Integrating Indigenous Ways of Knowing and Learning
into Face-to-face, Blended, and Online Learning Environments

by

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requirements for the degree of

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We accept the Process Paper as conforming to the
required standard.

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Abstract

This process paper and major project fills a gap in resources for educators to understand Indigenous perspectives and integrate Indigenous educational methodologies into their own practices. As a step toward reconciliation in Canada, educators are directed by employers to Indigenize their curriculum yet question how to do so. After reviewing relevant literature, a website was created to support educators in building capacity for intercultural understanding, respect, growth, and relationship. The website leads viewers through Indigenous perspectives then moves to four elements of Indigenous educational methodologies and practices: relationship with place, circle, the story, and mentorship. A final section applies the methodologies to blended and online learning environments. Website design includes clear navigation and separate sections for background information, applied examples, and additional resources. Anonymous survey reviewer findings were integrated into the final website version. A Home Page redesign led to inclusion of author personal presence and a more human element. Reviewers found the information and examples useful, adaptable, and applicable. Many recommended the website to colleagues or teacher trainees. The major project meets its intended outcomes and creates positive unexpected outcomes. Both the website content and the intentional visual, oral, and nature-based design focus creates an unusual, non-text-based resource for educators.

Figure 1. Website linked page button images. Images: A. Hilker

Website URL: https://indigenousknowingeducation.weebly.com/

Keywords: Indigenous education, Indigenizing curriculum, Indigenous perspectives, storytelling, dadirri, place based learning, circle in education, mentorship, learning by doing, non-linear thinking, blended learning, online learning, adult education, K-12 education
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First and always to the lands and creatures that have been my abiding teachers.

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To the many Indigenous women who shared tea, tears, and laughter through many years of my work at Somenos Transition House, a safe house for women and their children on unceded Cowichan territory, Vancouver Island, BC.

To my Online Learning and Teaching Diploma (OLTD) Cohort 5 colleagues and instructors who accompanied me through two very intense years of coursework, almost daily contact, breaking down and reforming what learning and teaching could and can look like. A special nod to Program Coordinator Mary O'Neill.

To the dancing circle of dear friends and sisters who share footsteps into the ancient past and the imagined future through the Sacred Circle and Traditional Women's Dance circles that are a part of my weekly life. This practice and company of Circle has been my witness, guide, and centering presence in a life of many distractions.

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Thank you and huy tseep q’u, ALL!
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Chapter 1 – Introduction

Purpose of the Major Project

There is rich opportunity for people of different cultural backgrounds to benefit from recognizing and integrating Indigenous ways of knowing and learning into the experience and practice of education. This invitation is being explored by Canadian educational systems from K-12 public and private schools, alternative schools, adult education centres, and universities, as well as other learning environments. Of course, this starts in face-to-face relationships and interactions. It could also extend into other educational environments such as the blended or online classroom.

The purpose of this major project was to assist educators in building connection with a selection of Indigenous ways of knowing and learning so that they are more equipped to integrate these methodologies into their face-to-face, blended, and online learning environment practices.

Justification of the Major Project

As technology develops, education moves into new electronic, mobile, and virtual environments. To build relationship with and practice respect for Indigenous peoples of Canada, and to honour the Truth and Reconciliation Commission Calls to Action, there is a need for educators to develop a connection with Indigenous ways of knowing and learning and develop methods to integrate them into online learning environments.

As an emerging sector, there is little specific material to support online learning endeavours. This is such a new learning environment challenge that even Indigenous universities in Canada are outsourcing their online courses to more established, non-Indigenous programs.
Educators and educational systems are called upon to hold themselves to educational standards that encompass Indigenous learners in conscious and specific ways:

62. We call upon the federal, provincial, and territorial governments, in consultation and collaboration with Survivors, Aboriginal peoples, and educators, to:

ii. Provide the necessary funding to post-secondary institutions to educate teachers on how to integrate Indigenous knowledge and teaching methods into classrooms.

63. We call upon the Council of Ministers of Education, Canada to maintain an annual commitment to Aboriginal education issues, including:

iii. Building student capacity for intercultural understanding, empathy, and mutual respect. (Truth and Reconciliation Commission of Canada: Calls to Action, 2015a)

One often hears honest questions from educators wondering about the relevance of colonization, and truth and reconciliation between Indigenous and non-Indigenous peoples today. They clearly see that Indigenous peoples need to heal from historical atrocities. However, non-Indigenous individuals, perhaps recent immigrants or fourth generation Canadians, often feel removed from historical injustices. There is guidance offered from a variety of sources. Profoundly, the Truth and Reconciliation Commission of Canada (TRC) (2015b) reminds Canadians that, “by virtue of the historical and modern Treaties negotiated by our government, we are all Treaty people” (p. 114). If all Canadians are Treaty people, the barrier that divides individuals and groups by cultural or ethnic background must exist in a different context. During the TRC testimonies, the Reverend Stan McKay of the United Church, who is also a Survivor, brought attention to a holistic view of relationship, reciprocity, and healing. “[We cannot] perpetuate the paternalistic concept that only Aboriginal peoples are in need of healing... We all
have stories to tell and in order to grow in tolerance and understanding we must listen to the stories of others” (p. 115-116). Most educators today are part of a Western system of education that, historically, has held views and espoused methods and philosophies perpetuating the idea that other-than-Western is less valuable. This is a challenge of decolonization in education, as well as in broader society and Canadian systems.

Coleman, Battiste, Henderson, Findlay, & Findlay (2012) described decolonizing the mind as a “rejection of diffusionism, the notion that knowledge spreads one way from ancient Egypt to Greece and Rome, then Europe, and from there to the rest of the world… Decolonizing the mind means recognizing a wide array of knowledge systems, operating in a global ‘ecology of knowledges’ (Santos)” (p. 143). They further stressed the importance of educators to consciously access different knowers (different than Western) as authorities and sources of knowledge.

This research and major project arose from my own quests, as a non-Indigenous educator in a British Columbian university system, for information to help me understand what it meant to Indigenize education. I thought that this was a broad and indistinct term that went far beyond including Indigenous materials in my classroom material. Materials were a start, but it didn't address what I felt was a need to dismantle the philosophies behind some of my practices, and the practices of the institution, and rebuild in a way that incorporated ideas, methodologies, and practices based on some common Indigenous ways of knowing, teaching, and learning.

The research for this project has taught me that understanding the meaning of the words Indigenous perspectives - perspectives with an 's' - is essential before any application of Indigenous methodology can be truly effective. Taking on a practice without understanding the why of it can lead to problems. The same can be said of existing practices. This research and
project have invited me to look at the why of current educational system philosophies and practices. My personal answers to this second question have not always been to my liking, and thus I am challenged to address them.

This major project has produced a shift in my own educational foundations. Not surprisingly, this shift has spread to my life philosophy. The two, in true non-linear fashion, cannot be separated.

**Critical Challenge Question**

Thaman (2003) encouraged educators to acknowledge and recognize the dominance of Western philosophy, content, and pedagogy in the lives and education of Indigenous peoples and asked for educators to value alternative ways of thinking about the world. With new K-12 curricula being implemented and more flexibility around content and delivery style, there is room for optimism that a variety of ways of knowing and perspectives will reach learners. The K-12 educational system, colleges, universities, and other adult learning centres could all benefit from Thaman's (2003) suggestions above. To further this acknowledgement and recognition, this process paper and major project was developed.

The process paper and project focused on the question, “How can educators integrate Indigenous ways of knowing and learning into face-to-face, blended, and online learning environments?” The purpose was to support educators, and by extension educational systems, in building capacity for intercultural understanding, respect, growth, and relationship.

**Project Overview**

The context for the major project grew out of questions facing me as an English instructor at Vancouver Island University's (VIU) adult upgrading faculty. Furthermore, VIU had been working on making the university more welcoming and accessible to Indigenous learners,
developing an Indigenous peer mentorship program, developing the role of Elders within the university, expanding their Office of Aboriginal Education, and engaging staff and faculty to explore Indigenous presence and methodologies in the classroom. While I welcomed all these initiatives, I was not that much the wiser to what it actually meant to bring Indigenous ways of knowing and learning into my teaching practice.

There are several Indigenous educational committees in British Columbia that are actively building capacity in this area, but they are hard for the average educator to access. I was especially interested in what it might mean to bring Indigenous perspectives into blended and online education. For that, I found almost no information.

Because of the newness of the field – online education – I decided to take a step to creating the beginnings of a conversation. I was very aware that as a person long out of contact with my European Indigenous heritage, that I could only ask questions, allow those closely connected to their Indigenous heritage to speak for themselves, and practice what I only really understood. Learners are quick to reject what feels imposed, and I could not ask other educators to impose unfamiliar practices and ideas into their course delivery. However, I could ask them to ask themselves questions. This became the basis for the major project website.

As I approached what to include in the website, it became apparent that I needed to spend more time on concepts and philosophies, and less time on what I was originally focused on, that is, incorporating Indigenous ways of knowing and learning to an online educational platform. I could not integrate what I did not understand. I decided that it would be the same for other educators. If educators could understand some of the concepts better and develop their own relationships with these concepts, then their own ingenuity and creativeness would allow them to find ways to integrate the concepts into their own educational settings.
I found that the ideas of Indigenous Perspectives needed to be explored and developed before going on to any of the methodologies. Next, I chose four areas that I had a personal relationship with, those of place, circle, story, and mentorship. There are numerous other elements present in Indigenous ways of knowing and learning, but the project needed to be restricted to a manageable size.

Lastly, I came back to my original intention of providing guidance in ways the project perspectives and methodologies could be incorporated into blended and online educational settings.

**Key Deliverables**

The major project was the development of a website that would provide educators with resources and support to include and incorporate Indigenous ways of knowing and learning into their learning environment. The website included

- a collection of Indigenous voices that aimed to give the viewer an experiential sense of Indigenous perspectives, relationships with place, use of circle as a methodology, the power of story as a design and delivery method of education, and learning through the watching and doing of mentorship;
- examples of application of the above methodologies; and
- resources and sources of inspiration in the areas of Indigenous perspectives, place, circle, story, and mentorship

The website focused first on Indigenous perspectives as a necessary beginning to understanding any other methodology. Following the Perspectives page came an exploration of the four selected methodologies of Indigenous ways of knowing and learning as applied in face-to-face, blended, and online educational settings.
## Definition of Terms

Below is a table providing an overview of terms referred to in this Final Process Paper and in the major project that are not defined in greater depth elsewhere.

Table 1

### Definition of Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Brief Description</th>
<th>Source</th>
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<tr>
<td><strong>Educational terms:</strong></td>
<td></td>
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<tr>
<td><strong>Blended learning</strong></td>
<td>Online or web-based learning is incorporated into a F2F course. Learners will be delivered some of their learning materials and activities via a course web-page, an online LMS, or other web-based methods. Learners have flexible access to content and instruction during which the time and place learning occurs. A blended learning environment requires access to internet and an electronic device such as a laptop, tablet, smartphone, or desktop computer.</td>
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<tr>
<td><strong>Cohort</strong></td>
<td>A group of learners that move through a learning process at the same time and speed. This may last from one course, to a term or school year, to a multi-year program.</td>
<td></td>
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<tr>
<td><strong>Continuous intake</strong></td>
<td>A course that has multiple times a learner can enter, as opposed to entry at the beginning of a term or semester. Some continuous intake courses offer entry every two weeks to learners.</td>
<td></td>
</tr>
<tr>
<td><strong>Educators</strong></td>
<td>Teachers, instructors, professors, educational administrators, educational staff in any Western or Indigenous educational system, whether public, private, or alternative. The focus is more on Western educators, as most have gone through a formative Western</td>
<td></td>
</tr>
<tr>
<td><strong>Educational System</strong></td>
<td><strong>Description</strong></td>
<td><strong>Source</strong></td>
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<td>------------------------</td>
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<tr>
<td>Educational System (the system used widely in Canada), themselves.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Face-to-face (F2F)</strong></td>
<td>The traditional classroom or face-to-face instruction is when the instructor and the students of an educational institution are in a place devoted to instruction and the teaching and learning take place at the same time.</td>
<td>Purdue</td>
</tr>
<tr>
<td><strong>K-12</strong></td>
<td>Canadian kindergarten to Grade 12 educational system (including general reference to Ontario, which goes to Grade 13)</td>
<td>B.C. K-12</td>
</tr>
<tr>
<td><strong>Learning Management System (LMS)</strong></td>
<td>An online educational management system that provides a dedicated space for learners to access course materials, see their grades, submit assignments, communicate with the instructor through a built-in email option, participate in discussions with other learners through a forum, and track their progress through the course.</td>
<td>LMS: Brightspace</td>
</tr>
<tr>
<td><strong>Multi-level</strong></td>
<td>A course or class that has more than one level of learner, such as a math class with grades 10 - 12 learners registered in the course at the same time.</td>
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<tr>
<td><strong>Online learning</strong></td>
<td>Learning is delivered fully through web-based resources, such as a LMS or a combination of online websites and tools. An online learning environment requires access to internet and an electronic device such as a laptop, tablet, smartphone, or desktop computer.</td>
<td></td>
</tr>
<tr>
<td><strong>Indigenous</strong></td>
<td>This term is described more fully in Chapter 2, as it is key to identity and relation to place. In Canada, Indigenous peoples include First Nations, Inuit, and Metis.</td>
<td></td>
</tr>
<tr>
<td><strong>Indigenize education</strong></td>
<td>There is an effort in Canada to bring Indigenous perspectives, ways of knowing and learning, and</td>
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Indigenous content into educational systems. This effort is in early stages and requires a willingness to value the wisdom and knowledge of Indigenous peoples and of local Indigenous Elders and knowledge holders.

### Indigenous perspectives

Perspectives, ways of knowing, that are specific to Indigenous peoples. While some perspectives described below and in the major project website refer to worldwide Indigenous peoples, most references are to perspectives of Indigenous peoples of modern day Canada and North America.

### Non-linear thinking

Can include the use of intuition, insight, creativity, and emotions when comprehending and communicating information. Thinking that happens through the right brain, which is relational-based, rather than logic-based. Non-linear thinking can happen non-sequentially and may be circular in nature. It is often inter-relational and pattern-based.

<table>
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<tr>
<th>Residential school Survivors</th>
<th>Indigenous individuals who attended the Canadian Indian Residential School system. While not everyone who attended a residential school identifies (or identified) as a Survivor, the term is used in general conversation and in terms of the Canadian Truth and Reconciliation Commission (see TRC below).</th>
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</thead>
<tbody>
<tr>
<td>The Land</td>
<td>This term is used specifically when describing relationship to place as the primary source of knowledge.</td>
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*Digital Literacy: A Demand for Nonlinear Thinking Styles*  
*Western Thinking and its roots – Indigenous Thinking and its roots*
from which Indigenous laws, cultures, and practices arise. The Land may in fact be a prairie, forest, lake, tundra, or coastal beach system. The place of relationship will depend on the territory of the Indigenous group.

**Treaty**

Treaties are agreements made between the Government of Canada, Indigenous groups and often provinces and territories that define ongoing rights and obligations on all sides.

Treaties can also be seen through a different lens: “Canada’s comprehensive land claims policy, and British Columbia's treaty process, perpetuates and reinforces the understanding of land claims agreements as mechanisms for removing Indigenous Peoples from their lands so that the lands can be exploited by non-Indigenous people” (McIvor, 2018).

**Truth and Reconciliation Commission of Canada (TRC)**

The Truth and Reconciliation Commission (TRC) provided those directly or indirectly affected by the legacy of the Indian Residential Schools system with an opportunity to share their stories and experiences. The TRC spent six years travelling to all parts of Canada and heard from more than 6,500 witnesses. The TRC created a historical record of the Residential Schools system. In December 2015, the TRC released its entire six-volume final report. All Canadians are encouraged to read the summary or the final report to learn more about the history of Indian Residential Schools and its legacy.

**Summary**

Educators need support to understand and practice Indigenization of education, be that curriculum, materials, or educational structural organization itself. To assist educators, with a
special focus on instructors in the K-12 to post-secondary ranges, the major project website was developed including pages on Indigenous perspectives, relationship with the Land, Circle as methodology, the power of Storytelling, and learning by watching and doing through Mentorship.

Before the major project website was designed and built, a literature review was done to gather material on and understand Indigenous perspectives and approaches to using place, mentorship, circle, non-linear thinking, and story as ways of Indigenous knowing and learning. The research results were instrumental in the creation of the major project and the content used on the website.
Chapter 2 – Literature Review

Introduction

Critical Challenge. The literature review focuses on how educators can integrate Indigenous ways of knowing and learning into online learning environments to support educators, and by extension educational systems, in building capacity for intercultural understanding and respect. Educators must begin by exploring the meaning and diversity of Indigenous perspectives. Connection to Land, learning by watching and practicing, Circle as methodology, non-linear thinking, and Storytelling are five proposed access points. Starting with a preliminary exploration of Indigenous perspectives, the research is presented on how each topic exists in Indigenous cultures, with a focus on what can be used in an educational setting.

Background. Exploring research and literature revealed that older publications were, for the most part, as relevant as current publications. While online education is an emerging phenomenon, Indigenous ways of knowing and learning trace their roots back 40,000 years. Sources further removed from colonization and residential school experiences are precious. While these sources are rare, Indigenous peoples have managed to safeguard and preserve as much of their traditional knowledge as possible. Bridging traditional knowledge into modern educational systems could benefit not only Indigenous learners, but all learners, educators, and wider society. Before starting a major project website, research into relevant literature needed to occur.

The literature review influenced the development of an experiential website designed to assist educators with integrating Indigenous ways of knowing and learning into F2F, blended, and online education.
Indigenous Perspectives

Understanding Indigenous perspectives is key to accessing the creativity that can allow individual educators to implement Indigenous ways of knowing and learning into their course delivery. The five methods of teaching and learning that follow – connection to Land, learning by watching and practicing, Circle as methodology, non-linear thinking, and Storytelling as powerful methodology – are each important, yet they are merely branches on a tree with no roots unless perspectives are deeply explored and absorbed into understanding. These five methods were a starting place for me, as researcher and author, as areas where I felt the most practiced. There are other methods of Indigenous ways of knowing and learning worthy of future study and integration into education. In the true spirit of Circle, understanding and incorporating Indigenous perspectives and becoming proficient in the use of the five methods will not happen in a linear fashion. Rather, they interconnect and weave through one another, moving in a circle or spiral, simultaneously reaching deeper into understanding and integration while stretching upward and outward into community and everyday life. Connection to place, context, relationship and reciprocity, and interconnection between all things (human, animal, plant, mineral, etc.) are embodied in Indigenous perspectives and ways of knowing. Joseph (2016) described Indigenous identities as coming from connectedness, which are reinforced by Indigenous law, kinship, and spirituality.

Australian Aboriginal and Torres Strait Islander educators described perspectives as ways of seeing the world. “Perspectives affect the way we interact with the environment and the perceptions we have about ourselves, our culture and the way we see others” (State of Queensland, 2014, p. 22). Perspectives are not static nor do they belong to one person or group only. Rather, perspectives are made up of individual and collective identities. The authors
cautioned about generalizing Indigenous perspectives (plural) into Indigenous perspective (singular). “These generalizations are often misleading and inappropriate, causing the homogenisation of Indigenous peoples” (p. 21). One way to avoid generalization is to consider place and context.

Cardinal (2001) pointed to the importance of context, a theme that runs through both Indigenous scholarly literature and Indigenous oral histories and laws. The Latin term indigenous, Cardinal indicated, means “born of the land” or “springs from the land,” which is a context. “When you create something from an Indigenous perspective, therefore, you create it from that environment, from that land in which it sits. Indigenous peoples...are shaped by the environment...it gives them their responsibility for stewardship; and it sets out a relationship” (p. 180). Cajete (1994) understood the words indigenous to be “derived from the Latin root indu or endo that is related to the Greek word endina meaning 'entrails'. Indigenous means being so completely identified with a place that you reflect its very entrails, its soul” (p. 87).

Munroe, Borden, Orr, Toney, & Meader (2013) contended that the new methods of education being explored and implemented by boards of education - such as British Columbia’s K-12 curriculum released in 2018 - were, “in fact, rooted in very old ideas embedded in Indigenous knowledges” (p. 319). They were concerned that context was often missing from teaching: “We are troubled by the tendency in traditional mainstream education to teach skills stripped of context. We believe the teaching of decontextualized mathematics and literacy skills does not align with an Indigenous worldview which is holistic and interconnected” (p. 318).

This idea of ingrained responsibility to and relationship with place emerges repeatedly in Indigenous world views. Cajete (1994) spoke of the importance of the “deep ecological philosophy and understanding of relationship to the natural world,” a paradigm that is needed “to
balance the Western mechanistic philosophy of control of Nature...a homogenizing, technosocial paradigm” (p. 78). The perspective and practice of connection to and reciprocity with the Land (Cajete's *Nature*) and the environment is explored further below.

In studying past and current matriarchal Indigenous societies, Göttner-Abendroth (2009) found that they “do not have religions based on a God who is invisible, untouchable, and incomprehensible – but omnipotent. On the contrary, in matriarchy, divinity is immanent, for the whole world is regarded as divine – as feminine divine...Everything is endowed with divinity, each woman and man, each plant and animal, the smallest pebble and the biggest star” (p. 24). This reflected Cajete’s (2009) foundational characteristics of Indigenous education as including integration and interconnection as universal traits. Indigenous systems of interconnection – some of which have survived to present day despite the destructive forces of colonization, patriarchal empires, religious missionizing, mass tourism, the market economy, and industrialization (Göttner-Abendroth, 2009) – served societies and cultures for thousands of years, much longer than the objectifying, disconnected Western philosophies of more recent eras. Wendy Brady of Australia reflected that her ancestors “had in place systems of education, cultural practice and maintenance, spirituality and social cohesion which sustained them for 40,000 years” (Thaman, 2003, p. 9).

There is a movement in Western, as well as in Indigenous education, to *re-enchant* the academy (Voss & Wilson, 2017). Cajete (1994) contended that an integral part of Indigenous education is about learning how to blend the mythological, aesthetic, intuitive, and visual perspectives of Nature with the scientific, rational, and verbal perspectives.

The art of storytelling has potential to enchant listeners and assist them in accessing wisdom, teachings, and information from the story. Story is a powerful method of
communication, and with it comes the non-linear, deliberate use of Circle, whether in storytelling, talking circles, or consensus-building as a governance system. Both methods and tools are overlaid on each Indigenous group’s connection to land or place.

Connections to the Land: Nature and the Environment

There is “no separation between sacred and secular [in matriarchal, Indigenous societies] ...If nature is regarded as holy...then humans worship nature and live in peace with Her in order to best ensure their own welfare (Göttner-Abendroth, p. 24).

Cajete (1994) placed connection to Land in an interesting context. “Tribal education...was an educational process that unfolded through mutual, reciprocal relationships between one's social group and the natural world. It was essentially a communally integrated expression of environmental education (p. 26). Cajete insisted that the art of relationship, ways of ecologically-based living that evolved over 40,000 years of continuous relationship with particular environments, must be re-taught through modern education (p. 78). This art of relationship can serve as a model to carry modern social and economic structures into the future. It is critical to link education – the values behind the content – with the kind of world that individuals and societies want to live in. For the future to be sustainable, choices and critical analysis free of illusion must be made. “A decision made with the future, ongoing health of the earth in mind is reflective of Indigenous ways of knowing... and ecoliteracy (Munroe, Borden, Orr, Toney, & Meader, 2013, p. 327).

Close ties and connection to the Land – sometimes in English called Nature, Country, Bush, Forest, Sea – affect the ways in which “the land is perceived and treated; not as a commodity or resource, but as an extension of the group and something to be nurtured“ (State of Queensland, p. 21). This relationship with nature and the environment often has “particular
emphasis on cycles and patterns and the effect each has on the other” (p. 21). This reveals a sensitivity to human effect on the environment, not only the environment’s effect on humans. In an educational setting, this is important because it shifts the focus from objectification to reciprocity. Relationship and reciprocity opens an array of curricula, activities, and pedagogies that are absent in an objectification-only, one-directional perspective.

Education has a role to play in furthering reconciliation between Indigenous and non-Indigenous peoples and their respective governments. The concept and practice of respectful relationship between humans and Land is so important to Indigenous peoples that, in the words of Elder Reg Crowshoe during the TRC hearing, “If human beings resolve problems between themselves but continue to destroy the natural world, then reconciliation remains incomplete” (TRC 2015b, p. 123). The Commission has heard this perspective repeatedly: “That reconciliation will never occur (Hilker's italics) unless we are also reconciled with the earth. Mi’kmaq and other Indigenous laws stress that humans must journey through life in conversation and negotiation with all creation” (p. 123).

Elder Reg Crowshoe’s challenge and the Truth and Reconciliation Commission’s testament place the burden of entering this type of relationship on all people. For some, this will be easier; for many, it will be challenging. Educators are in a unique position to open conversations and ask themselves and learners to consider these perspectives, even if there is no immediate answer. Educational in Canada has played a key role in supporting and promoting Western, Eurocentric ways of thinking, learning, and being that have removed culture and language from Indigenous peoples. Historically, education turned away from the dialogue and negotiations with all creation that is an imperative of Mik'maq law. Today, educators can take a role in supporting and promoting curiosity and room for exploration in these types of dialogues.
Educators encounter opportunities for inquiry in every subject and at every age level. Those *curiosity moments*, as I like to call them, could include exploring Indigenous perspectives and different ways of seeing the world.

Cajete (1994) asked educators to learn how to see Nature holistically (p.123). Building educational systems that remain connected to and integrated with a system of values growing from relationship with place can inform what that education system could look like and how it could operate. In my own experience and in watching educators integrating land-based learning into their curriculum, both educators and learners thrive when their learning environment reflects the natural environment that surrounds them. A challenge with online learning is that participants reflect a multitude of different connections to different natural environments. Educators can provide opportunity to create meaningful relationship between individual learners and the Land.

One practical method to encourage conversation and to practice “exquisite listening skills” (Cardinal, 2001, p. 181) is through finding ways to be in Circle and to learn through watching and practicing what the watcher deems valuable.

**Mentorship: Learning by Watching and Practicing**

Taking the learning experience online might have an advantage of allowing learners to connect with their wider world, the world outside the face-to-face classroom, more easily. Learners can be encouraged to find mentors that are relevant to them individually. However, all learners, regardless of the learning setting, respond to real-life examples and connection with mentors. Meaningful education can occur when learners build relationships with community members and experts – experts in the field, peers, and other resource people.

Battiste (2002) described Indigenous knowledges as “often oral and symbolic... transmitted through the structure of Indigenous languages and passed on to the next generation
through modeling, practice, and animation, rather than through the written word” (in Munroe, Borden, Orr, Toney, & Meader, 2013, p. 321).

To benefit from learning by observing and interacting with others, learners must employ the skill of *dadirri* - deep listening. In *Success For Koori Cohort*, Brearley (2011, January 12) described deep listening as “tuning in… Deep listening is based on stories, silences and the spaces that lie between. As a research methodology, the practice of deep listening is an invitation into culturally congruent ways of learning and knowing” (p. 44)). Australian Aboriginal writer and Elder Ungunmerr-Baumann (n.d.) described *dadirri*, as

inner, deep listening and quiet, still awareness. Dadirri recognizes the deep spring that is inside us... It is something like what you call ‘contemplation’... In our Aboriginal way, we learnt to listen from our earliest days. We could not live good and useful lives unless we listened. This was the normal way for us to learn – not by asking questions. We learnt by watching and listening, waiting, and *then* acting.

Elder Stephen Augustine (in TRC 2015b) talked about this quality of deep listening as an act of respect and reconciliation.

> Reconciliation cannot occur without listening, contemplation, meditation, and deeper internal deliberation... We must enlarge the space for respectful silence in journeying towards reconciliation... Dialogue and mutual adjustment are significant components of Mi’kmaq law. (p. 122)

The idea that communication, listening and understanding another individual or group is built into Mi’kmaq law models a strategy for teaching and learning. Mi’kmaq leaders would certainly have to be practiced in the skills of listening and contemplation before being selected to represent an individual or community.
Western education encourages learners toward inquiry and asking questions. Perhaps there is a way to integrate appreciative inquiry with the fine arts of Australian dadirri and Mi’kmaq deep listening and deliberation. This contemplative space can create an environment for reflection and absorption, a refreshing reprieve from the Western tendency toward busy-ness, constant movement, stress, and anxiety. A way to practice contemplation and deep listening while in the presence of others is to engage in the practice of being in Circle.

**Circle as Methodology**

Cardinal (2001) explained using the practice of Circle as a “human cultural expression of nature” (p. 181). For example, a *Talking Circle*, traditionally used in Indigenous sacred ceremony, provides a structure where the voice of each person present is given equal weight. Each voice is acknowledged and heard in turn. Each voice is “Culturally located, “and participants learn “To Listen Respectfully to/ Others” (Gravelline, 2010, p. 364) through repeated practice, explicit modelling, and clear intent.

Circles represent “interconnectedness, equality, and continuity...Circles suggest inclusiveness and the lack of a hierarchy... movement of the seasons and the sun’s movement from east to west during the day...symbolize completeness and equality” (Government of Ontario, 2009, p. 8).

Talking circles promote what Cowan and Adams (2002) called integrative conversation, which “involves the exchange and creation of new meaning” (in Pete, 2004, p. 9). They continued by adding, “An integrative conversation is a genuine exchange of ideas, feelings, perspectives, opinions, and so forth, where for each person involved there emerges a sense of self as part of the whole” (in Pete, p. 9). “Unlike other systems of communication, talking circles are not intended to create competition as in the western tradition”(Pete, 2004, p. 9). Being present in
a talking circle is to practice dadirri, or deep listening, as well as sharing, which shifts meaning within the group, thus collectively creating something new. “Individuals turn from concerns on the personal level, to collective concerns: away from competition to individuals contributing as a part of a larger community. This shift from competitive to inclusive is the cross-cultural move” (Pete, 2004, p. 9).

Operating in circle is not a new idea, even amongst Western populations. The benefits of circle have perhaps been forgotten, but remnants remain for access to their teachings and wisdom. Baltic countries such as Greece, Bulgaria, Romania, Turkey, and Armenia retain traditional and ritual dances that have roots thousands of years old. Shannon (2018, Winter) spoke to the richness of these traditional circle dances. For example, in Armenian dances, “their motifs and patterns are very ancient and constitute a nonverbal ‘language’ of movements which are deeply symbolic, powerfully evocative and profoundly spiritual.” Garfinkel (2010) 'confirms that 'scenes of dancing are among the oldest and most persistent themes in Near Eastern prehistoric art,’ reaching as far back as the 9th millennium BCE, and affirms that the history of dance can be shown to have started 'as early as the first appearance of modern humans in Europe, nearly 40,000 years ago”’ (in Shannon 2017, p. 328).

“Dance is not performed in isolation, but as part of a more complex ritualistic activity. Rituals and ceremonies are elaborate events, with a complex set of actions, involving talking (praying, blessing, story telling), eating (drinking, feasting), physical gestures (clapping hands, putting one's hands on others’ heads) and movement (dancing, moving in procession, circling)” (Garfinkel, 2010, p. 212). Knowledge, culture, and history was and continues to be transmitted using such circles.
Many cultures have practices held in a circle, and this non-competitive, inclusive format is a natural fit in education, should instructors and institutions value these teachings and philosophies. A modern application of talking circles in blended and online educational settings can be seen in the use of videoconferencing services such as Zoom. All participants in a session can see and hear each other at the same time. The mute/un-mute button acts as a sort of talking stick which is passed between participants. Small talking circles can be created out of the big group – called break-out groups – by the session moderator. These small sessions can be full of vitality and can be used to connect learners who wouldn't otherwise be able to meet in person.

**Non-Linear Thinking**

Stories, thought process, and discovery can happen in ways other than a linear fashion. Established Canadian (based on British-style, colonial) education is deeply rooted in linear, left-brained thought and structure. Online education has the opportunity to expand and embrace non-linear, Indigenous styles of delivery and expression of learner knowledge. A dynamic application of this is what my Online Learning and Teaching Program (OLTD) colleagues termed a “Chat Blast.” While in a Zoom (online videoconferencing) session, on occasion, the group of eighteen learners would use the chat window to brainstorm and build on one another's questions and ideas. Learners who were normally shy about speaking in person, or on the video screen, participated fully and creatively in this activity. None of us had experienced this type of activity, the burst of unstructured thought flow, or the interaction and stimulation provided by other learners in a F2F situation. We had all experienced brainstorming, a fine example of non-linear thinking, but this was a new experience with new results for us all.
Valuing non-linear thinking and ways of learning might challenge established practice around assessment and values, yet there is movement toward alternate ways of valuing and assessing understanding.

While one might think the opposite of linear thinking is circular thinking, there are other ways of thinking that are non-linear. Non-linear thinking may be as diverse as the individuals expressing this type of thought. Wilmarth (2010) proposed core educational methods of successful citizens of the 21st century as a “messy, nonlinear, highly organic learning process.” (p. 95 in Munroe, et al. 2013, p. 324).

Even time is non-linear and can be cyclical in nature (Joseph, 2016). Time need not only relate to months, years, days, and minutes but can also be measured in cyclical events such as seasons, yearly migrations, or plant life-cycles, which adapt to micro- and macro-climate environmental factors.

Battiste alluded to the complexity of thinking that occurs when embracing Indigenous knowledges as they are embodied in “a web of relationships within a specific ecological context” (Munroe, et al., 2013, p. 325). Educators can find ways to nurture and retain inherent ability for non-linear, creative thinking in learners.

Inquiry promotes non-linear thinking. This is sometimes challenging for learners taught to think along straight paths, but the exploration can be richly rewarding. Indigenous methods of storytelling are excellent examples of how children and adults are exposed to non-linear thought and behaviour practice.
Storytelling

Storytelling and the passing on of knowledge is deeply personal, cultural, and relevant. This can range from choices of literature, to ethnobotany, to ways of perceiving geography and marking land boundaries.

Opportunities and practice in oral presence can bring life to voices that are rarely heard. For example, when given the opportunity to introduce themselves through an online image and post to a dedicated class bulletin board, students responded with enthusiasm. One student (2017) indicated that she liked having the time and space to compose and review what she wanted to say about herself. She also indicated that posting to the online bulletin board was less intimidating than having to speak in person in front of strangers at the beginning of a course. In another example, a class team of three learners in my English adult upgrading course (2019) conveyed how much they enjoyed expressing their understanding of a novel through creating their own stories and representations of the novel. The learners created a mock interview of novel characters and recorded a podcast. These three learners brought a unique, value-added learning to the other learners in their course and to me as their instructor through their oral presence. Both activities could be used in blended and online learning environments. Value needs to be placed on the oral nature of stories and information sharing.

In the TRC (2015b) findings, Elder Reg Crowshoe talked about stories and oral history: When we talk about the concept of reconciliation, I think about some of the stories that I’ve heard in our culture and stories are important... these stories are so important as theories but at the same time stories are important to oral cultures. So when we talk about stories, we talk about defining our environment and how we look at authorities that come from the land... [and] we talk
about our relationship with the land. How we look at relationship and forgiveness is so important. (p. 123)

The concept of oral stories as sources of authority is foreign to the Western trained and socialized mind where authority comes from printed word. These printed authorities, in some ways, can be considered oral stories that have been immobilized.

Q’um Q’um Xiiem - Jo-Ann Archibald - (2008)) reflected on the practice of storywork. The Elders taught me about seven principles related to using First Nations stories and storytelling for educational purposes, what I term storywork: respect, responsibility, reciprocity, reverence, holism, interrelatedness, and synergy. Experiential stories reinforce the need for storywork principles in order for one to use First Nations stories effectively. (p. IX)

Archibald went on to say,

These seven principles form a Stó:lō and Coast Salish theoretical framework for making meaning from stories and for using them in educational contexts. I learned that stories can “take on their own life” and “become the teacher” if these principles are used. (p. IX)

Even within Western academia, there is a growing hunger for different ways of knowing. “Pedagogic voices [are] clamouring for a restoration of mythopoetic and imaginal modes of learning” (Voss & Wilson, p.18). Willis and Morris defined mythopoetic as “narrative ways of generating imaginal rather than explanatory knowing” (in Voss & Wilson, p.18). In the 1970s, James MacDonald advocated methods “for engaging both the critical mind and the intuitive/emotional heart” (p. 18). Philosopher, activist, and scholar of deep ecology Joanna Macy works in service of change, to what she and Molly Brown have called the “Great Turning,” which “involves a necessary 'shift in perception of reality, both cognitively and spiritually' and
requires creation of institutional forms rooted in deeply held values, which are 'both very new and very ancient, linking back to rivers of ancestral wisdom'... If learning is to be enchanted, then, it must address the heart” (Voss & Wilson, p. 21).

Penelakut Elder, Vancouver Island University Elder in Residence, and Hul'q'umi'num language teacher Florence James often spoke to students about connecting to their “beautiful heart and beautiful smuth'qun” (brain) (A. Hilker, personal communication, 2015). It was a rare occurrence for a university professor to speak so openly about the heart and mind, but this seemed natural to Florence James, who was raised in a cultural tradition based in coastal British Columbia that is deeply connected to the land and sea. The Coast Salish peoples of this region often speak to the idea and practice of “nats'amaat shqwaluwun”, roughly translated from Hul'q'umi'num as “one heart - one mind.” The idea that minds must be rooted in hearts and that hearts are rooted in place and interpreted into the world through story and storytelling (amongst other formats) is something deeply missing in Western, colonial-style teaching and learning. I can attest that class after class of indigenous and non-indigenous students responded with openness and enthusiasm to Elder Florence James. Interestingly, the learning of every Hul'q'umi'num word with Florence James involved a story steeped in culture and history, whether the topic was family relationship and social structure, seasons, a particular type of sea duck, or the name of a month corresponding to the full moon when particular harvesting activities took place.

Stories and storytelling can be used as a methodology for linking separate parts into a whole. Stories can include allegory, or what Kovaks, Carriere, Montgomery, Barrett, & Giles (2015) described as “a narrative imbued with abstract...ideas or principles for the purpose of offering a teaching” (p. 33). Allegory, along with metaphors – which can show similarities and
differences between objects or ideas – “is a useful device in research that draws upon Indigenist principles because of its ability to represent holism and relationality in visual and literary forms” (Kovaks, et al, 2015, p. 33). The authors linked Indigenous use of story to worldviews that are “premised on an animated world” (p. 36) which, to the participants of their report, “were seen as a unique approach to knowledge” (p. 36). In this way, story was viewed by participants as a medium for Indigenous knowledges. Finally, because of the circular nature of Indigenous perspectives, the authors bring in the theme of place: “Stories are that which tell of knowledge that is grounded in place” (p. 36-37).

Conclusion

Understanding and integrating Indigenous perspectives, forming relationships with the Land, learning through observing and practicing, engaging Circle as methodology, exploring creative, non-linear thought practices, and using Story are all ways that educators can incorporate Indigenous ways of knowing and learning into face-to-face, blended, and online education. Applications of these philosophies and perspectives in face-to-face, blended, and online learning environments require further exploration.

To implement the literature review findings into a major project, procedures and methods were developed. I needed to consider approaches I might take in building the major project website and what topics to include. Website design principles and layout also needed to be carefully considered and planned. Once the project was implemented, there needed to be a review and feedback process. A project timeline was developed to monitor Version 1 of the website, review and feedback, project revisions for Version 2, and completion of the process paper.
Chapter 3 – Procedures and Methods

Major Project Development

The major project was intended to address the Critical Challenge of supporting educators, and systems of education, in building capacity for intercultural understanding, respect, growth, and relationship with Indigenous communities, and by extension, with many different communities. Through designing and building a website that attempted to follow Indigenous perspectives, and through focusing on four of the five researched elements of Indigenous ways of knowing and learning in this website, the intention was that educators would feel more equipped to integrate some of these perspectives, methodologies, and pedagogies into their own practice. The website was designed to address blended and online educational learning environments as well as face-to-face, fully “brick and mortar” types of educational settings.

Website Considerations

It was critically important to me as an educator and the website designer to practice using Indigenous perspectives in the website design. Using the elements of Place – nature – Circle, Story, and Mentorship in the design process itself was in the forefront of my website design concept. If I couldn't apply what I was recommending, I wouldn't be living up to what I was asking others to do.

The element of Story was represented through the inclusion of my own stories as well as the stories of others to give the website a feeling of oral presence. The use of video made the oral nature of the stories more life-like and immediate. The aim was to engage the viewer (and listener) on a more personal level.

It was important to include elements of Circle in the website. This could be done visually through image shape and content layout. The challenge was to create the feeling for the website
viewer of sitting or dancing together, listening deeply to each speaker, and developing a sense of shared experience and community from which decisions and ways of moving into the world could emerge.

I considered how to show what I was asking others to learn. According to Indigenous ways of teaching and learning, modelling and mentoring give others the opportunity to learn through observation and practice. As such, I included myself and my own practices in the website, as I too was learning and practicing, as an educator, to follow these principles.

Visually-based learning is common to all mammals, including humans. In the context of a text-rich, Western educational framework, I wanted to focus more on visual cues that weren't dependent on the written word. This could include the use of images and videos to transmit information and meaning.

Repetition of patterns and practices inform Indigenous ways of knowing and learning. Like the repeated steps of traditional circle dance, whether from a Hungarian or Macedonian mountain village or a Coast Salish longhouse, humans learn well through recognizable patterns and opportunities to practice. The website pages needed to have elements, sections, and patterns that would be recognizable to viewers to give shape to the dance of the website as a whole.

A final, overarching consideration had to be to connect the website to Place. Because the research focused on pre- and contemporary-Canadian/North American Indigenous perspectives, while also being informed by Indigenous perspectives from other worldviews, I could not connect the website to one location only. I could, however, connect the website visually to Nature as a basis of grounding and centering, and from there expand into non-nature based locations, such as a classroom or web-based educational environment. This could be achieved through image, colour, and texture choices in the design process. It was critical for me to remind
the website viewer to keep the knowledge and teachings of Nature and Place in focus when making educational decisions.

**Website Design**

*Design principles.* The website needed to follow Web design principles to engage the audience – educators. There needed to be multiple means of representation, such as “visual-non-verbal or graphic-based resources” and auditory resources, which “provide alternatives to [viewers] who prefer to hear the information, rather than read it” (Boskic, Starcher, Kelly, & Hapke, 2008, p. 148). Multiple means of engagement (Boskic, Starcher, Kelly, & Hapke, 2008), such as video, games, image, or text would give the audience options for interacting with the website content. Multiple means of expression (Boskic, Starcher, Kelly, & Hapke, 2008) could also be a guide for the expressional quality of the website content.

Writing for the web needed to be engaging for the audience. “Most online readers develop the habit of skimming the screen looking for key points rather than studying in detail” (Boskic, Starcher, Kelly, & Hapke, 2008, p. 159). Limiting paragraph length, using headers consistently and repeatedly to “announce and reinforce new themes,” and making sure ideas were grouped into an easy-to-read format would help organize text into engaging units (Boskic, Starcher, Kelly, & Hapke, 2008, p. 159).

The website needed to be designed with a principle of intuitive structure and be “simple to understand so that users would not have to think which way to go...The structure must be free from lots of cognitive load so that visitors don’t have to wonder how to move from point A to point B” (Luxenburg, 2016). Visual hierarchy, the way in which the eye moves and perceives things, also needed to be taken into design consideration according to element size, content hierarchy, and any striking elements (Luxenburg, 2016). Further principles of website design
were considered including accessibility, avoiding overwhelming choices for the viewer (Hick’s Law), proximity and size of linked features (Fitt’s Law), communication style and content, and finally the balance of white space to content in a simplicity of design (Luxengurg, 2016).

**Laying out the website.** The Critical Challenge in the Chapter 2 literature review was to explore the meaning and diversity of Indigenous perspectives, then to examine how connection to Land, learning by watching and practicing, Circle as methodology, non-linear thinking, and Storytelling were not only useful but desirable in educational settings. The website project had the aim to engage and pique the curiosity of the viewing educator. Only then might the educator be willing to try something that might be new to them.

Five main pages were created and devoted to five of the six elements listed above. Rather than creating a page dedicated to non-linear thinking, I wove this methodology and, indeed, way of thinking and being, throughout the other topic pages. My interest in and curiosity about non-linear thinking was deep yet my research was not sufficient for me to integrate and fully explore on a dedicated web page. The Major Project Recommendations below address this topic further. Each page, except for the page on perspectives, had the same sections and categories to provide consistency for the viewer. A home page, a blended/online page, and a blog page were created to surround the core topics (see Table 2).
Table 2

*Website planning table.*

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<td></td>
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</table>

**Website Project Implementation and Feedback Process**

**Implementation.** The website was slow to materialize as it required considerable preliminary understanding of each element. It took time to gather ideas on how to represent philosophy, worldviews, and perspectives in a visual format. Version 1 of the website – everything prior to any revisions made after outside review and feedback – was, itself, multi-
versioned. After initial creation of the separate pages, implementation of each section was best grouped together by category. Images, quotes, and examples of each element were focused on one at a time, as were other sections, such as the application section “In the classroom” or the resources section “Inspirations for instructors.” Images were gathered to reflect themes and formatted to avoid overwhelming the technical size capacity of each page. Section titles and headings were edited at the same time to provide consistency. Image credits were also done together.

I constantly returned to the meaning of Indigenous perspectives and questioned myself on whether I was staying true at least to my own understanding and experience of the commonalities between these multiple perspectives.

**Feedback process.** After all pages were complete, the draft version of the website was made available for review to supervisors, educators, Vancouver Island University OLTD colleagues, and others with editorial expertise.

An invitation for review was created through Google Forms (Appendix A), and sent out via email. The results of the findings are detailed in Chapter 4 and outlined below in the project timeline. Findings were collated and applied to Version 2 of the website.
**Project Timeline**

Table 3

*Project timeline*

<table>
<thead>
<tr>
<th>Project component</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of intent for major project in form of website overview</td>
<td>September 7 – October 1, 2018</td>
</tr>
<tr>
<td>Major project website build, Version 1</td>
<td>October 1, 2018 – February 28, 2019</td>
</tr>
<tr>
<td>Design Google form survey for feedback, Call for reviewer field testing</td>
<td>March 1, 2019</td>
</tr>
<tr>
<td>Reviewer feedback received – collating begins, Major project Version 2 revisions begin</td>
<td>March 8, 2019</td>
</tr>
<tr>
<td>Major project Version 2 build complete</td>
<td>March 30, 2019</td>
</tr>
<tr>
<td>Completed paper sent to Supervisor for final review and sign-off</td>
<td>April 15, 2019</td>
</tr>
<tr>
<td>Dean’s final sign-off of completed paper</td>
<td>April 30, 2019</td>
</tr>
</tbody>
</table>

**Conclusion**

Once content factors for the website were considered, website design principles and layout were settled upon, a project timeline was created, and an implementation plan was settled on, the next step was to build Version 1 of the website. After Version 1 was completed, the project went through field testing. Findings from an invitation to review survey and personal correspondence were applied to Version 2 of the website. Chapter 4 below details the major project field testing and findings.
Chapter 4 – Field/Beta Testing and Findings

Field Testing – Methods and Process

Call for reviewer feedback. After Version 1 of the major project website was completed, a survey created through Google Forms was sent to reviewers via an email containing an invitation to review the website and respond to survey questions. Invitations were sent by myself and Mary O’Neill, OLTD Program Coordinator, to OLTD program colleagues, select Vancouver Island University (VIU) Education faculty and staff, my M.Ed. (L) advisor, other primary and post-secondary educators, and several editors. The survey requested feedback over a ten-day period, which was extended a further four days to gather more reviewers. Next, the findings were collated and reviewed. The intended outcomes of the testing included anonymous, qualitative feedback on website design and layout, clarity, and potential usefulness of information on the website. Reviewers had the opportunity to provide anonymous, constructive opinions and comments on different aspects of the website. The invitation to review garnered nine surveys and two personal emails with notes for a total of eleven responses.

Survey design. The first section of the survey was a copy of the email invitation to review the website and complete the survey.

The second section of the survey, “A little about you,” allowed me to understand the perspectives of the reviewers in terms of their own educational focus, whether they identified as Indigenous, and their understanding of Indigenous ways of knowing and learning prior to viewing the website. This was an important starting point a primary goal of the website was to assist those who were looking for deeper understanding of Indigenous ways of knowing and learning within an educational context.
The third and ninth sections, “Website design” and “Website navigation,” focused on the aesthetic values of the website, including rating readability, text-to-image balance, and engagement levels. Website page design was important, as this is what lead the viewer through the content. It needed to be legible, accessible, easy to navigate, and engaging to keep the viewer interested and scrolling to the bottom of each page, thereby accessing, and interacting with, as much website content as possible. Website design followed “Accessibility and universal design” (Boskic, Starcher, Kelly, & Hapke, 2008) recommendations and “Seven principles of design for ePortfolios” adapted by Luxenburg (2016). The survey permitted an evaluation of the successful implementation of the design principles.

Survey sections four through eight focused on website content, including the home page, perspectives page, place/circle/story/mentorship pages, the online (later renamed the blended-online) page, and the blog page. Content clarity, relevance, usefulness, and usability were questioned to assess continued inclusion of content and focus of each section on website pages. The reviewer had opportunity to highlight their favourite sections or aspects of each page and offer suggestions of any changes or additions they might like to see. These assessments were important guides in future version changes.

A final section provided space for any final comment or observations the reviewer might wish to offer.

**Feedback questions.** Feedback on the major project deliverables, content and design, and questions about the reviewer’s background were gathered on the Google Form. A variety of response formats including multiple choice, checkbox grid, short answer, and long answer were used to convey the following questions:

Section 1 – no questions. Copy of invitation to review
Section 2 – Reviewer Profile “A little about you”

- Which best describes your current occupation?
- If you are an educator, what educational levels have you worked with over the last 4 years? (Select all that apply)
- How informed about Indigenous ways of knowing and learning did you feel before you explored my website?
- Do you identify as Indigenous?

Section 3 – Website design

- My favourite thing(s) about the design is (are)...
- One design change I might suggest is…
- Further design comments?

Section 4 – Website content: Home page

- Home page clearly illustrates purpose of site.
- Information is clear and concise.
- This page makes me want to see more.
- I understand which sections I can go to next.
- By looking at the Home page, what did you expect to see and learn on other pages?
- Once you explored the other pages, did you learn or find what you were expecting? If no, what DID you learn or find?
- What is one extra or different thing you wish were on the Home page?

Section 5 – Website content: Perspectives page

- Content on this page is engaging.
- This page made me curious about Indigenous perspectives.
• It is clear where to go next on the site.
• Once you explored the Perspectives page, did you learn or find what you were expecting?
  If no, what DID you learn or find?
• How might the Perspectives page influence course design or delivery?
• What is one extra or different thing you wish were on the Perspectives page?

Section 6 – Website content: Place, Circle, Story, Mentorship

• Place page information is clear.
• Circle page information is clear.
• Story page information is clear.
• Mentorship page information is clear.
• “In the classroom” section on each page looks useful.
• “Inspiration” section resources on each page look useful.
• Videos of Anne are a useful addition.
• Once you explored the Place, Circle, Story, or Mentorship pages, did you learn or find what you were expecting? If no, what DID you learn or find?
• How might the Place, Circle, Story, or Mentorship pages influence course design or delivery?
• What is one extra or different thing you wish were on the Place, Circle, Story, or Mentorship pages?

Section 7 – Website content: Online page

• This section adds to the site.
• The information is clear and concise.
• The information is relevant and useful.
• This section could help online/blended learning instructors with course design.

• The Place, Circle, Story, Mentorship pages could help online/blended learning instructors with content and course design.

• Once you explored the Online page, did you learn or find what you were expecting? If no, what DID you learn or find?

• How might the Online page influence course design or delivery?

• What is one extra or different thing you wish were on the Online page?

Section 8 – Blog page

• The Blog is a useful addition as a space for dialogue.

• What do you wish were here as an alternative to the Blog space?

Section 9 – Website navigation

• The site is easy to navigate.

• Menu headings are intuitive and make sense.

• Image & button links are clear and easy to follow.

• Navigation comment

Section 10 – Overall

• What are 3 things you take away from this website?

• Do you consider the design of the website successful?

• Comments on website design overall.

• Do you consider the website information engaging, thought-provoking, informative, and useful?

• Would you refer educators to this website?

• Would you refer teacher trainees to this website?
• How informed about Indigenous ways of knowing and learning do you feel now that you've explored my website?
• Any final comments?

Field Testing – Feedback and Findings

The invitation to review the project website was accepted by eleven individuals, nine using the survey and two using personal email comments. The survey results and personal email comments are below. All reviewers were from the educational field, ranging from primary to adult upgrading and other post-secondary, except two reviewers, one a former middle school educator who became a freelance editor and the other an educator now in the immigrant support field. About three quarters of reviewers indicated that they were somewhat informed about Indigenous ways of knowing and learning before viewing the website. The idea was to gauge any differences in understanding that reviewers saw in themselves as a result of the website. None of five reviewers identified as Indigenous. This question was included because I thought the understanding of perspectives and website content might be different between Indigenous and non-Indigenous reviewers. In retrospect, I wish I had used the survey question, “Do you identify as non-Indigenous?” rather than placing focus on potential Indigenous reviewers. This taught me a place of unconscious bias.

Checkbox grid questions could be scored on the following basis: Great – Pretty good – Medium – Not so much – Needs work.

Website design and navigation. – Design. I created a checkbox grid with website design questions including text size, font, and colour; balance between content and white space; ease of flow between items on a page; and engaging images and colour schemes. Most questions were scored “Great” to “Pretty good”. Unfortunately, all data for this section was lost as, after all
responses were in, I clicked on a Google form option to see the difference between checkbox grid and linear scale, and all entry questions and responses were erased. Google forms is not set up to maintain version history, and the material was lost. However, I had visually scanned the responses and was able to receive website modification feedback before the material was accidentally deleted. The comments sections gave more suggestions for changes than the checkbox grid. Reviewers commented that the website was readable, legible, with reasonable balance between items. Reviewers indicated they were not having difficulties with visual flow or engagement.

Comments revealed that reviewers liked interactive elements, image and colour themes, “an organic quality… relevant to the topic” (see Figure 1 and Appendix B), design consistency and ease of navigation. They liked the variety of media, repetition of shapes and images. These comments suggest a certain level of success with the principles of web design (Boskic, Starcher, Kelly, & Hapke, 2008; Luxenburg, 2016), which would ease distraction and enhance engagement with the content.

Figure 1. Images of nature were placed throughout the website to give it an organic feel. Image: A. Hilker

Question prompts for design change and further comment revealed that some text appeared overwhelming. Two reviewers asked for some clarity around navigation, such as adding “all pages to the navigation bar, or add a drop-down under perspectives.” One reviewer commented on the importance of proper text and image alignment: “There is one place that the
photo bumps into the text and it distracted me like a crooked picture on the wall.” This one spot on the entire website was slightly jarring. It shows the importance of attention to detail in website design to avoid distracting the viewer from the intent of the page.

A perceptive – or perhaps experienced – reviewer commented on my column approach to presenting material as being interesting and effective. However, there were areas where text in a column next to other text went below the “fold” of the page. This newspaper-type format was not seen as effective for the Web.

One design change comment was directed at the content of the home page. This theme came up again in survey questions focused on the home page and is reviewed more thoroughly below.

**Navigation.** Figure 2 shows how reviewers found website navigation in terms of ease; intuitiveness of menu headings; and image and button link clarity and ease of use.

![Survey navigation grid questions and responses.](image)

*Figure 2. Survey navigation grid questions and responses.*

While some reviewers found the navigation intuitive and logical in terms of design and layout, others asked for more links at the bottoms and tops of pages, and for all pages to be
INTEGRATING INDIGENOUS WAYS OF KNOWING & LEARNING

added to the navigation bar at the top of the page. One reviewer commented that the website “uses modern page design approaches using sections and longer pages. This worked for this site.”

**Website content. – Home page.** The home page proved most confusing and unclear to reviewers of all website pages. Reviewers commented that “the heading was more informative about what I might see,” and the “home page [was] very inviting and welcoming. I was intrigued (sic) as to what else was available on the site.” However, other comments asked for less information and more website component overview. The chart below (Figure 3) reveals some of this lack of clarity.

![Website content: Home page](image)

*Figure 3. Website Home page content grid questions and responses.*

Some reviewers wanted to see all perspectives and elements on this page to prepare them for jumping to the next section. “I would love to see the links to the perspectives. Even if you miss the home page, it would be nice to be able to get into the ‘meat’ of the material quickly.
This is the way most people approach a Web site. They don't spend much time on the home page.”

**Perspectives.** Reviewers were unanimous that content on the Perspectives page was engaging with six of eight reviewers indicating that the page made them curious about Indigenous perspectives. Reviewers weren’t all clear where to go next on the site.

When asked how the Perspectives page might influence course design or delivery, two reviewers commented that the page provided “good examples for incorporating different lenses” and that the page created “several possibilities right away.” Another reviewer commented that “it certainly makes me consider these (and other) differing views and ways of presenting content-not just a privileged ‘white western’ view.”

When asked about any changes or additions to the Perspectives page, one reviewer asked for a “little more in how to approach indigenous peoples. I’m ignorant.” A reviewer who may have been accessing the website on a handheld device commented on the amount of material to scroll through. They suggested subpages within this Perspectives section.

**Place, circle, story, mentorship.** In a grid series of questions, reviewers all found information on each of these four to be clear, and the “In the classroom” and “Inspiration for instructors” sections to look useful. The strongest response was in response to whether the “Videos of Anne” section was a useful addition. Eight of nine reviewers scored this section as “Great.” This provided key information for later website development.

Reviewers commented on not being sure what they expected to find but were “impressed with the carefully created content on each of these pages,” liking concept explanations and examples of application, and being “amazed by the variety.” One reviewer found the Mentorship page to be “particularly interesting to me. I was wondering how to bring mentorship into a
mostly academic classroom. After reading and watching the videos, I realize that I do it all the time without thinking about it which is kind of affirming.”

A key deliverable was to incorporate Indigenous ways of knowing and learning into educational settings. Measuring how reviewers could see the website influencing course design or delivery was important. One reviewer reflected on how they could “now use these as themes to consider in my own course design. [P]reviously, I would not have been comfortable knowing what aspects [to] include or even where to start.” Another reviewer responded that the “inspirations resources at the end of each section gave some food for thought as to how a regular primary classroom could incorporate some of these ideas.”

**Online page.** Five to six reviewers scored “Great” on questions asking if the Online page added to the website, if the information was clear and concise, whether the information was relevant and useful, and whether this section could help online and blended learning educators with course design. One to three reviewers scored these questions as “Pretty good.”

Reviewers commented on the shorter scroll, clear information, and usefulness of the Online page. “I didn't realize at first that these pages were the practical side of how to accomplish the learning.” Similarly, another reviewer revealed that this was their “favourite page. I really liked how practical this page was. There were a lot of ideas that could be applied or adapted for different types and ages of students.” One reviewer reflected on the following Online page opening statement: “In some ways, being online seems the exact opposite of many Indigenous perspectives and practices.” The reviewer commented that they “agree that online learning does seem contrary to FN perspectives so [they] found this section very useful in addressing this ‘disconnect’.” A later comment revealed that “some people feel online work is an
anathema to indigenous ways of knowing. You have shown that our online world can also be a tool to understanding and using IWK [Indigenous ways of knowing and learning].”

As a potential page change, one reviewer suggested using the term “online/blended” rather than just Online, as they thought that “blended delivery might be the ideal method for conveying indigenous perspectives.”

**Blog page.** The pie chart in Figure 4 showed that eight out of nine reviewers were in favour of including a blog on the website.

**Figure 4.** Survey Blog page pie chart

Because blog spaces aren’t always engaging or used, the survey asked for alternatives to a blog page. Three reviewers commented on wishing for more direction and guidance to initiate comments within the blog itself or to “instigate dialogue on these topics.” One reviewer added that the blog “provides a look into personal reactions.” Reflective of some potential future website users, one reviewer commented that they were “not a computer person so would probably be too intimidated to use it, but lots of other people like to share their ideas and comment.”
**Overall.** Reviewers found the website design to be “very pleasing...visually appealing...genuine and organic, which is consistent with the topic...intuitive...beautiful.” One reviewer liked “the variety of photos, different texts, and videos.”

Reviewers were unanimous about the engaging, thought-provoking, informative, and useful nature of the website (see Figure 5)

![Pie chart](image)

**Figure 5.** Website information

Website information, overall, was found to be both “impressive” and perhaps overwhelming: “So much useful information...Would need more time to take it all in.” Two reviewers commented on potential use in their own classes: “Interesting ideas, some of which I would be willing to use in my classroom.” and “I will be using this site with my undergrad students. It is so chock-full of wonderful information for them as budding teachers. Thank you for developing this resource.”
Nine of nine survey reviewers would refer educators to the website. Seven of eight reviewers responded with “Yes” when asked if they would refer teacher trainees to the website, and one responded with “Maybe.”

Reviewers were asked at the beginning of the survey how informed they felt about Indigenous ways of knowing and learning before exploring the website. They were asked the same question after exploring the website. “Still confused” dropped from 22.2% to 0%, “Somewhat” informed dropped from 77.8% to 44.4%, “Very” informed increased from 0% to 44.4%, and a new category emerged at 11.1%: “Much more informed, enlightened and encouraged to “take the plunge” and integrate many of these perspectives and suggestions into my own course design” (see Figure 6).

![How informed about Indigenous ways of knowing and learning do you feel now that you've explored my website?](chart.png)

*Figure 6.* Reviewers ranged in how well they felt they understood Indigenous ways of knowing.

**Final comments.** This question revealed itself to be valuable as a place for several excellent suggestions and comments not always captured elsewhere. One reviewer commented on the human touch that “Anne’s videos” provided, a comment that was reflected in several other
places. “I really enjoyed your own personal videos Anne! I felt they added to the personalization and sincerity of the content resources presented.” And again, another reviewer liked “the insert of videos of Anne talking because it feels more personal as though she is inviting me to explore this with her.”

A final comment reminded me to include a “formal acknowledgment [or] statement of gratitude to indigenous people whose material is used on this site.”

**Reviewers' Personal Email Comments**

The two email responses to the call for major project review contained comment only, as they did not complete the survey. Since this constructive feedback was conducted via email, the responses were not anonymous.

**Website design and navigation.** Dr. Carol Schick commented on design and navigation: “As a teacher and as a student, I found the links, sites, videos and [images] very inspiring, easy to navigate and useful. It assures the viewer that they matter and that their learning is possible, and perhaps more important, that that the learner/viewer also has something to offer” (personal communication, March 25, 2019).

**Website content.** Email comments reflected survey comments to bring my own presence and voice more prominently to the website. Schick articulated this theme well: “In the midst of so much competition for our attention, the mere value of the learning, such as you offer, is not sufficient. Viewers need to connect with what you are doing right away. And there is nothing more compelling than human-to-human experience...I think you should bring your own experiences in more prominently...It will be a useful for others at the beginning to know that you have a personal connection to what you are offering. I don’t mean that you should make yourself the centerpiece of the inquiry, just the human being who has a great desire to offer something
wonderful to others. We are still interested in people, after all” (personal communication, March 25, 2019).

Schick gave examples of ways I had already brought some of my own presence to the website, and the effect this had on her as a viewer. “A good example is your February 2 blog comment. It draws me in immediately. It sounds as if there is a real person here...I love your own videos with your own comments found throughout. They lead us on and give us a reason to look farther. This is the kind of personal anchoring that draws people in” (personal communication, March 25, 2019).

Further comments reflected survey responses about the lack of engagement on the Home page, both in terms of content, my own presence, and visual engagement: “Say briefly why you are doing this, at least where you are teaching or who your students are. What is your purpose?... Is there some way of making these terribly important opening statements more interesting to look at? Other than the first page, the visuals throughout do a good job of capturing our attention. You have thought this through so well. You could stand to be a bit more flamboyant at the beginning” (personal communication, March 25, 2019).

A final email comment reflected survey comments on the quality and usefulness of resources. “Your resources throughout are excellent. A person could be happily lost for hours, clicking, listening, reading. It makes me want to be in a class as teacher/student simultaneously” (personal communication, March 25, 2019).

Sheila Leigh, a second email reviewer, commented on the value of perspectives offered on the website. “To me all cultures are collective and today there are studies which suggest we are affected by our cultural perspectives while still in the womb. To me recognizing this is like a second birth. Your site explores this” (personal communication, March 22, 2019).
Significance of Findings

The findings gathered from reviewers via survey and personal emails provided valuable information and suggestions to fine-tune and, in some cases, redesign certain aspects of the major project website. While there were flaws in the survey design itself, such as survey length, repetitive questions, and my own general lack of understanding of survey question impact on the survey-taker, enough data was gathered to influence changes and improvements for Version 2 of the website project.

The most significant findings pointed toward a general success in website design and navigation, as well as useful resource and application materials and links. Reviewers were not hindered or distracted by text size, colour, or placement on the page; lack of balance between white space and webpage material; or poor navigation prompts.

The most common suggestion for change focused on bringing more of my own personal presence to the website. Reviewers liked connecting with the human element of my videos and brief stories. This gave a focus for substantial remake of the website Home page in Version 2 of the major project.

The findings also confirmed that the website filled a need for resources and examples of how to approach Indigenizing curriculum. Reviewers were enthusiastic to share the website with colleagues and student teachers. The relief of some reviewers was palpable to have increased their understanding of Indigenous perspectives and four elements of Indigenous educational methodologies. The website clearly provided a place for educators to start or continue their exploration of relationship with Indigenous ways of knowing and learning and, once understanding is present, to meld some of these methodologies and philosophies into their own practice.
Conclusion

Though the feedback findings and major project revisions, a final Version 2 website was created. This led to website redesign conclusions in terms of mechanics and content. The process of researching and reviewing relevant literature and creating the major project website led to intended and unintended outcomes, both of which bore further examination. The feedback findings also needed to be related to research completed in the Chapter 2 literature review. It was important to assess any limitations of the major project website and suggest final recommendations.
Chapter 5 – Conclusions and Recommendations

Website Redesign Conclusions

The major project website survey focused on three broad categories, two of which have been examined above: website mechanics (website design and navigation), website content, and website impact. Mechanics and content were relatively easy to assess. Website impact was measured at an initial, observation stage, but it is impossible to measure long-term impact at this stage of the project. Long-term impact is discussed further below in Major Project Recommendations.

**Website mechanics.** All feedback on website design and navigation was useful, both in terms of what was working well, and what needed adjustment. Following principles of web design (Boskic, Starcher, Kelly, & Hapke, 2008; Luxenburg, 2016) created, for the most part, a distraction-free experience for the reviewers. Suggested changes improved the structure, design, and functioning of the website.

**Intuitive structure and organization.** The findings revealed that most of the structure was intuitive and easy to follow. However, the Home page, a critical beginning point that captures the viewer’s attention and leads them to subsequent content, was not engaging and reviewers expressed being unclear as to where to go next. I moved a website intention statement from the bottom of the page, where it could be easily missed or skipped, to the very top of the Home page to give viewers a clear understanding of what to expect. I also moved large image buttons titled Place, Circle, Story, and Mentorship from the Home page to the Perspectives page, as I wanted to direct viewers to the Perspectives page before moving on to each element.
As per one reviewer’s suggestion, I listed each of the four elements on the menu bar under Perspectives. Before doing this, the only way to access an element page was from one of the actual web pages. Placing these on the menu created an alternative navigation route.

I also inserted a “Go to top” button at the bottom of each webpage. Because the pages were long and involved “a lot of scrolling,” this button could assist viewers to move more easily within a page.

The consistent organization between pages meant that reviewers knew where to find certain sections no matter which page they were on. This was particularly true for the Perspectives, Place, Circle, Story, and Mentorship pages, which maintained the same layout of sections even if some of the content varied (e.g., the first section of the Story page had many more videos than the other pages). Certain symbols remained consistent thereby helping the viewer to recognize a given section. For example, see Figure 7, a small red-winged blackbird in a left-to-right, grey gradient box for “Anne’s videos.”

![Figure 7. Example of repeated website symbol.](image)

My experience as a dancer of traditional Balkan dances containing repetition – a principle of education, dance, art, textile motifs, song, story, and much more – has taught me that repetition provides a place of familiarity. Once the pattern becomes familiar enough, one's mind can then focus on other aspects of what is being repeated. For example, when I become familiar
enough with a repeated pattern of dance steps, my brain can shift its focus away from my feet and onto other dancers, the occasion, or the feeling behind doing this given dance on this given day. On the website, each page goes through the same basic sections, like steps in a dance. After the first two pages, the hope is that viewers will become familiar with the layout, quit thinking about how to navigate, and pay attention to their own feelings and discoveries behind the content on the page. Repetition helps a person organize what they are seeing or doing in a way that helps integrate content.

**Visual hierarchy, white space, and balance.** Visual elements were very important in the design of this website for reasons going beyond capturing a viewer’s interest or creating a pleasing experience. Communicating visually is a principle of Indigenous ways of knowing and learning. I felt the need to practice this principle in the website design. I needed to consider what I was communicating by the way I mixed text and image, the amount of each that I included on the page, the colours I chose, and the path the viewer’s eye would take while moving through a page.

I wanted to move away from a strictly linear experience so common to text and, by extension, much of the internet. To accomplish this, I broke text into small boxes with images dispersed in between. By placing text and image boxes adjacent to one another, somewhat like newspaper columns, I was able to create more of a meandering visual and reading path than a sequential one. I didn’t need viewers to read text in a particular order, so this strategy worked well. Survey reviewers commented that they liked the page layouts and that their interest was held by website design.

Because text was confined to small boxes, I could adjust the space and colours between boxes and sections on a page. This controlled the amount of white space (meaning empty space)
between elements, thus providing places of relaxation for the eye and keeping the overall design relatively simple. Most of the pages had a lot of content, and I was concerned about overwhelming the viewer. This strategy helped. Some reviewers still found the content overwhelming, and this is addressed below in Recommendations. Font sizes were kept larger and darker than the Weebly default for ease of reading; however, in some cases, the large font was also overwhelming. By decreasing extra-large font size, the effect was more relaxing.

**Hick’s Law and Fitt’s Law.** According to Hick’s Law (Luxenburg, 2016), it is important to avoid creating too many choices for the viewer at any given spot on a page. One reviewer pointed out that many of my text columns passed beneath the “fold” of the webpage, which didn’t work well. As I tested this comment, I discovered that when I followed a column to the end of its passage, I would then have to scroll back up to start the next column. This runs contrary to how people scroll on a webpage, which is usually top to bottom. The worst of the text boxes falling into this category were rearranged, turning them into full page width boxes, somewhat disrupting the meandering path flow. However, it was more important to have a viewer not lose a whole text box.

Fitt’s Law (Luxenburg, 2016) reminds the website builder about element proximity and the size of liked features. “The smaller the object is, the harder it will be to click on… It means that the easiest objects to locate and target are the ones closest to the mouse's current position and that have large target spaces... The worst possible object is one that is very far away from the current position of the cursor, and very small in size” (Luxenburg, 2016). To follow this principle, I kept certain linked images in the same spot on every page and linked text close to their corresponding images and in columnar alignment with other linked text, thus keeping the mouse and pointer in the same relative spot on each item.
**Website content.** Reviewers made consistent comments on how much they liked the information, images, “In the classroom” examples of how to apply a given Indigenous way of knowing and teaching element, “Anne’s videos,” and resources listed under “Inspiration for instructors.” There were numerous comments about the practicality of the examples, videos, links, and Online page. One reviewer suggested changing the page name from “Online” to “Blended/Online” to better reflect the range of educational situations that might apply to the material on the page. I followed this suggestion and find it a natural fit.

Reviewers made no requests for change in website content other than on the Home page and Blog. The suggestions for the Blog were to include more directive questions and include prompts for feedback, commentary, or other types of posts. This was accomplished by changing the last line in my February 12, 2019, blog post from statement format, “Please leave your comments, questions, ideas, and practices!” to question format, “How do you bring Indigenous ways of teaching and learning to your classes?” Future blog posts will keep this principle in mind.

**Home page.** The Home page was a challenge and went through the most revisions on the whole website. I was very resistant about bringing my presence to the website, other than the choices I made in content and design, along with the inclusion of “Anne’s Videos.” I didn’t feel qualified to speak on behalf of the Indigenous voices I had presented on other website pages. In the end, I personalized the content of this page and spoke only for myself. I related my own experiences and understanding of place, circle, story, and mentorship. While it was difficult to settle on this approach, the process was important and modeled the mentorship element of finding ways to relate to an Indigenous way of knowing so that it might be applied in an educational – or any other! – setting.
I also developed and included a brief website builder biography. Although I had intended to create a space for acknowledgement, an important Indigenous protocol, it did not appear in the website Version 1. After a reviewer’s reminder, a list of acknowledgements was included on the Home page.

**Outcome Evaluation**

The purpose of this major project was to assist educators in building connection and relationship with a selection of Indigenous ways of knowing and learning so that they could become more equipped to integrate these methodologies into their face-to-face, blended, and online learning environment practices. By providing this support to educators, and by extension educational systems, the hope was to build capacity for intercultural understanding, respect, growth, and relationship, to the benefit of all. One website reviewer commented that “these are inspiring ways to improve education for all students.”

**Intended outcomes.** The outcome of building capacity for intercultural understanding, respect, growth, and relationship would require measurement through a longitudinal study far beyond the scope of this research and project. However, it is easier to measure the outcome of assisting educators in building connection and relationship with a selection of Indigenous ways of knowing and learning so that they could become more equipped to integrate these methodologies into their face-to-face, blended, and online learning environment practices.

Reviewer comments indicated that they felt better equipped after viewing the website to incorporate Indigenous ways of knowing and learning into their educational practices. “I can now use these as themes to consider in my own course design. Previously, I would not have been comfortable knowing what aspects [to] include or even where to start.” “This has taken a huge concept and provided 4 overall strategies with practical ideas for application. I can use these
general categories as well as specific ideas.” “The inspirations resources at the end of each section gave some food for thought as to how a regular primary classroom could incorporate some of these ideas.” One reviewer referred to the Blended – Online page as “concise and practical with ideas that make me say, ‘I could do that.’” Overall, reviewers found the website to be “an amazing resource that inform[s] and guides every step [of the way].”

The website affirmed ways one reviewer was already using one of the pedagogical methods without knowing it: “The Mentorship page was particularly interesting to me. I was wondering how to bring mentorship into a mostly academic classroom. After reading and watching the videos, I realize that I do it all the time without thinking about it which is kind of affirming.”

Reviewers also indicated that they would return to or wished to spend more time with the material. “I'd like to have more time to appreciate these pages.” The website was sufficiently useful that one reviewer wished “to share it with [their] teaching team.” Another said, “I'd like to share this with others who are interested.” All reviewers would consider referring teacher trainees to the website, which would expose new teachers to Indigenous ways of knowing and learning and give them thoughts and resources to call upon as they develop their own styles of course designing and delivery.

The website was intentionally created to reach as wide an educational audience as possible, covering a range of learner ages, subject categories, and educational settings. This was successfully noticed by one reviewer who commented, “I think this is a very unique resource that should be widely shared among disciplines. [I] like that it was not subject-specific.”

**Unintended outcomes.** While the major project website fulfilled its intended outcomes, the project also had some unintended outcomes. Most of these unintended outcomes occurred at
a personal level, but some also occurred at interpersonal and community levels. The general areas of unintended outcomes emerged over the months of struggle in how much of my own presence to bring to the website, the effects of following Indigenous protocol and creating an acknowledgment section, and the connection between seemingly unrelated communities in my life.

**Personal values, personal presence.** The internal challenges were mightier than the technical ones. As I slowly developed each web page, I brought forth Indigenous voices to allow them to tell their own stories, certainly as I understood them. Every step of the way, I was conscious of any places I might be misappropriating what didn’t belong to me. I tried as best as I could to look at what I was creating through the lens of someone who might see this work from a different perspective.

I felt so strongly that these Indigenous values and ways of knowing, learning, teaching, and being were of critical importance to the direction of our collective future that I just didn’t want to avoid anything out of trepidation. The only path through reluctance and fear was to see and hold on to the commonalities that shine through many human perspectives and worldviews. The diversity and expression of these perspectives is vast. And, to our peril, there were best practices that were being ignored and suppressed by the old Western worldview.

Then there was the issue of how much of myself to bring to the website. A deep challenge was bringing my own voice and experience explicitly to the website. I created the space for personal videos to be included, and it took months and multiple retakes to find an approach that I was happy with. This was not a case of being camera shy with my little iPhone. The place I stumbled was valuing my own input as worthy of standing next to the Indigenous voices already on the page. The Home page went through the most versions and iterations.
Through encouragement and support of my advisor, Laura Tait, and several other experienced and honest project reviewers, more of my own presence was brought to the project. I learned the value of the human connection that the viewer was craving. If I thought of the viewer as participant, it allowed me to have more direct conversation with them. I was also reminded, not for the first time in my life, that each person, regardless of their cultural or ethnic background, is valuable. Valuing and expressing one’s own voice and wisdom is its own tremendous subject of study, if not practice. This major project has had the unintended outcome of encouraging me into areas of what felt like risk, a surprise for someone often outspoken on social and cultural issues.

As a non-Indigenous person and educator, I felt humbled. The research of such vast systems of knowing was remarkable, and this reinforced my idea that the way of thinking I grew up with was not the only way. Knowing this and feeling it are two different things. Laura Tait -- my advisor, school district assistant superintendent, and wise Tsimshian woman -- reminded me that “Humility is well taught and practiced among Indigenous people, as it shows us how we all relate to Earth.” (A. Hilker, personal communication, April 20, 2019). I was grateful for this experience and became even more resolved to find ways to stay humble in my own teaching and life.

**Acknowledgment protocol.** Acknowledgements are common in certain areas of Western society. An acknowledgement page often appears at the beginning of a book, at the end of a film in the form of credits, at the end of research material in the form of a bibliography or references page, or at a celebrity awards show by award winners. However, this is about the extent of acknowledgements. In contrast, many North American Indigenous societies practice a protocol of acknowledgement in frequent situations, to remind listeners of relationship with the land and
community on which everyone depends. My sense is that this protocol upholds a mindset of respect and sustainability that must be constantly renewed.

As a personal exercise, creating an acknowledgement section felt respectful. It also had the effect of pulling all those I had acknowledged into a circle of support and solidarity around me. This acknowledgment section had the effect of creating community, an amazing outcome, as some of the people listed are no longer alive, yet their wisdom, knowledge, and teachings are present in the website.

Creating the list of acknowledgements also gave me a sense of responsibility to those I was acknowledging, both into the past and into the future. It created in me, just one person, a sense of lineage. In a Western world so devoid of roots, where it is easy and encouraged to make decisions that benefit the individual over the community, a sense of lineage redirected my decisions away from places of greed and exclusion and toward places of generosity and inclusion. This may seem exaggerated, but in a classroom, this could influence me to see what my course design decisions would have on learners after they leave the classroom. This long-term view might take more initial planning time and effort, but once done could create a more engaging, relevant learning experience for learners and instructors.

From the onset of this research and project, I asked myself how my beliefs influenced my actions and practices. This question was possibly the most important question of the entire project. By encouraging Indigenous perspectives and presence into education, I was asking all educators to understand why they were doing what they were doing and where the thinking behind their decisions came from. This is a fundamental question that has ripple effects towards how education is structured, to what is really being taught, to how it is delivered and received, and to how it affects the future. Being able to answer these questions is important so that
decisions can be made consciously. Laura Tait described it clearly when she said, “We can’t or shouldn’t do anything in education without examining and collaboratively establishing what these are, so that we make conscious decisions about how, what and why we teach” (A. Hilker, personal communication, Apr. 20, 2019).

**Connection between different communities.** This last section was less concrete yet worth including in this evaluation. There is an effect that happens when one focuses attention on a given subject matter: one starts to see it everywhere. For example, when considering whether to purchase a red car, there suddenly seems to be more red cars on the road than previously noticed. Each of the project areas I was focused on stood out across my education life into all other areas of my life.

While creating this major project, there was an increase in my perception of times of communication and miscommunication because of differences in perspectives. I noticed how often social, economic, family, education, and governance structures were organized on a basis of circle and dadirri (deep listening) rather than top-down hierarchy: infrequently. I noticed where circle was present in my life: dance; family; some aspects of a community organization and board of directors I sat on; and some instances in my own teaching practice, faculty functioning, and university initiatives. I noticed what happened, and how people behaved and made decisions when they had personal connection to areas of nature. I noticed how engaged I and others were when story was used as a tool of teaching something beyond the contents of the story. I also noticed how people created their own narratives as a way of understanding their lives. I was moved, during this time, when witnessing mentorship and realized how rare it is to find people willing to give focused time and attention to others who are learning. I became more
sensitive to how my own actions, decisions, and ways of being – whether conscious, unconscious, intentional, or not – modelled the same to others.

The unintended outcome of this focused research and subsequent noticing was a shift in understanding how the world around me was organized and where I, individually, and society (societies) have choices in how to exist in this world, now and in the future. This is an almost overwhelming concept, but not impossible. Indeed, the Indigenous practice of considering seven generations into the future when making decisions provides a framework. If I am honest with myself about the impact of my decisions on future generations, I may make those decisions differently. In another example, if my small city was honest with itself about the long-term impact of its municipal forest reserve management 140 years from now, it might make its decisions differently. If educators look at the impact of how they do what they do on the great-grandchildren (not even seven generations) of their students, they may make their decisions differently.

As an educator, this was important information. It reminded me of how learners connect what happens in their studies with their outside lives. The major project was a self-directed study and inquiry, and I had the freedom to focus on areas that were important to me. As a classroom instructors, curriculum designers, and administrators, educators have the choice to create similar opportunities for individualized inquiry, while also having times when the outcomes are more directed, such as learning a math or grammar procedure. Educators must be conscious of what they model and teach that falls outside the area of content. Each learner in a class will absorb, take home, and relate this to their lives and worldview. There is tremendous responsibility in how educators do what they do. It is exciting to bring conscious awareness to planning and delivery of education.
Results of Findings in Relation to the Literature Review

The findings from Chapter 2 – Literature Review directly influenced the organization and a starting place for content on the major project website build.

The literature review research was divided into six sections: Indigenous Perspectives; Connections to the Land – Nature and the Environment; Mentorship – Learning by Watching and Practicing; Circle as Methodology; Non-Linear Thinking; and Storytelling. This led to the creation of the major website pages under the new headings of Perspectives, Place, Circle, Story, and Mentorship. The category of non-linear thinking was removed as a focus and instead woven throughout the website.

Key deliverables. The major project was the development of a website that provided educators with resources and support to consider ways to include and incorporate Indigenous ways of knowing and learning into their learning environment. Indigenous voices, methodologies, application, and resources and sources of inspiration were the main methods of delivery.

Indigenous voices. A website-build goal was to deliver a collection of Indigenous voices that would give the viewer an experiential sense of Indigenous perspectives, relationships with place, use of circle as a methodology, the power of story as a design and delivery method of education, and learning through the watching and doing of mentorship. This was accomplished through embedding research into website pages in the form of quotes, and explanations and examples of concepts. Text, video, and images all assisted in delivering the information not just intellectually but experientially.

Methodologies. Perspectives, place, circle, story, and mentorship were all explored as methodologies on the website. Each had a dedicated page and relied heavily on the research from
the literature review. Again, because of the website format, much of the research was able to be embedded directly into the website either in direct quotes or summaries of concepts, and Indigenous ways of knowing and learning.

**Application.** Methodologies and concepts were further explained on the website through models of application. This occurred through direct modelling on the website and examples application by other educators. Each methodology webpage had a section called “In the classroom” (see Figure 8) that led the viewer through links to other schools, programs, or educational settings that were using a particular methodology. There was little use in proposing a methodology without showing how it could be applied in educational situations with a range of subjects, levels, locations, and ages of learners.

![Figure 8. Example of repeated section on Place, Circle, Story, and Mentorship pages.](image)

**Resources and sources of inspiration.** All but the Home page was designed to include educator resources and sources of inspiration. Educators find it difficult to find relevant and accessible materials on how to incorporate Indigenous ways of knowing and learning into their educational environments. The website provided a curated selection of resources to further
support educators in their efforts. Selected resources and materials further explained or gave examples of the principles uncovered in the literature review research.

**Limitations of the Website Project**

Project limitations fell into the categories of subject scope, website technical parameters, website size considerations, and consultation.

**Scope of subject.** Indigenous ways of knowing and learning covers far more ideas, practices, and methodologies that could be covered in the literature review and major project. By focusing on Indigenous perspectives and the four elements of Place, Circle, Story, and Mentorship, the scope of examination was contained into a manageable amount of research for this project. There were other worthy methodologies that could have been included instead, such as developing the research area of non-linear thinking, accessing Elders as knowledge-holders, or creating opportunities for experiential learning.

**Website technical parameters.** A technical limitation emerged in trying to apply the methodology of Circle in what I discovered to be a website program world of straight lines and square corners. I had uncovered yet another right-angled, walled classroom. The idea was to bring visual circles and curved lines to the web pages to create a feel of walking along a nature path. I didn’t want to invite educators to use principles of Circle then present them with straight lines and sharp angles on the website. The world is full of templates that imprint on the brain, become ingrained over time, and are hard to notice. People habituate so easily, myself included, and I wanted to create a different experience. Given the medium I was working with – a free version of Weebly – I had to work within square parameters. I did the best I could with creating a path-like effect through building and inserting round images, and placing text in scattered columns interspersed with colour. Other website-building programs might have expanded
capacity. However, given other learning curves and output demands, I stuck with the limitations of a website-building tool I was familiar and comfortable with.

**Website size considerations.** Certain material was omitted from the website to contain the size of each page. Many of the pages were already long and required a fair amount of scrolling, disadvantages to holding viewer interest. Images and links were also limited as they began to slow down the loading time of some of the website pages. This is a quick way to lose viewer patience, something I wanted to avoid, or at least minimize.

**Consultation.** In different circumstances permitting more time and resources, this website could have been built with extensive local Indigenous knowledge-holder consultation, to best reflect the regional ways of knowing and learning. Such a website would also be very valuable in a different way that might not have included the range of current research sources and presented results. However, consultation did occur with my advisor, Laura Tait (Tsimshian), and extended Indigenous educational communities.

**Major Project Recommendations**

**Future research.** Based on the findings of the major project, continued exploration of the research subjects is warranted. Indigenous perspectives and relationship with Place, using Circle as a methodology, exploring the power of Story, and modelling learning through mentorship are strong educational approaches, and each of these elements could be explored and practiced more deeply. Reviewers gave strong indications of interest in and enthusiasm for the website content, which showed a lack of easily available resources.

Research into additional methodologies and practices of Indigenous ways of knowing and learning is needed, such as non-linear thinking, accessing Elders as knowledge-holders, or creating opportunities for experiential learning, as mentioned above.
Indigenous epistemologies are also relevant and valuable areas of focus, research, and understanding. Indigenous epistemology is the “theory of knowledge that is based on Indigenous perspectives, such as relationality, the interconnection of sacred and secular, and holism. The emotional, spiritual, cognitive, and physical dimensions of knowledge are common in Indigenous epistemologies” (Antoine, A., Mason, Ra., Mason, Ro., Palahicky, S., & Rodriguez de France, C., n.d.).

This research and the major project was meant to assist educators of many types, including teachers and instructors, administrators, curriculum developers, student advisors and supporters, teacher trainers and trainees, and educational researchers. While there is overlap, each one of these educational sectors could be focused on separately. However, as Figure 9 shows below, all educators together provide learners with the educational experience.

*Figure 9. Pulling Together: A Canoe Journey - Curriculum developer emphasis, by Dianne Biin [CC BY 4.0 International License](https://creativecommons.org/licenses/by/4.0/).*
**Influence on further development and future research.** The presentation style and focus of this major project is unique. I would like to see Indigenous ways of knowing and learning embedded into how educators, researchers, learners, and communities are presented with the material and applicable research. Almost all the research findings were in text format, with occasional visual representation. Almost all the research, from scholarly text to informal websites and curriculum development materials, revealed findings and suggestions in Western academic formats, which leaves the viewer with intellectual, left-brained, non-experiential content and little to no embodied understanding. This is certainly an area of future development for researchers and educators, no matter the discipline or sector.

**Addressing the critical challenge.** This process paper and major project focused on ways educators could integrate Indigenous ways of knowing and learning into face-to-face, blended, and online learning environments. The purpose was to support educators, and by extension educational systems, in building capacity for intercultural understanding, respect, growth, and relationship.

Each of the website pages was designed to support educators and model ways of incorporating Indigenous ways of knowing and learning into face-to-face, blended, and online learning environments. There was modelling in the way the content was designed, navigated, and delivered. There was support through providing theoretical background, entrance points to understanding Indigenous perspectives, and the concepts, and methodologies and practices of relationship with place, circle, story, and mentorship. Educators were provided with numerous applications of the ideas on each page, and resources and inspirations for further personal research.
Next steps for the website. The major project website had areas where it could build and continue, primarily in areas of adding methods or elements of Indigenous ways of knowing and learning, creating sub-pages, and adding to the blog.

Additional methods. The website could grow to include additional elements of Indigenous ways of knowing and learning. A place to start could be including a page on non-linear thinking, and how this could be a valued educational practice. Other methods and practices, such as non-linear thinking, accessing Elders as knowledge-holders, or using experiential learning would require research before being added to the website.

Sub-pages. If lists of classroom applications, resources, and inspiration examples for educators grows, it could become necessary to create sub-pages for each of the main elements. Website viewer navigation ease would need to be kept in mind.

The Blog page. Regular additions to the blog would help to keep the website current and active. As this was an area that reviewers asked for more presence and interaction, it would be a way to keep the website vital. The blog page would be an ideal setting for metacognitive comment, those self-reflective places of personal and professional transformation and witnessing. This would depend on continued interaction with the website on both my part, as website developer, and on the part of viewers.

Final Conclusions

I came into this major project with the idea of bringing Indigenous ways of knowing and learning to online education. There was a lack of resources and examples of application in my own searches for assistance. I felt the importance of bringing principles of community, circle, experiential learning, and shared leadership to an exciting new blended or online educational setting which wasn’t confined by square walls and rows of desks. I thought I had an opportunity
to be a small voice of influence in how educators moved into the future in this online format. I’d already had excellent experiences as a student in the OLTD program, and I wanted to grow and build on what I had encountered.

When it came time to plan a website, my original ideas did not suddenly jump forth and tell me what this fabulous website was going to look like. In fact, it took months of incubation before I could even come up with a way I might focus my project. I had already done the work of determining research focus categories for the process paper. It had become clear in that process that I needed to start with a definition of what Indigenous perspectives even were before moving on to specific principles and methods that might be incorporated into curriculum and design. At this beginning phase, there was no way I could go immediately to online application of the principles I’d researched. This wouldn’t come until much later in the project, and the focus on blended and online application could not be examined until I, myself, had gone through a full exploration of Indigenous perspectives and my chosen four elements.

There were Indigenous perspectives, plus five research elements to focus on, which was reduced to four for the website. I wondered how I could take life philosophy, worldviews, and multi-generational practices and distill them to a single webpage. How was I to help the viewer get a felt sense of what these ideas and practices meant? I was convinced that there was no way any educator was going to try any of the methods I was proposing if they didn’t first understand the roots. This was it: I couldn’t ask anyone to raise a barn on anything but a solid foundation. My experience with foundations is that they must live inside me to do any good. They can’t just be words from a book or from someone else.

It may seem like overdoing what amounts to an assignment for a piece of paper giving me a credential. However, to honour both the issuer of this credential and my own sense of self-
respect, I needed this project to actually do what I wanted it to do. In the end, it will be up to the website viewer to answer that question, but I have found ways to best get my intentions out into the world.

Because the world is in a time of technological development at an unprecedented speed, every choice people make as individuals, communities, and countries ripple quickly across their lives and nations. It was important to me that people enter the future consciously rather than as a side effect of what was familiar. While my ideas and beliefs may have seemed distant from a Master’s website project, they were not. It was precisely the intention behind how I was to move forward with each stage that helped me choose what to include in my content, how I was going to model what I was trying to impart, and what kind of experience I wanted the website viewer – the participant, the educator – to encounter.

While there are many Indigenous theories and methods yet to be explored and brought to the website and to my own educational philosophy, understanding, and practice, I consider the literature review research and the major project process to have successfully met the objectives and key deliverables set out at the beginning. The minor changes in focus and delivery have added to the final product.

The conception, development, creation, implementation, and revision of the major project led to interesting external and internal results. I became much more aware of how Indigenous perspectives, place, circle, story, and mentorship manifested and were deliberately pushed aside in education and daily life. My own shifts and conscious efforts at decision-making created in me a better educator and human being. This is precisely what educators hope for in the learners they work with. Not only had I become a better educator through the process of the major project, I had become what I look for in a learner: someone who grows and transforms.
The major project website reminds the viewer of successful, established, ancient practices and blends them into a modern setting. These examples of education move away from Western, Euro-centric models of design, content, delivery, and experience and toward models and practices that are more holistic, sustainable, connecting, engaging, and deeply creative. Steps toward reconciliation are as good as the behaviours and actions of the people involved. The process of creating this website has been a process of reconciliation within myself and with the Indigenous communities surrounding me. Through this website, other educators might also find ways to move toward reconciliation, healing, and thriving as communities.
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Press.


Appendix A

Screen capture of the Google Forms survey and invite to review

Feedback Survey

Thank you for taking a few minutes to participate in this survey. Your answers provide valuable feedback on my new website, "Incorporating Indigenous Ways of Knowing & Learning into Education", the Final Project for my Master of Education (Leadership).

This website is designed for educators to explore, understand, and integrate some of the perspectives and Indigenous ways of knowing and learning into their educational settings. The focus is on relationship with place, the pedagogy of circle, the power of story, and the practice of mentorship. A final section provides thoughts and ideas of how these elements can be incorporated into online education.

Your valued feedback will be used to inform website content and design decisions in order to improve this resource. All responses are anonymous.

Please complete the survey by Friday, March 8 (International Women’s Day!), if possible, so I have time to collate responses.

See the website: https://indigenouknowingeducation.weebly.com/

Thank you for your time and input!

Anne Hilker
MEd (L) Graduate Candidate
Vancouver Island University

A little about you

Description (optional)

Which best describes your current occupation? *

- Educator
- Educational administrator
- Other...
Appendix B

Screen Capture of nature-based website images

https://indigenousknowingeducation.weebly.com/

The Energy of Circles

“Circles... invoke and celebrate the greater circles - the cycle of the seasons, the cycle of life and the wheel of death and rebirth.

In a circle all are equal, no one is more important or in front of anyone; there is an intimacy in a circle; circles are about connecting and relating...

Whenever you are in the circle, you can see everyone else and you are always in direct communication with the centre, with the Source.

A line moves directly forward, focused on a goal, so a leader is implicit... There is no face-to-face connection, and the view ahead is someone else’s back.

We need line energy - it can get us somewhere, but it also needs to be exposed to circle energy to keep the journey orientated to the centre.
Indigenous PERSPECTIVES online

In some ways, being online seems the exact opposite of many Indigenous perspectives and practices.

See how you can apply your new understandings in the class!

The power of STORY online

For me, the most important aspect of Story online is to create a narrative and use visual formats for conveying information. Narrative is engaging and helps make sense of the world of new material.

The next most important aspect is to encourage and honour voice in learners. It is richly rewarding and beyond comparison.