

ATHABASCA UNIVERSITY

INFORMING AN INUIT ONLINE MODULE USING TYPE-2 DIABETES MELLITUS

AS AN EXEMPLAR

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BY

WAYNE CLARK

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Term	Definition
Qikiqtani/ ᖅᑭᑭᑦᑕᑦ	<i>Qikiqtani/ ᖅᑭᑭᑦᑕᑦ</i> is the region of Nunavut encompassing Baffin Island, Devon Island, and Ellesmere Island.
Qilalugaq qaqortag/ ᖅᑭᑭᑦᑕᑦ ᖅᑭᑭᑦᑕᑦ	<i>Qilalugaq qaqortag/ ᖅᑭᑭᑦᑕᑦ ᖅᑭᑭᑦᑕᑦ</i> is an Inuktitut term for beluga whale.
Qilalugaq qernertag/ ᖅᑭᑭᑦᑕᑦ ᖅᑭᑭᑦᑕᑦ	<i>Qilalugaq qernertag/ ᖅᑭᑭᑦᑕᑦ ᖅᑭᑭᑦᑕᑦ</i> is an Inuktitut term for narwhal whale.
Qimmijaqtauniq/ ᖅᑭᑭᑦᑕᑦ ᖅᑭᑭᑦᑕᑦ	<i>Qimmijaqtauniq/ ᖅᑭᑭᑦᑕᑦ ᖅᑭᑭᑦᑕᑦ</i> is an Inuktitut term used to describe the dog slaughter by the federal government in the 1950's and 1960's as a way to force Inuit families off the land and into federal programs and villages.
Qujannamiik/ ᖅᑭᑭᑦᑕᑦ ᖅᑭᑭᑦᑕᑦ	<i>Qujannamiik/ ᖅᑭᑭᑦᑕᑦ ᖅᑭᑭᑦᑕᑦ</i> is an Inuktitut term for “thank you.”
Qulliq/ ᖅᑭᑭᑦᑕᑦ	<i>Qulliq/ ᖅᑭᑭᑦᑕᑦ</i> is an oil lamp made usually made of soap stone that is lit by qilalugaq qaqortag or nattiq oil for light, warmth, and cooking.
Sauniqtuuq/ ᖅᑭᑭᑦᑕᑦ ᖅᑭᑭᑦᑕᑦ	<i>Sauniqtuuq/ ᖅᑭᑭᑦᑕᑦ ᖅᑭᑭᑦᑕᑦ</i> is a location on the Wilson River in Nunavut which refers to a place where there are lots of bones.
Sila/ ᖅᑭᑭᑦᑕᑦ	<i>Sila</i> is an Inuktitut term for air or atmosphere which holds significant spiritual significance to Inuit as the connector between humans and the spiritual realm.
Storytelling methodology	<i>Storytelling methodology</i> , in the context of this study, is used to provide a model of collaboration to regenerate knowledge that drew upon principles of Inuit Qaujimagatuqangit with the goal of achieving a happy outcome.
Takunnanguaqtangit/ ᖅᑭᑭᑦᑕᑦ ᖅᑭᑭᑦᑕᑦ	<i>Takunnanguaqtangit/ ᖅᑭᑭᑦᑕᑦ</i> is an Inuktitut term for “visioning” or seeing ahead.
Technology-enabled environment	<i>Technology-enabled environment</i> describes the built learning environment and the information and communications technologies that support an online learning space.

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Term	Definition
Tarneq/ ᑕᑦᓂᑭ	<i>Tarneq/ ᑕᑦᓂᑭ</i> is an Inuktitut term for soul.
Tikiraqjuaq/ ᑎᑭᑦᑲᑦᑲᑦᑲᑦ	<i>Tikiraqjuaq/ ᑎᑭᑦᑲᑦᑲᑦᑲᑦ</i> is the Inuit traditional name for Whale Cove, Nunavut.
Timi/ ᑎᑦᑲ	<i>Timi/ ᑎᑦᑲ</i> is an Inuktitut term for the human body.
Tuktu/ ᑕᑲᑕ	<i>Tuktu</i> is an Inuktitut term for caribou.
<i>Tunnaniq/ ᑕᑦᑲᑦᑲᑦᑲᑦ</i>	<i>Tunnaniq/ ᑕᑦᑲᑦᑲᑦᑲᑦ</i> is an Inuktitut term that describes the Pond Inlet region of Nunavut.
Tunnganarniq/ ᑕᑦᑲᑦᑲᑦᑲᑦᑲᑦ	<i>Tunnganarniq/ ᑕᑦᑲᑦᑲᑦᑲᑦᑲᑦ</i> is an Inuktitut term for fostering a good spirit by being open, welcoming, and inclusive and is a principle of Inuit Qaujimagatuqangit.
Tunnqaniq/ ᑕᑦᑲᑦᑲᑦᑲᑦ	<i>Tunnqaniq/ ᑕᑦᑲᑦᑲᑦᑲᑦ</i> an Inuit traditional belief association with naming that a named individual can take on the wisdom and strength of the person they are named after.
Tuqlrausiit/ ᑕᑦᑲᑦᑲᑦᑲᑦᑲᑦ	<i>Tuqlrausiit/ ᑕᑦᑲᑦᑲᑦᑲᑦᑲᑦ</i> is an Inuktitut term for naming of children, often unborn, after dead relatives, and is a long-standing Inuit tradition.
Tuttarvingat/ ᑕᑦᑲᑦᑲᑦᑲᑦᑲᑦ	<i>Tuttarvingat/ ᑕᑦᑲᑦᑲᑦᑲᑦᑲᑦ</i> is an Inuktitut term for “health centre.”
Type-2 diabetes mellitus	<i>Type-2 diabetes mellitus/ (DM2)</i> is a long-term metabolic disorder that is characterized by high blood sugar, insulin resistance, and relative lack of insulin. Common symptoms include increased thirst, frequent urination, and unexplained weight loss.
Ullukut/ ᑕᑦᑲᑦᑲᑦᑲᑦ	<i>Ullukut/ ᑕᑦᑲᑦᑲᑦᑲᑦ</i> is an Inuktitut term for “good day.”
Ukioq/ ᑕᑦᑲᑦᑲᑦᑲᑦ	<i>Ukioq/ ᑕᑦᑲᑦᑲᑦᑲᑦ</i> is an Inuktitut term for winter.
<i>Uluit/ ᑕᑦᑲᑦᑲᑦᑲᑦ</i>	<i>Uluit/ ᑕᑦᑲᑦᑲᑦᑲᑦ</i> (singular ulu) is an Inuktitut term for semi-circular shaped knives. Uluit were traditionally used by women to cut animal flesh and skins, and blocks of snow. Uluit are symbolic of traditional subsistence activities and a woman’s strength.

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creating the online module, and some of its content could be applied to other health conditions and other health care providers.

Background

To provide a health context for the online module, DM2 was used to help shape the medical education component of the module. As mentioned, Inuit community members have stressed the need for interventions that address the increasing DM2 rates in Inuit communities.

DM2 is a chronic metabolic disease that is of increasing concern in the Inuit population.

Andersen et al. (2016) attributes the spread of DM2 to behavioural factors, such as low levels of physical activity, poor diet, and genetic disposition. Other factors that impact Inuit DM2 rates are social determinants of health and lack of access to health services. Inuit social determinants of health have been identified as acculturation, self-determination, education, quality of life, productivity, income, food security, health care services, social safety net, housing, and environment (Inuit Tapiriit Kanatami, 2014; Jørgensen et al., 2010; King et al., 2009). It is important to note that challenges do not stop at these issues. Increasing rates of DM2 in Inuit populations can also be attributed to the loss of a traditional lifestyle and trauma as a result of colonization (Bombay et al., 2011; Brave Heart & DeBruyn, 1998).

The Inuit population in Canada is comprised of approximately 65,000 people. Nearly 73% reside in the Inuit Nunangat, which consists of Nunatsiavut, Nunavik, Nunavut, and the Inuvialuit Settlement Regions; and approximately 27% reside outside of these land claims territories (Statistics Canada, 2018). The communities in this region are represented by the red dots on the map depicted in Figure 1. The map depicts the enormous geographic range of Inuit communities that exists across Inuit Nunangat.

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The prevalence of DM2 in the Inuit population is similar to the prevalence in the general Canadian population, which is 7%, and research has documented that up to 20% of DM2 cases are undiagnosed, thus DM2 is likely underestimated among in the general population, and the Inuit population (Manousaki et al., 2016; Statistics Canada, 2018). While DM2 rates among the Inuit population are comparable to the overall Canadian population, they have been rising (Crowshoe, Dannenbaum, Green, Henderson, Hayward, & Toth, 2018,). Rates of diabetes across all Indigenous people in Canada are estimated to increase significantly by 2025 (Diabetes Canada, 2018). This study is significant because it can help inform a response to rates of Inuit DM2 in an Inuit-appropriate manner.

Figure 1

Map of Inuit Nunangat (Statistics Canada, 2018)



As part of this response, redirecting treatment and care in Inuit communities will be necessary. Medical education that focuses on incorporating patient perspectives is necessary to improve initiatives that center on patient-centred care (Bhattacharyya et al., 2011). Educational efforts can help to provide more culturally appropriate and relevant linkages between patients,

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clinical services, and community resources (Jernigan et al., 2016). Holistic perspectives of etiologies and social experiences adopted by Inuit vary from the biomedical model, which centers on the individual versus the collective, and may influence care (Lister, 1989). Inuit perspectives on health take into account the entire community. Therefore, education that considers the health of the patient and the community as a whole would be commensurable with IQ (Karetak et al., 2017).

Positionality

I acknowledge that Inuit heritage involves complete sets of knowledge systems, which contain unique concepts of epistemology that draw upon a specific scientific rationality that is relevant to a given Inuit reality (Battiste, 2002; Chilisa, 2012; Karetak et al., 2017). I acknowledge that Inuit have long-held epistemologies that were in place prior to contact with European missionaries and that these views have lived on in various ways, such as through the transmission of IQ as a way of thinking that is governed by *maligait*/Lᑕᓂᐃᑦ (natural laws).

I self-identify as an Inuk, having Inuit and European heritage, and that I am a Beneficiary of the Nunavut Land Claim Agreement (Tikiraqjuaq/ ᑎᑎᑦᑦᑦᑦᑦᑦ [Whale Cove]). My grandparents were Johnny and Frances Voisey, and I am the son of Grace Voisey Clark. My *Ataatatsiar*/ ᐱᑕᑕᑦᑎᐱᑦᑦ (grandfather) was a whaler and trapper until my grandparents and their children were moved to *Kuugjuaq*/ ᑖᑦᑦᑦᑦᑦ (Churchill) in the early 1950s as part of the Inuit resettlement and *qimmijaqtauniq*/ ᑦᑎᑦᑦᑦᑦᑦᑦᑦᑦᑦᑦ (dog slaughter) that was taking place throughout *Inuit Nunangat*/ ᐃᐃᐃᑦ ᐃᐃᑦᑦᑦ (Inuit land base) at that time. I acknowledge that my access to the Inuit community in the Kivalliq Region/ ᑎᑎᑎᑦᑦᑦᑦ (a region of Nunavut) is by virtue of my heritage and kinship. As I embarked upon this research journey, I connected with my

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grandparents, acknowledging their wisdom and strength, and the knowledge they held that was passed down by our ancestors. A photograph of my Anaanatsiar and Ataatsiar is presented in Figure 2.

A belief that is central to Inuit culture is that an individual has *tunnqaniq*/ᑕᓐᓄᓐᓂᓐ (two souls), one that is human and one that is a name soul. I hold the name “John” as part of my namesake after John (Johnny) Voisey, my Ataatsiar. As Johnny Voisey was a skilled Inuk trapper and whaler, he was known to have a deep understanding of *qilalugaq qaqortag*/ᑭᓄᓄᓐᓂᓐᓂᓐ ᓄᓄᓄᓐᓂᓐ (beluga whales); he knew their migration patterns in the *Kangiqsualuk ilua*/ᓄᓄᓄᓐᓂᓐᓂᓐ ᓄᓄᓄᓐᓂᓐ (Hudson Bay) and the Davis Strait throughout the seasons. My Ataatsiar died in 1977. According to *tunnqaniq* tradition, the soul of my Ataatsiar came to reside in me after his death, which means I have the potential to have his strength of character. I acknowledge my relationship with my Ataatsiar, and that he is a part of the journey that I am undertaking with this research study. I discuss the *tunnqaniq* tradition further in Chapters 4, 5, and 6.

Figure 2

Photograph of Johnny and Frances Voisey, c. 1959 (Family Photograph Collection)



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I also acknowledge that there are various elements of Inuit history and culture that cannot be fully researched unless there is some form of lived experience within the study design. This means that methodological approaches based on mainstream models do not work with, and are counter-intuitive to, Indigenous epistemologies (Chino & DeBruyn, 2006). Therefore, I proceeded with the storytelling methodology to uphold an Inuit reality (Aveling, 2013): a reality in which I have a cultural, ancestral, and spiritual connection. Many of the stories passed down through my *Anaana*/ ᐱᓐᓐ (mother) were shared with her by my *Anaanatsiar* and *Ajjigiikuit* (aunts). Figure 3 presents a photograph of my *Ataatatsiar*'s sisters, Nancy Voisey, Winnie Crawford, and Rosie Voisey, wearing their traditional *amautiit* (women's traditional dress [singular: *amauti*]) in *Naujaat*/ ᐱᓐᓐᓐᓐ. These *amautiit* are traditional Inuit parkas and were sewn by Winnie Crawford. Sewing skills were highly valued in Inuit society and were essential to survival.

Figure 3

Photograph of Nancy Voisey, Winnie Crawford, and Rosie Voisey in Naujaat, c. 1935 (Family Photograph Collection)



The Need for Inuit-Led Medical Education

A storytelling methodology was used within an Indigenous research paradigm to gather information from Inuit Elders and other community members residing in Manitoba and Nunavut. This included information about the aspects of IQ that should be included in a DM2 online module designed to better inform non-Inuit physicians. Non-Inuit physicians require medical training that describes Inuit-led ideas to increase culturally-based knowledge, thereby expanding their skills and competencies. This is necessary to prepare them to treat and care for Inuit patients and families in a culturally-safe manner. For the health system in Northern Canada to become more effective concerning Inuit health outcomes approaches are needed to address racism and the lack of Inuit physicians who could help ensure education and restore balance. New methods are needed to educate physicians and to demonstrate the value of continuing professional development (CPD) for safer, value-based, and effective care (Bragg & Hansen, 2011).

This lack of training was highlighted as part of an audit conducted by the Office of the Auditor General of Canada (2017), which described the challenges in delivering health care services in Nunavut. The objective of the audit was to determine if the Nunavut Departments of Health and of Finance had adequately managed its health care personnel to deliver health services in the territory. One audit criterion was to determine if training was available to ensure that health care providers can acquire, maintain, and develop the skills and competencies needed to carry out their responsibilities. The auditor concluded that appropriate training should be made available for health care providers in a timely manner. The Department's response indicated that it would work with the Department of Culture and Heritage on a cultural orientation program; further details about the training have not yet been published.

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There is an absence of Canadian and international literature available that describes how Inuit populations are geographically and culturally different from other Indigenous people. Understanding the intricacies of these differences will help inform medical education in multiple contexts. Research in this area should be conducted through an Inuit cultural lens using practical approaches that are respectful toward Inuit customs and protocols. Research should be designed in partnership with the Inuit community using IQ principles as a guideline. This is important as IQ principles are accepted by the Government of Nunavut as a framework for decolonizing policies and structures imposed on the Inuit community by previous colonial governments and government systems (Government of Nunavut, 2000). While the Government of Nunavut recognizes IQ, not all Inuit governments have accepted these principles as a strategic approach to problem-solving.

Inuit Community Engagement

The overarching goal of this research is to develop an IQ-informed online module that has a focus on DM2. As mentioned above, I am signatory to a research sharing agreement with the MIA to carry out this research study. The organization and I complied with the specific guidelines and principles stated in this agreement (e.g., by ensuring a respectful research relationship was maintained). More information about the research sharing agreement is available in Appendix K. The MIA's mission is to improve the livelihood of Inuit in Manitoba by promoting Inuit values, community, and culture (Manitoba Inuit Association, 2020). The MIA recognizes and promotes the realization of the right of self-determination for Inuit in Manitoba and throughout Canada (McDonnell, Voisey Clark, & Clark, 2018). The MIA, as a champion of Inuit in Manitoba, works with the Winnipeg Regional Health Authority to consult on health care provider cultural awareness training. In addition to this work, the MIA has

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consulted the University of Manitoba to establish research guidelines for how researchers should approach community engagement as part of Inuit health research conducted at the university (Cook et al., 2014).

As a first step toward the development of Inuit-led medical education, I worked with Inuit Elders and community members to determine how the community could lead the representation of IQ in an online module focused on DM2. I achieved this by using the conversational method (Kovach, 2010) to explore and discuss how IQ can be represented in an online module. While engagement through conversations with Elders and community members had some focus on DM2, the knowledge I gathered was related to how IQ could be integrated into the design of an online module. This included the features and characteristics required to convey IQ to non-Inuit physicians who work in Northern health care facilities. This was done so that they could better support DM2 prevention and treatment strategies with their patients. As IQ is a dynamic and interconnected knowledge system, I used these principles to guide me through the research process. I used IQ to design the online module, which represents the intervention explored in this study.

IQ was an appropriate framework for this study because it is a strength-based approach that encompasses Inuit perspectives grounded in traditional beliefs and values that have shaped an Inuit worldview for millennia (Tester & Irniq, 2008). It is the knowledge that, traditionally, has been shared by Elders to generations of Inuit, and it is linked to their survival in a contemporary context. That is, IQ continues to evolve within an Inuit community consciousness. Education is an important place to discover IQ because it teaches Inuit identity and knowledge and offers a clear sense of the unique personal strengths and skills of Inuit (Government of Nunavut, 2007). Given the centrality of IQ within the community, it is

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an essential framework to use in decolonizing education and developing pathways for new relationships with educational institutions. More information about IQ principles is cited in the theoretical and conceptual framework in this chapter and in the literature review in Chapter 2.

Statement of the Problem

Keeping the aforementioned Inuit perspective on health in mind, Inuit-specific educational resources are needed so that Inuit societal values are better reflected in the health care system. Inuit-led medical training that incorporates IQ as a component of individual and community health is necessary for non-Inuit physicians who work in Northern health care facilities to learn. It has been acknowledged that the Government of Nunavut needs to provide this culturally appropriate orientation training for physicians (Office of the Auditor General of Canada, 2017). Cultural safety training that encourages trust and more equitable patient-provider relationships is important to this learning process so that physicians can facilitate culturally safe care.

A patient-centred approach that uses concepts of IQ for treating Inuit patients who are at risk of developing DM2 or have developed DM2 is a good exemplar for physicians to learn about different treatment approaches for Inuit patients. Battiste and Henderson (2000) state that “survival for Indigenous people is more than a question of physical existence...it is an issue of protecting, preserving, and enhancing Indigenous worldviews, knowledge systems, languages, and environments. It is a matter of sustaining spiritual links with ecosystems and communities” (p. 290).

From an Inuit perspective, the quote above describes the unique survival needs that Inuit face as people, which are congruent to their reality as a unique Indigenous people. This fact is of particular significance because Inuit are not identifiable as a single nation. As Indigenous groups

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are not homogenous, medical schools should have specific curricula related to the local and regional groups that trainees would serve. It has also been argued that “Indigenous knowledge [was] not sufficiently and appropriately available through books, journals, monographs, theses, or dissertations...” (Battiste et al., 2002, p. 91). This lack of curricula exists because institutionalized racism within medical teaching resulted in a preclusion of Indigenous ways of knowing and healing systems. Institutional racism, also referred to as systemic racism, is enacted in the form of requirements, conditions, policies, or processes that uphold and replicate preventable and unjust inequities across racialized groups (Paradies et al., 2013).

In the medical teaching realm, institutional programs have been traditionally and historically based on scientific principles that were upheld by Western values and approaches to health. Williams and Mohammed (2013) argue that the science-based conventions should be more flexible so that scholars can work toward reducing the negative effects of racism and racial disparities. For example, Indigenous knowledge that is combined with Western science-based knowledge can provide a powerful teaching tool (Kwiatowski et al., 2009). Although some advances are being made in Indigenous health education overall, there is still a need to reflect the diversity among nations that include Inuit-specific knowledge. An example of an educational offering that addresses institutional racism is the San'yas Indigenous Cultural Safety Training developed by Cheryl Ward (Kwakwaka'wakw) and Leslie Varley (Nisga'a) and the Provincial Health Services Authority in British Columbia (San'yas Indigenous Cultural Safety Training Program, 2020).

In 2015, the Truth and Reconciliation Commission of Canada (TRC) issued 94 calls to action to address the legacy of Canada's genocidal policies and practices towards Indigenous people, specifically the history of residential schools. All levels of government, academic

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institutions, libraries, archives, museums, and the justice system were called upon to address and advance reconciliation with Indigenous people across Canada. The TRC Calls to Action are extremely important in a health care context as they highlight the fact that the health care system must recognize that Indigenous people have distinct health needs that should be understood and addressed. Appeals that are associated with the residential school system need to be rectified through specific actions made by individuals and society as a whole, for which education and training is needed to shed light on why reconciliation is an important process to undertake (Wilk et al. 2017).

Specifically, in relation to this study, the Truth and Reconciliation Commission of Canada (2015) stated that:

We call upon those who can effect change within the Canadian health-care system to recognize the value of Aboriginal healing practices and use them in the treatment of Aboriginal patients in collaboration with Aboriginal healers and Elders where requested by Aboriginal patients (p.3).

The Commission also asserted that:

We call upon medical and nursing schools in Canada to require all students to take a course dealing with Aboriginal health issues, including the history and legacy of residential schools, the *United Nations Declaration on the Rights of Indigenous Peoples*, Treaties and Aboriginal rights, and Indigenous teachings and practices. This will require skills-based training in intercultural competency, conflict resolution, human rights, and anti-racism (p.3).

These Calls to Action describe the necessity for a level of training that incorporates recognition and understanding of Indigenous ways of knowing and health practices.

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While Inuit health education is limited, there is a program at the Children's Hospital of Eastern Ontario in Ottawa. It is referred to as the “Nunavut Program” and is a collaborative partnership between Ottawa Health Service Network Inc., the Government of Nunavut, and other local Ottawa Inuit organizations in support of children and youth from the Qikiqtaaluk Region of Nunavut. The partnership is grounded in IQ and helps to coordinate care during hospital visits and to support safe and appropriate discharges (Children's Hospital of Eastern Ontario in Ottawa, 2020).

The Nunavut Program has created cultural competency modules, which offers training to health care providers about culturally competent services for Inuit patients. There are four modules contained with a downloadable application for Apple or Android devices. Module one provides health care providers with an introduction of the geography, history, and demographics of the Qikiqtaaluk Region of Nunavut. Module two addresses some of the common experiences Inuit face when travelling for health care including fatigue, long wait-times, homesickness, and cultural differences. Module three describes some of the challenges of delivering health care services in Nunavut. Lastly, module four explains cultural competency and cultural safety within a health care system from the perspective of Inuit (Children's Hospital of Eastern Ontario in Ottawa, 2020). A module does not exist to address a specific condition. Thus, the work undertaken in the context of this dissertation complements the seminal work undertaken by the Children's Hospital of Eastern Ontario, Government of Nunavut, Tungasuvvingat Inuit, Ottawa Inuit Children's Centre, and Ottawa Health Services Network.

Theoretical Framework

This research study is based on an Indigenous research paradigm, which maintains a relational ontology, axiology, and epistemology because of the interconnectedness of all things

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in the Universe (McGuire-Kishebakabaykwe, 2010; Wilson, 2001), and this relationality is central to how Indigenous research should be conducted (Moreton-Robinson, 2017). Indigenous knowledge stems from a spiritual connection to the Creator, and how survival is linked to medicines, plants, animals, land, sky, water, and all of the ecological matter of creation itself (Archibald, 2008). These are the “things that make up Indigenous embodied ways of knowing” (Weenie, 2008, p. 551). Relationality, in the sense of this research, is situated in an Inuit ontology and community consciousness that is linked to the physical environment, or land base, inherent to Inuit themselves and their ancestors.

In Wilson’s (2008) seminal work, *Research as Ceremony*, he postulates that Indigenous research requires the researcher to situate themselves in the middle of the research, with participants, and to listen carefully without judgment and to draw upon conclusions based on the information presented to them. He describes the ceremonial aspect of research as “[building] stronger relationships or bridging the distance between aspects of a cosmos and ourselves” (Wilson, 2008, p. 137). His approach to Indigenous research has provided me the centrality and relationality to conduct a study within an Indigenous research paradigm that can be integrated with the Elders and Inuit community who participated in this study. The relationship between myself, as the researcher, and IQ principles is how I intended to make this integration possible, and it was central to my entire approach for how the research was conducted.

As this study was conducted within an Indigenous research paradigm, I made certain that I had an informed sense of the historical and critical role research has taken in Inuit communities. It was critical that I considered the worldview of Inuit and our perspectives on the present-day issues at hand for the purposes of this research. To achieve this, I was invited to regular board meetings at the MIA, where I provided updates on the research study as it

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progressed, received advice from board members, and followed up when required. I kept a journal of meeting minutes which recorded the advice shared by board members, as well as how it was communicated and follow-up actions taken. Where appropriate, I included information from the journal in my analysis of shared knowledge for this research study.

My research study required the creation of relationships that are built on mutual respect and accountability, which is reflected in the study's outcomes. As indicated above, I drew on the work of Shawn Wilson (2008). Wilson (2008) describes research as a ceremonial process that engages research participants to resolve tensions from past research experiences and other colonial processes to gain new perspectives for the betterment of the community. This helped to create the foundation for me to approach the research problem with the Elders and community members. In addition, I incorporated the IQ principles of *innuqatigiitsiarniq*/ ᐃᐃᑦᑲᑎᑦᑲᐅᐅᑦᑲᑦᑲᑦ (respecting and caring for others) and *tunnganarni* (being open and inclusive by having a good spirit) into relationship building as part of the research process as an Inuit-specific research study.

IQ is a holistic framework that can be considered for inclusion within Inuit research contexts because it can convey elements that make up an Inuit epistemology (Karatek et al., 2017; Pidgeon, 2008). IQ is often used by Inuit land claim organizations and territorial governments to describe Inuit societal values (Lévesque, 2014). IQ is highly regarded as an educational framework and is built into Nunavut legislation. IQ is cited in the Nunavut Education Act (2020) which states: “the public education system in Nunavut shall be based on Inuit societal values and the principles and concepts of [IQ]”. This might suggest that there is great potential for IQ principles to be extended throughout public services and programs, including the provision of medical services.

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IQ has been woven into the research design because IQ was an appropriate and respectful way for me to approach the research problem in the context of interacting with an Inuit worldview. Inuit storytelling can provide deep and meaningful insight about IQ within the online module. Inuit have passed on experiences from generation-to-generation to educate each other about the importance of living a good life and understanding and respecting relationships with the environment, animals, and the spiritual realm. Stories that are experiential can align with IQ principles when it is important to do so.

Meaning-making is a socially symbolic act which forms a narrative that is based on a context of time and place, and is a part of unikkaaqatigiinni. A storytelling methodological framework (Craven et al., 2016; Detta, 2018) is the best way to approach the research questions because knowledge about IQ has been shared through stories by Inuit for millennia. To engage Elders, the conversational method was employed to further contextualize research-specific goals and objectives related to cultural safety and online module design; however, the act of storytelling itself leveraged ideas about specific IQ phenomena. Inuit engagement is emphasized in this research study through conversations with Elders and community members. The conversational method offered Inuit Elders a way to control and direct what they wished to share with respect to the research study questions and module design elements.

This work was further supported by the constructive alignment theoretical framework, which aligns educational learning objectives, activities, and assessment in an integrated fashion (Biggs, 1996; Biggs & Tang, 2011). I analyzed the knowledge shared with me and considered how constructive alignment theory could support an approach that organizes content within an online module. This allowed the online module design to integrate appropriate teaching, learning, and assessment criteria. Biggs and Tang (2011) referred to this integration as the entire

system, which needs to be kept in balance when considering the needs of the learner with specific learning objectives and the correlated learning activities. Constructive alignment is congruent with an Indigenous pedagogy because, as an integrated model, it looks at the “whole system,” which is similar to an Indigenous view that all things have relational points of connection to one another. More information about constructive alignment and Indigenous pedagogy is discussed in the literature review in Chapter 2.

Figure 4

Conceptual Illustration of Study Based on Constructive Alignment Theory in Biggs and Tang (2011)

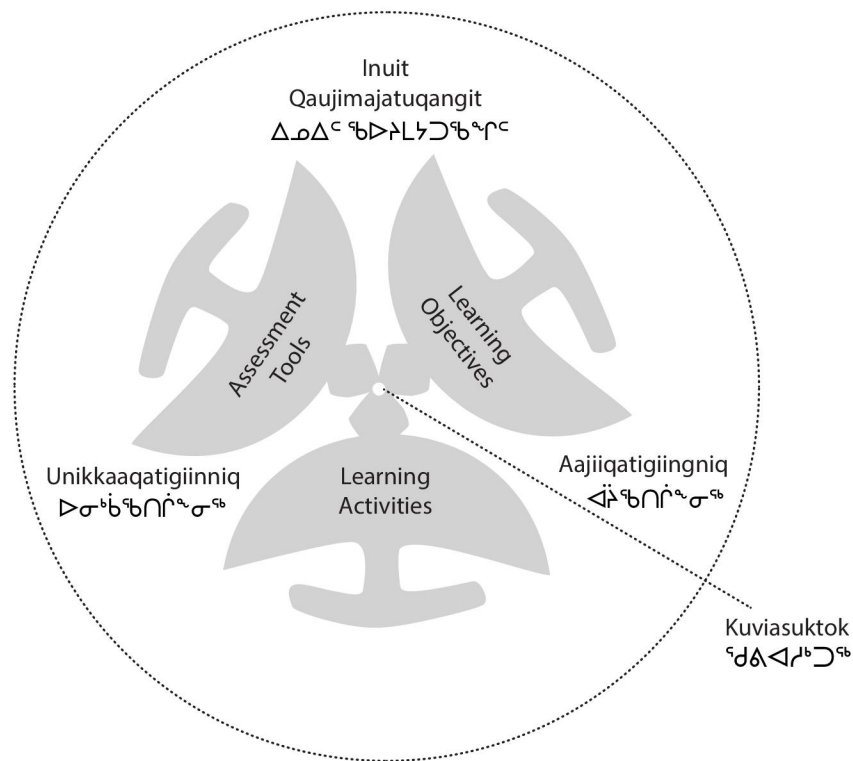


Figure 4 depicts the theoretical framework in a conceptual model. The model describes the relationship between IQ, *ajjiqatigiingniq*/ *ajjiqatigiingniq* (consensus building), and

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Northern health care facilities. I describe the theoretical framework I used and how it informed my engagement with Inuit Elders and community members in my quest for knowledge about cultural safety and IQ, and its application in the design of an online module. I introduce these elements to illustrate how I investigated the topics necessary to address my thesis with an approach that was decolonizing and commensurable with an Inuit epistemology and ontology. Moreover, I provide an introduction of why the online module would be more meaningful if it were Inuit Elder- and community-led using IQ principles that are combined with constructive alignment principles (Biggs, 1996; Biggs & Tang, 2011) in the shaping and organizing of content.

Chapter 2 draws upon the literature and theories available to decolonize medical education. I reviewed studies that used an Indigenous pedagogical approach to describe how learning technologies and media (i.e., digital storytelling) can be incorporated into the design of an online module. In this chapter, I also describe IQ in further detail and share examples of how it has been used in other research studies in the social sciences. In addition, I review why constructive alignment is an appropriate approach for decolonizing medical education and developing Indigenous pedagogy.

Chapter 3 describes my methodology and application of the theoretical framework toward practical research that engaged Inuit Elders and other community members in the design of an online module. In this chapter, I share how I used conversations with Inuit Elders and community members to draw on stories to develop a process for knowledge co-creation (further described in Chapters 4 and 5).

Chapter 4 discusses the knowledge shared by Inuit Elders and the online module design process. In this context, I examine the stories and advice received from the conversations with

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the Elders. I highlight salient themes, discuss their relevance, and assess how the knowledge and advice received had answered the study's research questions. I describe how the conversational method was a suitable method for seeking knowledge from the Elders about IQ and Inuit health and how it provided the right language to give structure and meaning to the research questions. I also describe how the conversational method used with the Elders aligned with an Inuit worldview to help elicit details in the sharing of stories, as well as the relational component of IQ and my place as the researcher within these exchanges.

Additionally, I describe how I analyzed the knowledge shared by the Elders and how it provided me with the insight for the design of the online module. I scrutinize the value of IQ principles and constructive alignment theory and discuss why it was important to conduct the study within an Indigenous research framework. Finally, I describe how constructive alignment theory supports the content within the online module design.

Chapter 5 describes the *Kangiqliniq/ ᑲᓴᓴᑦᑕᓄᓄᑦ* (Rankin Inlet, Nunavut) community engagement session process and how it reflected Inuit voices through using the conversational method. As the conversational method is an approach that is increasingly used for Indigenous research, I describe how it was appropriate for use in this study, how it could support a discussion about the rationale of IQ in the context of the design of online module, and how it could contribute to the final product. This was emphasized in the way community members responded to the online module design and in how their impressions were able to further the conversation.

Chapter 6 presents my evaluation of the potential impact of the study's findings, the storytelling methodology as an approach for investigation, and how community-driven curriculum design can support various community-based and physician stakeholders. I revisit

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any limitations previously mentioned in Chapter 3 and consider any shortcomings experienced in the later stages of the research study. Finally, I provide my conclusionary remarks to overall study.

Summary

In this chapter, I presented an overview and introduction to the research study and described my positional and theoretical framework. I defined community engagement through storytelling and the conversational method as part of a research study partnership with the MIA. I provided a background of DM2, which is the medical area of focus of the online module. The significance of this research study was discussed, as was the incorporation of IQ into medical education for non-Inuit physicians who work in Northern health care facilities. A statement of the problem and the theoretical framework for the study were presented. I identified the research study questions and the methodological approach I used for the research design strategy and provided the limitations and delimitations around the study and its scope. Finally, I presented a description of the outline for the remaining chapters contained within this dissertation.

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- *Aajiiqatigiingniq/* ᐱᑦᑲᑎᑦᐱᑦᐱᑦ /consensus decision-making;
- *Pilimmaksarniq/* ᐱᑦᐱᑦᐱᑦᐱᑦ /skills and knowledge acquisition;
- *Qanuqtuurniq/* ᑲᑲᑦᐱᑦᐱᑦ /being innovative and resourceful in seeking solutions; and
- *Avatittinnik kamatsiarniq/* ᐱᑦᐱᑦᐱᑦᐱᑦ ᑲᐱᑦᐱᑦᐱᑦ /respecting and caring for the land, the animals, and the environment.

Thus, IQ is a dynamic and interconnected knowledge system.

IQ, along with Inuit culture and language, was significantly compromised by Western colonial systems and structures, including the work of Roman Catholic and Anglican missionaries. Residential schools in Inuit Nunangat were not established by the federal government until much later than the southern Indian Residential School System but were essentially a system of residential and day schools and hostels under the direction of what was then called the Department of Northern Affairs (Truth and Reconciliation of Canada, 2015). The system that was administered meant that children were separated from their parents, or in other cases, Inuit families made decisions to move to locations where day schools were located to keep their families united. Still, Inuit had similar experiences of abuse than those of other Canadian Indigenous people as part of the residential and day school system that was in place over the past century (Igloliorte, 2011; King, 2006; Truth and Reconciliation of Canada, 2015). The purpose of the schools was to assimilate Inuit children into Euro-western society that refused to practice language and other cultural customs as part of the system. A tremendous amount of healing has occurred since then, with land claim agreements in place, there has been an increased focus on cultural and language revival, including the restoration of IQ within Inuit society. It is important to note that a significant amount of damage remains as a result of the schools, which will take decades to undo.

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When the Nunavut Land Claims Agreement was signed in Canada in 1993, it was believed that Inuit knowledge and values needed protection due to the rapid socioeconomic development of the North and political assimilation that was occurring (Lévesque, 2014). The creation of Nunavut in 1999 was seen by Inuit as a means to safeguard IQ for future generations (Nunavut Social Development Council, 2000). Since that time, there have been a number of initiatives that integrate IQ into government structures, some of which include education, child and family services, health promotion, and environmental protection (Docherty-Skippen & Woodford, 2017; Johnston, 2014; Rand, 2016; Office of the Auditor General of Canada, 2017).

IQ has been used to reform K-12 education in Nunavut, inform leadership, and develop new curriculum that integrates Inuit knowledge and values modeled through content as part of the required pedagogy (Aylwayd, 2007; Docherty-Skippen & Woodford, 2017; Griebel & Kitikmeot Heritage Society, 2013; Mcgregor, 2012). These research studies state that IQ is essential to all aspects of teaching and learning as a framework for knowledge co-creation in Nunavut. However, continued consultations with Inuit communities are necessary in order to incorporate IQ strategically and operationally within the education system (Preston et al., 2014). Docherty-Skippen and Woodford (2017) argue that, to incorporate IQ, educational leadership in Nunavut should consider strategies that focus on innovative approaches for teaching and learning to allow for diverse ways of community participation from Elders, community members, and Indigenous scholars.

As there is no university physically located in Nunavut, a limited number of degree programs are offered in association with Southern universities to provide specified training through partnership agreements with Nunavut Arctic College (the only post-secondary institution in the territory). It is not known to what extent IQ is included in the curriculum of these

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programs which include the Nunavut Nursing Program at Dalhousie University, the Nunavut Teacher Education Program at the University of Regina, and the Master of Education in Leadership and Learning Program at the University of Prince Edward Island. However, Nunavut Arctic College has integrated IQ in the formation of its goals and objectives (Arctic College, 2018).

There are instances where IQ has been applied to social services, health and environmental research. In Johnston's (2014) study, she describes how IQ could assist child and family services to instill Inuit beliefs and values among children in care. She argued that IQ should be built into the child welfare system as part of a structural redesign. She concludes that incorporating IQ into a "built environment" where Inuit do not experience decision-making roles remains a formidable but necessary challenge to overcome in order for new and improved child welfare policies and practices to be made (Johnston, 2014). In another study, Rand (2016) drew upon IQ principles as part of storytelling sessions to draw upon experiences of Inuit women to support community-based human immunodeficiency virus and sexually transmitted infection prevention strategies. The researcher used *piliriqatigiingniq*/ ᐱᑕᑎᑦᑲᑎᑦᑲᑦ (i.e., working together for common good) and *aajiiqatigiingniq* as guiding principles for the research design. Those who know IQ have also made some inroads in environmental science research. The relationship between IQ and wildlife management has been studied, specifically with the harvesting of *qilalugaq qernertag* (narwhal), *tuktu*/ ᑕᑲ (caribou) and conservation policies (Anderson & Nuttall, 2004; Keenan et al., 2018). These researchers concluded that a lack of IQ knowledge by some non-Inuit community members has created communication challenges and that more decision-making at the community level was needed for IQ to be integrated into the

social fabric of Inuit Nunangat, an environment that is shared with *qallunaat*/ ᖃᓕᓄᓐᓂᓐᓂᓐ (non-Inuit).

Despite the long-standing tradition of research taking place in the North in various forms, often with the support of Inuit, only recently has IQ been incorporated into studies to provide an alternative lens for looking at scientific phenomena. This idea is important to this study because it offers a framework for how to integrate IQ in an area where this has not previously been attempted. It is inspiring to see non-Inuit researchers engage in projects that incorporate IQ. However, an important step is still required to have Inuit actually designing and leading research studies of this kind.

The IQ framework builds on a series of natural laws known as *maligait*, which include working together for the common good; respecting all living things; maintaining harmony and balance; and continually planning and preparing for the future (Tagalik, 2018). These laws are integral components to a decolonizing approach, for the re-evaluation of colonial structures, and for the re-creation of new structures that can hold and extend the values and principles of IQ. Specifically, with regard to the colonial history of Western-based medical practice in Northern communities, IQ provides a natural approach to decolonizing health education and moving beyond painful colonial experiences. Given the place IQ has in Inuit community consciousness, it is essential to use this framework for decolonizing education designed to safeguard the well-being of Inuit and their survival in a changing, contemporary world.

DM2 Education and Cultural Relevance

Diabetes education can be defined as a collaborative process through which people with, or at risk for, diabetes gain the knowledge and skills needed to modify behaviour and successfully self-manage the disease and its related conditions (Burke et al., 2014; Powers et al.,

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2017). Diabetes medical education and practice are closely linked to available research and best practices within clinical settings. In this context, physicians are trained to educate patients in diabetes self-management as a component of care within a Western medical paradigm. One Canadian definition of the concept of care and treatment of diabetes includes clinical interventions that allow access to health care professionals and specialized care in the management of comorbidities (Canadian Diabetes Association & Diabetes Educator Section, 2014). There is, however, a need for an inclusive approach to diabetes management that is rooted in physical, emotional, mental, and spiritual wellness necessary for long-term educational solutions (Ross, 2009).

Education with Indigenous persons or communities must also include cultural safety, which is an awareness of the need to overcome power imbalances, institutional discrimination, colonization, and colonial affiliations in support of positive relationship building (Curtis et al., 2019; Lavallee et al., 2014). Originally conceived by the Māori nurse, Irihapeti Merenia Ramsden, cultural safety is an approach that considers how social and historical contexts, as well as structural and interpersonal power imbalances, can impact health and health care experiences (Ramsden 2002; Brascoupé & Waters, 2009). Cultural safety necessitates that physicians understand the socio-political realities of their patients and that they avoid reinforcing negative stereotypes while fostering positive, trusting relationships (Yeung, 2016). However, as stated by Jeriganet and colleagues (2016), the gap that exists between culturally-based training and the strategies needed to deliver improved models of care in the health and medical sciences is substantive. In Canada, Indigenous cultural education that fills this void needs to be localized, given the unique cultural differences and realities that are attributed to specific groups and the vast diversity between and among First Nations and Inuit and Métis people.

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In order to create ongoing self-management that is achievable and sustainable in Inuit communities, more community-driven practical and pragmatic approaches to health and well-being are necessary. An example of an approach by the James Bay Cree is a collection of stories, entitled *The Sweet Bloods of Eeyou Istchee* (DyckFehderau, 2017), which shares the lived experiences of 26 James Bay Cree people who have DM2. The storytellers articulate how DM2 is more than just a condition; it is a reality that involves food security, traditional teachings, animals, and the land.

Given the need for local resources, there is value for Inuit communities to participate in the design of DM2 education that is culturally relevant, meaningful, and applicable. This is important because Inuit can support the development of culturally safe clinical practice guidelines through knowledge sharing and education (Canadian Diabetes Association Clinical Practice Guidelines Expert Committee, 2013; Rice et al., 2016; Waldram et al., 2006). In this way, Inuit perspectives can guide how non-Inuit health services providers, including physicians, provide care.

Primary health care services are provided throughout Inuit Nunangat across vast geographic areas, which are integrated with multiple service delivery agents in Southern centres where tertiary care is provided. Treatment planning, patient education, and health promotion must take on different meanings, considering varying cultural contexts and patient-provider relationships. These challenges make it difficult for positive engagement to take place in the development of programs and activities in Inuit communities on a regular and consistent basis (Cook, 2003; Lavoie et al., 2010). A lack of programming and challenges with health care delivery across multiple jurisdictions make it difficult for continuity of care and relationship building.

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These issues are evident in the way that diabetes programs are delivered at the community level. For example, lack of accessibility to specialized care adds to the health system challenges that exist in Northern and remote communities. The Nunavut health care system is the most geographically stretched north-to-south health system in Canada, leaving it fragmented both administratively and operationally. Patients from throughout Inuit Nunangat travel to southern centres for secondary and tertiary care (McDonnell et al., 2019). For diabetes specifically, the Aboriginal Diabetes Initiative supports diabetes programming in Nunavut, including the Inuit Diabetes Network (Health Canada, 2011). The network helps to ensure comprehensive coverage of services and activities within Inuit Nunangat (Leung, 2016). Therefore, approaches for treatment should be coordinated, developed, and implemented to correspond with local treatment and prevention resources.

As DM2 is complex and impacted by determinants of health, care plans and related strategies should be developed and discussed with patients for pragmatic, solution-based goal setting (Bhattacharyya et al., 2009). There can be, however, a divergence of values that can present barriers to personalized treatment and care planning (Belanger, 2011; Scott, 2010; Stewart, 2008). A study by Rice et al. (2015) cited the need for ongoing dialogue between Indigenous health researchers and community members to bridge the gap between traditional and Western medical practitioners for holistic, collaborative care to occur. Community-based knowledge can help physicians work with Inuit patients and support clinical practice, while upholding culturally safe approaches to care. Creating a space that can support a dialogue between Indigenous and Western worldviews is necessary for knowledge co-creation that is respectful and meaningful (Docherty-Skippen & Woodford, 2017; Ermine et al., 2005; Kirkness & Barnhardt, 1991). Within Inuit communities, IQ is often used to ground Inuit perspectives in

the sharing of specific experiences, challenges, and expectations in the provision of community-based initiatives.

Decolonizing DM2 Medical Education

The literature reveals that there is a need to decolonize medical education (Mundel & Chapman, 2010; Nazar et al., 2015; Rodney, 2016). Institutions and communities must jointly design and evaluate medical education innovations (Pillay & Kathard, 2015). In relation to this type of collaboration, Smith (2005) postulates that “it is extremely important to build accounts of Indigenous education because these accounts document innovative solutions, telling the stories of Indigenous engagement with education and highlighting issues to be debated or further researched” (p. 95). These ideas are valuable to the research study because they support the need for ongoing Inuit participation in medical education research. It is necessary to have a framework for engagement that establishes how the Inuit community can advise institutions, curriculum designers, and other stakeholders of the approach they would like to take in a way that decolonizes education.

Indigenous people are calling for local, place-based education as the most appropriate way to learn about and from Indigenous communities in the interests of social justice and reconciliation (Battiste, 2000; Donald, 2012; Truth and Reconciliation Commission of Canada, 2015). As more postsecondary institutions are promoting reconciliation, there has never been a better time for the development of strategies for decolonizing education. Reconciliation, in the context of this research study, will be an iterative process to incorporate IQ as an innovative, anti-racist, and community-based solution.

The existence of racism in academic institutions has created the most significant barrier for Inuit knowledge and culture to be incorporated into medical education. Medical education

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has directly impacted the legacy of racial segregation in health care. Moreover, the way in which the health care system is structured and how Indigenous people encounter care, in turn, affects the way they are treated (Lavallee et al., 2014; Lavoie, 2018; Stuber et al., 2008). Recognizing that racism has played an integral role in the shaping of medical curricula, many institutions have emphasized the importance of decolonizing medical education to better acknowledge Indigenous rights and to promote reconciliation of past wrongs (Ewen et al., 2011; Gonzalez et al., 2018; Phillips, 2004; Truth and Reconciliation Commission of Canada, 2015; University of Minnesota Medical School, 2020). Decolonizing medical education involves innovative pedagogical methods that encourage physicians to recognize and challenge their own biases that address the complex power imbalances of the legacy of colonialism within the health care system (Lokugamage, Ahillan, & Pathberiya, 2020). Decolonizing medical education is also about incorporating Indigenous knowledges into the system. The challenge with this work will be to ensure that Inuit communities, and the vast diversity that exists within them, are appropriately represented in multiple health education contexts (i.e., chronic conditions) and diverse health care settings.

Access to Inuit knowledge would enable non-Inuit physicians to better recognize the health care needs of Inuit patients, leading to better-informed care. Previously, there was little inclusion of Indigenous knowledge within medical curriculum that was directly associated with cultural survival and well-being. This reality within medical teaching institutions has historically kept Indigenous knowledge outside of the academy and has inhibited the ability to interact and share Inuit culture and history with other scholars on an equal ground.

Previous instances of Indigenous knowledge within Western-based educational systems have created a situation where the dominant Eurocentric values and systems are maintained and

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seen as superior methods (Battiste, 2005). This is evident by the lack of Indigenous medical education because teaching institutions have upheld the Western biomedical view as the basis for its pedagogy (Paasche-Orlow, 2004; Ragoonaden et al., 2009). Western worldviews on medical education have maintained a dominant position over Indigenous worldviews and have been established on Western terms. There is a need to bridge together Western and Indigenous pedagogical approaches in new forms of training. Indigenous medical education can be changed through postcolonial approaches that incorporate Indigenous worldviews into pedagogy to offer alternate forms of inquiry and interpretation to increase cultural competencies of learners (Weenie, 2008).

Indigenous Pedagogy and Curriculum Design

In recognition of the distinct cultures that exist among Indigenous peoples, specific communities should be empowered to design health curricula that are reflective of their unique health and wellness needs. Community involvement from an Inuit perspective would bring an inherent recognition and respect of different learning styles, values, and belief systems to medical education. This recognition and respect would be integral to the curriculum design process as part of continuous improvement and as community needs change and evolve (Ragoonaden et al., 2009).

Investigating how Inuit holistic perspectives can advance the development of a DM2 online module may lead to improved Inuit health, with more meaningful and lasting impacts for Northern communities and the non-Inuit physicians who work there (Bird et al., 2008).

Dissecting this idea promotes new pedagogical approaches for medical education that are open to Indigenous knowledge and teaching methods, such as storytelling. Medical education often involves case studies that describe specific medical cases such as the background of the patient

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world. Working with Elders to share IQ can help shape and enrich Inuit health pedagogy and deliver targeted educational interventions. Indigenous pedagogical frameworks present different ways to think through the complexities of otherwise forcing an Indigenous worldview within Western educational systems. However, decolonizing existing pedagogy is an essential building block for the process of engaging Indigenous communities in the development of curricula (Rice et al., 2016; Smith, 2005). A key element of Indigenous pedagogy is to allow experiential learning, achieved through language and story work as critical elements of pedagogical frameworks (Searcy, 2016). A theoretical framework for story work, defined by Archibald (2008), includes the following seven principles: respect, responsibility, reciprocity, reverence, holism, interrelatedness, and synergy. These principles are integral to community ownership and how stories are shared. Therefore, curriculum design that is conducted by non-Indigenous institutions should respect the stated principles, but also ensure protocols are in place to uphold community values that originate from language and culture (Archibald, 2008).

Through language and culture, Indigenous epistemology has survived for thousands of years in the transmission and preservation of deep cognitive bonds (Battiste, 2000). Ensuring that the value of language and specific meanings are a part of medical education can offer a deeper connection to patients and communities and help to ensure a higher level of awareness about an Inuit reality. Inuktitut (i.e., Inuit language) plays a vital role as it forms the basis and meaning of original stories passed down from generation to generation (Berkes & Armitage, 2010). Spoken Inuktitut is more commonly used in communication across generations and to express feelings and thoughts related to cultural identity (Dorais, 1995, p. 296). Alternatively, written Inuktitut was historically limited to education, religion, or institutional contexts (Dorais,

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1995) until formal efforts were made by the Government of Nunavut to protect Inuit languages¹, both oral and written (Government of Nunavut, 2012). In a study about accessing personal health information, Inuit participants described the need for Inuktitut words to express health and health-related concepts. The participants felt that this would result in Inuit being involved in their health more holistically (Clark, 2014). Inuktitut is important to an Inuit DM2 online module because the language assigns meanings to certain concepts that are significant to Inuit health and that are respected and appropriately contextualized. Elders and community participants who spoke Inuktitut during conversations as part of this study used the Aivilingmiutut dialect as it is most commonly used in the Kivalliq Region where the research was conducted.

Reinforcing education with depth of meaning derived from IQ and Inuktitut terminology is a valuable way to achieve cognitive associations that are compatible with an Inuit worldview (Karetak et al., 2017). From this perspective, curriculum design that is grounded in IQ can be based on a "learning-by-doing" model, which can be correlated to a constructively aligned framework for defined goals, activities, and assessment to be achieved (Biggs, 1996; Biggs & Tang, 2011). In the following subsection, I describe constructive alignment theory and how it can be applied when designing an online module with Inuit community members using IQ principles.

Constructive Alignment

Originally conceived by John Biggs (1996), constructive alignment is a systems-based learning model that is about improving teaching and learning; it places the learner at the center of

¹ While Inuktitut is a term used to describe the Inuit language, there are variances in dialect by region. Some Nunavummiut call their language Inuktitut, while others call it Inuinnaqtun, Nattilingmiutut, Qamani'tuarmitut, Paallirmiutut, Aivilingmiutut, Qikiqtaaluk, or Sanikiluarmitut depending on community.

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activity with the goal of achieving specified outcomes. It is a powerful conceptual tool that enables curriculum designers to evaluate the consistency between learning objectives, learning tasks, and assessment frameworks (McLoughlin, 2002). Biggs' model of constructive alignment constituted a paradigm shift in the late 1990s, in terms of the way in which educators had traditionally viewed the process of curriculum design, which focused on the content the teacher needed to cover according to standardized taxonomies (Biggs, 1996). The model offers three stages: (a) identification of clear learning objectives; (b) assessment criteria that are designed to assess the achievement of learning objectives; and (c) appropriately designed learning opportunities for learners to effectively carry out the learning assessment criteria at hand (Rust, 2002). As a Western concept, constructive alignment principles can be adapted for use in Indigenous pedagogy because they acknowledge that activities (i.e., learning by doing) are important to Indigenous teaching practices and are designed as active, contextualized processes of constructing knowledge (Marchand, 2010; Miller, 2002). Given that Elders share their knowledge with the next generation, the role of Elders in leading this knowledge sharing can be described as similar to a teacher's role, with the younger generations as learners in this comparison.

Similar to the approach in which Indigenous pedagogy emphasizes the importance of holistic knowledge as a continual process, constructive alignment theory frames a process that is conducive for sharing knowledge and building on a knowledge base with certain objectives (e.g., passing on knowledge from one generation to the next and learning by doing). The tradition of storytelling is a long-held practice in Indigenous communities for knowledge sharing and teaching and has been used to share stories that have specific learning objectives. For example, I recall listening to stories shared by my Anaanatsiar and Ataatsiar as young as five years old.

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While I learned many things from these experiences, I recognize how these stories helped to shape my Inuk identity, my connection to the land, and the way in which I honour my relations.

The incorporation of Inuit storytelling in a physician education context can be supported by constructive alignment theory. Constructive alignment holds two broad theoretical principles involving teaching and learning. The first is based on the objectivist principle of what is known and not known. That is, there is a distinction between beliefs and knowledge (Fenstermacher, 1994; Popper, 1959/2002). The second principle claims that meaning is created by the learner and is not executed by reality or transmitted by instruction. The latter has two streams, constructivism and phenomenography (Jervis & Jervis, 2005). In this context, constructivism refers to what the learners have to do, rather than on how they represent knowledge.

Phenomenography is focused on learner activity, or the different ways in which learners experience, conceptualize, realize, and understand various aspects of phenomena being studied (Jervis & Jervis, 2005; Marton & Booth, 1996). These principles are fundamental to designing an Inuit DM2 online module. Firstly, they can dissect previously held assumptions about Inuit health by introducing IQ into the pedagogy. Secondly, constructive alignment can facilitate the integration of consideration of Inuit phenomena to establish learning objectives that are based on new understanding, thereby resulting in curriculum design based on IQ.

Constructive alignment therefore provides an ideal approach for incorporating IQ into cultural safety education because of the interconnectivity that exists in IQ principles between learning objectives, activities, outcomes, and the natural world. The components of a constructively aligned teaching model provide an easy-to-understand approach that Elders and community members can maintain and evaluate over time. For example, my Ataatatsiar wanted my angaju/ ᐱᓐᓴᓴ (brother) to be a hunter (learning objective). He took him as a young boy to his

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camp on hunting trips, and frequently brought him to check on his fishing nets (learning activities). Today, my angaju is a skilled hunter who provides for his family (assessment criteria). Constructive alignment could be applied to non-Inuit physicians in the context of this study, in that there is a need for non-Inuit physicians to provide culturally safe care to Inuit patients (learning objective). The online module will contain Elder stories about IQ related to the objectives of the online module (learning activities). As a result of completing the online module, there will be a non-Inuit physician workforce that is trained to respond to the health care needs of Inuit patients (assessment criteria).

Education design, in this sense, can be seen as promoting new ideas to non-Inuit physicians by introducing IQ throughout a constructively aligned design process. Given the various elements of IQ, using a technology-enabled environment (i.e., virtual platform) for its presentation can be advantageous to the curriculum designer because it can offer a non-linear organization of concepts, while upholding a cohesive design strategy. The next subsection of my review looks at technology-enabled learning environments to contextualize how constructive alignment theory can be applied to an online module design.

Constructive Alignment and Online Learning Environments

As this study is focused on informing the design of an online module, a discussion for connecting constructive alignment theory to technology-enabled environments is a necessary component of the literature review. Heydenrych (2004) described constructive alignment as a contemporary instructional design approach that is easily transferable to a technology-enabled learning environment. A technology-enabled environment is proprietary technology that delivers education in an electronic format that can be accessed online. This is essential when designing an online course using a constructive alignment method as it can build on approaches to learning

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based on defined pedagogy, instruction, learning activities, and use of online tools for "built-in" support (McLoughlin, 2002; Rogerson-Revell, 2015; Tam, 2000). Biggs (1996) claimed that constructive alignment principles are designed to address an educational objective and should aid the facilitation of more active engagement.

Part of using constructive alignment in connection with online learning environments is to shift pedagogical practices to a learner-centred model (Barone, 2003; Fishman et al., 2013). By doing so, teaching can shift from teacher-centred instruction to an interactive model that fosters knowledge construction, with learners actively participating in learning processes (Reaburn et al., 2009). Similarly, instructors who work with online learning environments must facilitate a learner-centred model of instruction, and, through constructive alignment principles, support interactions that align learning activities and course objectives in a virtual context. The introduction of digital storytelling as part of a constructive aligned technology-enabled environment can complement the benefits of an interactive learning model. This can be achieved through tools that customize individual narratives as well as personalize and enrich the learning experience (Robin, 2008). Digital storytelling is also a good example of an Indigenous learning activity that can be enacted within an online environment. This example is described in the following subsection.

Digital Storytelling

Digital storytelling offers an arts-based pedagogical tool as purposive method for responding to the needs of learners as part of a learner-centred teaching model (Burgess, 2006; Castleden et al., 2013; Dowell, 2013; Smythe, 2012; Yang et al., 2017). Digital storytelling combines traditional methods of communication and teaching with audiovisual technologies based on a process-based approach, in which stories are grounded in self-revelation and are

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personal in a first-person narrative that communicates Indigenous ontologies and epistemologies (Cherubini, 2008; de Jager et al., 2016). Digital storytelling is a process that is centred on creation which can enhance visual literacy and uses audio to emphasize narration and meaning (Cunsolo Willox et al., 2012), providing a rich, culturally relevant, first-person, and aural depiction of life (Harper et al., 2012).

Indigenous people can use digital technologies to reinvent and transform the delivery of storytelling in a similar way to how Inuit communities have always approached sharing knowledge and culture in real space (Hopkins, 2006; Lambert, 2013; Robin, 2008). Digital storytelling offers a unique medium to communicate and express pride, culture, and community knowledge that can be activated and shared (Lambert, 2010; Lambert, 2013). The nature of storytelling can be the basis of any instruction to transform a learning environment (Pewewardy, 2002; Butterwick & Lawrence, 2009). Incorporating storytelling in a digital context has the potential to offer non-Inuit physicians learning opportunities in technology-enabled environments that provide extraordinary insight into Inuit community culture.

It is important to consider that digital stories for curricula require community involvement in their design, implementation, and evaluation. Stories delivered in person or in film are powerful acts of remembrance (Iseke & Moore, 2011). Thus, the design of digital stories for online education for medical practitioners should be purpose-built with community input to have a powerful impact on Inuit health and well-being (Caxaj, 2015).

Summary

This chapter presented the literature reviewed in preparation for the research study and broadly described some of the issues related to the introduction of Inuit perspectives in DM2 education. Literature on decolonizing education and Indigenous pedagogy was reviewed to

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demonstrate why IQ is a necessary component of Inuit-led education, such as the design of the online module proposed in this research study. The need for teaching and learning to be more descriptive to help learners acquire knowledge in a constructively aligned manner was introduced. Further research on the applicability of constructive alignment was discussed to demonstrate its value and applicability in an online learning environment and how digital storytelling, combining both IQ and constructive alignment in this environment, can support the achievement of research study objectives.

Constructive alignment theory was also introduced as an approach to incorporate IQ principles into an online module. I described how teaching and learning can be enhanced through the combination of online learning environments and digital storytelling. These ideas form the basis for how I approached the methodology used to gather knowledge from Elders and community members and for how I used the knowledge shared with me to design an online module focused on DM2 for non-Inuit physicians who work in Northern health care facilities.

The literature on this research problem is still in its infancy. Extensive literature related to DM2 medical education exists within clinical and biomedical contexts. However, further studies are necessary to help inform medical education training programs that focus on holistic Inuit perspectives of health and well-being. There is a need for medical education for non-Inuit physicians who work in Northern Inuit communities where training is often based on hands-on, learn-as-you-go experience. Inuit holistic perspectives that are based on IQ principles and incorporate the realities that exist within diverse community contexts would be a culturally relevant solution. Research that describes a process for how to approach Inuit-led health education design for non-Inuit physicians does not appear to exist in the literature.

To decolonize Inuit DM2 education, it is necessary to empower community members to

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lead the design of medical education and to acknowledge the need for the incorporation of an Inuit-informed approach within medical teaching institutions. I described IQ as an Inuit value system and thereby argue its relevance as an Indigenous approach to pedagogy in the context of this study. Constructive alignment literature was also reviewed because, as a model, it is in line with learning-by-doing concepts of education that are commensurable within an Indigenous pedagogy, particularly through storytelling and other cultural contexts. Finally, I reviewed the application of constructive alignment theory within technology-enabled environments and digital storytelling as a medium for culturally rich teaching and learning.

Chapter 3. Methodology

Overview of Methodology

A storytelling methodological framework was employed to help me understand Elders' and community members' ideas related to cultural safety, IQ, and DM2. Sharing knowledge about IQ from one generation to the next is done through unikkaaqatigiinni (storytelling) and the expression of an Inuit epistemology, where there is a deep connection to the environment, animals, and ancestry. The sharing of this knowledge was intended to prepare successive generations to survive in the harshest of conditions, based on a true understanding of the world, or what Karetok et al. (2017) described as "what Inuit know to be true". IQ is a way of thinking that helps to maintain harmony among community members, which is often represented through the use of metaphor in storytelling (Tester & Tagaliq, 2017).

A storytelling methodology made this research more meaningful for the Inuit involved in the study (Craven et al., 2016; Detta, 2018), and is consistent with Indigenous principles of relationality and holism (Brant Castellano, 2000; Meyers & Long, 2007). Historically, research has not been a positive experience for Inuit communities due to inappropriate methods and practices used by research "outsiders" in the past. Historically, research has been used to undermine, ignore, and dismiss Inuit perspectives and voices for which incredible harm resulted (Inuit Tapiriit Kanatami, 2018). According to the Government of Canada's *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans 2018* (TCPS2) and ethical researchers, researchers have a responsibility to cause no harm and develop an understanding of their duties and personal obligations (Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, & Social Sciences and Humanities Research Council of Canada, 2018; Vanclay et al., 2017). Storytelling offers a way to initiate research

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with Indigenous community members and represents a means to examine current events and perspectives that are consistent with traditional worldviews and cosmologies (Iseke, 2013). Indigenous people throughout the world have long used storytelling to pass knowledge from across generations, typically in an oral tradition as the foundation for learning, relationship building, and sharing of experiences (Kovach, 2010). Stories and storytelling are linked to epistemologies situated in an Indigenous paradigm that are relational, purposeful, and collaborative. The use of storytelling within tribal contexts involves particular protocols depending on the context of place (Kovach, 2010). Within an Inuit perspective specifically, storytelling about IQ is more like a philosophy for having a good life (McMillan, 2005).

Stories have been the way in which Inuit have shared IQ for millennia. Tester and Tagaliq (2017) describe storytelling and the way Inuit shared knowledge by oral accounts that are meaning-making through visual symbolism and three-dimensional thinking. When information or instructions were given, learners were challenged to envision what was being described as part of the storytelling and learning process (Tester & Tagaliq, 2017).

Wilson (2008) noted that storytelling methodologies offer a means to get away from abstraction and rules dictated by Western academic discourse. In this sense, storytelling promotes new opportunities for Indigenous protocols, such as the validity of symbolism and meaning-making in the context of Western research. Storytelling is a socially symbolic act in that it takes on meaning within a social context as it plays out in the construction of knowledge (Mumby, 1993). Stories about IQ that are incorporated into personal experiences, places, or circumstances can make up a narrative that is grounded in an Inuit worldview and follows a specific protocol around meaning-making. In this study, storytelling made IQ accessible for the

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research process within a narrative that was shaped spontaneously in the form of stories as part of conversations with Elders (Kovach, 2010).

A key strength of using a storytelling methodology in this study was the linkage between Inuit participants' knowledge (i.e., IQ) and my role as the researcher. Using a storytelling methodology helped to ensure that Inuit teachings and epistemologies uniquely guided research activities in a manner that was culturally commensurable in the form of conversations with the Elders and community members (Bauer, 2017). Therefore, storytelling staged community involvement by engaging the Elders and community members to seek their advice on the design of an online module that would respond to their expressed needs (Rice & Mundell, 2018; Michell, 2015; Daza, 2013). To achieve that end, I employed the conversational method (Kovach, 2010), as an approach that is aligned with a storytelling methodology and Indigenous research paradigm.

The conversational method follows an Indigenous methodology, as it embodies an Indigenous worldview for story-based people. I created research study questions that were relevant to a conversational method for meaningful dialogue centred on the research study problem. The research was structured as a recursive process, recognizing that conversations could create a discourse about the subject matter, which became evident as the conversation questions were modelled through the collaborative conversation process (Keeney et al., 2015; Moreton-Robinson, 2017). Research questions were designed to obtain advice on IQ in conversations that were respectful, as well as decolonizing, because the Elders and community members were in control of how the conversation unfolded and developed, and were in control as the research study was shaped. The methodology process evolved over five steps taken in the research process (as depicted in Table 1).

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I found that the conversational method was a culturally safe means of engaging with Inuit Elders and community members about the research problem. I selected the conversational method to gather knowledge because I thought it could help to ensure the inclusion of Inuit voices and perspectives that were fundamental components of the research design. It offered a means to support an inclusive and respectful method of seeking knowledge. I could demonstrate *innuqatigiitsiarniq* (i.e., respect) because it gave Elders and community members greater control over their involvement in the research process, thereby affirming their own self-determination (Kovach, 2010). I collected and analyzed knowledge shared from the Elders and community members who hold knowledge about IQ in Manitoba and Nunavut.

Research Questions

The overall research question for this study is: How can storytelling and Inuit Qaujimagatuqangit inform the development of a DM2 online module designed for non-Inuit physicians who work in northern health care facilities? Research sub-questions are as follows:

1. How do Inuit want to be recognized and understood by non-Inuit physicians?
2. According to the participants, how can IQ principles support these ideas?
3. How can storytelling be used to help educate non-Inuit physicians about IQ and traditional approaches to living that can support DM2 interventions?

These questions were intended to draw on perspectives from Inuit Elders about how to share Inuit cultural knowledge in the context of DM2 and online module. Questions were designed to get a glimpse into an Inuit worldview about regaining control of health and spiritual wellness toward eliminating DM2. Inuit knowledge exists but it has been ignored within the context of biomedical worldviews. These questions aimed to disrupt Western biomedical approaches through a decolonized approach that incorporated Inuit knowledge related to DM2 to

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address the research problem and provides non-Inuit physicians with a different perspective on Inuit health. The current view is based on a non-Inuit physician's medical training and lived personal and professional experience working with Inuit patients. There is no educational offering that is rooted in or led from an Inuit standpoint.

Knowledge Gathering

The knowledge from Elders and community members was gathered through conversation, retained in my memory, and captured through my hand-written notes. With the support of a community member who provided Inuktitut language interpretation, I was able to listen more attentively and paid attention to body language and moments of silence, even while taking my own notes. I chose not to use a recorder as it could have been a deterrent to my ability to be present and help guide the conversations with Elders and community members. Another benefit of not using a recording device is that the participants may have felt freer to participate in the conversation (Kowalsky et al., 1996). As I sought knowledge from the Elders and community members, they directed the flow of information and identified aspects of the research agenda. I met with the MIA to discuss a general overview of the study and questions prior to moving forward with the study. The study was further reviewed by Elder Maata Tagak Palmer, who provided additional advice around the questions that were used for conversations with the Elders and for the community engagement session.

For conversations, I was prepared to engage in as many meetings with Elders as necessary to capture the knowledge needed to inform the online module design. This meant pacing conversations in a manner that would allow me to have the time and space for reflection in-between and to design the online module. The same approach was used for the community engagement session. Given the collective voices that were present, a focus on aajiiqatigiingniq

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(i.e., consensus building) was necessary. This was important when approaching the research questions and participating in a discourse regarding the online module design or other topics that were raised during the collaborative conversations. I helped ensure that there was balance and consensus around issues that required discussion, while respecting each of the individual voices present in the community engagement session. I aimed to achieve this by incorporating IQ principles of *innuqatigiitsiarniq* and *tunnganarniq*, as mentioned and contextualized earlier in Chapters 1 and 2.

My method for data collection involved in-person conversations and, as described in more detail on the following page, comprised the conversations, the online module design process, and the community engagement session. The approach involved a review of the online module with some questions that could contribute toward a conversation about the content and how it could be improved. My analysis strategy for the knowledge I gathered is also described as part of my method.

Table 1

Steps Taken in the Research Process

First Step Taken	Second Step Taken	Third Step Taken	Fourth Step Taken	Fifth Step Taken
I engaged with Elders for a one-hour conversation ($n = 6$).	a. Knowledge shared with me by Elders was analyzed. b. I designed the first draft of online module.	I presented the first draft of the online module to Kangiqliniq community members ($n = 9$) for additional advice.	Knowledge shared by Kangiqliniq community members was analyzed.	I refined and revised the online module to reflect Kangiqliniq community members' advice.

Conversations

Using the conversational method described above, all of the conversations were conducted in person to gather information from Elders over a two-month period. This was done in keeping with Inuit cultural expectations when seeking information from Elders.

Conversations took place at times when an Elder from Nunavut was in Winnipeg for meetings related to other work with the MIA. Before each conversation, I presented an overview of DM2 to help ensure there was a baseline understanding of the disease and its context within Inuit communities. Each conversation started with a dialogue about the research questions to ensure that there was a common ground for conducting research with Inuit Elders. While it is important that the conversations had some structure (Kvale, 1996), the conversational method was used to facilitate a dialogue that is characteristic of Inuit storytelling. My questions were structured to elicit information to address the overarching research study question as well as to seek knowledge related to IQ and online module design in a reflexive dialogue (see Appendix I for the Elder conversation protocol).

The conversational method was supported by a protocol consistent with the creation of a shared space that was collaborative, dialogic, and reflexive (Kovach, 2010; Kovach, 2015). It was necessary to listen attentively to the participants and record information without the use of an electronic recording device, as this allowed for full immersion in the conversation and storytelling process, pausing periodically to record thoughts in writing before returning to the conversation. As the conversational method relies on storytelling as a means to share information, I depended on the symbolism, such as references to land and animals as part of stories that were shared by participants. I reflected upon these to distill salient points derived immediately in the post-conversation period. The notes I took during the conversations also

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assisted me in this process, as they afforded post-conversation reflection that provided an opportunity to document additional context to the notes without time constraints.

I designed my conversation questions in a way that allowed for a free flow of conversation between the participants and myself. This helped me better understand their views on Inuit community health and understand how non-Inuit physicians can support and honour these ideas in clinical practice. After all of the conversations were completed, I analyzed the information and knowledge gathered from these conversations through written notes that were transposed into a spreadsheet; this analysis stage informed the design and content of the online module.

Design of the Online Module

Findings from the conversation stage were used to inform the design of the online module and its content and characteristics. An objective of the online module is the development of knowledge that could support pathways for preventing and treating a chronic condition, namely, DM2. I designed the content and look of the module based on the information shared during the conversations with the Elders. I then analyzed and organized this information into teaching, learning, and assessment components based on the constructive alignment framework. The learning activities were supported by the standard operating features of a technology-enabled environment (e.g., synchronous/asynchronous communication and video functionality). I also considered how digital storytelling could be incorporated into the module to further impart deeper experiential insights into IQ and pedagogical practices for non-Inuit physicians.

Once I completed the design, I placed all of the content into a course outline and created a document to present to community members in Kangiqliniq. Finally, I designed assessment criteria. The content reflects what the non-Inuit physicians are expected to learn and how their

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understanding of the course content will be assessed. I also ensured that there were linkages between the learning objectives and assessment criteria design throughout the online module design process, acknowledging the symbiotic role these two components play to influence learning (Biggs, 1996; Boud, 2010; McLoughlin, 2002). I subsequently presented all of the materials designed to community members during the Kangiqliniq community engagement session stage as described in Table 1 (see Third Step Taken).

Community Engagement Session

Once the online module was drafted, I used the snowball approach to gather participants for the community engagement session. Community members in Kangiqliniq were invited to verify the relevance of the educational content. It was important, however, that the information I gathered from Elders was shared with community members to provide them with the opportunity to share additional comments (Dennis, 2014; Denzin & Lincoln, 2008; Smith, 2012; Sutton & Austin, 2015). This helped me develop a better understanding of the participants' knowledge as a living culture (Aronson & Laughter, 2016). The community engagement session was important to help ensure that the research study was carried out through a process that was holistic, reflexive, interconnected, reflective, and relational (Smith, 2012; Chrona, 2017). The inclusionary criterion of community input upheld a high degree of ethical conduct in the overall research design (Canadian Institutes of Health Research et al., 2018).

To ensure that community members understood the anticipated format of the online module, I provided a verbal orientation and exemplars of the pre-consultation online module, which are included in Appendix A (English) and Appendix B (Inuktitut). I described how it would be supported by a technology-enabled learning environment. The community engagement session was used to discuss the appropriateness of the content and design of the online module

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for the purpose intended. In this context, I took a less directive role and used semi-structured stimulus-based questions for conversation, while following the conversational method to guide and shape the discussion. By doing this, there was a higher likelihood of a shared vision among community engagement session members. I designed the community engagement questions to stimulate advice from community members present about how the online module could concretely convey the learning objectives, activities, and assessment criteria. I believe this conveyed an approach that is consistent with Inuit understandings of IQ and how it is used to discuss issues at hand by Elders and community members. Akin to the conversation questions, I also designed the community engagement session questions to support the overarching research question (see Appendix J for the community engagement protocol).

Prior to commencing the community engagement session, I asked Elder Levinia Brown to offer an opening prayer. Following the prayer offering, I guided the dialogue responsibly, ensuring a respectful and ethical space for reviewing the online module and content design while simultaneously evoking knowledge co-creation among community engagement session participants (Ermine et al., 2005; Kirkness & Barnhardt, 1991). This recursive means of relationship building ensured a two-way process in the design of the online module (Sykes, Willis, Rowland, & Popple, 2013; Chrona, 2017). I made every effort to ensure that space was created to gather information from multiple participant perspectives on teaching Inuit health without an agenda but, instead, with an open mind. I also demonstrated an honest desire to learn and to serve the needs of Inuit for the physicians who treat them (Cochran et al., 2008; Smith, 2012), thereby helping to ensure the content of the online module is culturally appropriate (Sleeter, 2012).

Analysis of Knowledge Gathered

The initial analysis involved noting patterns and consistencies in the information shared, while also observing similarities and differences between individual narratives. Conversation notes were charted through a manual process to maintain the responsibility inherent in my role as researcher and to be present without the intrusion of a recording device. In doing so, I was more respectful of the sacred knowledge I sought (Kovach, 2010, 2015). Prior to the post-consultation session with community members, I analyzed the information in the notes using thematic analysis (Braun & Clark, 2008). I first became familiar with the information and sorted the knowledge collected through a coding procedure and used spreadsheet software to help me sort, codify, and filter responses. I clustered and interpreted the information to come up with themes, which I placed into categories. This system was based on key themes derived from Elders' story elements that helped me organize salient points that emerged from the information. These points were sorted and coded further (Auerbach & Silverstein, 2003) to identify cultural characteristics and meanings which broadened and deepened my understanding of the Elders' knowledge.

This process helped elucidate the streams of data from the conversations thereby uncovering what I needed to consider for the online module content framework. The organization of categories and themes in this manner provided me with a means to consider which aspects of IQ were relevant to physicians and Inuit health, and to justify their inclusion (i.e., what ideas were brought up in conversation and garnered consensus). I raised outlier themes that brought value to the online module when I reviewed content with community members. This brought clarity to information that I did not connect to IQ immediately, such as the importance of traditional skills in Inuit society. This technique was used to make sense of the streams of knowledge from the respective Elders, with the purpose of uncovering the discursive

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meaning of Inuit knowledge, eliciting details, and ensuring relevance to non-Inuit physicians in a medical context.

Participants and Recruitment

For the study, I recruited Inuit Elders and community members who live in Manitoba and Nunavut. Elders are the carriers and emblems of communally generated and mediated knowledge (Burns, 1998). Elders are the first and foremost teachers of knowledge in Inuit communities. Becoming an Elder is a role that Inuit grow into, as their wisdom is recognized from their vision, knowledge, and communication (Pauktuutit Inuit Women of Canada, 2006). Their personal characteristics made them ideal sources of truth for uncovering knowledge that helped address the research questions. I honour and respect the role of Elders in the Inuit community, and I acknowledge the vital role the Elders played in this research study. As part of the recruitment process, I used a conversation consent form to inform Elders about the research study and described their role in it (see Appendix E [English] and Appendix F [Inuktitut] for more information about the Elder conversation letter of invitation and consent form).

Community members from Kangiqliniq assisted me in refining and revising content for the online module. For the community engagement session, I looked for a cross-section of community members as much as possible. Thus, an intergenerational and multi-vocal narrative that constructed meaning translated a sense of values and attitudes that were based on a lived communal experience. As with the conversation participants, community engagement session participants were provided with a participant consent form that described the research study and their role in the community engagement session process (see Appendix G [English] and Appendix H [Inuktitut] for more information about the community engagement session participant letter of invitation and consent form).

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Recruitment was based on personal knowledge and contacts, following the snowball method (Shaghagi et al., 2011; Goodman, 1961). It was possible to identify Elders and community members already known to the MIA and me. However, I met many Elders and community members for the first time as part of the research study process. The snowball method was chosen for its relational character, and its appropriateness for Inuit culture. I started with one Elder who identified other Elders and community members who might be interested in this study. Table 2 lists the Elder participants who took part in this study according to their assigned code, gender, and residence.

Table 2

Elder Participants

Code Assigned	Gender	Residence
001	Female	Manitoba
002	Female	Nunavut
003	Male	Nunavut
004	Male	Nunavut
005	Male	Nunavut
006	Male	Nunavut

Many community members rely on word-of-mouth for getting information about new ideas, plans, and people in the community (i.e., outsiders). For my study, the use of the snowball method was helpful for establishing trust because I lacked the relationships needed to conduct this type of research project with many of the community members. I relied on connections from the Elders to find other community members who would add richness and diversity to the perspectives gained during the initial conversation stage. I personally asked if they knew of other potential participants who might have been interested in taking part in the research study. I

followed up with the Elders and community members to confirm their interest and availability. All interested parties were reminded that their participation was not obligatory and I informed them of the option to opt-out of the research study at any time. Table 3 lists the community participants who took part in this study according to their assigned code, gender, age, residence, and session date.

Table 3

Community Participants

Code Assigned	Gender	Age	Location	Session Date
Participant 001	Female	Approx. 70+	Nunavut	February 2020
Participant 002	Female	Approx. 40+	Nunavut	February 2020
Participant 003	Female	Approx. 40+	Nunavut	February 2020
Participant 004	Female	Approx. 50+	Nunavut	February 2020
Participant 005	Female	Approx. 50+	Nunavut	February 2020
Participant 006	Female	Approx. 50+	Nunavut	February 2020
Participant 007	Female	Approx. 50+	Nunavut	February 2020
Participant 008	Male	Approx. 50+	Nunavut	February 2020
Participant 009	Male	Approx. 50+	Nunavut	February 2020

The Role of the Researcher

As an Inuk, I am committed to authentic engagement with the Inuit community. In the context of research, Inuk scholar Julie Bull (2010) described authenticity as “research that means employing processes that allows the researcher to learn and be responsive to an Aboriginal mindset” (p. 17). Given the role of storytelling within Inuit culture, it was an appropriate approach for authentic engagement. Storytelling was used to help guide me with how to raise the research topic with Inuit Elders and community members in a manner that allowed them to determine the course of the research study (Bull & Hudson, 2019).

I acknowledge the inherent rights of all Indigenous people and the rights of Inuit as set out in the Nunavut Land Claim Agreement. I am also cognizant of the Nunavut context and health care issues in Canada, other territories, and throughout the circumpolar regions of the world. I was respectful of the privacy, dignity, culture, and rights of the Inuit community, including their right to self-determination and the Inuit laws that govern their communities respectively. I dutifully guarded and respected the confidentiality of the information obtained, related community information, and traditional knowledge, including the community members' rights as owners of their intellectual property (Chilisa, 2012; Smith, 2012). Further information regarding my role as the researcher is outlined in a research sharing agreement with the MIA (see Appendix K for more information about the research sharing agreement).

Ethical Considerations

Preparation for these conversations included the development of Elder conversation and community member protocols that were submitted as part of my applications to the Athabasca University Research Ethic Board and *Nunavummiut Qaujisaqtulirijikkut/ ᓄᓐᐅᓴᓄᓐ* ᓄᓐᐅᓴᓄᓐᓄᓐᓄᓐᓄᓐ (Nunavut Research Institute). In addition to the university's ethics approval, I required a license to conduct research in Kangiqiniq under the Nunavut Scientists Act (which I was granted on October 25, 2019).

Ethical issues within the health sciences often present themselves as dilemmas where two or more courses of action seem contradictory, yet both seem to be right (Russell, 1993). Bearing this in mind, I practiced good judgment and found appropriate pathways to pursue the research. Specifically, in choosing the appropriate pathway, I resolved issues that could have potentially arisen in how IQ was conveyed within this research study and how it could have been negatively interpreted and misunderstood. For example, applying IQ to DM2 prevention and management

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may seem like a logical intervention, but this approach may not be commensurable with a Western biomedical approach to care.

To help balance this potential issue, I acknowledged that I am aware of the social settings where the conversations and the community engagement session took place and, as an Inuk and employee of a health care organization, I understand the dynamic nature of health care organizations and communities. I was committed to balancing the knowledge I obtained as a result of the Elder and community engagement with problem-solving strategies that are mindful of Inuit realities. I was aware that participants could become emotionally triggered through the discussions, and made arrangements with the attending physician at the Kivalliq Health Centre in case mental health intervention was required as a result of conversations that took place in Kangiqliniq. These arrangements were made at the request of the Athabasca University Research Ethics Board as part of their response to my ethics review submission. I also reviewed local community supports within the Kangiqliniq in case there was need for an intervention as a result of a participant taking part in this research study. Fortunately, to my knowledge, no such event occurred. I also ensured a high degree of respect for the subject matter, participants, and community members at all times (Kovach, 2010). In addition to these steps, I contacted the Office of the Mayor of Kangiqliniq to inform His Worship of the study and to obtain a letter of support from the Hamlet (see Appendix L).

The research study followed Chapter 9: Research Involving the First Nations, Inuit and Métis people of Canada of the TCPS2 (Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, & Social Sciences and Humanities Research Council of Canada, 2018) and a research sharing agreement with the MIA. The specific guidelines and principles outlined in the research sharing agreement between myself, as the

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researcher, and the MIA helped to ensure a respectful research relationship. There was a reciprocal understanding that the research study would offer mutual benefit to the community, would request for appropriate permissions and consent, would respect community ethics, and would not exploit protocols in the research process (Castellano, 2004).

The research sharing agreement is a template that the MIA uses when entering into research partnerships with third parties. These provisions offered a framework that helped to ensure an appropriate transfer of knowledge for all aspects of the research study. My method was another element that helped to ensure ethical considerations were followed, but it was just as important that I honoured the relationships that developed as a result of the research study and acknowledged that these are as valuable as the research study itself. This involved a component of knowledge translation between the community members and me, which helped to ensure the research study can be further evaluated and refined. I described a process for how the MIA can work with physicians to ensure that the training meets CPD requirements and accreditation standards for implementation.

Finally, to uphold the principle of reciprocity, I donated the course outline and related teaching materials designed during this study to the MIA so that these resources can be used for similar or follow-up plans, studies, and other educational initiatives in the future. In doing so, I am supporting the building of a body of Inuit knowledge that can be further accessed by other Inuit community members interested in research and education. My goal is to continue to support MIA and its partners in achieving these objectives. As an Inuk, my desire to learn about the research topic extends beyond this study. My commitment to improving the level of Inuit knowledge within medical education is my life's work.

Limitations

I carefully sought out Elders and community members in Manitoba and Nunavut to participate in this study, but due to time limitations and the small sample size of participation, the scope of Inuit knowledge I could access was limited. Six Elders and nine community members participated in this study. Therefore, this sample size is not representative of the Canadian Inuit community. There are varying opinions about the research study problem among Elders and Kangiqliniq community members that may have impacted the information collected and my ability to conduct a thorough analysis. I kept notes to describe any outliers that occurred within these dialogues, resulting in some information that was outside of the research study objective. Another limitation was my own lack of fluency in the Inuktitut language. While parts of the conversations and community engagement session were carried out in English, it was expected that terminology and references to IQ principles and values would be shared, which are grounded in Inuktitut nomenclature. In keeping with TCPS2 obligations, I worked with an Inuktitut language interpreter to provide additional insight into the context of how the terms are used within the scope of the study, including any written findings and recommendations. This terminology is reflected throughout the manuscript and defined in the List of Abbreviations and Nomenclature. Finally, I was conscious of my own bias. While the conversational method allowed for a reflexive and dyadic discourse within the Indigenous tradition of storytelling, my role as the researcher was critical to navigating the dialogue that took place, and thus I needed to trust the perspectives of the Elders and community engagement session participants throughout the knowledge seeking process.

Delimitations

This research study describes how I used a storytelling methodology to seek knowledge from Inuit Elders and community members about IQ, cultural safety, and an online module design. Six Elders and nine community members participated in this research study. In partnership with the MIA, I used the snowball method to recruit Elders and other members from the Inuit community in Manitoba and Nunavut. Conversations and a community engagement session were used to engage research study participants about the research study questions. An exemplar of the online curriculum was presented to Elders and community members to discuss the appropriateness of the content and design of the online module for the purpose intended. Elders and community members had a chance to request results via email to give them an opportunity to change or remove any information in the final analysis that they do not want to make public. However, participants have not taken up this opportunity to date. The course outline and teaching materials designed as part of this research study were donated to the MIA as a form of reciprocity and as a symbol of gratitude for their partnership, participation, and support.

Summary

This chapter discussed the methodology selected for this research study. The rationale for the qualitative approach chosen is based on its commensurability with an Indigenous research paradigm and the value of storytelling as a means for sharing information with the Inuit community members who participated in the research study. I described how I ensured that IQ was authentically represented in the online module. I described how I was guided by the advice and suggestions of the Elders and community members I consulted as part of this study. Lastly, I discussed the ethical considerations taken into account when conducting research involving

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members of the Inuit community in Manitoba and Nunavut. I discussed how the final written analysis was used to help complete the design of the online module and to identify recommendations that could help inform an Inuit medical education strategy and an implementation and evaluation plan for MIA and its partners.

Chapter 4. Knowledge Shared by Elders

This chapter prefaces and documents my conversations with Inuit Elders in Manitoba and Nunavut. It reports how I used the knowledge shared with me during these conversations to develop a proposed online module design. Next, it presents the organization of the proposed online module using constructive alignment principles (Biggs, 1996; Biggs & Tang, 2011). Lastly, it discusses the approach I used to select the Elders' stories and how this influenced the learning objectives, learning activities, and assessment criteria of the module.

Background

Elders have historically been the single most important resource for Inuit society to maintain its cultural heritage, spiritual knowledge, and way of life. Elders have always shared their wisdom as rooted in practice or learning by doing at one's own pace and time, without negative connotations (Nakasuk et al., 1999; Stielgelbauer, 1996; McGrath, 2005). In doing so, Elders have always directed their knowledge to the younger generation as a means of survival. Therefore, Elder involvement was a critical component of this study and module design in honour of that tradition. I am forever grateful to the Elders who were willing to participate in this study and share their wisdom and strength with me.

Part of this gratitude was expressed in the way in which I prepared for my interactions with the Elders ($n = 6$), both formally and informally. Prior to engaging with each Elder, it was essential to acknowledge my relationality to the research. This involved meeting each Elder in a safe and appropriate location, while being perceptive of the historical events they may have witnessed during their lifetime and as Inuit who have witnessed a lot of changes and are intricately connected to the past (Ferrazzi et al., 2018). This awareness also involved my acknowledgment of our respective ancestors and relationship with Inuit Nunangat.

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While only three of the six Elder conversations took place in Kangiqliniq, my experience in the Hamlet was a significant component of the module design process as I reflected on all the Elder conversations that occurred as part of this study. My immediate arrival to Kangiqliniq included a personal acknowledgement of the land, my family relatives who currently reside there, and my ancestors who once resided nearby. This form of acknowledgement was carried throughout my visit by:

- (a) taking part in conversations with the Elders as part of the formal research process;
- (b) my interactions with community members and family relatives; and
- (c) the form of prayer and meditation.

As mentioned in Chapter 1, I was named after my *Ataatatsiar*, and as part of the *tuqlrausiti*/ᑕᓂ ᓇᓇᓇᓇᓇᓇᓇᓇ tradition, the soul of my *Ataatatsiar* came to reside in me after his death. I felt immediately connected to him upon arriving in Kangiqliniq on a mid-December morning. As I departed the aircraft, two *aqiggiq*/ᐱᓇᓇᓇᓇᓇᓇᓇ (ptarmigans) flew over my head as they were about to land just ahead of me. The temperature was -32 centigrade or -45 centigrade with the wind chill. *Aqiggiq* are well adapted to survive in the Arctic's bitterly cold *ukioq*/ᐅᐅᐅᐅᓂ (winter) by finding plants to feed on in the harshest of conditions. I felt an immediate connection to the land because of the encounter with *aqiggiq*.

The birds felt welcoming on a spiritual level. I recall my *Ataatatsiar* telling me about *aqiggiq* as a boy. *Aqiggiq* are one of the first animals an Inuk boy hunts when he is taught hunting skills. The event was personally significant because of a memory I hold about a hunting trip with my *Ataatatsiar* from a previous teaching that I received, which is also related to the unexpected encounter with the birds. I learned that the Inuktitut term *tuttarvingat*/ᑕᑕᑕᑕᑕᑕᑕ, which means “bird landing in the centre,” was used to describe “health centre” as there was

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previously no Inuktitut term to describe a health centre concept. The entire event reminded me of my Ataatsiar, who was front of mind while I navigated between two languages during my visit, most significantly during my one-on-one conversations with Inuit Elders that occurred in Inuktitut and English.

After leaving the airport, a relative invited me for a tour of the community and its surrounding area, which included spectacular views of the Kangiqsualuk ilua. I began my work in the community by speaking with Elders, community members, and family relatives. These activities helped to build and shape relationships as part of preparing for the Elder conversations and related research activities. As part of engaging the community, I was invited for a *tuktu* (caribou) dinner and gifted a *nasaq*, which is a traditional hat worn by Inuit during the *ukioq* (winter). The *nasaq* is also known as a “pang hat,” named after the Inuit community, Pangnirtung, where these hats were originally woven as early as the 1960s. On the third day, I was invited to a community event where I was introduced to many people. During this event, it was very evident that Elders are highly regarded and respected by all members of the community. I was introduced as the son of Grace Voisey Clark to some of these Elders who remembered her as “Dooley”. Dooley was the childhood name of my Anaana. Figure 5 presents a photograph of my Ataatsiar and Anaana.

While in the Hamlet, I viewed the land and Kangiqsualuk ilua in which my Ataatsiar navigated throughout his life as a trapper and whaler. Connecting to my grandparents and acknowledging this place helped to ground me with the insight to approach knowledge seeking as an intellectual and spiritual process. Spending time in the community for five days included three dinners with Elders and family relatives, with each meal consisting of *tuktu*. The sharing of *tuktu* is culturally meaningful, made evident by the discussions about *tuktu* and other animals

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as integral to an Inuit way of life and survival during my conversations with the Elders. I was gifted with tuktu and *muktuk* (frozen whale skin and blubber) on the morning I departed Kangiqliniq for Winnipeg.

Figure 5

Photograph of Johnny and Grace (Dooley) Voisey, c. 1946 (Family Photograph Collection)



Preparing for the Conversations with Elders

I met with three Elders in Manitoba, who have links to the Kivalliq and Qikiqtaaluk Regions of Nunavut, and three Elders in Kangiqliniq. The protocol I developed provided me, as the researcher, with a guide to enter into conversations with the Elders and to explain the objectives of the study in an appropriate manner. I explained the informed consent process as part of my obligation, the overall research question, and followed up with specific questions

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brought up during the conversations. Regarding preparation, I explained that Elder Maata Evaluardjuk Palmer reviewed the protocol and questions arranged for our conversation. The protocol used for conversations with Elders is presented in Appendix I.

As noted above, Elder conversations occurred in Inuktitut and English. However, one of the Elder conversations was entirely in Inuktitut, but an interpreter was present to translate parts of the conversation to English. I focused on the subject matter using the protocol as a guideline, but recognized the interactions were part of a process of knowledge co-creation and preservation, for the purposes of drafting the online module content while maintaining the authenticity of each encounter (Jacklin et al., 2017). While reflecting on my hand-written notes, I considered the truthfulness of the information shared in the tradition of Inuit storytelling. That is, storytelling is a traditional form of sharing knowledge by Elders to educate younger community members in the application of knowledge regarding a specific phenomenon. Thus, I considered this tradition in my approach to the knowledge seeking process (Scassa, 2019; Waddell et al., 2017) and the additional notes I made in made in the post-conversation reflection period.

Each Elder conversation took place while sitting down and having tea or a meal, when time permitted. After I prepared for the conversations with the Elders, the dialogue flowed using the questions in the Conversations with Elders Protocol. Since questions were established as a means to guide discourse, conversations unfolded with various stories layered between topics of discussion (Kovach, 2010; Sium & Ritske, 2013). One aspect of the conversations I noted was that each Elder focused on life stories as part of our interactions. Many of the discussion points incorporated personal experiences or other stories from other Elders who originally shared the narrative with them (McGrath, 2005). Elders described events and other memories, particularly when describing an Inuit identity.

Knowledge Shared by Elders

Inuit traditional knowledge is at the heart of the storytelling and traditional practices. The wisdom shared with me was socially and contextually situated within an Inuit worldview and epistemology. Elders shared stories in the tradition of sharing knowledge instead of responding to specific research questions. The context of each conversation varied by individual as each Elder brought their own unique experience to the knowledge seeking process. Salient discussion points, organized by theme, are summarized based on my hand-written notes from these conversations. Given the qualitative nature of the knowledge shared with me, only the most striking themes are presented.

All of the Elders spoke about how missionaries and government-imposed changes altered the way in which Inuit share information and their relationship to the application of knowledge (i.e., storytelling of lived experiences, approaches to sharing personal information, and changing livelihoods). There were conflicting worldviews and each Elder discussed how the Inuit community has gone through rapid proliferation of changes in a short period of time—which meant that they had to learn a new language and way of living—and how it seemed there was no consideration of Inuit culture and customs as the changes occurred. However, two Elders acknowledged that IQ was used specifically in negotiating land claim agreements and other legacy negotiations that were made between Inuit leaders and the federal government. IQ was also referred to as a means to problem-solve and build consensus for Inuit hunters.

Lifestyle

A common theme echoed by all of the Elders was the need to continue eating traditional foods such as *nattiq*/ ᐱᑦᑎᑦᑕᑦ (seal) and *tuktu*. Specific practices of eating raw meat were discussed and, while stories varied in terms of how much raw meat is consumed today, it was

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The Elders spoke about how the need for many community members to re-embrace a traditional Inuit diet consisting of food from the land, and to limit intake of food from the South (i.e., processed, high caloric food products). The Elders stated there is a need to teach young people to subsist more on a traditional diet of tuktu and nattiq. Each of the Elders spoke about the need to educate community members, especially about young people maintaining a traditional diet (because eating habits have changed a lot). Supporting others in need of educational interventions about the importance of maintaining good health was discussed as a way to help make community members more aware of healthy food options.

Traditional Skills

The Elders spoke about a long history of Inuit skills in relation to hunting, harvesting, sewing, and maintaining a traditional lifestyle. While these roles have been primarily distributed by gender as a division of labour, the roles continue to be a significant part of defining Inuit identity, regardless of sex. That is, skills were not so much defined by sex but rather as means of survival. Traditional roles are also important to how stories and information were shared, depending on the skills being taught and by whom. One Elder described how it is important for non-Inuit physicians to understand traditional skills (as they are a way in which a family can support someone with DM2) and described how traditional skills can affect an individual within their familial and community context. For example, if a physician is aware of a person's skills, this can affect how they might approach the IQ principle of qanuqturniq. A person with traditional skills is highly regarded by community members because traditional skills demonstrate resiliency.

Another Elder shared that girls were taught by women to be expert sewers before they could marry, while boys were taught to be skilled hunters so they would eventually be able to

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provide for their families. The conversations revealed that sewing and hunting are skills for Inuit self-preservation. One Elder stated that sewing skills still help Inuit today because they can teach confidence and resiliency since it takes time to become an expert sewer and this skill is extremely important for survival from the elements.

Another Elder shared that her anaana/ ᐱᐱᐱᐱ taught her how to sew and that she always felt confident because her anaana/ ᐱᐱᐱᐱ taught her how to be confident, which symbolized a close family bond. She explained that being taught by her anaana/ ᐱᐱᐱᐱ showed her how to be a parent, and the teachings became life lessons that she continued to refer to throughout her life. One Elder described the skills of various family members as essential to the survival of a family unit.

Everyone had a role to play, which included teaching those skills to younger generations.

(Participant 002)

Storytelling as Cultural Survival

Elders indicated that storytelling is used to describe personal, familial, social, cultural, and spiritual phenomena as processes of sharing knowledge that is passed down by each generation. Stories matched the storyteller's role in Inuit society by incorporating individual experiences and interpretations. In these situations, story elements can stay intact from generation-to-generation in the co-creation of knowledge that is necessary for sharing Inuit values, belief systems, and survival skills, such as how to build an *igluvut*/ ᐃᐅᐅᐅ (igloo). One Elder shared a story about igluvut building from her *ataata*/ ᐱᐱᐱᐱ (father), which prioritizes a way of communicating that is culturally commensurable within an Inuit context.

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[What non-Inuk] would think of building a dwelling out of snow blocks...? My ataata taught me when building igluvut, there needs to be enough room to move around. We learned how our parents made igluvut to protect us from the cold.

(Participant 002)

Elders stated that stories can be used to help teach physicians about IQ and how to apply it in a health care setting. It would be important to consider the different ways that IQ can be applied as illustrated through story because IQ can mean different things depending on the situation, the people involved, and the actions needed. Storytelling has often been the way in which IQ was shared because of the oral nature of Inuit culture. It was stories that Elders recalled when they described a real-life situation that required problem solving or consensus building with others.

It was described that when Inuit tell stories, the storyteller acted on knowledge. Some of the knowledge was passed down over generations, but it can be personalized to a given situation, such as how someone used knowledge to help them with a problem (e.g., a life-or-death situation). For example, a hunter could use stories to help themselves and fellow hunters to find animals or places to temporarily set up camp while being out on the land.

This form of story can act as a form of *takunnanguaqtangit/ ᑕᑯᑦᑲᑦᑲᑦᑲᑦᑲᑦ* (visioning or seeing ahead) while travelling in pursuit of animal prey. Visioning, through story can also help a physician and patient describe how DM2 came about, and how symptoms affected a patient's personhood. These stories were often the original stories of *angakkuit/ ᑲᑦᑲᑦᑲᑦᑲᑦ* (shamans [singular: angakkug]), which were retold in reference.

Angakkuit told stories and we determined how to apply them when we "re-heard" the stories in given situations. These stories helped to guide us.

(Participant 001)

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realms and the bridge between them. This belief suggests that an Inuit ontology and epistemology is rooted in language (McGrath, 2012).

Another Elder described that the concept of story is based in language and that the story would not have the same meaning in English. Another fluently bilingual Elder, who was raised in the South, believed that storytelling offered in English to non-Inuktitut speaking audiences was better than sharing no stories about the Inuit experience. It is not always possible for some Inuit because their language was forbidden in residential schools. However, Inuit tend to be aware of Inuktitut terminology that is embedded in the culture. It is important for non-Inuit physicians to become familiar with all of the IQ concepts to demonstrate that they have made an effort to understand Inuit culture.

For example, an Elder commented that implementing Inuktitut within a health environment could be as simple as placing an illustration of a tuktu with all of its body parts (e.g., heart, kidneys, and intestines) and their associated terms in Inuktitut. Using these terms as part of clinical practice would be a way to establish cultural safety within a clinical environment. The picture of the tuktu would make the patient feel comfortable and the physician would become more familiar with the body parts in Inuktitut if they could point to these on the illustration as part of patient encounters. The Elder said it would be important for physicians to be aware of relevant Inuktitut words even if they are not able to pronounce them because they are important to health and Inuit patients would see this as a gesture of cultural acknowledgement. For physicians, developing knowledge in this area can help them build trust with patients in order to better communicate with them and understand patient needs.

Another Elder described cultural meaning-making in the context of the online module. That is, he coined a term that would be an appropriate title that represented the voices of the

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Elders who shared their wisdom and knowledge for the purposes of training non-Inuit physicians.

Δᓃᑦᑎᓃᑦ ᓃᑦᓃᑦᓃᑦ ᓃᑦᓃᑦᓃᑦᓃᑦᓃᑦᓃᑦ ᓃᑦᓃᑦᓃᑦᓃᑦᓃᑦᓃᑦ ᓃᑦᓃᑦᓃᑦᓃᑦᓃᑦᓃᑦ, ᓃᓃᑦᓃᓃᓃᓃᓃᓃᓃᓃᓃ ᓃᑦᓃᑦᓃᑦᓃᑦᓃᑦᓃᑦ.

An Inuktitut term that is appropriate for this education material is piqqusiqput ukpirijaqput, which means “we believe in our culture”.

(Participant 006)

All of the Elders felt that wherever possible, Inuktitut could be incorporated into digital storytelling with English subtitles or voiceovers as a means to keep the language relevant in the online module. Given that some Elders lost some of their language through the Canadian Indian residential school system and that storytelling could also occur in English, a combination of both languages with applicable subtitles or voiceovers could be beneficial.

The loss of Inuit language has really hurt us. It was almost taken away from many of us; some of us did not teach it to our children. We were disciplined for speaking the language [while away from home at school]. I am so upset I did not use the language in front of my children.

(Participant 002)

IQ as a Tool of Problem Solving

Elders felt that in order to appreciate the principles of IQ it would be important to have a basic understanding of these concepts to be able to comprehend the depth of meaning. It was stated by one Elder that the principles of IQ must be the first thing physicians learn, as this knowledge is necessary before they can understand anything else about Inuit. It was suggested that physicians would need to go outside the health centre, engage with the Inuit communities, and talk to people to see how IQ can be applied to health. There was consensus that this idea could be achieved through digital storytelling. As it was mentioned that IQ was used in

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agreement making, the idea of working together as a team is important for Inuit patients and non-Inuit physicians to emphasize in the development of care plans.

[IQ] can be used in different ways especially in the context of a person or community versus in a government organization or policy. If doctors had this level of knowledge about IQ, they would be able to use it with patients or in other parts of their practice.

(Participant 005)

One Elder stated that the use of IQ has become less apparent in young people because not enough time has been spent on teaching IQ in recent years. If physicians learn about IQ from the online module, they need to understand that some Inuit have lost their knowledge about it or that they do not use it in the same way they once did due to the changes that have occurred over time. It is important to work as a team when you use IQ in order to understand how it can be used between two or more people to solve problems.

We don't always know what to do when doctors tell us something. We used to talk to the Elders who would tell us what to do when we needed guidance.

(Participant 005)

Health Education

Elders described instances of how physicians could treat patients more appropriately or help ensure culturally safe care. As mentioned, Elders stated that Inuit traditional knowledge could be offered to physicians through digital storytelling. Examples could include storytelling about how IQ was used to help someone with the setting of goals related to their health or a story about how IQ was used when a family member was sick. Storytelling about IQ could help an individual or family deal with a DM2 diagnosis and this could be a meaningful form of education.

A deficit that was emphasized is that physicians lack knowledge about who Inuit are, where Inuit communities are located in the world, and that Inuit are a distinct Indigenous group

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with their own history, identity, and worldview. There was also a discussion about physicians needing to improve how they interact with Inuit people. A solution toward more effective communication is the concept of collaborative culturally safe care.

If doctors worked with us more, they would understand our needs better. Part of this involves educating the community but the other part involves educating the doctors about us.

(Participant 006)

A Proposed Online Module Design

The Elder conversations were used to draft an online module for a proposed course for non-Inuit physicians. The Elder conversations supported the creation of the first draft of the content for the outline, and set the foundation for the module objectives, which guided the design process. The salient points from conversations were used to help align module objectives with learning activities and assessment criteria, which are described below and on the following pages.

The draft module is based on story elements from Elder conversations. This process is depicted in Table 3. As part of my analysis of Elder conversations, I considered key story elements that help shape the module and correlated these story elements with specific learning objectives and activities, which helped me to define the assessment criteria accordingly. Given the need to seek the knowledge of Elders to help shape the content, I committed to an approach that upheld their contributions to ensure their wishes manifested in the learning material. There were many references during Elder conversations about what they learned from their parents and grandparents, and these teachings are all story-based. Given the importance of storytelling in these discussions, a significant proportion of content will be delivered through Elder stories captured on video and incorporated into the module.

Table 4*Elder Stories and Inspiration Used for Online Module Draft*

Code	Story Elements	Constructive Alignment Use
001	Why we need to tell Inuit stories, importance of IQ as a way of living, linking the present to the past, concept of tuqłurausiit.	Elements were used to design the learning objectives, metaphor of tuqłurausiit, interactive map.
002	The role of family in Inuit identity, maintaining communal ways of living, igluvut building and its significance to Inuit survival, correlation between sewing and spirituality, Inuit worldview.	Elements were used to design the objective of storytelling for teaching and learning, Elder inspired digital resources.
003	The need to maintain traditional diet, hunting and spirituality, mentoring the next generation.	Elder inspired digital resources related to hunting, harvesting, traditional diet, and self-determination.
004	Need to restore IQ in modernity, relationship of grandparents and parents to an Inuk, relationship between Inuit and animals.	Elements were used to design the “interactive tuktu model” and learning activities related to Inuktitut.
005	The role of ancestors, animals, and land to an Inuit identity, restoration of IQ, IQ within society.	Elements were used to design the objective of applying IQ in clinical practice and in the case study.
006	History of IQ in the formation of Inuit land claims and other agreement making, physician awareness of Inuit culture.	Elements were used to design learning objectives and activities about collaborative care planning and the inclusion of Inuktitut in a health care context.

One of the first tasks in planning the online module design was to define a starting point and the key aspects that would define the design process. I felt it was necessary to incorporate the specific elements of information that the Elders requested be a part of the online module to emphasize the significance of a story that held particular importance to them. Second, the structure for organizing a learning framework relied heavily on aligning key elements of study objectives, learning activities, and learning assessment criteria. The relationship between these

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elements provided me with the foundation to organize the content in the online module draft and the overall logic for its design.

Table 5

Inuit Online Module for DM2 Treatment Designed Through Constructive Alignment

Learning Objectives	Learning Activities	Learning Assessment Criteria
Develop an understanding of how Inuit self-identify and how identity is important to self-preservation.	Review online module content about IQ in a health care context. Written assignment.	Demonstrate a basic understanding of who the Inuit are and how they self-identify.
Develop and apply knowledge related to IQ in clinical practice.	Review online module content. Case study about collaborative care in DM2 treatment plan.	Recognize and acknowledge own bias. Illustrate an ability to conceptualize an application of IQ in a clinical context.
Understand the role of storytelling as a means of teaching and learning.	Written reflection on how Inuit storytelling can support Inuit health in a modern health care delivery system.	Illustrate an ability to comprehend Inuit storytelling as a long-held practice for teaching and learning and how it might be used in health-related contexts.

Learning objectives of the online module were completely derived from Elder conversations based on the specificity of the needs that Elders described for what non-Inuit physicians need to know. Listing these objectives, I created the structure of the learning framework by first designing the teaching and learning activities, which was followed by an assessment regime (Biggs, 1996; Biggs & Tang, 2011). Once appropriate learning assessment criteria were defined, I reviewed and refined the synchronicity of the learning objectives, teaching and learning activities, and learning assessment criteria as described in Table 4. While I have used the principles to set up the structure, the knowledge of the Elders played an important role in describing a community-driven learning asset that builds on Inuit unity and dignity. The

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learning objectives, learning activities, and learning assessment criteria are described in the following subsections.

Learning Objectives

The learning objectives, or Elder directives, were used to select wording that could be synonymous with the learning activities to ensure the elements were constructively aligned according with Bigg's (1996) principles.

Develop an Understanding of How Inuit Self-Identify. It is critical that non-Inuit physicians have a general understanding of who the Inuit are and how they self-identify in order to communicate with Inuit patients and family members. It is also important that they understand how identity is an integral component to an Inuit worldview.

There are often misconceptions about Inuit based on stereotypes as well as confusion that Inuit are similar to other Indigenous people in Canada, which presumes their own identity, worldview, language, cultural practices, and history. There are aspects of an Inuit worldview that are less known to mainstream Canadians, such as the practice of tuqłurausiit and other Inuit spiritual beliefs. The Inuit worldview is important for physicians to be aware of when incorporating IQ into practice because it provides a baseline for this knowledge to be applied. The Elders felt it would be important for physicians to possess this knowledge in order to have the ability to understand the context in which IQ was being used or applied.

Develop and Apply Knowledge Related to IQ in Clinical Practice. Principles of IQ can be important to an Inuk patient who is dealing with DM2 as a new diagnosis or as a patient managing the disease. Principles of IQ are particularly important to a non-Inuit physician helping the patient to adopt a care plan that requires a significant lifestyle change. As mentioned above, one Elder specifically suggested that IQ principles be introduced clearly as an objective

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of the module, and thus the IQ terminology, principles, definitions, and examples have been incorporated. An important aspect of how to acknowledge IQ in clinical practice would be to recognize that there are significant gaps between Western and Inuit worldviews that are important and necessary to navigate when delivering health care services. This objective is about recognizing that one's own worldview may not be relevant to an Inuk patient or family member, and acknowledging that IQ principles can be applied within a clinical process or care plan when providing health care services.

An important element of cultural safety is how it can be applied by practitioners (Foster, 2017; Yeung, 2016) so that these principles can be more meaningful in a clinical context. An example of cultural safety in clinical practice is the provision of holistic health models that are integrated with Western medicine.

Understand the Role of Storytelling as a Means of Teaching and Learning.

Storytelling can be a valuable and meaningful approach for health care providers when working with patients to illustrate the complexity of the human experience of illness (Hawthornthwaite et al., 2018; Joyce, 2018; Morrise & Stevens, 2018). Storytelling can be important within an Inuit health context because it can encapsulate a depth of meaning that could otherwise be missed in typical clinical contexts. When working with Inuit, non-Inuit physicians who take the time for storytelling can learn a lot about an Inuk patient especially as a relationship develops.

Storytelling will be well represented within the module content, with multiple digital stories of Elders and other community members describing specific phenomena that build on the learning objectives. Storytelling in the module is two-fold because it will offer a medium to communicate content but will also offer the physicians with the examples of what storytelling “looks like” so they can consider how it might help them in their practice.

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Learning Activities

Learning activities will be a combination of activities that concentrate on aspects of Inuit history, culture, and way of life. The training introduces physicians to IQ so they can have a better understanding of how to use the principles to treat Inuit patients based on Inuit traditional ways of taking action.

Within the online module, there will be digital assets as described to complement the textual information, and build on ideas. Other interactive tools will be created for learning. For example, to help physicians easily identify where Inuit live in Canada, an interactive map names the Inuit hamlets, including their traditional Inuktitut names. Another tool, called “interactive tuktu,” will be used to show the various organs within a tuktu to encourage physicians to use language and aspects of Inuit culture in communications.

As Inuktitut was described as a critical component of Inuit identity and culture, aspects of the content (e.g., digital stories, interactive tools) will be portrayed in Inuktitut with English voiceovers or sub-titles. This will allow authentic storytelling from the voice of the storyteller. Digital stories and interactive tools are positioned within the online module as constructive learning aids that support the learning objectives.

Written Reflection About How Inuit View the Concept of Self-Preservation. The first part of the module will offer the non-Inuit physicians with information about Inuit culture and history to offer an overview of who the Inuit are. A mid-point assessment will occur once the physician has an opportunity to work through the foundational learning material and they will be asked to write a short reflection based on two questions: “Why do you think Inuit have survived for thousands of years?” and “Can your answer support a DM2 intervention?”

Case Study and Using Traditional Diet in Clinical Practice. This aspect of the online module involves a case study aimed to teach physicians about shifting approaches for treating Inuit patients who present with symptoms of DM2. The assignment will challenge physicians to provide a response that re-thinks typical biomedical approaches of dealing with patients showing symptoms of DM2, guiding them to consider how they might use Inuit culture and traditional diet in the provision of treatment and care planning. The case study can be presented in a video with actors who portray the patient going to the health centre for a medical appointment.

After the video is presented, physicians will complete the assignment. Based on the information included in the module, physicians will be asked how they might change their approach to treating the patient who is symptomatic of DM2 and how they might link Inuit culture and traditional diet with a treatment plan, and consider some information learned as part of the module. Once the assignment has been completed, another video can be presented that shows how they could have intervened in this case considering Inuit culture and traditional diet in the provision of treatment and care planning.

Written Assignment About Storytelling as a Means to Teach and Learn. Physicians could be asked to write an essay in response to the following question: “In reflecting on what you have learned, why do you think Inuit culture and IQ can be important aspects of consideration when delivering health care services to Inuit patients who are at risk of contracting, or who have, DM2?”

Learning Assessment Criteria

Learning assessment criteria for the online module is based on the level of knowledge a physician can demonstrate in written assignments as described above. Assessment measures for determining the level of comprehension will be based on a formative assessment. That is, the

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capstone activities used in the online module will lead to the refinement of the learning objectives in accordance with constructive alignment principles.

Non-Inuit physicians will be given feedback from an online facilitator based on a given assignment if they have misunderstood the task and will be asked to re-submit their assignment in order to pass. The feedback will be used to help a non-Inuit physician to shape their efforts at accomplishing the goal, and the instructor will provide customized assistance where needed (Simonson et al., 2019). For example, application of cultural safety and related knowledge such as the Inuit worldview and IQ in this context will be subjective based on an individual's experience. Non-Inuit physicians who already have experience working in Northern health care facilities or other Indigenous communities may have an advantage over others without this experience in grasping the concepts and ideas presented in the module.

Demonstrate a basic understanding of IQ. The ability to demonstrate a basic understanding of IQ will be reflected in how physicians describe these principles as positive pathways for engaging Inuit patients and families who may need to acquire new skills for managing DM2 or how it can be used to problem solve around issues that are influencing a patient or family's ability to cope. Physicians who are able to apply these concepts in the case study or reflect further on the ideas presented in written assignments will be able to demonstrate an ability to support a patient's abilities to use IQ in ways that are meaningful to their individual situation.

Exhibit an Appreciation for the Importance of Maintaining Traditional Lifestyle for Health and Well-Being. As traditional skills were a main area of conversation through each of the Elder conversations, the need for physicians to recognize their importance is a component of the module content and learning outcomes. Inuit have survived for thousands of years in harsh

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environmental conditions because of these skills combined with the application of IQ in situations that called for planning, consensus building, and so on. Inuit pride themselves for their incredible hunts, their traditional food, and the beautiful clothing they have designed over centuries. Recognizing these skills in a patient can help physicians understand how they have used their minds to accomplish what they know and what their ancestors knew; this is how they can recognize Inuit culture.

Recognize and Acknowledge Own Bias. The Indigenous Health Working Group of the College of Family Physicians of Canada (2016) states “unintentional interpersonal racism is a pervasive problem in health care settings. It can be hard to address and manage, because we are often not even aware that it is happening” (p. 5).

As Elders have described, there is often little known about Inuit outside of what is generally known in the mainstream media. Thus, recognizing bias is important. A physician’s ability to acknowledge their own bias or the amount of knowledge they were able to gain as a result of the taking the module would be positive criteria for this learning outcome. Non-Inuit physicians need to understand the importance of reflection to demonstrate what they have learned from the online module and to bring it into their consciousness.

Illustrate an Ability to Comprehend Inuit Storytelling as a Long-Held Practice. Physicians who can recognize the role of storytelling when applying IQ will have successfully demonstrated this learning outcome. This can be achieved through written statements about lived experience, insight of how storytelling can be used in clinical practice, or how an Inuk patient might approach their condition. A key criterion will be the acknowledgement of storytelling as a form of communication that can be used in situations that replace conventional forms of assessments, diagnoses (i.e., reasons for visiting the health centre), creation or

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implementation of care plans, or follow-up appointments with patients. Incorporating IQ as an aspect of storytelling that can support complex care needs in holistic ways is also a key learning outcome.

Summary

This chapter included a review of all salient conversational elements that were shared by Elders in Manitoba and Nunavut and further discussed how these elements were used to shape the proposed module design. These elements are intended to support the following chapters. Conversation notes are available upon request. The key point represented in this chapter is that the Inuit Elder involvement was integral to shaping the online module design. Without their participation, the content proposed would not be possible. The following chapter will discuss how other Inuit community members of various genders and ages in Kangiqliniq provided additional feedback about the content and its organization, planned use, and perception of the module. While I have used the constructive alignment principles to set up the structure, the knowledge of the Elders played an important role in describing a community-driven effort that builds on Inuit unity and dignity.

Chapter 5. Kangiqliniq Community Engagement

This chapter presents the community engagement process that took place in Kangiqliniq in February 2020 and discusses the participation and input of community members in the draft online module design. This information describes the community engagement component of the process of designing the content. Within this chapter, I share how I prepared for the community engagement session and describe my positionality, as an Inuk researcher, which is followed by a presentation of the feedback provided by community members on the draft online module content. I then discuss how the feedback influenced the changes that were made to the final draft of the content contained within Appendix C (English) and Appendix D (Inuktitut). As with the Elder conversations, I developed a protocol for engaging with community members to aid in the conversation process to help ensure the main topics were covered over the duration of the session. Since I received simultaneous feedback from multiple individuals ($n = 9$), there were fewer topics discussed to ensure there was enough time for everyone to have a voice and participate in the process. A copy of the community engagement protocol can be found in Appendix J.

As stated in Chapter 1, the need for a culturally safe medical curriculum that is relevant to Inuit populations from an Inuit cultural perspective is foundational to this research study. A process of how to engage Inuit community members in the design of teaching material is twofold. First, the methodology for Inuit community empowerment in curriculum design confirms a collective identity, and second, it can create awareness among non-Inuit physicians of the diversity that exists among Indigenous nations for which specified curricula are necessary. I argue that the process of Inuit Elder and community engagement facilitates a self-learning and

teamwork ethos throughout the community and serves to further motivate the evolution of physician-patient relationships to improve communication and care plan development.

Participation in the Kangiqliniq Community Engagement Session

Since only a handful of participants were bilingual, I was introduced by Elder Levinia Brown, in Inuktitut, and was greeted by community members through an Inuktitut interpreter. From that point, the dialogue that took place occurred in Inuktitut. This aspect of communication set the stage for how the formal part of the session would play out through the conversation, interpretation, and note-taking. I believe this characteristic of the consultation process made the session more culturally authentic. However, I realized that there were cultural differences, and at times during the session, I asked for clarification. Nonetheless, the ideas seemed to flow free for the duration of the session, which took about one hour.

While I felt there was general agreement and consensus among community participants about the module outline draft document overall, I relied on the interpreter to translate guiding questions. Once we had fully engaged in a conversational topic, I continued with another conversation point to carry on with the dialogue. This process seemed to ensure there was a collective understanding of what was occurring by all the participants from an emic perspective.

After the conversation with community participants ended, Inuktitut and English were spoken simultaneously and other community members who did not participate in the formal part of the session joined us for the tuktu feast. Once the rest of the community members were settled in and were enjoying their meals and having conversation with myself and others, I felt like we had accomplished something for the greater community, if not for Nunavut overall. Community members commented to me how important it was to have cultural safety training for non-Inuit physicians and said that they were happy to have participated in the process.

Setting of the Engagement Session

Elder Levinia Brown led the opening of the community engagement session by the lighting of the *qulliq*/ ᓄᓕᓐᓂᓐ (oil lamp), as part of a ceremonial blessing to start the meeting. The *qulliq*, which signifies an Inuit woman's strength, care, and love, is an oil lamp that is made of soap stone and was traditionally fueled by *qilalugaq qaqortag* or *nattiq* oil. It represents the light and warmth provided at the hearth. The flame of a *qulliq* has provided light to Inuit for generations and, in some instances, it is the only source of light in the high arctic for months at a time during *ukioq*. Elder Levinia, in the community context of this research study, is the flame keeper. Once the *qulliq* was lit, I proceeded with guiding the discussion with community members. Figure 6 portrays a photograph of Elder Levinia Brown and me prior to community engagement session.

Figure 6

Photograph of Elder Levinia Brown and Wayne Clark in Kangiqliniq, Nunavut (Captured February 2020)



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In positioning myself, I was aware that there are jurisdictional gaps in how health care services are delivered for Inuit who reside in the Kivalliq Region and how, at times, there can be social mistrust of the health care system due to experiences related to historical events that are further compounded by the gaps in care that Inuit in these communities' experience. I am aware that patients and families may have been inadvertently impacted by the fact that medical colleges in Canada have historically neglected the cultural factors that are important to Inuit society and the supportive role these institutions had in establishing a health care system that is based on an inequitable, racist model (Diffey & Mignone, 2017; Leyland et al., 2016; McCallum & Perry, 2018; Truth and Reconciliation Commission of Canada, 2015). I am aware that these issues continue to play out in the systems and structures of how health care services are delivered today.

I also needed to be familiar with the fact that an Inuit worldview generally operates from a framework of interconnectedness, whereby relationship is the lens through which Inuit community members understand and see the world. I needed to be aware that certain protocols are in place. In this context, there is a traditional set of rules to help maintain harmony and respect among community members. Although I self-identify as Inuk and as a relative of some of the community members, I am still considered an outsider from the South. Therefore, respect for "how things are done" in Kangiqliniq will carry on after I am gone. I was also aware that the discussions taking place as part of the community engagement process would continue on and would hold their own meaning outside of the project.

Prior to starting the conversation with community members, copies of the online module draft were provided in Inuktitut and English as reference points, which also helped guide the discussion. Community members were reminded that they could provide input on topics of

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conversation in relation to the draft online module from the English and/or Inuktitut versions presented and that their input was foundational to the entire process. I explained that the process of working with Inuit Elders provided the foundation of what was suitable and necessary for the draft of the online module content.

Figure 7

Photograph of Uluit Used in the Kitchen (Captured Prior to the Community Feast in February 2020)



Elder Levinia's husband, Elder Ronald Brown, who is my Anaana's/ ᐱᐱᐱ first cousin, donated and prepared the tuktu dinner for the community feast that was hosted in the Kangiqliniq Drop-in Centre's Elders' Room preceding the engagement session. A culture of sharing has been a key component of Inuit survival. Inuit still share many things, especially food. Traditional food is often cut and shared in communal gatherings using uluit (knives [singular: ulu]). Figure 7 portrays uluit from the Kangiqliniq Drop-in Centre's Elders' Room. Traditional food of Inuit, sometimes referred to as "country food," consists of food based on animals from

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engagement session concluded that *piqqusiqput ukpirijaqput* was most suitable for the online module and the Elders were informed of the outcome.

I reviewed the use of the term *piqqusiqmut ukpirijaqput* in the context of the online module with three Elders who also agreed that it was an appropriate term to describe cultural safety for the intended purpose. I had a discussion with each Elder about why the words were selected. The process of naming the online module is perhaps the most indicative of a process of working with Elders and community members in finding educational solutions. This was achieved by asking the Elders a question, having a fulsome discussion, reviewing it further with community members, and returning to Elders to verify the outcome.

As mentioned in Chapter 2, cultural safety was first introduced to health care by the Māori nurse, Irihapeti Merenia Ramsden, in 2002 as part of her doctoral research at Victoria University of Wellington, New Zealand (Ramsden, 2002). Since then, cultural safety has been localized in various Indigenous contexts throughout the world. Within Canada, cultural safety training delivered in British Columbia was named *San'yas*, which means knowledgeable in the Kwak'wala language. Similarly, the term *kawa whakaruruhau* relating to Māori issues in cultural safety has been adopted by nurses and midwives in New Zealand (Ramsden, 2002). The term *piqqusiqput ukpirijaqput* is another example of localizing the contextual meaning of cultural safety with an Indigenous people.

I attribute the knowledge and wisdom of Elders Jack Anawak, Levinia Brown, and Maata Evaluardjuk Palmer for helping to identify *piqqusiqput ukpirijaqput* as a term for Inuit cultural safety for the online module. I am honoured for their insight and wisdom and suggesting this important Inuktitut term.

Increased Emphasis on Inuktitut

Community members explained the need for more of an emphasis on the Inuktitut language. They indicated that communication issues could occur as a result of the language barriers that exist in health care settings and that additional communication breakdown occurs as a result of the overuse of medical terminology and other technical jargon that Inuit community members, especially Elders, are not familiar with. One community member commented that “our language is our culture, but it is not evident of that within what is being presented [in the draft module outline].” Inuktitut is a reflection of the Inuit worldview. McGrath (2012) states that “language is a reflection of a specific worldview and is metaphorically expressed differently [between Inuktitut and English]” (p.216).

I updated the draft online module video placeholders to include Elders and other Inuit community members to be shown in described video in both Inuktitut and English regardless of the language the person is using to share stories. I have also revised the section on Inuktitut to include information related to Inuit medical interpreters. For example, how to work with one of these health care professionals, recognizing that it is an Inuk patient’s right to use their language as part of their encounters with all health care providers and other interactions with the health care system.

Lastly, one community member commented that his physician used terms like *ullukut*/ ᐅᓪᓴᐅᐅ (good day) and *qujannamiik*/ ᓴᐅᓴᓴᓴᓴᓴᓴ (thank you) during medical encounters. He thought it would be helpful to ask physicians to learn five words in Inuktitut as part of the online module. A video placeholder was added to the section that discusses Inuktitut and language issues to challenge physicians to learn five Inuktitut words as part of the online module training.

Section on Traditional Diet

Community members felt strongly that a section for traditional diet and the effects of eating too much Southern food was needed within the online module. This issue was first raised by one community member, whose comments were followed by a lengthy discussion about the various traditional foods that would likely be unfamiliar to a non-Inuit physician, such as *misigraa*/ᑦᑭᑦᑭᑦ (whale oil) and *kiviaq*/ᑭᑭᑦᑭᑦ (fermented walrus or seal).

Misigraa is consumed as a flavour enhancer and is an essential condiment and marinade, as well as a common medicinal application (Borre, 1991). Some meats, such as tuktu or nattiq, are dipped into the oil prior to eating. The oil is also consumed on its own much like how other cultures ingest fish oils as part of their diets. One community member indicated that the oil was helpful for rheumatoid arthritis. Essential fatty acids found within misigraa can support heart health, reduce inflammation, and it has been known to protect the body from disease. It was also noted that kiviaq can aid with digestion. Microbiome research over the past two decades has revealed that, in addition to helping to digest food, it can mediate weight gain, fight off infection, and even alter one's mood (Carpenter, 2012; McClements, 2019).

One of the reasons non-Inuit physicians need education on misigraa and kiviaq includes the lack of knowledge that exists about these traditional food customs due to their having been looked down upon by *qallanuut* (non-Inuit). There is a need to educate physicians about the natural benefits of traditional food, as remarked by one community member. A chapter published by Egeland et al. (2009) offered insight into evidence of nutrition transition from a traditional diet to a more Southern one. The authors postulated that Inuit are losing the protection that spared them from the diabetes epidemic that surged among Canadian First Nations in the 1990s.

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While traditional food still remains very prominent within an Inuit diet, most community members described having a mixed portion of traditional and Southern foods in their diet. All community members felt there are more Southern foods being introduced all the time, such as fast food from grocery stores, and that families must monitor their intake and continue to eat traditional food as much as possible.

I have incorporated a section for traditional diet, which offers an overview of the foods mentioned above, and processes for preparing them. Included in this section are two additional videos. One includes a video of an Inuk with DM2 who will share how they consume traditional food as an approach to managing their condition. The other way will be a video of an Inuk who discusses how they incorporate traditional and Western foods as part of a diet as an approach to a healthy lifestyle.

Underscoring the History of IQ

One of the main points made by community Elders in the early stages of this study was that physicians need more information about who the Inuit are and how they self-identify before they can comprehend some of the principles and concepts of IQ. Therefore, the draft online module includes various pieces of information that are framed around IQ, including the principles and how IQ is being used in the community in contemporary contexts. This is intended to offer some insight to physicians on how they might use IQ in clinical practice. Community members felt that a little more information about IQ contained in the online module was necessary, such as a historical perspective and how IQ was made into a framework for use in modernity. This framework can demonstrate how transfer of knowledge occurs for preserving rich cultural traditions in contemporary contexts (Laugrand & Oosten, 2002). A reference was made to how IQ was used to help negotiate the Nunavut Land Claim Agreement and how it is

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being used by other parts of the Canadian government as part of ongoing negotiations to do with land rights, environmental stewardship, and governance.

IQ, as a set of principles, has been used by Inuit since time immemorial. However, it was incorporated into a framework in the 1990s to ensure that future generations of Inuit would have access to traditional knowledge (Tester & Irniq, 2008). Community members felt that IQ has been used in multiple situations in contemporary Inuit life and that these situations can be highlighted within the online module as examples. IQ has not been widely introduced to the health care system in Nunavut in the achievement of any goals, as far as what is available within academic literature. It was suggested that physicians could use IQ in other aspects than patient care. Since many parts of the Canadian health care system are going through transformational changes, there are opportunities to include IQ as a way to build community-based partnerships. The incorporation of IQ in a form of a partnership strategy with Inuit communities would be very beneficial; however, this is outside the scope of this study. Nonetheless, the education proposed for the purposes of the online module will provide non-Inuit physicians with a basic understanding of IQ, which will prepare them for the use of IQ in other parts of the health care system where significant Inuit community engagement is required.

Storytelling by Inuit With DM2

Community members pointed out that the proposed videos in the draft online module did not include Inuit with DM2. As noted, three out of the nine community members that participated in the session in Kangiqliniq have the disease. It was felt that persons with DM2 could best speak to some of the topics contained within the draft online module. Community members described storytelling as life lessons, cautionary tales, adventures of resilience, and prayers for a healthier life.

Revisions to the Online Module

As the researcher, I designed the content with the method used for this study, but the content still required a further review in keeping with the concepts of aajiiqatigiingniq and unikkaaqtigiinni^q as described in the conceptual model designed for this study included in Chapter 1. While considering all of the advice provided to me, I recalled that during the course of the consultation process with community members, there was an unspoken respect for the Elders' voices and an appreciation for what had already been drafted as a result of the earlier conversations that occurred with them. While recommendations were given, there was consensus among the community members that the online module would serve its objectives.

The community engagement session further underscored the importance of community involvement as part of the design process, to socialize and confirm ideas about the module's learning objectives, learning activities, and learning assessment criteria. This aspect of the online module design reflected the community engagement component of the research process, where aajiiqatigiingniq and unikkaaqtigiinni^q occurred as an ongoing and continuous cycle within an Inuit community context.

The hand-written notes were reviewed and analyzed to consider how the content could be revised appropriately while respecting the original stories and advice of the Elders. I categorized these themes as elements of advice and then referred to my notes to ensure my analysis was accurately reflected. I then went through the sections of the online module to determine where revisions would be most appropriately made. The revised content is described in Table 6, which includes the sections of the module where the revisions were incorporated and are also included in the post-consultation version of the online module draft outline (see Appendix C [English] and Appendix D [Inuktitut]).

Table 6*Kangiqliniq Community Member Revisions to Online Module*

Code	Story Elements	Constructive Alignment Use	Revisions Made
001	Why we need to tell Inuit stories, importance of IQ as a way of living, linking the present to the past, concept of tuqlurausiit.	Elements were used to design the learning objectives, metaphor of tuqlurausiit, interactive map.	Increased emphasis on significance of IQ and Inuit land claims (Section 5). Increased emphasis of traditional foods and DM2 (Section 14).
002	The role of family in Inuit identity, maintaining communal ways of living, igluvut building and its significance to Inuit survival, correlation between sewing and spirituality, Inuit worldview.	Elements were used to design the objective of storytelling for teaching and learning, Elder inspired digital resources.	Increased emphasis of tuqlurausiit to an Inuit worldview (Section 8).
003	The need to maintain traditional diet, hunting and spirituality, mentoring the next generation.	Elder inspired digital resources related to hunting, harvesting, traditional diet, and self-determination.	Increased emphasis of tradition of fermenting foods like misigraa (Sections 9, 14).
004	Need to restore IQ in modernity, relationship of grandparents and parents to an Inuk, relationship between Inuit and animals.	Elements were used to design the “interactive tuktu model” and learning activities related to Inuktitut.	Increased emphasis on Inuktitut in health care (Section 11). Increased digital resources to do with Inuit with DM2 (Sections 1, 7, 14).
005	The role ancestors, animals, and land to an Inuit identity, restoration of IQ, IQ within society.	Elements were used to design the objective of applying IQ in clinical practice and in the case study.	Increased emphasis on the historical significance of IQ and Inuit land claims (Section 5).
006	History of IQ in the formation of Inuit land claims and other agreement making, physician awareness of Inuit culture.	Elements were used to design learning objectives and activities about collaborative care planning and the inclusion of IQ in a health care context.	Incorporated piqquisiqput ukpirijaqput into the module title and objectives (Section 1).

Table 7

Revised Draft of the Online Module Content

Feedback	Revisions
Piqqusiqput Ukprijaqput.	<p>Incorporated piqqusiqput ukpirijaqput into the title of the online module and as part of the welcome page.</p> <p>Revised the third objective to include piqqusiqput ukpirijaqput as a component.</p>
Increased emphasis on Inuktitut.	<p>Storytelling will be offered in Inuktitut with closed captions in Inuktitut and English.</p> <p>Revised to include a placeholder for a video that challenges physicians to learn five Inuktitut words as part of the online module training.</p>
Add a section about traditional diet.	<p>Revised outline to include a section on traditional diet, with an emphasis on the traditional foods available (e.g., misigraa and kiviaq).</p> <p>Revised to include a placeholder for a video about an Inuk with DM2 who shares how they consume traditional food as an approach to managing their condition.</p> <p>Revised to include a placeholder for a video about an Inuk who discusses how they incorporate traditional and Western foods in their diet as an approach to healthy living.</p>
Underscore the history of IQ.	<p>Revised the section about IQ to include the historical significance of IQ, both as traditional knowledge and as a contemporary framework that was introduced in the 1990s.</p>
Storytelling by Inuit with DM2.	<p>Revised welcome video placeholder to include an Elder with DM2.</p> <p>Revised to include a placeholder for a video about an Inuk with DM2 who shares their experience on how to navigate the health care system inside and outside of the territory.</p> <p>Revised closing video to include an Elder with DM2.</p>

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Participants also felt it was necessary to convey to non-Inuit physicians the importance of Inuktitut in Inuit society and as a component of an individual's health and well-being. Other specific feedback that is included in Table 7 supports Elder stories and advice. Sections of the module were revised according to the advice provided and the relevance of the original Elder story elements. I categorized the elements of advice, and then went through the sections of the online module to determine where revisions should be made. I noted that the feedback indicated the placeholder videos for the welcoming and closing messages should be given by an Elder with DM2 and made these minor revisions. For example, community members suggested that more Inuit and stories related to DM2 be included in the module overall.

With each of these revisions, content was enhanced to increase the emphasis of a specific teaching. Additional videos added include an Inuk with DM2 who shares their experiences, an Inuk who shares how to ferment kiviaq, an Inuk youth who shares why Inuktitut is important, an Inuk with DM2 who shares the importance of traditional food, and, lastly, an Inuk with DM2 who shares how they incorporate traditional and Western food into their diet.

Constructive Alignment as a Tool for Knowledge Co-Creation

Constructive alignment as an approach to curriculum design supported the research process because it provides an intact frame of reference when analyzing multiple layers of information. Constructive alignment offered a method for how to engage with Inuit Elders and other community members in the development of content for the draft online module. I achieved this through a series of steps that could ensure authenticity of an Inuit voice throughout the online module, and in the development of learning objectives, activities, and assessment criteria that are congruent with the needs of the community. Embedding input and feedback steps into this process supported an emergent and dynamic design that permitted community participation

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through a form of virtual content mapping (Auhl et al., 2018). Further steps for developing and producing cultural content can be taken using the approach as a cycle for continuous Inuit community participation and content refinement. The steps taken in the co-creation of knowledge are depicted in Figure 8.

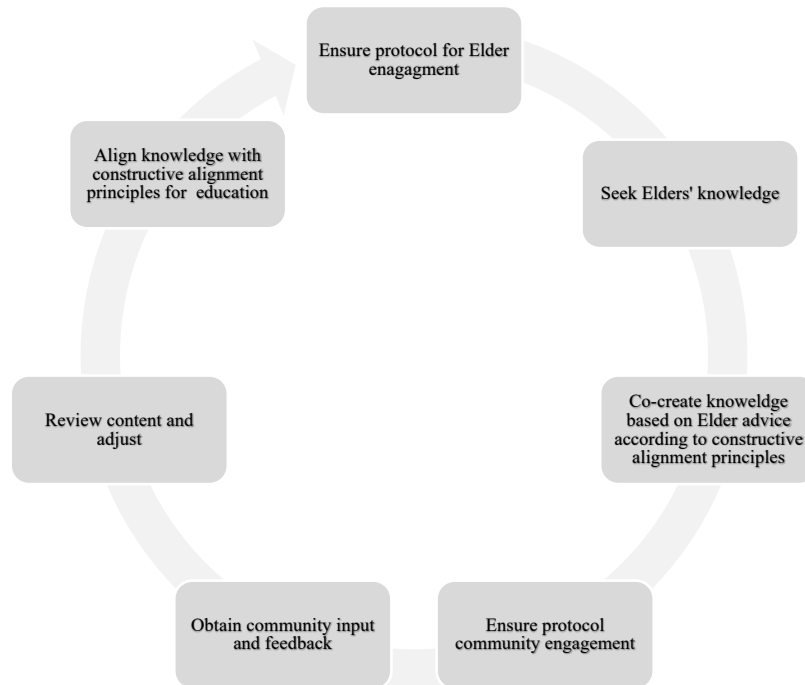
Constructive alignment offered an approach to take on the task that worked for the Inuit Elders, community members, and me, as the researcher, which manifested in several ways. First, I was able to place the Elders' conversation points into categories that helped to inform the learning material and learning activities, which, in turn, helped to identify the learning objectives. This allowed me to establish the learning assessment criteria. Second, this framework provided me with a clear description of how I developed the online module content from the knowledge of the Elders, visualizing the process to community members (Laperrouza et al., 2019). Explaining the role of the Elders in the development of the draft online module content to community members gave the entire process credibility. It seemed to offer an intuitive and practical approach that could elicit further input from community members who knew the draft online module content was in place because of the Elders who had already contributed to it.

One of the aspects that became clear while using the constructive alignment framework in partnership with the Inuit community was the pre-existing process for knowledge exchange. That is, there was an unspoken understanding of what Elders expected of me and that they had final say. As in the community engagement session, the Elders in the room were often silent, but their presence seemed to be extremely important to the others present in the room. There was an acknowledgment of the unspoken word. I had also wondered about the discourse in Inuktitut that was taking place and about what elements of the exchange I may have missed because of my

using the approach as a cycle for continuous Inuit community participation and content refinement. The steps taken in the co-creation of knowledge are depicted in Figure 8.

Figure 8

Cycle of Knowledge Co-Creation with Inuit Elders and Community Members Using Constructive Alignment Principles



While I participated in the conversation with the assistance of a language interpreter, I was captivated by the discourse that was taking place in Inuktitut and yearned to have participated fluently in it. At times when the Elders spoke in the community engagement session, there was an understanding that this was the moment where we had found our group consciousness, as we came to a consensus on a topic or issue. This notion suggests that individuals within Inuit social structures have agency within that configuration but follow hierarchal protocols. While I was not able to confirm these perceived social cues as a process for knowledge co-creation, I believe it is noteworthy as an observation I experienced. Since I hope

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to continue working with the Inuit community, it would be helpful to consider how to structure an Inuit methodology as part of next steps.

A process that overlaps Inuit and Western epistemologies and intellectual traditions in its development and implementation is likely needed (McGrath, 2012). Following the process for knowledge co-creation as depicted in Figure 8, I believe the Inuit methodology can be articulated within the Elder and community engagement protocol documents and throughout the entire research cycle. This may require a separate study of its own to help inform other scholars who wish to engage Inuit communities in research partnerships in the co-creation of knowledge.

Summary

This chapter discussed the processes related to preparing for and establishing the community engagement session in Kangiqliniq and the feedback given about the content and its organization, planned use, and perception of the module. Included in the discussion are the elements of feedback received and how these were addressed using the constructive alignment principles that were followed for the online module (pre-consultation). Other information provided the rationale for the revisions made. At the end of the chapter, I discussed a process for knowledge co-creation with Inuit Elders and community members using constructive alignment principles.

Chapter 6. Discussion and Recommendations

The main thesis of this research study is that IQ is foundational to traditional and contemporary Inuit worldviews and that IQ can be applied through digital storytelling to advance cultural safety training for non-Inuit physicians in an online module. Inuit Elders and community resources are essential to advance cultural safety training and to educate non-Inuit physicians as aspects of developing and maintaining ongoing relationships among stakeholders. I have proposed an outline for an online module and described how this work could be further improved through the co-creation of knowledge with Inuit Elders and community members in Manitoba and Nunavut. This chapter addresses the research study objectives and supports Inuit self-determination. This chapter is represented by three parts, which include study findings, limitations, and recommendations.

Study Findings

This section summarizes the findings of the research study. First, I discuss my findings that describe how the Inuit Elders and Kangiqliniq community members who participated in this study want to be recognized and treated by non-Inuit physicians. Second, I discuss how IQ can support these ideas and the role of IQ in an Inuit identity. Third, I describe the traditional approaches to self-preservation and stress of colonial impacts on Inuit. Last, I evaluate digital storytelling as one approach to achieve these goals and discuss any short comings and limitations with the methodology.

How Inuit Want to be Recognized

Inuit want to be recognized as unique northerly people who are culturally independent and who have survived for thousands of years without being influenced by others. The Inuit Elders and Kangiqliniq community members who shared stories with me as part of conversations that

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occurred throughout this study were all very proud of being Inuit and connected to Inuit Nunangat, not just within Canada but as the people who originate from the circumpolar regions of the world. Given the harsh environmental conditions in which Inuit live, there was a sense of modesty in how they have been able to survive in these settings, prior to outside interference. There was awareness among the Inuit Elders and community members that more recognition is evolving in Canada, but that most Southerners lack a basic level of knowledge about Inuit culture, customs, and history. In common with that of other Indigenous people, Inuit heritage involves complete knowledge systems, which contain epistemologies that are relevant to a given Inuit worldview.

With Inuit self-governing jurisdictions in place since twenty to thirty years or so, there is an increased focus across Inuit Nunangat regarding the use of IQ in education and other government systems as guiding principles for public policy. This resurgence of knowledge and cultural practice suggest there is a renewed interest in IQ taking place, as acts of self-determination. I personally acknowledge the unique perspective this study has provided me as an Inuk and what it means to be Inuk. Alfred and Corntassel (2005) argued that “shifts in thinking and action that emanate from recommitments and reorientations at the level of the self that, over time and through proper organization, manifest as broad social and political movements to challenge state agendas and authorities” (p. 611). The introduction to IQ and associated knowledge gained as a result of this study has provided me with the tools to help my community in ways that were previously unattainable to me. Greater recognition of Inuit culture has offered me with insight about how to work with and involve Elders and community members in health and educational research.

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Decolonization, as an aspect of research, is an important component of this study because the research design was conducted by Inuit for Inuit as the researcher is Inuk and the research study participants were also Inuit. While I recognize that non-Inuit stakeholders must become part of the work needed to produce and disseminate the online module, the research study was an act of decolonization and symbol of self-determination.

IQ and Inuit Self-Determination

Elders and community members stated that IQ is essential to the perpetuation of Inuit identity and culture. Colonialization has eroded IQ; its transmissions across generations have been compromised and, in some cases, halted. Residential schools, the taking of Inuit children in non-Inuit foster care and adoption, and the growing number of Inuit living in Southern environments because of limited housing, health care, and employment in Nunavut, have contributed and continue to contribute to the erosion of IQ. Pathways for Inuit to reconnect with IQ are limited. In addition, Inuit depend a great deal on non-Inuit for health service delivery and in research.

Inuit are eager to reconnect with IQ and to extend IQ knowledge to non-Inuit with whom they engage because it underscores Inuit identity. IQ is an integrated knowledge system that has been used for thousands of years and cannot be fully incorporated into a single online module, especially without Elder-led, face-to-face teaching. This is because IQ is a corpus of knowledge that is entrenched in historical and contemporary reference points that continue to be applied in a modern context and everyday lives within an Inuit realm of possibilities. These possibilities are not out of a textbook. The online module is only a start to constructive learning that builds on the knowledge of non-Inuit physicians in a manner that can be applied within their practice and to create an awareness of Inuit cultural identity as an element to societal growth.

Traditional Approaches to Self-Preservation and Stress of Colonial Impacts

The meaning of community input has helped to ensure there was a collective voice in the development of the online module content. The process has not only improved the community members' ability to interact with the health care system as an act of self-determination, but it also developed their abilities to participate in empowering the community network. Community members became more sensitive to power relations that exist in health care and the relevance of Inuit cultural knowledge across the health spectrum, as it relates to their own health and health care. These experiences can provide incredible insight into an Inuk patient's health and well-being. As Nataka (2007) postulated "[It is worthwhile] to explore the actualities of the everyday and discover how to express them conceptually from within that experience, rather than depend on or deploy predetermined concepts and categories for explaining experience (p. 12). Inuit knowledge and customs have remained in Inuit society and are being revived in Inuit self-government and Inuit institutions. Therefore, it is reasonable to expect that these experiences will eventually become more evident in health systems and programs as Inuit knowledge and customs proliferate further throughout Inuit society as part of the revitalization.

Digital Storytelling

As discussed throughout this research study, digital storytelling is a unique medium used to teach in innovative and effective ways. To support the learning needs of non-Inuit physicians, I worked with Inuit Elders to identify how IQ can be respectfully captured through digital storytelling. My overall goal was to ensure Inuit communities can lead the support of the research objective for non-Inuit physicians to better understand IQ, with the hope that this will result in more meaningful patient interactions and increase effective service utilization. As mentioned as part of the analysis of Elder conversations in Chapter 4, Inuit have used storytelling

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as a process for sharing information that has been passed down for millennia. Each story is contextualized based on the individual or common experiences of those involved in those processes. In recent years, stories can also incorporate aspects of how individuals and families have dealt with qallanuut and other outside influences that have threatened Inuit culture and livelihoods.

Incorporating Inuit storytelling into a digital medium provides a broad base format to share stories with people who may not have had the level of intimacy or opportunity to obtain the knowledge of Inuit Elders otherwise. Messaging in digital storytelling in an online context does pose the risk of not getting through to a learner based on the circumstances of an individual learner's ability to decode the intended message. All of the community members who participated in the study felt that digital storytelling is an appropriate and acceptable form of sharing or delivering Inuit ideas and cultural knowledge in an educational context. The placement of story in the context of the online module will be very important.

Communication theorist, Stuart Hall (1973) described an encoding/decoding model of communication for which media texts are encoded by the producer and decoded by the receiver as a dominant, negotiated, or opposition reading. The goal is to achieve a dominant or preferred reading so that the messages of the Inuit storyteller will be perceived the way the producer intended. That is, as a positive reinforcement of a learning objective or an overall message the Inuit storyteller wants to get across. Hall (1973) argued that, in order to do this, messages should target audiences from the same culture so the narrative is easy to understand. I believe that with commitments being made to reconciliation, and other work that has been conducted in cross-cultural communication, more interest in Inuit knowledge has been created from outside the

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culture. My belief is that non-Inuit physicians will choose to absorb the messages of Inuit storytellers as they build relationships in Inuit Nunangat as an outcome of these experiences.

Negotiated reading and oppositional reading of digital storytelling can occur if the stories shared are not appropriately associated to the other learning material that is constructively aligned within the online module. When an online module is appropriately designed and follows the goals and objectives of the Inuit community, storytelling can act as a form of disruption of outside influences or can contextualize Inuit experiences in a post-modern reality that upholds an opportunity for knowledge co-creation and cultural preservation. Sium and Ritskes (2013) argue that articulations of Indigenous theory through story oppose colonial claims that Indigenous experiences are that of “pre-modernity” because Indigenous truth is constructed under a facade of postmodern fragmentation of the truth. Digital stories within an online module have the potential to reclaim an Inuit epistemic certainty that has not been shared within formal medical teaching practices to date.

However, a shortcoming with a storytelling approach is twofold. One aspect of authentic Inuit storytelling is that the story needs to be in Inuktitut for its full depth of meaning to be expressed in the transmission and receipt of the knowledge. While messages can be translated to another language, the message will lose some of the original and contextual meaning since metaphor is deeply entrenched in the storyteller’s connection to their community, ancestry, and land. Therefore, the true depth of meaning can never be fully embraced by a non-Inuit physician. The non-Inuit physician can potentially misinterpret and misunderstand the information that was intended. Because these processes were conducted in English, I was constantly checking myself as I made notes and in the post-reflection period in order to ensure that my analysis of the interpreted stories remained as authentic as possible. The community

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engagement session helped to dispel some aspects of this concern because it was facilitated in Inuktitut. However, my language barrier remained a shortcoming. This can be remedied with further opportunities for knowledge translation with community members and my own will and ability to learn Inuktitut in future research.

Limitations

Although this research study was thoughtfully prepared, there were limitations. Firstly, the research study was conducted with a qualitative methodology and the knowledge shared was dependent on my own skills as the researcher who interpreted it. Thus, biases and idiosyncrasies may have unintentionally influenced these interpretations. Given that my biases may have impacted the research study outcomes, I was conscious of my role as the researcher throughout all aspects of the research process to ensure it did not impact the Inuit community negatively. In facing my biases, I was gifted with opportunities to challenge and change my way of thinking. Secondly, my knowledge of the Inuktitut language is limited and, thus, I required the assistance of an Inuktitut language interpreter at times to ensure that the context and implication of Inuktitut nomenclature used in the research study was correct and appropriate. I did not consult physicians about the online module in order to maintain an authentic, decolonizing Inuit-led research process (something that has not been done before in a medical education context). Opportunities for physician engagement related to the online module, including accreditation procedures, will take place outside of this study as part of the next steps. Six Elders and nine community members participated in this research study and this number does not represent the entire Inuit population or Inuit communities in other parts of Inuit Nunangat.

Recommendations

This section describes a recommendations framework for the MIA as part of an ongoing approach for CPD education for piqqusiqput ukpirijaqput. As part of the next steps to expand on this research, I recommend a partnership between the MIA and the KIA to further develop a prototype, test, and expand community-based participation throughout Inuit Nunangat, with the goal of developing in-person Elder-led teaching and supporting land-based healing opportunities. I also recommend partnering with a medical teaching institution to finalize and produce the online module. Six recommendations are described in this section.

Recommendation #1: Further Emphasis on Inuit Partnerships.

As mentioned in Chapters 1 and 3, my partnership agreement with the MIA outlines principles of conduct that I followed, as the researcher, and the role of the organization in support of the research study. A further partnership that brings together other Inuit is essential for achieving kuviasuktok. Traditionally, Inuit have lived and thrived in Inuit Nunangat. Between the 1970s and 2000s, Inuit started to organize and establish regional land claims within the regions of Nunavik (Northern Quebec) in 1975, Inuvialuit (North West Territories) in 1984, Nunavut in 1993, and Nunatsiavut (Labrador) in 2005 (Bonesteel & Anderson, 2008; Jackson Pulver et al., 2010). Each of these regions makes up Inuit Nunangat (as mentioned in Chapter 1).

The borders that separated the provinces and the Northwest and Yukon Territories created a situation where Inuit who resided outside these lands had the potential to be cut off from their respective homeland. This was true for Inuit who resided in Kuugjuaq Manitoba, which was considered part of the other “border” communities. In more recent times, Inuit have moved South to seek training, health care, advanced education, or further opportunities. For example, hundreds of Inuit permanently reside in parts of Manitoba, including Winnipeg (Manitoba Inuit

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Access to traditional food in the Manitoba context can be more challenging; however, community partnerships have made tuktuk and other traditional food available to urban Inuit through MIA's northern affiliations. It is recommended that work continues to address relationships between production, distribution, and consumption of traditional food and explore its role in community empowerment, spirituality, and self-determination. Focusing on food sovereignty can be regarded as a response to colonialism, and reinforcing traditional knowledge concerning food. As MIA and its partners advance positions on food sovereignty, it will be necessary to further elaborate on this aspect in the online module as it is further developed, as an element of Inuit cultural safety education.

Recommendation #3: Develop a Prototype

In keeping with the scope of the research study, I had the opportunity to discuss and present a five-page outline of proposed content to Kangirliniq community members, which did not fully demonstrate the power and impact of digital storytelling because there were no audiovisual tools as part of the presentation. It would be helpful to continue working with Elders and community members on a prototype of the online module by incorporating videos and other digital assets (e.g., interactive map of Inuit Nunangat and interactive tuktuk application) within a prototype; this can demonstrate another perspective of content that is more fully developed. Involving Elders and community members in the prototype design will be critical to the overall product and research outcomes as an output of a community-led research study. Increased community participation from Elders, knowledge holders, and writers to further define what has been proposed for the online module to date will improve the quality of the learning content and overall product.

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As part of this process, it is recommended that the full list of digital story ideas that were proposed for the online module be produced, to give Elders and community members a sense of what digital storytelling looks like in the context of an online module for the intended purpose. That is, this creative process can provide Elders and community members with access to the content for a better sense of the look and feel of the online module and for how it can come together within a structured design. I followed the advice of Elders and community members on how to best represent digital storytelling in an online module; that is, through short video narratives, which are then contextualized through text, or through longer videos with reflective questions as part of the learning activities proposed. A full list of digital stories selected by the Elders and community members is presented in chronological order of placement within the online module as follows:

- Elder with DM2 welcomes the learner to the training in Inuktitut.
- Inuk with DM2 shares their experience navigating the health care system inside and outside of the territory.
- Inuk hunter shares stories about hunting and what it means to them.
- Inuk harvester shares stories about animal harvesting.
- Inuk shares stories about the role of sewing historically (with seal and other skins), modern technological advances, and the importance of sewing in Inuit culture.
- Inuk shares information about how to ferment kiviaq and its relevance to food security.
- Elder shares story about how IQ is used when hunting animals.
- Elder shares stories about how Elders support the Inuit family model.
- Elder shares story about how IQ was historically used when someone was sick, and how that could apply within a contemporary context.

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- Elder discusses why Inuktitut is an important component of Inuit self-determination.
- Inuit youth discusses why Inuktitut is important to their future and challenges physicians to learn five words in Inuktitut to use in their practice.
- Elder identifies and discusses the foods they used to rely on when DM2 was not known to Inuit.
- Inuk with DM2 shares how they consume traditional food as an approach to managing their condition.
- Inuk with DM2 discusses how they incorporate traditional and Western foods as an approach to healthy living.
- Elder with DM2 thanks the physicians for taking the training.

These digital stories will be presented alongside other learning materials that are developed according to the criteria of each section for the prototype, following the logic described for the online module. For example, traditional skills and knowledge are important for non-Inuit service providers and researchers to consider, as they provide a self-empowered and positive way for families to support the well-being of loved ones. Digital storytelling related to traditional skills will also include learning material in textual format to help guide the non-Inuit physician with how and why these digital stories enhance the learning material and learning experience.

Recommendation #4: Test the Prototype

Once the prototype is developed, it will be important to consider how to place and configure content into a technology-enabled environment. As described in Chapter 2, a technology-enabled environment contains features that can further inculcate deeper experiential insights for non-Inuit physicians into IQ and pedagogical practices. As part of next steps, a

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technology-enabled environment should be selected during the content design stage in order to determine how it can support the placement of digital stories, text, and assignments within its structure. The testing of the module described as part of this recommendation is based on general functionality because the technology-enabled environment that will be used for the online module has not yet been identified (as this will be based on a partnership with a medical teaching institution and the availability of resources).

The placement of content with a staging environment will provide a non-linear, interactive demonstration of the content that can be further reviewed by more community members, Inuit health care personnel, and non-Inuit physicians. This type of interactive demonstration can present content and depict the benefits of constructive alignment as the theoretical framework used for the overall online module structure. In addition, related to technology-enabled environments, unique opportunities can exist to present Inuit content and Inuktitut terminology with audiovisual applications that help non-Inuit physicians ascertain morphology and syntax. Specific feedback from reviewers can further refine content for the final version.

Community Members. Participants from the community engagement session described the importance of obtaining widespread input from other Inuit communities in the territory. This increased level of participation will allow for a review of the second draft of the content used for the online module. The online module can be demonstrated in-person and at a distance, both of which can provide value toward increased levels of participation across multiple communities. Community members felt that it would be necessary to involve more communities across Nunavut to flesh out ideas and regenerate knowledge across locations. As the online module prototype evolves there will be more contexts, and therefore more options for its placement

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within a technology-enabled environment, it is recommended that community engagement takes place through online testing. This would be done as an effort to engage a higher number of community members in future research. Moreover, a richer collection of stories would become available to build Inuit pedagogy.

Inuit Health Care Personnel. The community members discussed many ideas on how to improve interactions with non-Inuit physicians that support a more positive medical encounter. However, fundamentally, more clinic staff are required to implement culturally safe environments. In spite of these challenges, there are a number of very knowledgeable and committed people working in Nunavut, most notably the community members themselves. It is hoped that this research could draw upon relationships that exist across the communities and would be represented in the health service delivery domain.

There are high turnover rates among health human resources who come to Inuit communities to work temporarily. This has had a negative effect on how health care is perceived and delivered. These challenges can impede opportunities to build teams and offer training and professional development for those who remain in Inuit communities (Turner, 2010). Among these issues, there are other challenges related to the services that are available and the lack of cultural knowledge that exists among temporary locum tenens and agency nurses. While the training of Inuit health care staff is an ongoing process, the value it provides to the community is immeasurable. Community members working in primary health face challenges related to improving disparities in health and can provide practical feedback from their experiences as part of testing and finalizing the online module.

Recommendation #5: In-Person Elder Relationships

While learning activities and digital stories contained within the online module will assist non-Inuit physicians with learning objectives described in Chapter 4, there will still be a need for face-to-face engagement with Elders and community members. Part of this engagement will occur as part of non-Inuit physicians getting to know their patients and “living” in a community, even as temporary locum tenens in lieu of permanently established medical services. Learning that occurs at the community level will take place as part of how non-Inuit physicians develop relationships within a community. Many communities rely on Elders to provide guidance on matters of public importance and, therefore, it is recommended that non-Inuit physicians find ways to work with Elders in support of community goals and needs. Non-Inuit physicians should be aware of who the Elders are in a given location, address them as Elders, and respect their roles within the community.

Recommendation #6: Land-Based Healing Programs

Inuit have always had a strong connection to Inuit Nunangat. This is reflected in the stories shared with me as part of this study, and in their conviction to protect the land and their rights to it as part of the land claim agreements that have been put in place with the federal government. There is, however, an urgent need for Inuit to participate in healing programs that are land-based in nature to help overcome the trauma associated with colonial impacts (Fletcher & Denham, 2008; Oosten & Laugrand, 2007). It would be vital for non-Inuit physicians to participate in these programs in some way as the teachings involved in these programs can be vital in a health care setting. Once non-Inuit physicians are better trained in piqqusiqput ukpirijaqput, there may be ways to integrate the role of a medical provider in these programs.

Recommendation #7: Partner with a Medical Teaching Institution

The facilitation of community empowerment through community-based curriculum design should be a key consideration for any cultural safety education process. For Inuit community engagement, a primary focus on a better understanding of the Inuit worldview and their rights as Inuit citizens is needed. Generally, there is an urgent need to incorporate Inuit cultural safety within the Canadian health care system, not just within the Northern health care facilities but the Southern ones as well. Training of this nature can also assist non-Inuit physicians and other health care providers to better respond to and work with an Inuit representative workforce that supports Inuktitut language interpretation, hospital discharge planning, and advocacy within tertiary hospitals. Incorporating Inuit cultural safety could facilitate more opportunities to train non-Inuit physicians who work within the Canadian health care system. This would help humanize medical culture and build partnerships across health networks.

In order to produce an online module of this nature for medical teaching institutions, there must be some aspect of integration with standards of CPD regulated by the College of Family Physicians of Canada, Canadian Medical Association, and Canada's Research-Based Pharmaceutical Companies. Previous iterations of continuing medical education were often designed by the institution without community involvement, as part of physician-led and self-directed studies. A partnership that integrates values with the equity and diversity programs can ensure the online module content and learning activities will meet these standards as well. This recommendation does not come without its challenges as there is significant rigour involved in the CPD accreditation process. As this research study described a decolonized process for online module design that is led by the Inuit community, it is recommended that community

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members, who wish to pursue it, continue to work with an Inuit physician and other allies in the medical field to ensure CPD certification. The CPD certification process must also acknowledge the inherent rights and cultural ownership of an informed and shared process for collaboration as informed by Inuit through traditional protocols and intellectual property. CPD certification processes should revolve around Inuit health and wellness to address historical and colonial misrepresentations of Inuit by reinforcing community-driven ideas for how Inuit want non-Inuit physicians to see them. As part of the CPD certification process, the online module could be mandated for non-Inuit physicians by the Government of Nunavut licensing that oversees physician practice in territory, thereby prioritizing the learning objectives associated with the online module within the jurisdiction.

Summary

In this chapter, I shared the study findings, limitations, and recommendations. This discussion depicts how IQ is vital to traditional and contemporary Inuit worldviews and that IQ could be applied through digital storytelling to teach non-Inuit physicians about what Inuit want them to know as their health care providers. The findings describe how Inuit want to be recognized, IQ and self-determination, traditional approaches to self-preservation and colonial impacts, and digital storytelling as a means to elucidate Inuit knowledge. I discussed the study limitations and how these helped change my way of thinking or how I could address these issues in a study with a broader scope. I also made recommendations for Manitoba Inuit Association to further enhance the online module with additional content and production staging and testing plans with increased Inuit community input and a medical teaching partnership.

Chapter 7. Conclusion

The discussion regarding this type of research study is very timely in health care and within Indigenous communities throughout the world. Health care organizations are striving to implement cultural safety education that is widely available. Cultural safety training opportunities have significantly increased since the release of the Final Report of the Truth and Reconciliation Commission of Canada, with approximately 15 different training options being offered across the country (Mackenzie et al., 2017). While these options are extensive, it is not known to what degree these opportunities acknowledge the unique cultural differences and experiences of Indigenous nations in Canada, including Inuit, as this has not yet been evaluated. There are limited opportunities in which non-Inuit physicians are taught to integrate Inuit cultural safety into clinical settings, limiting their understanding of how it can be best applied to practice.

My research study offers a relevant approach that engaged Inuit community members in an online module design process. My intention was to emphasize that Inuit storytelling is one way toward achieving sustainable health education models that can help improve health outcomes. As a health care administrator and a member of the Inuit community, I am passionate about giving voice to Inuit community members and supporting their right to self-determination over their determinants of health. The storytelling methodology used in this study is a hybrid that will inform curriculum design with experience and knowledge held by Inuit community members. With growing concern of increased DM2 rates in the Inuit population, it is critical to hear the views of community members about how medical education in this area should be led.

Another aim of this research study is to help raise awareness for community-driven input into Inuit health education initiatives. The gap in existing literature prevents me from

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introducing previous studies that could help contextualize this work. However, my goal is that the support needed will be seen as important to the community and that this study will represent a first step in improving specific medical curriculum relating to Inuit communities.

There is currently a lack of Inuit-specific online culturally-safe training. This research study is valuable to the Inuit community because its outcomes will address how IQ can inform online education modules for non-Inuit professionals, researchers, students, and Inuit who do not have access to Elders and other knowledge holders. My intention was to emphasize that Inuit storytelling is one way toward the co-creation of relevant and culturally safe education models. I anticipate that this seminal work will have a long-term positive impact, and may open opportunities for online, culturally-appropriate innovation for Inuit, wherever they live, for more effective knowledge transmission.

Inuit stories and ways of sharing IQ are as varied as the people throughout Inuit Nunangat in personal, communal, and institutional contexts. Inuit should have a prominent role in the management of cultural safety training that is developed and delivered by medical teaching institutions and government agencies, to incorporate their wisdom and knowledge into the design process with or without the cooperation of physician educators. However, Inuit knowledge should be the basis for how Inuit wellness looks in any medical context. Careful and culturally-appropriate compilation of Inuit knowledge should provide important insights for non-Inuit physicians who work in Northern health care facilities or who have an interest in reconciliation with Inuit. It is reasonable to consider that digital storytelling is a meaningful way to share stories at a distance and train physicians about Inuit cultural safety.

In common with other Indigenous people, Inuit heritage involves knowledge systems which contain epistemologies that are relevant to a given Inuit worldview, such as the way in

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which Inuit traditionally acknowledged the intersectionality of person and spirit. Elements of person and spirit were themes within the stories shared by Elders as was the connection to ancestors, animals, and land. This connection to spirit is captured in the notion of the fetus as a small human endowed with consciousness and will, but psychologically delicate with the spiritual characteristics of animals, the deceased, and other supernatural beings (d'Anglure, 1994). This symbolic representation was also used to depict the connection to the womb, as the inner human world, and igloo, as the human world, and their relationship to sila/ ᓂᓴ (air) and the universe (d'Anglure, 2005, 2018). These metaphors are represented in several of the stories shared through relationships with ancestors, animals, and land. The interchange between the physical and sila is also symbolic of the relationship between an Inuit reality and the nature of the cosmos.

To address the notion of building on an Inuit methodology for the purposes of education research, careful consideration is needed to bring different knowledge traditions and systems together for an Inuit research paradigm that can be applied across the social sciences and humanities. Kovach (2010) described the beginning of this process as first becoming aware that this process underscores a belief that any methodology is a knowledge belief system that is described in the actual methods. In this case, the application of an Inuit belief system is that IQ principles are contained within story.

This research study was an attempt to demonstrate how IQ can be used in digital storytelling, and acknowledges a difference between Inuit and Western knowledge for describing Inuit cultural safety. Acknowledging the distinction between Inuit and Western knowledge can provide researchers with an opportunity to work with a method that incorporates Inuit epistemologies and ontologies that are not interrupted by forcing these within a Western

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methodological framework (Kovach, 2010). IQ, as an evolving framework, continues to be accessed in multiple contexts, be it traditional or contemporary, to offer a lens on a wide range of phenomena that are perceived, analyzed, and conveyed by Inuit.

I purposefully intended that the research study be reflective of the knowledge shared by the Elders and community members to eliminate as much of my voice as possible. This is one of the reasons that I felt it so necessary to use Inuktitut terminology where it was relevant within the manuscript, as a way of upholding its significance within an Inuit research framework and honouring and respecting the knowledge holders who made this research study possible. The benefits of incorporating IQ and storytelling into social sciences and humanities research will be reflected in an Inuit knowledge domain that can further advance the development of Inuit pedagogy and scholarship.

When I first began this study, I had certain expectations in mind. With the impact of the pre-existing theory chosen for the study, I expected that the use of constructive alignment principles would play a significant role in the shaping of content for the online module. In fact, this aspect was only a component of it. I became aware that Inuit participants are deeply rooted in Inuit traditions that have not been influenced by academic conventions. However, Inuit have been negatively impacted by colonial systems and structures commonly experienced by other Indigenous people in Canada.

In spite of these differences and challenges, a clear pathway was established for the online module by Inuit Elders and community members through engagement and storytelling. This aspect of the study has been a meaningful outcome for me in fulfilling my research objective and the associated pedagogical implications. One of my research intentions was to promote Inuit cross-cultural communication, and I believe that this study was a first step toward

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achieving it. As the module is further developed and implemented, I hope that more awareness will result.

I have made several recommendations for this study that are included in Chapter 6. My plan is to continue to support Inuit community-based organizations and the Government of Nunavut, where I can help to facilitate Inuit health research within academic and research institutions, funding agencies, and the community level. This includes continuing on my research trajectory of examining the relationship between policy and systems to promote the (re)development of Inuit health programs available to Inuit communities. I also wish to work with other Inuit scholars and research allies to expand on methodologies (i.e., study design and analytical methods) within an Inuit research paradigm to explore factors that suppress Inuit health systems in Canada.

I anticipate that as result of this study other Inuit scholars will come forward and pursue Inuit health or education research. The study itself provides one approach for other Inuit to consider how to go about conducting research with Elders and community participants, other community partners, and institutions. For these fellow Inuit, I have included the image of an Inuksuk/ $\Delta\text{ᐃ}^b\text{ᓃ}^b$ (structure made of stones [plural: inuksuit]) from Kuugjuaq in Figure 9. The photograph was taken by me, in May of 2018, right before my Anaanatsiar passed away. Inuksuit are used for navigation in Inuit Nunangat where, at times during ukioq, everything appears to look the same due to the quiet and barren landscape.

In the short time I participated as the researcher in this study, I learned aspects of Inuit culture, identity, and my own ancestry. As traditional skills are critical to communal survival, I asked myself where my skills lay within an Inuit realm. I realized that my role is a teacher. While I still do not speak Inuktitut fluently, I learned 45 Inuktitut terms during this research

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study. I refer to my Anaanatsiar and Ataatsiar this way now and it is almost as though I have a new-found relationship with them as a result of this study. I am deeply moved by having had the experience to learn more about my Inuk identity. As a health care professional, I have also reevaluated how I can engage with Inuit patients and assist in the development of policy and processes within the Southern Canadian health care system in a way that can further support Inuit health inside and outside of Inuit Nunangat.

Figure 9

Photograph of an Inuksuk in Kuugjuaq (Captured in May 2018)



I was completing this dissertation manuscript in the wake of the COVID-19 pandemic crisis that has impacted the world. During this time, as part of my role with the Winnipeg Regional Health Authority, I was working with Government of Nunavut nurses who were supporting the coordination of hospital discharges for Inuit patients who had traveled to Manitoba for health services. The care of Inuit patients was critical as processes were put in

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place that required Inuit patients to self-isolate for 14 days prior to returning to Nunavut. It was during these events that I connected to my Anannastiar and Ataatsiar, and other ancestors in ways that were not possible prior to this research study and journey of self-discovery. When the pandemic became a reality in Manitoba, I recalled the story of the herd of umingmak described to me by one of the Elders and compared it to the metaphor of herd immunity. It was then that I realized that stories shared by Inuit Elders for generations have been the narrative of Inuit survival for centuries. The acknowledgement of Inuit belief systems and research methodologies are critical to developing education that includes digital stories as illustrations of human resilience for millennia.

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Appendix A: Inuit Online Module for the Provision of Cultural Safety Using Type-2 Diabetes as an Exemplar Outline (Pre-consultation) English

Section 1: Welcome!

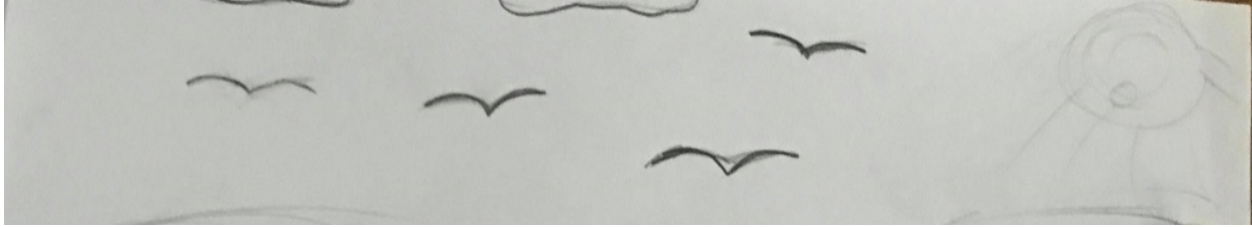


Image: Inuit sky. Copyright Grace Tookome

Welcome to the Inuit Online Module for Type-2 Diabetes Education. This training is meant to help physicians improve relationships and effectiveness when working with Inuit patients and families when supporting interventions for type-2 diabetes.

The module concentrates on aspects of Inuit culture, and way of life, with a focus on Inuit Qaujimagatuqangit (IQ). The training introduces physicians to IQ so they can have a better understanding of how to support Inuit patients and families who wish to use IQ principles in their health care plans.

[Video: Elder welcomes the you to the training in Inuktitut]

Section 2: Overview of the module

This section will list the section subject matter to give an overview of the entire module, and describe aspects of the learning material in terms of its organization of information, videos, and learning activities.

This module offers information, encourages reflection, and teaches skills for communicating with Inuit patients and families who are at risk of contracting type-2 diabetes.

Section 3: Module objectives

This section will describe the learning objectives associated with the online module, which include:

1. Develop an understanding of Inuit traditional and contemporary ways of life.
2. Develop a general understanding of IQ principles and their importance to Inuit life and relationships
3. Develop and apply knowledge related to IQ in clinical practice.

Section 4: Who are the Inuit?

This section will provide a historical overview of Inuit and some key events that have shaped an Inuit reality today.

Section 5: Interactive map of Nunavut

This section will include an interactive map of the all of the hamlets and municipalities in Nunavut, and include the three major centres where hospitals are located within the territory. Information about the communities in the Kivalliq Region will be included.

Section 6: Health care context in Nunavut

This section will provide an overview of the health care context in Nunavut to offer insight into the limited options an Inuk patient has while working with a physician and interacting with the health care system in the territory.

Section 7: Inuit worldview

This section will offer an overview of the components that make up an Inuit worldview so that physicians can learn about the interconnectedness between Inuit naming, animals and the environment. This content will describe the relationship between these aspects of Inuit culture and how these components have helped to shape Inuit self-preservation.

[Diagram depicting the relationship between *timi*/ ᐃᑦ, (body), which houses the *tarneq*/ ᑕᑦᓂᑦ, (soul), *anersaaq*/ ᐱᓂᑦᓴᑦ, (breath spirit), and *ateq* (name and soul combined)]

Section 8: Traditional skills

This section will introduce why traditional roles are important to Inuit and briefly describe some of the skills important to an Inuit way of life, including hunting, harvesting, and sewing.

Traditional skills are important for non-Inuit physicians to consider the ways in which a family can support someone with type-2 diabetes, and how these can affect an individual within their familial and community context. For example, a physician being aware of a person's skills can impact how they might approach the IQ principle of *qanuqtuurungnarnig*, or the concept of being resourceful to solve problems. Inuit traditional skills are very important to Inuit culture.

[Video: Inuk hunter shares stories about hunting and what it means to him/her]

[Video: Inuk harvester shares stories about animal harvesting]

[Video: Inuk shares stories about the role of sewing historically, with seal and other skins, and modern technological advances and the importance of sewing in Inuit culture]

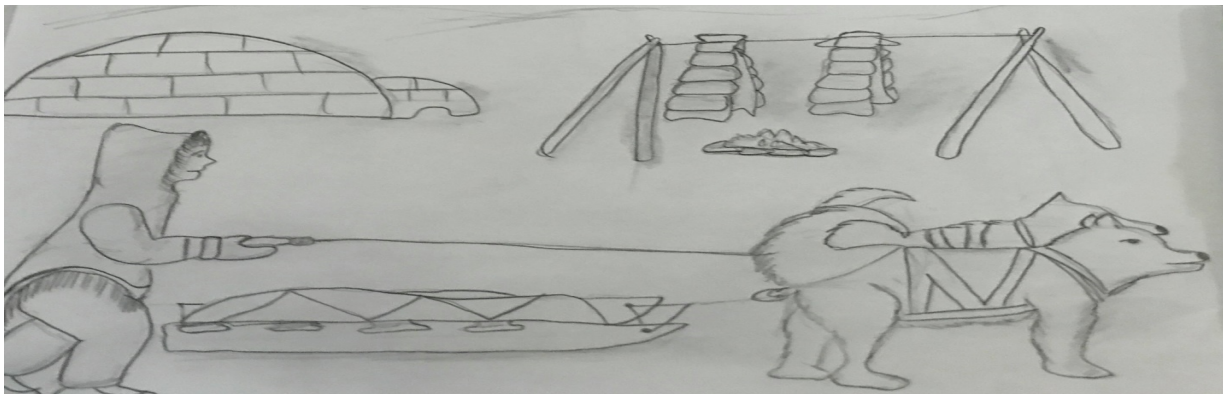


Image: Inuit hunter. Copyright Grace Tookoome

Section 10: Inuit Qaujimajatuqangit

This section will introduce physicians to IQ principles, discussing the concepts broadly with examples to exemplify use.

Section 11: Inuit storytelling and IQ

This section will ask physicians to watch three videos where Elders are discussing the application of IQ in hunting, childrearing, and when someone was sick.

[Video: Elder shares story about how IQ was used in hunting animals]

[Video: Inuk elder shares stories about how elders supported the Inuit family model]

[Video: Elder shares story about how IQ was used when someone was sick]

Section 12: Inuktitut

This section will introduce the physician to the Inuktitut language. Although there have been videos and some Inuktitut translations already contained within the online module, the purpose in this section is to ensure the importance of language within Inuit concepts of self-preservation and determination, including in health care encounters.

[Video: Elder discusses why Inuktitut is important component of Inuit self-determination]

Section 13: Interactive tuktu

This section will have an interactive tuktu with organs depicted in Inuktitut when the physician rolls over the area on the animal. The art work on the following page was drawn by Inuk artist Grace Tookoome and represents a placeholder for the interactive tuktu which will be developed specifically for the online module.

Tuktu photo with Inuktitut terms

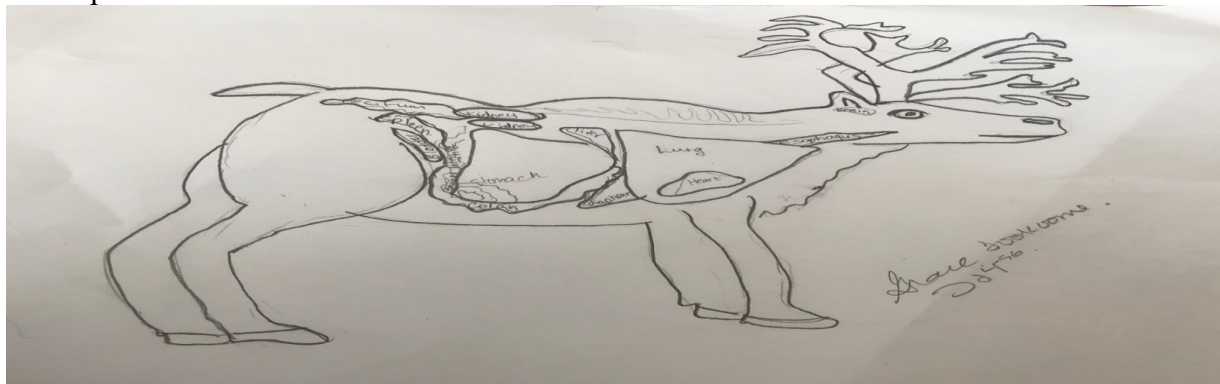


Image: Tuktu and its parts. Copyright Grace Tookoome

Section 14: Midpoint assessment

This section will ask physician to write a short reflection based on the question:

Why do you think Inuit have survived for thousands of years? How does your answer reflect an Inuit-appropriate type-2 diabetes intervention?

Section 15: Inuit and type-2 diabetes

This section will provide an overview of type-2 diabetes in Kivalliq Region and Manitoba and provide scientific data that is available. Additional information will be more specific to changing lifestyles and Inuit perspectives on the disease.

[Video: Inuit elder talks about what foods they used to rely on, when type-2 diabetes was not known to Inuit]

Section 16: IQ in clinical practice

This section will include some ways in which IQ is used in the community. There will be examples from government departments that are using IQ, and how it is applied to strategic initiatives.

Section 17: Case study

This section will provide a case study about a young Inuk who is symptomatic of type-2 diabetes and how IQ can be used as part of an intervention.

Section 18: Summary

This section will summarize key points from the learning material to reinforce the intended learning outcomes. In addition, information contained in the module will be summarized, source references, and a statement about the need for continuing professional development about Inuit health will be included here.

Section 19: Written assignment

This section will ask the physician to reflect on what they have learned. Specifically, they will be asked to write about either (a) how IQ can be important to an awareness of health and wellness or (b) how IQ could be used to help control conditions such as type-2 diabetes at the individual Inuk and community level.

Section 20: Completion

This section will congratulate the physician for completing the online module.

[Video: Elder thanks the physicians for taking the training]

Appendix C: Piqqusiqput Ukpirijaqput: Inuit Online Module for the Provision of Cultural Safety Using Type-2 Diabetes as an Exemplar Outline (Post-consultation) English

Section 1: Welcome!

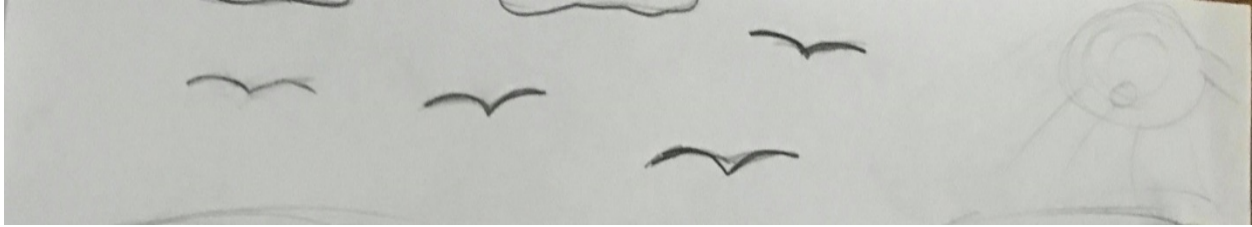


Image: Inuit sky. Copyright Grace Tookoome

Welcome to the piqqusiqput ukpirijaqput: Inuit Online Module for Type-2 Diabetes Education. piqqusiqput ukpirijaqput translates to “we believe in our culture” in Inuktitut. This module is meant to help non-Inuit physicians improve their relationships and effective communication when working with Inuit patients and families to support interventions for type-2 diabetes.

The module concentrates on aspects of Inuit culture, and way of life, with a focus on Inuit Qaujimagatuqangit (IQ) (Inuit traditional knowledge). The training introduces physicians to IQ so they can have a better understanding of how to support Inuit patients and families who wish to use IQ principles in their health care plans.

[Video: Elder with type-2 diabetes welcomes you to the training in Inuktitut]

Section 2: Overview of the module

This section will list the section subject matter to give an overview of the entire module, and describe aspects of the learning material in terms of its organization of information, videos, and learning activities.

This module offers information, encourages reflection, and teaches skills for communicating with Inuit patients and families who are at risk of contracting type-2 diabetes.

Section 3: Module objectives

This section will describe the learning objectives associated with the online module, as follows:

1. Develop an understanding of Inuit traditional and contemporary ways of life.
2. Develop a general understanding of IQ principles and their importance to Inuit life and relationships.
3. Develop and apply knowledge related to IQ in clinical practice to support piqqusiqput ukpirijaqput.

Section 4: Who are the Inuit?

This section will provide a historical overview of Inuit and some key events that have shaped an Inuit reality today.

Section 5: Inuit Qaujimajatuqangit

This section will introduce physicians to IQ principles, discussing the concepts broadly with examples to exemplify use.

This section will also include the historical significance of IQ since time immemorial and its revival in the 1990s as a tool in the negotiation of the Nunavut Land Claim Agreement. There will be a focus on how IQ can be used by patients and physicians to problem solve and work together to set priorities and achieve goals.

Section 6: Interactive map of Nunavut

This section will include an interactive map of the all of the hamlets and municipalities in Nunavut, and include the three major centres where hospitals are located within the territory. Information about the communities in the Kivalliq Region will be included.

Section 7: Health care context in Nunavut

This section will provide an overview of the health care context in Nunavut to offer insight into the limited options an Inuk patient has while working with a physician and interacting with the health care system in the territory.

[Video: Inuk with type-2 diabetes shares her experience with how to navigate the health care system inside and outside of the territory]

Section 8: Inuit worldview

This section will offer an overview of the components that make up an Inuit worldview so that physicians can learn about the interconnectedness between Inuit naming, animals and the environment. This content will describe the relationship between these aspects of Inuit culture and how these components have helped to shape Inuit self-preservation.

An important aspect of naming is the relationship to spiritual realms through *anersaaq/ <σ^{ᓃᓃ}ᓃ* and *sila/ ᓃ* as elements of Inuit ontological (philosophical study of the nature of being) and epistemological (philosophy of knowledge) perspectives to demonstrate the connection of naming to an Inuit worldview.

[Diagram depicting the relationship between *timi/ ∩Γ* (body), which houses the *tarneq* (soul), *anersaa/ <σ^{ᓃᓃ}ᓃ* (breath spirit), and *ateq* (name and soul combined)]

Section 9: Traditional skills

This section will introduce why traditional roles are important to Inuit and briefly describe some of the skills important to an Inuit way of life, including hunting, harvesting and fermenting food, and sewing. Traditional skills are important for non-Inuit physicians to consider the ways in which a family can support someone with type-2 diabetes, and how these can affect an individual within their familial and community context. For example, a physician being aware of a person's skills can impact how they might approach the IQ principle of *qanuqtuurungnarnig*, or the concept of being resourceful to solve problems. Inuit traditional skills are very important to Inuit culture.

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[Video: Inuk hunter shares stories about hunting and what it means to them.]

[Video: Inuk harvester shares stories about animal harvesting]

[Video: Inuk shares stories about the role of sewing historically, with seal and other skins, and modern technological advances and the importance of sewing in Inuit culture]

[Video: Inuk shares information about how to ferment kiviaq (fermented walrus or seal) and the importance of fermentation in terms of food security]

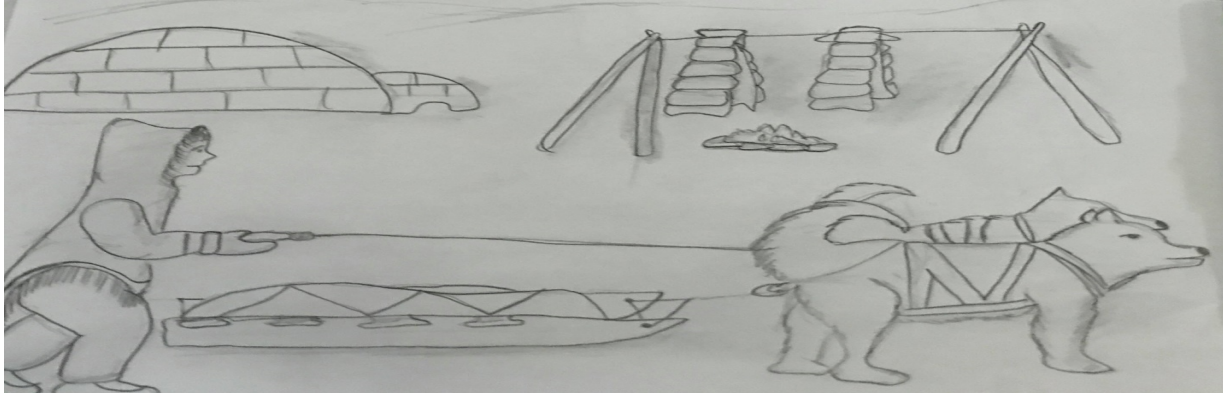


Image: Inuit hunter. Copyright Grace Tookoome

Section 10: Inuit storytelling and IQ

This section will ask physicians to watch three videos where Elders discuss the application of IQ in hunting, childrearing, and when someone was sick.

[Video: Elder shares story about how IQ was used in hunting animals]

[Video: Inuk Elder shares stories about how Elders supported the Inuit family model]

[Video: Elder shares story about how IQ was used when someone was sick]

Section 11: Inuktitut

This section will introduce the physician to the Inuktitut language. Although there have been videos and some Inuktitut translations already contained within the online module, the purpose of this section is to highlight the importance of language within Inuit concepts of self-preservation and determination, including in health care encounters. This section will provide information related to Inuit medical interpreters, including how physicians can work effectively with Inuit medical interpreters and an Inuk patient's right to use the Inuktitut language when communicating with medical providers.

[Video: Elder discusses why Inuktitut is important component of Inuit self-determination]

[Video: Inuit youth discusses why Inuktitut is important to their future and challenges physicians to learn five words in Inuktitut to use in their practice]

Section 12: Interactive tuktu (caribou)

This section will have an interactive tuktu with organs depicted in Inuktitut when the physician rolls over the area on the animal. The art work on this page was drawn by Inuk artist Grace Tookoome and represents a placeholder for the interactive tuktu which will be developed specifically for the online module.

Tuktu photo with Inuktitut terms

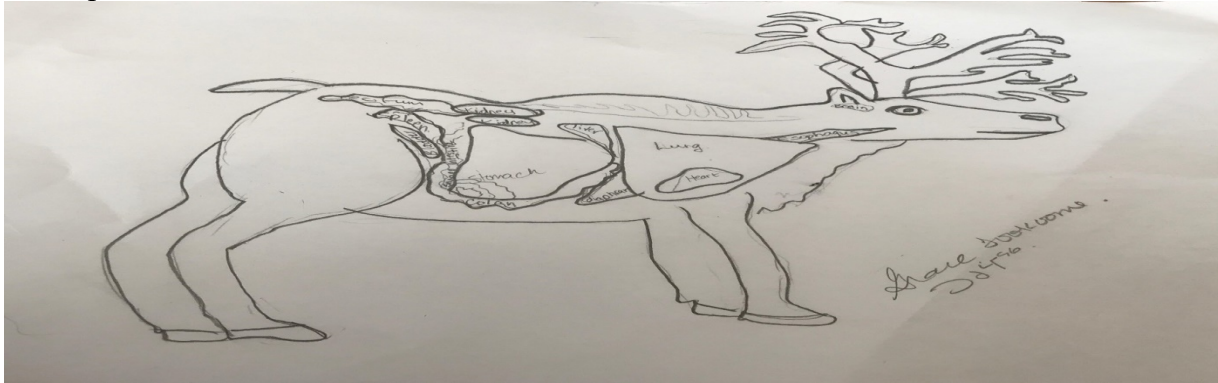


Image: Tuktu and its parts. Copyright Grace Tookoome

Section 13: Midpoint assessment

This section will ask physicians to write a short reflection based on the question: Why do you think Inuit have survived for thousands of years? How does your answer reflect an Inuit-appropriate type-2 diabetes intervention?

Section 14: Inuit and type-2 diabetes

This section will provide an overview of type-2 diabetes in Kivalliq Region and Manitoba and provide scientific data that is available. Additional information will be more specific to changing lifestyles and Inuit perspectives on the disease.

[Video: Elder talks about what foods they used to rely on, when type-2 diabetes was not known to Inuit]

New Section: Inuit traditional diet and type-2 diabetes

This section will describe the importance of a traditional diet of tuktu, kiviaq, muktuk (frozen whale blubber), umingmak (muskoxen), iqaluk (arctic char), and misigraa (whale oil). There will be an emphasis on misigraa and fermentation of traditional foods that are eaten throughout the seasons. There will also be an emphasis on how these traditional foods play a role in an Inuit identity and worldview.

[Video: Inuk with type-2 diabetes shares how they consume traditional food as an approach to managing their condition]

[Video: Inuk with type-2 diabetes discusses how they incorporate traditional and Western foods as an approach to healthy living]

Section 15: IQ in clinical practice

This section will build on the section devoted to IQ and describe how it is used in the community. There will be examples from government departments that use IQ, and how they apply IQ to strategic initiatives.

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Section 16: Case study

This section will provide a case study about a young Inuk who is symptomatic of type-2 diabetes and how IQ can be used as part of an intervention.

Section 17: Summary

This section will summarize key points from the learning material to reinforce the intended learning outcomes. Sources used will be cited and a statement about the need for continuing professional development about Inuit health will be included here.

Section 18: Written assignment

This section will ask the physician to reflect on what they have learned about how IQ can be important to an awareness of health and wellness, or how it could be used to help control conditions such as type-2 diabetes at the individual Inuk and community level.

Section 19: Completion

This section will congratulate the physician for completing the online module.

[Video: Elder with type-2 diabetes thanks the physicians for taking the training]

Appendix E: Invitation to Participate and Consent Form Elders – English

LETTER OF INFORMATION / INFORMED CONSENT FORM

Informing an Inuit Online Module for Type-2 Diabetes Mellitus

[Date]

Principal Investigator (Researcher):

Mr. Wayne Clark
waynevoiseyclark@gmail.com
(204) 489-9860

Supervisor:

Dr. Debra Hoven
debrah@athabascau.ca
1-866-441-5517

You are invited to take part in a research project entitled ‘Informing an Inuit Online Module for Type-2 Diabetes Mellitus’.

This form is part of the process of informed consent, in order to ensure you understand the research process and your role. The information in this letter is intended to give you the basic idea of what this research is about and what your participation will involve, should you choose to participate.

Please take time to read this carefully as it is important that you understand the information given to you. Please contact the principal investigator, Wayne Clark, if you have any questions about the project or would like more information before you consent to participate.

It is entirely up to you whether or not you take part in this research. If you choose not to take part, or if you decide to withdraw from the research once it has started, there will be no negative consequences for you now, or in the future.

Introduction

My name is Wayne Clark, and I am a Doctor of Education student at Athabasca University. As a requirement to complete my degree, I am conducting a research project about how Inuit Qaujimanituqangit (IQ) and storytelling can effectively be used in a type-2 diabetes (prevention) online module for non-Inuit physicians who work in Northern health care facilities, in an effort to support culturally-safe care. I am conducting this project under the supervision of Dr. Debra Hoven.

Why are you being asked to take part in this research project?

Inuit Elders are being invited to participate in this project, because of their knowledge of IQ and related teachings.

If at any time, you feel uncomfortable, I will stop the conversation process. If I suspect you become triggered as a result of the conversation, I will stop and get reassurance to continue. If you request to stop the process, I will respectfully discontinue the conversation, and inform that the conversation (as it relates to the research study) has ended, and that your information will not

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be used in the study. I will then destroy any notes, and identify the occurrence in administrative processes related to the study.

If the research process triggers you in any way, an Inuk Elder is available to meet with you, in-person or by telephone, to discuss any of your concerns. In addition, mental health workers are available at the Kivalliq Health Centre, in the event supports are needed.

What is the purpose of this research project?

In this project, storytelling can make IQ accessible for the research process. A key strength of using a storytelling methodology is to link Inuit participants' knowledge (IQ) and my role as the researcher. Using this approach can help to ensure that Inuit teachings uniquely guide research activities in a culturally appropriate manner.

What will you be asked to do?

There are two types of participants in this research project, **Elder participants** and **community engagement participants** of all ages and genders.

As an **Elder participant**, you will be asked to take part in a one-on-one conversation (in-person or by telephone) about how IQ and storytelling can help educate non-Inuit physicians to provide type-2 diabetes prevention education to Inuit patients. One-on-one conversations will take about one hour of your time and will be arranged for a date that is convenient to your schedule. An Inuktitut language interpreter will be available to support language barriers, if these occur.

Prior to entering into a conversation, I will provide you with an introduction to the research project, explain how it could be valuable for Inuit communities, and share my relationship and kinship to Kivallimuit to help establish the setting for our engagement. I will also provide an overview of the questions and ask if you are still comfortable in engaging in further discussion.

I will maintain hand-written notes, as part of the conversations that take place for one-on-one conversations and as part of the community engagement session. If requested, I will provide conversation notes by e-mail. Comments, clarification, or withdrawals are requested within two weeks of receipt of the conversation notes.

Results of this project may be provided to interested participants in a research project and will be sent by e-mail.

What are the risks and benefits?

There is minimal risk associated with this project. That is, the probability and magnitude of possible harms implied by participation is no greater than those encountered by participants in aspects of their everyday life that relate to the research.

You will be offered a \$250.00 gift card to Federated Co-operatives Ltd., which will be mailed to you after the conversation or provided in-person at the end of the community engagement session. In terms of benefits to the community, the research process and online module design will help to ensure there are appropriate educational resources available for non-Inuit physicians.

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Do you have to take part in this project?

As stated earlier in this letter, involvement in this project is entirely voluntary. You may refuse to answer any questions or to share information that you are not comfortable sharing. You may withdraw from the project at any time, at the time of the conversation, or during the knowledge analysis period by contacting me or my supervisor, Dr. Debra Hoven, at the contact information stated above. If you chose to withdraw, any information collected from you, including your name and contact information, will be removed from all research records.

How will your privacy and confidentiality be protected?

The ethical duty of confidentiality includes safeguarding participants' identities, personal information, and data from unauthorized access, use, or disclosure.

- The privacy and confidentiality of all research participants' identities, personal information will be maintained throughout this project.
- Confidentiality and privacy cannot be guaranteed for those research participants who participate in the community engagement session; however, prior to the start of the session, participants will be encouraged to respect and maintain one another's privacy and confidentiality.

How will my anonymity be protected?

Anonymity refers to protecting participants' identifying characteristics, such as name or description of physical appearance.

Every reasonable effort will be made to ensure your anonymity; you will not be identified in publications without your explicit permission.

Who can you contact for more information or to indicate your interest in participating in the research project?

Thank you for considering this invitation. If you have any questions or would like more information, please contact me, Wayne Clark by e-mail waynevoiseyclark@gmail.com or by telephone at (204) 489-9860, or my supervisor Dr. Debra Hoven by e-mail at debrah@athabascau.ca or by telephone at 1-866-441-5517. If you are ready to participate in this project, please complete and sign the attached Consent Form.

Thank you,

Wayne Clark

This project has been reviewed by the Athabasca University Research Ethics Board. Should you have any comments or concerns regarding your treatment as a participant in this project, please contact the Research Ethics Office by e-mail at rebsec@athabascau.ca or by telephone at 1-800-788-9041, ext. 6718.

Informed Consent:

Your signature on this form means that:

- You have read the information about the research project.
- You have been able to ask questions that you may have had about this project.
- You are satisfied with the answers to any questions you may have had.
- You understand what the research project is about and what you will be asked to do.
- You understand that you are free to withdraw your participation in the research project without having to give a reason, and that doing so will not affect you now, or in the future.
- You understand that if you choose to withdraw **after** knowledge has been shared, your information can be removed from the project at your request, if notification of your request to be removed is given within two weeks,
- You understand that knowledge is being sought anonymously, and therefore cannot be removed once the knowledge seeking process has ended.

Your signature confirms:

- You have read what this research project is about and understood the risks and benefits.
- You have had time to think about participating in the project and had the opportunity to ask questions and have those questions answered to your satisfaction.
- You understand that participating in the project is entirely voluntary and that you may end your participation at any time without any penalty or negative consequences.
- You are aware that you may contact the researcher, research supervisor, or the Office of Research Ethics if you have any questions, concerns or complaints about the research procedures.
- You have been given a copy of this Informed Consent form for your records; and
- You agree to participate in this research project.

I have been fully informed of the objectives of the project being conducted. I understand these objectives and consent to being interviewed for the project. I understand that steps will be undertaken to ensure that this interview will remain confidential unless I consent to being identified. I also understand that, if I wish to withdraw from the study, I may do so without any repercussions.

Signature of Participant

Date

Principal Investigator's Signature:

I have explained this project to the best of my ability. I invited questions and responded to any that were asked. I believe that the participant fully understands what is involved in participating in the research project, any potential risks and that he or she has freely chosen to participate.

Signature of Principal Investigator

Date

Appendix F: ᐃᐅᑦᑎᐆᑦ / ᐃᑦᑎᐆᑦ ᐱᓂᑦᓂᑦᓂᑦ (Letter of Invitation and Consent Form Elders – Inuktitut)

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[Date]

ᐱᓂᑦᓂᑦᓂᑦ ᑦᑎᐆᑦᑎᐆᑦ (ᑦᑎᐆᑦᑎᐆᑦ):

ᐃᑦᓂᑦᓂᑦᓂᑦ
waynevoiseyclark@gmail.com
(204) 489-9860

ᐆᑦᓂᑦᓂᑦ:

ᐃᑦᓂᑦᓂᑦᓂᑦ ᑎᐆᑦᓂᑦ
debrah@athabasca.ca
1-866-441-5517

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INFORMING AN INUIT ONLINE MODULE

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ᐅᑦᑕᑕᑦᑕᑦᑕᑦᑕᑦᑕᑦ ᐅᑦᑕᑕᑦᑕᑦᑕᑦᑕᑦ 1-800-788-9041, ᑲᑦᑕᑕᑦᑕᑦᑕᑦᑕᑦ 6718.

Appendix G: Invitation to Participate and Consent Form Community Members – English

LETTER OF INFORMATION / INFORMED CONSENT FORM

Informing an Inuit Online Module for Type-2 Diabetes Mellitus

[Date]

Principal Investigator (Researcher):

Mr. Wayne Clark
waynevoiseyclark@gmail.com
(204) 489-9860

Supervisor:

Dr. Debra Hoven
debrah@athabasca.ca
1-866-441-5517

You are invited to take part in a research project entitled ‘Informing an Inuit Online Module for Type-2 Diabetes Mellitus’.

This form is part of the process of informed consent, in order to ensure you understand the research process and your role. The information in this letter is intended to give you the basic idea of what this research is about and what your participation will involve, should you choose to participate.

Please take time to read this carefully as it is important that you understand the information given to you. Please contact the principal investigator, Wayne Clark, if you have any questions about the project or would like more information before you consent to participate.

It is entirely up to you whether or not you take part in this research. If you choose not to take part, or if you decide to withdraw from the research once it has started, there will be no negative consequences for you now, or in the future.

Introduction

My name is Wayne Clark, and I am a Doctor of Education student at Athabasca University. As a requirement to complete my degree, I am conducting a research project about how Inuit Qaujimanituqangit (IQ) and storytelling can effectively be used in a type-2 diabetes (prevention) online module for non-Inuit physicians who work in Northern health care facilities, in an effort to support culturally-safe care. I am conducting this project under the supervision of Dr. Debra Hoven.

Why are you being asked to take part in this research project?

Inuit community members of all ages are being invited to review the draft online module content in a community engagement session in Kangiqliniq, in order to gain their perspectives on the appropriateness of the content for the purpose for which it is intended.

If at any time, you feel uncomfortable, I will stop the conversation process. If I suspect you become triggered as a result of the conversation, I will stop and get reassurance to continue. If you request to stop the process, I will respectfully discontinue the conversation, and inform that the conversation (as it relates to the research study) has ended, and that your information will not be used in the study. I will then destroy any notes, and identify the occurrence in administrative processes related to the study.

INFORMING AN INUIT ONLINE MODULE

If the research process triggers you in any way, an Inuk Elder is available to meet with you, in-person or by telephone, to discuss any of your concerns. In addition, mental health workers are available at the Kivalliq Health Centre, in the event support is needed.

What is the purpose of this research project?

In this project, storytelling can make IQ accessible for the research process. A key strength of using a storytelling methodology is to link Inuit participants' knowledge (IQ) and my role as the researcher. Using this approach can help to ensure that Inuit teachings uniquely guide research activities in a culturally appropriate manner. The project hopes to uncover knowledge that can be used effectively in an online module to help support training intended for non-Inuit physicians who work in Northern health care facilities.

What will you be asked to do?

There are two types of participants in this research project, **Elder participants** and **community engagement participants** of all ages and genders.

As **community member participant**, you will be asked to take part in a community engagement session about how IQ and storytelling can help educate non-Inuit physicians to provide type-2 diabetes prevention education to Inuit patients. The session will take one and half-hours of your time and will be arranged for a date that is convenient to your schedule. An Inuktitut language interpreter will be available to support language barriers, if these occur.

Prior to entering into a conversation, I will provide you with an introduction to the research project, explain how it could be valuable for Inuit communities, and share my relationship and kinship to Kivallimuit to help establish the setting for our engagement. I will also provide an overview of the questions and ask if you are still comfortable in engaging in further discussion.

I will maintain hand-written notes, as part of the conversations that take place for one-on-one conversations and as part of the community engagement session. If requested, I will provide conversation notes by e-mail. Comments, clarification, or withdrawals are requested within two weeks of receipt of the conversation notes.

Results of this project may be provided to interested participants in a research project and will be sent by e-mail.

What are the risks and benefits?

There is minimal risk associated with this project. That is, the probability and magnitude of possible harms implied by participation is no greater than those encountered by participants in aspects of their everyday life that relate to the research.

You will be offered a \$50.00 gift card to Federated Co-operatives Ltd., which will be mailed to you after the conversation or provided in-person at the end of the community engagement session. In terms of benefits to the community, the research process and online module design will help to ensure there are appropriate educational resources available for non-Inuit physicians.

INFORMING AN INUIT ONLINE MODULE

Do you have to take part in this project?

As stated earlier in this letter, involvement in this project is entirely voluntary. You may refuse to answer any questions or to share information that you are not comfortable sharing. You may withdraw from the project at any time, at the time of the conversation, or during the knowledge analysis period by contacting me or my supervisor, Dr. Debra Hoven, at the contact information stated above. If you chose to withdraw, any information collected from you, including your name and contact information, will be removed from all research records.

How will your privacy and confidentiality be protected?

The ethical duty of confidentiality includes safeguarding participants' identities, personal information, and data from unauthorized access, use, or disclosure.

- The privacy and confidentiality of all research participants' identities, personal information will be maintained throughout this project.
- Confidentiality and privacy cannot be guaranteed for those research participants who participate in the community engagement session; however, prior to the start of the session, participants will be encouraged to respect and maintain one another's privacy and confidentiality.

How will my anonymity be protected?

Anonymity refers to protecting participants' identifying characteristics, such as name or description of physical appearance.

Participant anonymity for those who take part in the community engagement session cannot be guaranteed, however, the knowledge obtained from that participation will be reported without identifiers.

Every reasonable effort will be made to ensure your anonymity; you will not be identified in publications without your explicit permission.

Who can you contact for more information or to indicate your interest in participating in the research project?

Thank you for considering this invitation. If you have any questions or would like more information, please contact me, Wayne Clark by e-mail waynevoiseyclark@gmail.com or by telephone at (204) 489-9860, or my supervisor Dr. Debra Hoven by e-mail at debrah@athabascau.ca or by telephone at 1-866-441-5517. If you are ready to participate in this project, please complete and sign the attached Consent Form and return it to Wayne Clark by e-mail at waynevoiseyclark@gmail.com or bring the form to the community engagement session in Kangiqliniq on February 14, 2020.

Thank you,

Wayne Clark

This project has been reviewed by the Athabasca University Research Ethics Board. Should you have any comments or concerns regarding your treatment as a participant in

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this project, please contact the Research Ethics Office by e-mail at rebsec@athabascau.ca or by telephone at 1-800-788-9041, ext. 6718.

Informed Consent

Your signature on this form means that:

- You have read the information about the research project.
- You have been able to ask questions that you may have had about this project.
- You are satisfied with the answers to any questions you may have had.
- You understand what the research project is about and what you will be asked to do.
- You understand that you are free to withdraw your participation in the research project without having to give a reason, and that doing so will not affect you now, or in the future.
- You understand that if you choose to withdraw **after** knowledge has been shared, your information can be removed from the project at your request, if notification of your request to be removed is given within two weeks,
- You understand that knowledge is being sought anonymously, and therefore cannot be removed once the knowledge seeking process has ended.

Your signature confirms:

- You have read what this research project is about and understood the risks and benefits. You have had time to think about participating in the project and had the opportunity to ask questions and have those questions answered to your satisfaction.
- You understand that participating in the project is entirely voluntary and that you may end your participation at any time without any penalty or negative consequences.
- You are aware that you may contact the researcher, research supervisor, or the Office of Research Ethics if you have any questions, concerns or complaints about the research procedures.
- You have been given a copy of this Informed Consent form for your records; and
- You agree to participate in this research project.

I have been fully informed of the objectives of the project being conducted. I understand these objectives and consent to being interviewed for the project. I understand that steps will be undertaken to ensure that this interview will remain confidential unless I consent to being identified. I also understand that, if I wish to withdraw from the study, I may do so without any repercussions.

Signature of Participant

Date

Principal Investigator's Signature:

I have explained this project to the best of my ability. I invited questions and responded to any that were asked. I believe that the participant fully understands what is involved in participating in the research project, any potential risks and that he or she has freely chosen to participate.

Signature of Principal Investigator

Date

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▷ 𐀁 𐀅𐀆𐀇𐀈𐀉 𐀊𐀋𐀌𐀍𐀎𐀏 𐀐𐀑𐀒𐀓𐀔𐀕 𐀖𐀗𐀘𐀙𐀚𐀛𐀜𐀝𐀞𐀟𐀠𐀡𐀢𐀣𐀤𐀥𐀦𐀧𐀨𐀩𐀪𐀫𐀬𐀭𐀮𐀯𐀰𐀱𐀲𐀳𐀴𐀵𐀶𐀷𐀸𐀹𐀺𐀻𐀼𐀽𐀾𐀿.
 ▷ 𐀁𐀂𐀃𐀄𐀅𐀆𐀇𐀈𐀉𐀊𐀋𐀌𐀍𐀎𐀏𐀐𐀑𐀒𐀓𐀔𐀕𐀖𐀗𐀘𐀙𐀚𐀛𐀜𐀝𐀞𐀟𐀠𐀡𐀢𐀣𐀤𐀥𐀦𐀧𐀨𐀩𐀪𐀫𐀬𐀭𐀮𐀯𐀰𐀱𐀲𐀳𐀴𐀵𐀶𐀷𐀸𐀹𐀺𐀻𐀼𐀽𐀾𐀿,
 𐀁𐀂𐀃𐀄𐀅𐀆𐀇𐀈𐀉𐀊𐀋𐀌𐀍𐀎𐀏𐀐𐀑𐀒𐀓𐀔𐀕𐀖𐀗𐀘𐀙𐀚𐀛𐀜𐀝𐀞𐀟𐀠𐀡𐀢𐀣𐀤𐀥𐀦𐀧𐀨𐀩𐀪𐀫𐀬𐀭𐀮𐀯𐀰𐀱𐀲𐀳𐀴𐀵𐀶𐀷𐀸𐀹𐀺𐀻𐀼𐀽𐀾𐀿 rebsec@athabascau.ca
 ▷ 𐀁𐀂𐀃𐀄𐀅𐀆𐀇𐀈𐀉𐀊𐀋𐀌𐀍𐀎𐀏𐀐𐀑𐀒𐀓𐀔𐀕𐀖𐀗𐀘𐀙𐀚𐀛𐀜𐀝𐀞𐀟𐀠𐀡𐀢𐀣𐀤𐀥𐀦𐀧𐀨𐀩𐀪𐀫𐀬𐀭𐀮𐀯𐀰𐀱𐀲𐀳𐀴𐀵𐀶𐀷𐀸𐀹𐀺𐀻𐀼𐀽𐀾𐀿 1-800-788-9041, 𐀁𐀂𐀃𐀄𐀅𐀆𐀇𐀈𐀉𐀊𐀋𐀌𐀍𐀎𐀏𐀐𐀑𐀒𐀓𐀔𐀕𐀖𐀗𐀘𐀙𐀚𐀛𐀜𐀝𐀞𐀟𐀠𐀡𐀢𐀣𐀤𐀥𐀦𐀧𐀨𐀩𐀪𐀫𐀬𐀭𐀮𐀯𐀰𐀱𐀲𐀳𐀴𐀵𐀶𐀷𐀸𐀹𐀺𐀻𐀼𐀽𐀾𐀿 6718.

Appendix I: Conversations with Elders Protocol

Preamble: The conversational method does not follow a traditional interview process. I have created a guide, but it does not include probing questions. The conversational method is meant to evolve in the setting with the participants. Nonetheless, I have created a guide that includes a script of how I will introduce the topic, close the conversation etc. and it includes the questions that were approved by my committee, which includes an Inuk Elder

Research Project: Informing an Inuit Online Module for Type-2 Diabetes Mellitus

Time: To be determined

Location: In-person or by telephone

Opening remarks to Elders:

Thank you for your participation. I believe your input will be valuable to this research study and Inuit community.

Confidentiality of responses is guaranteed.

I will be recording this conversation through hand-written notes, so I may pause during the conversation and will let you know if I need to pause for longer periods when the conversation picks up.

I will also make notes in a reflection period after the conversation ends. If you wish I will send you the notes from our conversation by email or regular post and you will have an opportunity to see the final results of the research study to provide additional feedback.

Approximate length of the conversation is expected to take 1 hour.

The overall research question for the study is how can storytelling and Inuit Qaujimagatunqangit inform the development of a DM2 online module designed for non-Inuit physicians who work in northern health care facilities?

Elder Levinia Brown highlighted the need for type-2 diabetes prevention education at the International Conference of Circumpolar Health in Copenhagen, Denmark in 2018.

The other questions that will help form our conversation were selected to gather knowledge that can be included into the online module. In addition to reviewing these questions with the research committee, I have also reviewed with Inuit elders who are associated with Manitoba Inuit Association. Elder Matta Evaluardjuk Palmer is a member of my research committee and she has also reviewed these questions.

INFORMING AN INUIT ONLINE MODULE

The questions are meant to help guide the conversation. You are welcome to share any information that relates to the question as part of your response. If there is a question you are uncomfortable with, you do not have to answer it. At any time during the conversation, you may raise other important considerations you feel are important and would like to discuss.

Key questions to be raised in the conversation

1. How do you describe the Inuit model of self-preservation (i.e., body, breath, and soul) in relation to your sense of well-being?
2. How can Inuit self-preservation be used as an intervention for diseases like DM2?
3. What aspects of Inuit Qaujimajatuqangit can support the intervention?
4. How can the concepts of Inuit self-preservation and IQ and be shared through storytelling?
5. Can these stories still have the same impact when spoken in or translated to English?
6. Can the ideas discussed today help non-Inuit physicians when treating conditions such as DM2?
7. Why do you think DM2 rates are increasing in Inuit Nunangat?
8. How can Inuit respond to increasing rates of DM2?
9. How can Inuktitut become more integrated into health education resources for non-Inuktitut speaking physicians?
10. How can digital storytelling be used to help educate non-Inuit physicians about traditional approaches used in health interventions for DM2?
11. Is there anything else you would like to discuss before we wrap up this conversation?

Concluding remarks to Elders:

This concludes the conversation. Thank you for your participation. My notes from this conversation will be available for you if you wish to read them. Would you like to be sent a copy? Which format would like to receive my notes in email or hard copy?

Thank you again.

Appendix J: Protocol Conversations With Community Members

Preamble: The conversational method does not follow a traditional interview process. I have created a guide, but it does not include probing questions. The conversational method is meant to evolve in the setting with the participants. Nonetheless, I have created a guide that includes a script of how I will introduce the topic, close the conversation etc. and it includes the questions that were approved by my committee, which includes an Inuk Elder

Research Project: Informing an Inuit Online Module for Type-2 Diabetes Mellitus

Time: To be determined

Location: Kangiqliniq

Opening remarks to community members:

Thank you for your participation. I believe your input will be valuable to this research study and Inuit community.

Confidentiality of responses is guaranteed

I will be recording your responses by hand-written notes, so I may pause during the conversation and will let you know if I need to pause for longer periods when the conversation picks up.

I will also make notes in a reflection period after the conversation ends. You will be sent the notes from our conversation and you will have an opportunity

Approximate length of the conversation is expected to take 1 ½ hours.

The overall research question for the study is how can storytelling and Inuit Qaujimajatuqangit inform the development of a DM2 online module designed for non-Inuit physicians who work in northern health care facilities?

Elder Levinia Brown highlighted the need for type-2 diabetes prevention education at the International Conference of Circumpolar Health in Copenhagen, Denmark in 2018.

The other questions that will help form our conversation were selected to gather knowledge that can be included into the online module. In addition to reviewing these questions with the research committee, I have also reviewed with Inuit elders who are associated with Manitoba Inuit Association. Elder Matta Evaluardjuk Palmer is a member of my research committee and she has also reviewed these questions.

The questions are meant to help guide the conversation. You are welcome to share any information that relates to the question as part of your response. If there is a question you are uncomfortable with, you do not have to answer it. At any time during the conversation, you may raise other important considerations you feel are important and would like to discuss.

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[Story boards depicting the conceptual lay out design and content of the draft online module will be on-hand]

Key questions to be raised in the conversation:

1. What is your impression of the learning material?
2. Can digital storytelling be an appropriate medium to share stories with physicians about Inuit health?
3. Do you feel the module will help physicians learn about Inuit in ways that will improve health care experiences of Inuit patients with chronic conditions such as DM2?
4. Is there anything else needs to be included in the module for it to be effective?
5. According to the respondents, how can the missing elements be included in the online module?

Concluding remarks to community members:

This concludes the conversation/ community engagement session. Thank you for your participation. My notes from this conversation will be available for you if you wish to read them. Please see me after the session if you have not already indicated you are interested in obtaining my notes.

Thank you again.

Appendix K: Research Sharing Agreement Principles of Collaboration Agreement

Between Wayne Clark and Manitoba Inuit Association for the Research Project:

“ Piqqusiqput ukpirijaqput (we believe in our culture): Informing an Inuit online module for the provision of cultural safety, using type-2 diabetes mellitus as an exemplar”

Parties

This document constitutes an agreement of collaboration between Wayne Clark (“the Researcher”) and Manitoba Inuit Association (“MIA”).

Purpose

The purpose of this Agreement is to establish a set of principles that will guide the conduct of the research project entitled “Informing an Inuit Online Module for Type-2 Diabetes Mellitus.”

Process

The researcher will coordinate all administrative matters related to the above-named research project, with recognition of the collaboration partnership with MIA. The Researcher will be based at 138 Niagara Street, Winnipeg, MB R3N 0T9

Ethical Considerations

The research collaboration partners to this agreement collectively share the responsibility for ethical standards throughout the project. Ethical codes of conduct for Aboriginal communities have been articulated in the federal government’s Tri-Council Statement (2014). In addition, each party of the research project has responsibility for raising ethical concerns and/or issues. Ethical dilemmas are to be resolved on the basis of the research party striving for a significant degree of consensus.

Duration and Amendments

This Agreement on Research Collaboration will be in effect throughout the entire research process; from the moment efforts are made to implement the proposal, through the development of the research methodology and questions, data collection, and analysis phases into the dissemination of and publication of the findings. The Researcher or MIA can amend this agreement upon mutual consent.

The Researcher and MIA agree to follow these principals in the manner outlined below:

- Researcher agrees to respect the privacy, dignity, culture and rights of Inuit in Manitoba and Nunavut.
- MIA and the Researcher will strive to include meaningful and equal participation from each of the respective partnering organizations for the research project. Therefore, the parties will be jointly involved as partners from the development of the research proposal to the dissemination of and publication of the findings.

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- MIA and the Researcher fully respect the rights of individuals and the confidentiality of their data, community information and traditional knowledge; and the rights of contributors to their intellectual property rights.
- The research questions will seek to address the purposes of the research study and will work to ensure that the research project is relevant to the needs of the Researcher's dissertation while balancing the needs of MIA.
- MIA will be provided the opportunity to review and comment on findings prior to publication or presentation, any one member of the research team may not, particularly once initial dissemination occurred, further analyze, publish or present findings resulting from the above-mentioned research study unless the entire team reaches consensus.
- The Researcher is responsible for maintaining the integrity of all data collected, such as story participant consent forms, storing raw data, and identifying who will destroy the data. Determination of how the integrity of the data will be maintained will be made by consensus.
- Once the privacy and confidentiality of participants has been demonstrated, data sets in the form of appropriate computer files may be shared with all members of the research team.
- It is agreed by MIA and the Researcher will provide the following project components or services as defined.

The researcher will ensure:

- Will uphold principles of Inuit *Qaujimagatuqangit* throughout the entire research study process.
- The development of a strategy and budget for the research project.
- Proposal submissions to third party funders, as needed.
- The development of research questions/ surveys, consent agreements, and REB submission(s).
- Support of culturally relevant and appropriate educational content developed for the research project, including any curriculum design requirements in a distance education context
- The provision of a course architectures and instructional design based on Constructive Alignment teaching principles (Biggs 1996; Biggs & Tang, 2011).
- The development of a research strategy, research questions/ surveys, consent agreements, and REB submission(s).

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- Regular reports to MIA on project status and related updates in a timely manner.
- Facilitation of a community engagement session to present research findings and contextualize best practice recommendations.

Online module content

The online module content developed and used for the purposes of the research project will become the sole copyright of the researcher; however, the research questions, findings, materials, storyboards, and content will be shared with MIA for future use.

Authorship

Criteria outlined by Huth (1986) will be used as guidelines for authorship of publication based upon the findings of the research. The criteria recommended that the author(s) must (1) make a substantial contribution to the conception, design, analysis, and/or interpretation of data; (2) be involved in writing and revising the manuscript for intellectual content; (3) approve the final draft. Those who have made other contributions to the work (e.g. data collection with interpretation, etc.), or only parts of the criteria should be credited in the acknowledgements, but not receive authorship.

- MIA will be provided with an opportunity to review and comment on findings prior to publication or presentation.
- The explicit permission of an individual or organization must be sought prior to acknowledging their contribution in a paper or presentation.
- MIA may choose to include a disclaimer if they do not agree with the content or views presented in a publication or presentation. In the case of a presentation, the disclaimer must be incorporated into the presentations in a manner which gives it the possibility of noticeable attention by those attending the presentation. The manner which the disclaimer is to be included must be approved by those providing the disclaimer.

Signed this ____ day of _____, 2019 at Winnipeg, Manitoba.

Frederick Ford
Manitoba Inuit Association

Wayne Clark
Researcher, Athabasca University

Witness

References

Biggs, J., & Tang, C. (2011). *Teaching for quality learning at university: What the student does* (4th ed.). Maidenhead, England: Open University Press/McGraw-Hill.

Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, Social Sciences and Humanities Research Council of Canada. (2018). *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans* (Catalogue No. RR4-2/2014E-PDF). Retrieved from Panel on Research Ethics website: https://ethics.gc.ca/eng/documents/TCPS_2-2014_FINAL_Web.pdf

Huth, E. J. (1986). Irresponsible authorship and wasteful publication. *Annals of Internal Medicine*, 104, 257–259.

Appendix L: Letter of Support from the Mayor of the Hamlet of Kangiqliniq

January 13, 2020

Mosha Cote
Nunavut Research Committee
Box 1720 Iqaluit, NU XOA OHO

Dear Mr. Cote,

On behalf of the Mayor and Members of Council of the Hamlet of Rankin Inlet please accept our support for the research project entitled, **informing an Inuit Online Module for Type-2 Diabetes** led by Wayne Clark.

The project is a way to bring knowledge of Inuit elders in Manitoba and Nunavut to work with members of the community in Rankin Inlet to inform the development of important education necessary for non-Inuit physicians to learn more about Inuit patients who have or may be at risk of having type-2 diabetes. The project is significant its outcomes can address how Inuit knowledge and community collaboration can inform medical education for non-Inuit physicians and support other Inuit communities to advance medical education that is important to them.

We wish Mr. Clark every success with his project. We are interested to see how the research can further support the residents of Rankin Inlet.

Sincerely,



Morag Macpherson
Senior Administrative Officer
Hamlet of Rankin Inlet

Appendix M: Athabasca University Certificate of Ethical Approval



CERTIFICATION OF ETHICAL APPROVAL

The Athabasca University Research Ethics Board (AUREB) has reviewed and approved the research project noted below. The AUREB is constituted and operates in accordance with the current version of the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS) and Athabasca University Policy and Procedures.

Ethics File No.: 23547

Principal Investigator:

Mr. Wayne Clark, Graduate Student
Faculty of Humanities & Social Sciences\Doctor of Education in Distance Education

Supervisor:

Dr. Debra Hoven (Supervisor)

Project Title:

Informing an Inuit Online Module for Type-2 Diabetes Mellitus

Effective Date: August 6, 2019

Expiry Date: August 5, 2020

Restrictions:

Any modification or amendment to the approved research must be submitted to the AUREB for approval.

Ethical approval is valid *for a period of one year*. An annual request for renewal must be submitted and approved by the above expiry date if a project is ongoing beyond one year.

A Project Completion (Final) Report must be submitted when the research is complete (*i.e. all participant contact and data collection is concluded, no follow-up with participants is anticipated and findings have been made available/provided to participants (if applicable)*) or the research is terminated.

Approved by:

Date: August 7, 2019

Cheryl Kier, Chair
Faculty of Humanities & Social Sciences, Departmental Ethics Review Committee

Athabasca University Research Ethics Board
University Research Services, Research Centre
1 University Drive, Athabasca AB Canada T9S 3A3
E-mail rebsec@athabascau.ca
Telephone: 780.675.6718