teaching others, cooking wild meat or local food and hunting, trapping and fishing.

How are they using ICT for learning and education?

I need my cable line hooked up in order to get internet because I am doing online courses. I have to go next door where they do have the internet

KO community member (from online survey)

To answer the research question, what online learning and education opportunities are the people living in these five remote KO First Nations using, we are including some of the comments provided to a number of the survey questions. Completing the survey provided community members with the opportunity to provide information about their use of these tools and to share their thoughts about what they would like to see and the problems they are experiencing. They provided both positive and negative feedback on the existing learning and educational opportunities along with constructive recommendations about what is needed to support ICT in their community. Multiple references to KIHS intersperse the comments since most people are familiar with this 14-year old, online learning opportunity in their community.

The internet has become a valuable resource for learning something new. When asked what they do when they want to learn something new, most respondents (83%) indicated that they use social media sites (MyKnet, Facebook, etc) for this every day. Often (daily or weekly) they search the web (84%) to learn something new, while others go online to ask a friend (66%). Daily or weekly they watch a video to learn how to make something or complete a task (45%). Every day, respondents share information using social media with someone living in same community (61%), with other Facebook users (61%), another KO First Nation (41%), another community in northwestern Ontario (38%), living elsewhere in Canada (34%), with other MyKnet.org users (21%), and another country (17%).

Survey responses highlight that the respondents are using online tools extensively for informal learning and sharing information. About half (51%) said they share skills or teach others online often (daily or weekly) while only 8% indicated they never undertake this activity. Telling or writing stories online is often done by 24% of the group with 19% never doing this activity. 18% of the respondents often share their art or music online, and 48% listen to music or look at art online created by Aboriginal people. Daily or weekly activities included sharing news and stories on social media (57%), reading stories about First Nations (51%), searching for information about First Nations and Aboriginal people online or posting announcements about different events (42%).

Videoconferencing is recognized as a valuable tool for the people in the communities. One respondent shared *“for those parents who cannot travel to see their child who is in high school [in a city], there should be video open to the parents ... to get a chance to catch up on their child progress and if he/she is having problems out there. Not to lose that closeness between a parent and a child.”* At the same time, several community members recognized the need for more support to use videoconferencing effectively. One wrote, *“Training should be taught to full-time employees how to use video conferencing.”* The responses also highlighted that some online training opportunities are not well known in the communities. For example, one person suggested, *“Ongoing training for health staff should be offered through video conferencing.”* In fact, KO offers a comprehensive program of ongoing training for health staff via

videoconferencing. This finding points to the need for more effective promotion of these opportunities to community members.

The Keewaytinook Internet High School (KiHS) is the most visible, long lasting, and obvious online education opportunity in the five KO communities and it is clear from the survey that it has a key impact in the communities. Many of the comments referenced KiHS as a delivery model for expanding learning and education opportunities. Only 2% of respondents did not know about KiHS and 16% use the service daily. Most respondents (80%) indicated that a member of their family is or has been a KiHS student. More than half (58%) believe that KiHS students receive an excellent education (37% did not know), and 69% will recommend KiHS to someone else in the next year. Sixty-eight percent believe KiHS should be expanded, with only 1% believing it should not.

As discussed, other formal education environments in the KO First Nations that make extensive use of ICT include the Wahsa Distance Education Centre and the local school. These facilities and their use of ICT are included in the survey by the questions concerning where the people are working and how they are using these tools. Additional information is provided in the following section containing qualitative feedback from the survey concerning their learning and education experiences.

What have been their experiences with these online learning and education opportunities and their perspectives on ICT in their communities?

I would like to see more trained employees at public works, police, airport security and internet. I would like also like to see a coffee shop or restaurant. A hotel or lodge would also benefit the community.

KO community member (from online survey)

Respondents made supportive comments about KiHS and its online high school program in different sections of the survey. Many of the respondents are familiar with this online education program because it is available in each of the First Nations. For example:

I like the KiHS, as my daughter is attending the local KiHS. She is still too young for us to let her go out to high school by herself. I also like the internet service - it is an easy way to communicate with family in other communities.

Along with the positive, critical comments emerged regarding some of the challenges in trying to operate these types of online services. One community member writes, “*KiHS teachers need more support in our community. They arrive highly motivated and become discouraged because they are entirely independent in running their programs.*” Another community member wrote “*No more advanced technology, it is scary!*”

But there is always the need for improvements as several people wrote about the need for better, faster internet, improved technical support services along with regular training for staff. A community member's final comment on the survey highlights the ongoing need for more information:

Faster internet ... Trained / Educated Workers ... If there are any new technology products / services the community should get workshops / presentations / information sessions on the product or service from knowledgeable workers. Not everyone is familiar with all the services maybe an open house to present what we have so far (advertised so we all know)

Comments about other learning, training, and education opportunities highlight the range of development possibilities that local ICT supports. Several people wrote about the need for post-secondary programs with comments such as "... Access to online college/training programs/courses like KiHS to go with the new school coming up. We do not have the luxury of being able to walk out the door and have access to these services." These comments indicate a need for more information and support so community members know about available online post-secondary opportunities and what resources are required to access them.

The survey successfully encouraged creative individuals to share their visions for their communities as the following comment demonstrates:

I would like to see a job that would take kids and other age people to go out into a camp. I would like to have a centre or some building of some sort that would hold educational equipment like flight simulators, small shops for carpentry and mechanics, something for them that they can learn and use as a tool to become a role model for others.

KO community member (from online survey)

Others wrote about the need for equitable services and the opportunities it would bring for future developments. "*I would like true high-speed internet that allows proper downloading/uploading and streaming videos. Access to this speed would allow learning of new things in many new ways.*"

Discussion and conclusions

All technology should always be up to date and [need to upgrade ICT] to supply the communities with access to all modern technology

KO community member (from online survey)

The people working, learning, sharing, and surviving in these remote communities are living very close to the land. The theme of doing activities on the land, including harvesting, hunting, trapping, fishing, canoeing, and camping, was common with most people completing the survey. For the people living and surviving in the KO First Nations, "decolonization is not a metaphor" – it is their way of life and they are working hard to assist their children and future

generations to continue their traditions, language, and culture (Battiste, 2013; Tuck & Yang, 2012). The responses demonstrate how ICT offers people the ability to stay in their communities and learn what they need to live sustainable lives in these challenging environments. Access and protection of traditional lands, languages, and local lifestyles is an ongoing challenge as colonial governments continue to impose capitalist policies supporting the transfer of their lands and resources to corporate interests in far removed urban centres (Alfred, 2009; Corntassel, 2012; Coulthard, 2007; Grande, 2004).

When responding to the online survey, the people living in these remote communities continually supported and wrote about their involvement with learning, education, and other activities that demonstrate their strong relationship with the land and all its resources. Their historical and contemporary commitment to learning about and working in these challenging environments supports the decolonialization work being undertaken by everyone in the communities.

The critical theoretical analysis of this study challenges established thinking about the requirements for education, training and learning opportunities in remote communities and especially remote First Nations. The study provides evidence of First Nations using ICT to support ownership and control of their own learning, training educational opportunities and the development of innovative solutions addressing local needs and priorities. KHS is an excellent example of a locally facilitated First Nation secondary school delivering courses and support services resulting in high school graduates celebrating their graduation in their own home community, surrounded by family, friends, and community members. Using this critical theory lens, our study strongly suggests that the people living in the KO First Nations are busy doing the work required to ensure their learning and training opportunities as well as their education system are decolonized. Land-based activities, language programs and learning from the elders and traditional people have always existed in these communities. Now the adults and everyone in these communities, including children, young people, parents and families, have choices to continue to live land-based lifestyles using ICT and locally-owned and managed infrastructure that supports initiatives that the people require.

Challenging contemporary regimes of truths and hegemony is now possible as remote and rural First Nations access ICT to create and distribute their own stories and experiences in various online media. The challenge will always be finding the listeners and learners who are will to consider other truths and ways of seeing our relationship to the land and all life forms. Land claims, Aboriginal and treaty rights, reconciliation, resurgence, responsibilities, relationships - all require immediate corrective measures by governments and settlers (Battiste, 2013; Corntassel, 2012; Tuck & Yang, 2012; Palmater, 2011). Current educational hegemonies need to change to reflect a balanced understanding including both Indigenous people and settlers as everyone begins to learn and share past and contemporary experiences and understandings. Incorporating

First Nation history as detailed by First Nation regimes of truths will help shape a more cooperative, inclusive, and collaborative learning and sharing environment for all Canadians. The use of ICT to support learning, skills training and education in remote First Nations as highlighted in this study is one of the many steps that are required for decolonization to occur across Canada. Celebrating the successes and acknowledging the people taking place in these challenging environments helps community members continue their important work.

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