

A place we call home: Curriculum for land-based education

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Abstract: This paper describes initial research into the creation of curriculum that combines visual communication design with local Indigenous knowledge in the Tłı̨chǫ Dene region of subarctic Canada. This curriculum is intended for regional youth, and to be accredited by the Faculty of Extension at the University of Alberta. Situated outside dominant models of design education, the following sections illustrate the significant role that embodied knowledge and relationality can play in land-based pedagogy. As part of this discussion, the field of design is situated as an intermediary between an Indigenous community and a Western academic institution. Through a reflexive, narrative form of writing, the following sections provide an account of consultations between the principal investigator and Tłı̨chǫ community members during the early stages of research in 2019. Consultation during this time led to the creation of two curriculum drafts that are presented in the following pages.

Keywords: design education; curriculum; Indigenous knowledge

1. Introduction: Land is home

In his 1977 report on the Mackenzie Valley Pipeline Inquiry, Justice Thomas Berger (1977) provided a description of sociocultural complexity in Canada's circumpolar region. Appointed by the Government of Canada to examine the potential impact of building a gas pipeline in the Yukon and Northwest Territories, Berger led hearings in dozens of northern communities between 1974 and 1976. During the hearings, members of Indigenous communities provided oral testimony that addressed the possible consequences of developing this industrial project. After collecting testimony from people in 35 communities, Berger (1977, vii) emphasized two contrasting views of Canada's north in his final report: "frontier" and "homeland."

The notion of frontier or "untouched land" is integral to colonial narratives of the north—often providing the grounds for largescale industrial projects in circumpolar regions (Paci & Villebrun 2005, p.81). On the other hand, the view of the north as homeland speaks to a meaningful terrain—meaningful, in the sense that cultural memory and ecological



knowledge is embedded in the many ancestral trails, rocks, trees and waterways of the region. A northern homeland is inscribed with knowledge that an experienced Indigenous elder can decipher (Andrews & Zoe 2007, p.23).

I begin this paper with an Indigenous perspective of land in order to establish a counterpoint to dominant Western descriptions of the earth—implicit in the colonial idea of *frontier*, and evident in a world that is, as Arturo Escobar (2017, p.12) indicates, "increasingly built without attachment to place, nature, landscape, space, and time." Shedding new light on the complex challenges of our time, Escobar situates the field of design as a potential world-building discipline. This vision of design practice may generate, according to the author, relational "ways of being"—offering "a tool for reimagining and reconstructing local worlds" (Escobar, 2017, p.4).

2. Sources of knowledge



Figure 1. Tłıchq youth take part in a land-based workshop near Behchokq (photo by Scott Portingale).

In this paper I present ideas that challenge the view of land as a homogenous frontier by emphasizing local know-how in the circumpolar north. I will describe initial research into the creation of curriculum that combines design practice with local Indigenous knowledge in the Tłıchq Dene region of subarctic Canada. The Tłıchq are a self-governed group of over 3,000 Athapaskan-speaking people who reside in the Northwest Territories. Behchokq is the largest community in the region.

This research took place from May to July, 2019. During this time, I consulted with regional educators, elders and government workers regarding the development of this unique educational experience—intended for regional youth, with accreditation from the Faculty of Extension at the University of Alberta. In developing this curriculum, the idea of combining Indigenous knowledge and design practice emerged from prior community consultation (Ruiz, 2018). The juxtaposition of these two ways of knowing is intended to create a context for learning that helps Tłıchq youth remain grounded in regional culture while engaging with present-day communication tools—walking along ancestral trails while tracing new pathways. In short, this project is based on the Tłıchq educational philosophy of being “strong like two people” (Zoe, 2007, p.15).

2.1 Literature and theory

In addition to regional educational philosophy, this research builds on a seven-year collaboration with members of the Tłıchq community. During these years I worked with community members in the co-creation of two animated films based on regional oral history (Ruiz, 2018). Much of what I have learned since I began working in the north took place through conversation and friendship with Tony Rabesca (Cultural Practices Manager for the Tłıchq Government), regional elders and knowledge holders, including John B. Zoe. As a Spanish-Canadian educator/designer, working on Tłıchq lands has involved continual learning, knowledge exchange and creative production that I have been honoured to be part of.

My research in the north is also informed by literature in the area of Indigenous pedagogy. Within Canada, this literature offers a critical interpretation of Eurocentric education. As Antoine, Mason, Mason, Palahicky, and Rodriguez de France (2018, p.9) write: "curricula have primarily been developed in ways that privilege the dominant, Euro-Western culture through the content, approaches to teaching and learning." The significance of this idea in Canada's north is further discussed by Lynn Aylward (p.2, 2007) in her writing about "Western epistemological and curricular constructs."

In response to these challenges, various scholars propose the Indigenization of curriculum (Jacobs, 2008; Warner and Gipp, 2009, Antoine et al., 2018; Archibald, 2019). Indigenization is described as “a process of naturalizing... knowledge systems” that are “embedded in relationship to specific lands, culture, and community” (Antoine et al., 2018, p.6)

Within this paper I will also refer to the notion of “relationality” as an integral part of land-based pedagogy (Wilson, 2008, p.7) For Moreton-Robinson (2017, p.71), "relationality is grounded in a holistic conception of the inter-connectedness and inter-substantiation between... all living things and the earth." In community-based research, this expansive concept reminds us of our "relationship with the world we inhabit" (Moreton-Robinson, 2017, p.71).

As a way to convey my own evolving relationship to people and places referenced in this paper, I will describe research activities through a reflexive, narrative form of writing. This

approach to writing emphasizes the important role of place, dialogue and critical reflection associated with an Indigenous Research Method (IRM)—the method applied during this study. IRM is a qualitative method based on three guiding principles: strengthening relationships (in both interpersonal and ecological terms), cultural protocol (embedding ceremony, gift-exchange, and respectful behaviour into a project), and generating positive change (the research, in other words, should benefit members of a community). Data collection for IRM can involve a range of qualitative strategies (including storytelling, focus groups, and participatory activities). I will describe the application of this method in subsequent sections. My interpretation of IRM is informed by Brown and Strega (2005); Archibald, Lee-Morgan, De Santolo (2019); Cordova (2007); Tuhiwai Smith (1999); and Wilson (2008).

Finally, this paper is influenced by design scholarship emphasizing social/participatory ways of working: Ehn, Nilsson, Topgaard (2014); Manzini (2015); Renwick (2005); Sanders & Stappers (2013). In section five I draw from the work of Donald Schön (1983) as well as Patricia Cain (2010), and Nigel Cross (2011) when describing embodied knowledge and the connection between design and land-based pedagogy. In multiple sections the work of Arturo Escobar (2017, p.15) provides a broad philosophical perspective through which to explore the question of how "design can be extricated from its embeddedness in modernist unsustainable" modes of production and "redirected toward other ontological commitments, practices, narratives, and performances."

This paper explores how the Indigenization of design curriculum can help build an ontological commitment rooted in ancestral knowledge, cultural continuity and place. This research also acknowledges what Ezio Manzini (2015, p.2) describes as "*the great transition: a process of change in which humanity is beginning to come to terms with the limits of the planet.*"

Building on this literature and theory, much of what I describe in the following pages revolves around trips to the Tłı̨cẖ region, via Yellowknife, in May, June and July, 2019. Reflections, initial consultations, and final thoughts branch out from these journeys. In the following section I start things off with a critical discussion of Eurocentric philosophy, describing the fragmentation of land—the "linear world view"—as seen from the air during a May 20, 2019 flight between Edmonton and Yellowknife (Christensen, 2009, p.99). In section four, I share feedback from initial consultations, and talk about the first draft of the curriculum. In section five I reflect on the development of the most recent version of the curriculum. In section six I discuss how this research was informed by the field of design and refer to the synergy between Indigenous knowledge and design practice. I continue, in the following section, with reflections from the air.

3. Lines



Figure 2. Edmonton from the air.

On the morning of May 20, 2019 I departed from Edmonton, on board Canadian North flight 444 to Yellowknife. Despite partial cloud coverage I decided to look out the window shortly after take-off. As the aircraft ascended, I spent several minutes observing the extensive patchwork of intersecting lines evident from above. Embedded throughout much of Edmonton's surrounding area, these lines delineate urban space, roadways, and farmland.

This extraordinary view led me to think about the massive agricultural settlement that has reshaped Western Canada in little over a century (Brody, 2000, p.79). Since the late 1800s vast areas of forest have been transformed into farmland and city. Geometric patterns, evident from the air, reveal linear pathways along which settler society travels.

After the aircraft reached cruising altitude, the ground below appeared increasingly green—we transitioned from pasture to boreal forest. I spent several minutes looking out the passenger window and noticed how the expanse of woodland was pierced by what appeared to be a thin roadway. From my perspective I looked for a distant bifurcation or termination of the road. But nothing appeared to obstruct the relatively straight line. The road seemed to stretch into the distance, under the clouds, ad infinitum.

The idea of an endless road conjures a range of mystifying images—such as Escher's mathematically-inspired drawings, or Borges' garden of (infinite) forking paths. Such images also expose many of the paradoxes, metaphysics and limitations of Western knowledge—specifically, Western knowledge developed from the early stages of the Scientific Revolution (1500s) onwards (Capra & Luisi, 2013, p.99).



Figure 3. Northern Alberta from the air.

Today, a seemingly unending network of lines covers much of Western Canada. The settlement of this part of the world was, as Hugh Brody notes, “among the largest and most rapid movements of human beings in history” (Brody, 2000, p.79). Basic elements of Western science enabled this large-scale settlement—analytic geometry, the point and line; in short, Cartesian coordinate systems, helped impose linear order over nature.

The reshaping of land along geometric patterns embodies a worldview, derived from European civilization. As Tim Ingold notes, “the geometric line lies at the root of [Western] law, reason and analytic thought” (Ingold, 2013, p.134).

Manifested in multiple contexts, and at various scales, straight geometric lines—used to divide, classify and compartmentalize space—are a key feature of colonial society. Such lines facilitated the imposition of a fragmented way of thinking and sensing on Indigenous lands. Linda Tuhiwai Smith (1999, p.97) describes this idea in *Decolonizing Methodologies*:

“While the West might be experiencing fragmentation, the process of fragmentation known under its older guise as colonization is well known to indigenous people. We can talk about fragmentation of lands and cultures. We know what it is like to have our identities regulated by laws and our languages and customs removed from our lives. Fragmentation is not an indigenous project, it is something we are recovering from.”

As Tuhiwai Smith notes, fragmentation affected both land and culture—physical environments, and ways of knowing. The straight line cuts through forest—transforming ecosystems, while altering the human psyche—imposing standardization and homogenization along the way. The process is an example of how, according to human

ecologist, Alastair McIntosh (2001, p.33), “the conditions of the world... bear on the structure of knowing.”

Through the remainder of this report I will continue reflecting on ideas about fragmentation, within the context of curriculum development in the north. I will further reference epistemological and curricular issues as I share the outcomes of conversations on Tłı̨chǫ lands.

The journey introduced in this section began onboard an aircraft. Less than 2 hours after departing from Edmonton, I landed at Yellowknife airport. It was a clear spring day. Shortly after exiting the aircraft I rented a vehicle and drove to Behchokǫ, along Highway 3, travelling along the rocky Precambrian surface of the Canadian Shield. While driving, I noticed the subarctic surroundings—ancient, exposed bedrock and thin layers of soil. Conical lodges and small cabins appeared in the distance. Highway signs informed me that I was on Tłı̨chǫ lands. As I approached Behchokǫ I thought of this stretch of highway, not as a standard road, but as a unique pathway.

4. Curriculum as a pathway



Figure 4. Research on Tłı̨chǫ lands.

The word “curriculum” is derived from the Latin “currere” which means “race”, or “course of a race” (Govt NWT, 2003, p.9). As part of ongoing collaborations on Tłı̨chǫ lands , educational experiences have been compared to a journey along a physical pathway or road (Ruiz, 2018, p.191). This comparison is explicitly stated in the opening pages of Dene Kede—an elementary and junior high school program of study created by northern Dene elders and educators in the 1990s.

The word curriculum comes from a Latin word which means a ‘track for racing’. In this document, we think of curriculum as an ancestral trail. It is a proven path that is the

result of many trials and errors of a people. It is a path that has led to many successful hunts and ultimately, the survival of the Dene. It is to these trails we have turned to guide us in preparing the Dene youth for our common future” (Govt NWT, 2003, p.9).

Traditional Tłıchq pedagogy involved constant travel by foot along ancestral pathways. As John B. Zoe (2007, p.3) writes, “The Tłıchq lived in a yearly cycle of following traditional trails.” As part of my research in the Tłıchq region (since 2012) elders have referred to the land as a foundational source of knowledge (Ruiz, 2018. p.31).

4.1 The first version of the curriculum

Considering the educational significance of walking (and interacting with) natural environments, the land became a core part of the first curriculum draft developed through this research. Teachings from elders along with lesson plans from Dene Kede also informed the early stages of this research. During the May trip to Behchokq, I shared this initial curriculum with community members—the presentation of the document, and subsequent focus group, prompted a collective conversation regarding this new educational experience (the draft is included on the following page).

This version of the curriculum combines traditional land-based activities and design practice (specifically time-based and print projects). The following community members attended meetings when this curriculum was presented at the Behchokq Friendship Centre on May 21, 2019: Rosa Mantla (educator), Terri Naskan (elder), Joe Pintarics (executive director of the Behchokq Friendship Centre), and Tony Rabesca. I also consulted with Tammy Steinwand-Deschambeault (educator and director for the Tłıchq Government) outside these meetings.

The intention behind the first version of the curriculum was to start a conversation about this research, while proposing a potential approach to the structure of this unique educational experience. Feedback from community members addressed areas of traditional knowledge, considered absent or lacking in this draft. The following is a summary of feedback gathered during visits to Behchokq in the month of May:

- The curriculum should include knowledge of basic survival skills (starting a fire, making shelter, clothing, etc.).
- The curriculum should include knowledge of traditional law on the land (protocols for trapping, hunting, and fishing).
- The curriculum should include knowledge of traditional medicine.
- An oral story can serve as the basis for each workshop. (R. Mantla, T. Naskan, J. Pintarics, T. Rabesca, & T. Steinwand-Deschambeault, personal communication, May 21, 2019).

Section 1 (14 hours)

The land

Engagement with the land—including trails, physical material, and animal hide, while introducing design methods for interpreting these experiences.



Walking, listening, and feeling the land (led by elders).



Traditional activities and craft (for example, sewing for girls, making fire and trapping for boys).



Use design methods for translating land-based knowledge. Consider how elders 'read the land like a book', and how we may design a book that 'reads like the land.'



Training in video recording using camera or phone.

Section 2 (14 hours)

Relation to others

Drawn from the Dene Kede emphasis on 'relation to others.' Activities will require collaboration, while also facilitating opportunities for personal reflection.



Work on a collective activity, like setting up a camp.



Reflect on the collective activity. Students will be encouraged to bring their 'voice' into audio/video, recording, and writing/drawing in their book.

Section 3 (14 hours)

History, time, and spirituality

This section revolves around discussion, preparation and participation in Feeding the Fire. The creative interpretation of history, Dene time, and spirituality will be addressed.



Elders will discuss the significance of ceremony in Tlicho culture. Design teacher will discuss or show examples of creative practice that communicates ideas about history, time, and spirituality.



Gather material for, and participate in Feeding the Fire ceremony.



Students will reflect on the ceremony and continuing to work on book and video projects.

Figure 5. The first draft of the curriculum. The three-part structure was derived from consultation with (and educational offerings from) the Faculty of Extension at the University of Alberta (drawing on the bottom right by James Wedzin).

In addition to gathering feedback on the curriculum, this trip was also important in terms of the methodological approach to this research. Throughout this research, visiting the community in person helped build a relationship of trust. This idea is expressed by Linda Tuhiwai Smith's (1999, p.15) notion of the "seen face:" in other words, "being seen by the people—turning up at important cultural events—cements your membership within a community in an ongoing way."

Following conversations with community members, I altered this curriculum in late May and early June, 2019. I created a revised version that incorporated survival skills, and provided outlines of daily activities over four, as opposed to the original three, workshop sections.

As I revised the first version of the curriculum I also avoided covering too much material within short time frames. The teaching of traditional land-based knowledge requires scheduling that is not rigidly compartmentalized (Ruiz, 2018, p.151; Peat, 2005, p.37). Dividing the curriculum up into narrow windows of time would potentially lead to an overly structured learning experience—an experience that is more closely aligned with colonial educational practices.

Public schooling in Canada has imposed a fragmented Eurocentric approach to the delivery of knowledge—embodied in techniques of notation, gestures, behaviours, and specific ways of arranging facts (Aylward, 2007, p.2). As I moved forward with this project, I avoided predetermining how activities may be compartmentalized (in other words, I avoided separating parts of the educational experience before information about location, teachings, and elders/educators was clarified).

Before completing the second version of the curriculum, I travelled to Behchokq on June 11, 2019. In the following section I discuss how attending a cultural knowledge workshop (as part of that trip) further contributed to the development of this research.

5. The art of drumming: new possibilities for curriculum



Figure 6. Russell Lake, near Behchokq (photo by Scott Portingale).

On the afternoon of June 12, 2019, I had the privilege of listening to elder Phillip Dryneck's demonstration and discussion on Tłıchq drumming at the Russell Lake camp near Behchokq (part of a three-day cultural knowledge workshop). The day's events revolved around the significance of this important cultural object. Reference was made to how traditional Tłıchq drumming helps "build community and reinforce bonds" (Strong, 2019). The "spiritual dimension" of drumming was also referenced—while exploring how the instrument is connected to land, animal and ancestral knowledge (Strong, 2019).

I begin this section with reference to elder Dryneck's drum description because following his presentation, I wrote the latest version of this land-based curriculum. Through this elder's presentation I was reminded that drumming (along with sewing, hunting, and other practices) are part of larger cultural experiences. Regional material culture (in the form of drums, conical lodges, caribou hide, as well as trees, rocks, and trails) are situated within a larger field of relationships and stories. The development of this curriculum offers a unique opportunity to consider the web of relations emerging from Tłıchq material culture. This curriculum can provide an experience that, in the words of Escobar (2017, p. 12), "respects, and builds on, the interconnectedness of all life, based on a spirituality of the Earth."

5.1 The second version of the curriculum

The most recent iteration of this curriculum (see the following page) offers a degree of flexibility through which to explore this relational worldview, while addressing requirements identified by community members (noted on page 8). Keeping in mind key parts of an Indigenous Research Methodology (as discussed in section two), this educational experience includes ceremony as part of daily activities and can help facilitate cultural continuity through the sharing of regional oral stories. Such stories are "living information systems" from which other teachings (involving traditional knowledge and design practice) will be based (Jacobs, 2008, p. 8).

This draft is designed as a template—a malleable system that can be adapted to different types of activities and teachings (details will be included as this research evolves). On each day, mornings are devoted to discussions and the sharing of stories, while afternoons are devoted to hands-on work—instruction in land-based activities, and/or design practice. The curriculum is to be taught by regional elders and design educators.

Specific areas of design practice that will be taught (based on expressed interest) include time-based and photo media (Ruiz, 2018, p.63). This learning experience culminates on day four, as students reflect on teachings, and communicate their experiences by compiling video footage, photography, and writing a short blog. The inclusion of a web or blog component in this curriculum addresses the interest (noted through consultation as well as previous research projects) in creating opportunities for youth engagement in this project (Ruiz, 2018, p.61).

Example for workshop on **Setting up shelter and starting a fire**

All days will begin and end with ceremony and/or prayer

Day 1	Day 2	Day 3	Day 4
<p>Morning Storytelling and discussion led by elders (including reference to Dene laws).</p> <p>Afternoon Training in documentation methods (customized for next days activities), including photo, video, and writing.</p>	<p>Morning Storytelling and discussion led by elders (students help document session—applying previous day training).</p> <p>Afternoon Hands-on demonstration on the land for:</p> <ul style="list-style-type: none"> • setting up shelter • starting a fire <p>Camera team (with students) document afternoon activities.</p>	<p>Morning Storytelling and discussion led by elders (students help document session).</p> <p>Afternoon Students engage in hands-on activities on the land (with elders' guidance).</p> <ul style="list-style-type: none"> • setting up shelter • starting a fire <p>Sessions will also be documented by students</p>	<p>Morning and afternoon Elders and/or teachers to discuss four Dene Kede learner outcomes as the basis for their reflection (relation to land, self, others, and spirit world).</p> <p>Students to reflect on, and communicate results of, previous 3 days through video and photo editing software, as well as web/blog.</p>



Figure 5. The second draft of the curriculum (based on setting up shelter and starting a fire).

This curriculum delivers interconnected threads of knowledge, acquired through listening, observing and making. By *making* I refer to both the production of Tłı̨cẖ material culture (through sewing, skinning, or scraping), as well as media production (involving video, photography, and writing). The emphasis on embodied knowledge or *making* also adheres to “curriculum indicators” as described by the World Indigenous Nations Higher Education Consortium (WINHEC) which “encourages and supports experientially oriented approaches to education” (Barnhardt, 2007, p.80).

The primary role of *making*, within this curriculum situates design as an intermediary field of study—between a Western academic environment and an Indigenous community. Design educators delivering this curriculum may help articulate common ground between methods and materials from the field of design, and land-based culture.

Both design and land-based experiences require hands-on processes, involving skill in making, shaping, and refining—fine-tuned over many years of practice. When drawing, for example, such a process is a way of thinking through activities that involve both body and brain (Cain, 2010, p.47; Schön, 1983, p.49). Furthermore, “coincidences in the rhythm of events,” or “rhythms and connections” are also common to the experience of designing as well as being on the land (Cross, 2011, p.11-13; Jacobs, 2008, p.5).

In the following section I conclude this report by describing a way through which Indigenous knowledge and design practice may be further connected as part of this curriculum. I will

share the latest consultation which informed this research. The discussion I will refer to took place during the Tłı̨chǫ Annual Assembly in the community of Gameti in July 2019.

6. Discussions



Figure 5. Images from the 2019 Tłı̨chǫ Annual Assembly in Gameti, NWT.

From July 7 to 11, 2019 I attended the Tłı̨chǫ Annual Assembly in Gameti, NWT. The event brought together people from across the region to share in social, political and cultural activities (Tłı̨chǫ, 2019). During my time in Gameti I met members of the regional government and Tłı̨chǫ educators.

As part of this trip I also had the privilege of sharing the latest draft of this curriculum with Lucy Lafferty (Language Culture Coordinator for the Tłı̨chǫ Government). I described the basic idea behind the project and provided copies of potential activities. After listening to my description of the research, and looking over handouts, Lucy shared her thoughts on this evolving educational experience.

Lucy's feedback revolved around two things: first, the need to revive aspects of traditional culture (specifically regarding survival on the land); and second, the need to ensure that this curriculum is relevant to both women and men—this feedback aligns with teachings from Dene Kede, as well as previous research in the Tłı̨chǫ region (Govt NWT, 2003; Ruiz, 2018).

The key suggestion provided by Lucy was that this learning experience take place within a traditional family camp (L. Lafferty, personal communication, July 9, 2019). Within the context of a camp, both women and men can be assigned specific tasks. Moreover, stories and activities explored could be relative to when the camp is set up. The time of year, in other words, can partly determine what is taught.

A Tłı̨chǫ camp embodies regional culture and way of life. As Lucy Lafferty suggests, the planning, set-up, maintenance, and daily routine of a camp are an integral part of life on the land and, therefore, the most suitable environment for participating students. Socialization and storytelling, as experienced in a camp are also an essential part of Tłı̨chǫ culture.

The camp is a communal environment that involves wide-ranging activities and material—participants need to set up tents, find wood, and start a fire. There are also opportunities to travel in the area, fish, set up traps, trap small game, take part in offerings to the land, ceremonies, and storytelling sessions (Govt NWT, 2003, p.10-12).

The campsite provides a rich, dynamic and memorable context for teacher-student interaction. Lucy Lafferty's advice indicates that the learning environment for this educational experience—a camp—should be explicitly stated in this project. In delivering this curriculum, the camp can also be thought of as a classroom—a classroom with material that is moveable and involves collective effort for assembly and maintenance.

The material of a camp is not tethered to the earth. Tent poles, tree stumps, canvas, and spruce boughs can produce malleable and temporary learning environments. The process of setting up, and living, within a communal camp provides a cultural experience that is fundamental to a Dene worldview. This idea is described in Dene Kede.

“The camp environment is a good one for learning traditional Dene knowledge and skills, and for learning why things are done as they are. Finally, the cultural attitudes that are developed with the camping skills will enable students to live in both worlds (Govt NWT, 2003, p.50).

Bringing together ways of knowing from *two worlds*—Indigenous and design-based—will make the camp required for this educational experience a unique place. This learning environment can possess characteristics of two ways of knowing: a traditional Tł̨ch̨ camp, as well as a space for creative design practice.

The idea of bringing together two ways of knowing (being *strong like two*) has been suggested throughout this report. I began this paper with critical discussions of Western built environments and Eurocentric education. I made a distinction between geometric lines and pathways—through this distinction I emphasized the importance of connecting (rather than fragmenting) knowledge.

The results of this research have led to the draft presented on page 11. The latest version of this curriculum is a flexible educational framework—facilitating adaptation to different variables (such as time of year, location, availability of elders and resources). Details regarding teaching content, storytelling, traditional activities and learning outcomes will be specified in the next phase of this research.

In this report I also described how the field of design can mediate between the university and Indigenous culture—offering methods, material, and ways of knowing that may be common to both. Unique interaction between these two ways of knowing is potentially transformative—opening new opportunities (for future students who participate in this learning experience) to trace new pathways that combine design practice and ancestral teachings.

Unlike standardized spaces and concepts derived from dominant Western design pedagogy, these teachings are rooted in local Indigenous culture. As such, the curriculum presented in

this paper can be described as *radical*. I use the word *radical* in the etymological sense—derived from a Latin word meaning *rooted* or *having roots*. Tłıchq knowledge is rooted in the regional terrain—and inscribed in the trees, trails, and rivers of the region.

The educational experience described in this paper offers new tools through which to engage with, and visualize, this knowledge. This curriculum also suggests how design education operating outside the physical boundaries of a Western academic institution may help restore connections to the natural world. In the circumpolar north, such connections take place on the land: *a place we call home*.

6. Conclusion

I will conclude by reflecting on two findings that emerged through this research—both reveal the importance of relationships. The first finding is about *the significance of relationships during the research process*. The project described in this paper involved conversations with various community members (indicated in section four), attendance at the drumming workshop (indicated in section five), and discussions at the Annual Assembly (indicated in section six). These visits were not only important for data gathering purposes—the visits also allowed me to share this evolving project with a range of educators and elders who in previous projects, supported and informed research activities. Visiting the community, and respectfully engaging with multiple knowledge holders is a way, according to Tuhiwai Smith (1999, p.15), of "reciprocating respectful behaviours, which... develop membership, credibility and reputation." Consideration of, and sensitivity to, the evolving relationship between researcher and community members can facilitate sustainable, long-term collaborations within socially engaged design research.

The second finding has to do with *the integration of relationships into the outcome of a project*. The curriculum presented in section five of this paper is intended to foster connection to land, and intergenerational dialogue—promoting the transfer of stories and traditional skills from elders to youth. This point was highlighted during visits to the Tłıchq region in May and July 2019.

Consideration of relationships at every stage of this research (from data collection to curriculum development) is key to building a project that engages community members while integrating a relational worldview into the very outcome of the study. Relevant to educational projects on Indigenous lands, this overarching understanding of relationships is also applicable to socially engaged design practice and pedagogy which involves local know-how and/or ecological perspectives.

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