Facilitating Online Learning with the 5R's: Embedding Indigenous Pedagogy into the Online Space

by

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We acknowledge with respect the Lekwungen peoples on whose traditional territory the university stands and the Songhees, Esquimalt and W̱SÁNEĆ peoples whose historical relationships with the land continue to this day.

Supervisory Committee

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Abstract

This project is a collection of resources for educators and instructors within the K-12 and post-secondary systems to support the adoption of Indigenous-created frameworks in online learning environments. The discovery phase in chapter one outlines our exploration of merging two seemingly disconnected perspectives and how our own life experiences and educational background gave rise to this project. The literature review in chapter two uncovers the concepts of Indigenous Knowledge and educational technology and creates connections between the two fields, while identifying gaps in the research and the work that needs to be done. The 5R's of Indigenous pedagogy are relationship, respect, relevance, responsibility, and reciprocity. These 5R's serve as important reminders for course designers in K-12 and post-secondary educators and benefit all learners. Our resources and reflections address how the 5R's can be used as best practice to enrich online teaching platforms and remote learning. The positive effect of reciprocal communication, relationship building, and embracing Indigenous-created frameworks in online learning environments extends out into the community and beyond.

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Dedication

This work is dedicated to the students and teachers learning from each other and striving to make this world a better place for all.

"I've learned that people will forget what you said, people will forget what you did, but people will never forget how you made them feel." – Maya Angelou.

Chapter 1: Introduction

Project Introduction

Our project will focus on developing resources for educators and instructors within the K-12 and post-secondary systems to support the adoption of Indigenous pedagogies in online learning environments. Our resources will address how Indigenous knowledge and research can be used as best practice to enrich online teaching and remote learning.

Research Problem and Significance

Why embrace Indigenous knowledge systems in online learning? Canadians have been called on by the Truth and Reconciliation Commission of Canada (TRC, 2015) and other agencies to incorporate Indigenous knowledge into all levels of formal and informal education. This call to action has caused post-secondary and K-12 institutions to take note and slowly begin making changes. However, these revisions seem to focus on face-to-face teaching and learning, while most distributed learning models are lacking in inclusive course design, opportunities for connection and community, and culturally responsive curriculum (Wanstreet, 2006). Online course delivery is sometimes the only means of obtaining an education, especially for many First Nations, Inuit, and Metis learners who live and work in remote communities or require additional flexibility in order to balance educational and social roles (Picciano, 2002). With this in mind, how can we design and facilitate online learning experiences that incorporate Indigenous knowledge and pedagogy in meaningful ways?

In some forms of online education, such as those designed with an asynchronous Learning Management System (LMS), teachers and learners may never meet or talk synchronously, and the learning may not be personalized for each student. Current online learning pedagogy may not be centred around the community or context of one place but is

meant to be accessed from wherever the learner may be. Typical online learning tends to focus on the transfer of knowledge and material within the course itself without the need for relevancy or context. The community shaped and formed in the online setting usually only exists in the digital world and is usually moderated or facilitated by the instructor. This absence of place-based learning and highly contextual pedagogy contrasts with successful Indigenous learning approaches (Picciano, 2002).

Restoule (2008, 2019) posit that embedding "The 5R's" into online learning design and curriculum can allow for a sense of place and increase engagement with students. Kirkness and Barnhardt (2001) spoke of 4R's of Indigenous pedagogy: Respect, Relevance, Reciprocity, and Responsibility, as they apply to post-secondary education generally, not necessarily in the online learning environment. The 5R's of Indigenous education and research as expressed by Restoule (2008) are: Relationship, Respect, Relevance, Responsibility, and Reciprocity. The 5R's focus on creating and maintaining a contextual learning experience for both the instructor and the learner(s). We know that place-based learning with a focus on personal connection and interaction works best in a face-to-face environment. The melding of online learning and Indigenous pedagogies of place-based learning are difficult to weave so as to create a meaningful learning experience.

Professional Journey and Relevance

Joanna: On Being the Good, White Woman

During the first week of my master's program at the University of Victoria (UVic), I attended a conference on the future of education and the keynote speaker challenged my perspective of colonialism by calling all non-Indigenous people living in Canada "settlers." I was immediately un-settled, uncomfortable, and unable to disregard the speaker's statement. After

meeting with this presenter and exploring some required readings, I discovered that the TRC (2012, 2015a) has called upon Canadians to recognize, rethink and reconcile our perspectives towards Indigenous peoples and their knowledge. Although the commission's findings have been published for almost seven years, I was unaware they existed until attending UVic's conference and listening to a story that confronted my prior knowledge. This ignorance was deeply troubling, as I am an educator and the TRC's calls to action addresses the need for educators to implement curricular experiences that depict an accurate portrayal of this contentious history, our present tensions, and our collective future. I realized that in order to teach any of these mandates in an authentic, meaningful way, I would have to put in the work. The following text and media represent my two-year journey of becoming a settler-educator who is committed to doing the work.

Hayley: An Invitation to Teach as a Settler

I am fortunate to be a teacher at the W̱SÁNEĆ Leadership Secondary School in the W̱SÁNEĆ territory near Brentwood Bay, BC. My subject areas are math and physical education for grades 7 to 12. The main curriculum documents I draw from include the First Peoples Principles of Learning, the First Nations Education Steering Committee's Math First Peoples Resource Guide for grades 8 and 9, and the Sport for Life physical literacy curriculum resources. These documents, in conjunction with the British Columbia curriculum documents, support me in expanding content to include other ways of knowing, First Peoples knowledge, and develop personalized learning options for my students.

Learning about the TRC (2012, 2015a), I became aware of the reality of how harmful, devastating and scarring the actions of the Canadian Government has been to Indigenous

communities. This includes, and is not limited to, residential schools, the 60's scoop and Metis land and identity infringement, which negatively affects the parents of our students in our classrooms, their perspective on school and education and current relationships with authority figures, including teachers. I will use this awareness as a catalyst for making real fundamental changes in our relationships with First Nations groups and students. I am now aware of some strategies and 'best practices' for teaching First Nations, Metis, & Inuit students. This consciousness is essential to help build confidence in the education system and enable educational success for Indigenous students.

I believe that teachers and school districts can provide transformative change for Indigenous students and their families, including the entire school community and other families. The ripple effect of communication and relationship rebuilding will reach out into the community and beyond.

Project Overview

Project

As settler-educators, we want to acknowledge that we are on a journey of un-learning and re-imagining educational practices with regards to Indigenous Education. When we began our MEd program, we both had experience working in systems that have yet to fully comprehend and answer the TRC's (2012, 2015a) calls to action. We also felt that although we have made attempts at teaching Indigenous Education, we remained rooted in our Eurocentric pedagogy and often taught using a historical narrative supplemented by cultural activities.

Instead of singular activities, we want to focus on authentically embedding pedagogy that supports First Nations, Inuit, and Metis learners. Coincidently, we discovered that this pedagogy lends itself to supporting all our learners.

The purpose of our project is twofold:

- First, it aims to develop and highlight current resources for educators and instructors within the K-12 and post-secondary systems to support the adoption of Indigenous pedagogies in online learning environments. Our resources address how the 5R's of Indigenous education and research can be used as best practice to enrich online teaching platforms and remote learning.
- Second, we wanted to create a space for educators to (un) learn and be able to feel vulnerable. We grappled with our own feelings of white privilege, guilt, shame, and fear many, many times as we began the work.

We want to encourage educators to begin the work, and to provide support to those engaging with the resources which will inform individual teaching practices.

Online Book Chapters

The online book is divided into five chapters, which each address one of the 5R's of Indigenous pedagogy. Each chapter aims to answer the following questions regarding curriculum and content in online education:

Relationships

How does the instructor foster relationships between students, peers, and the learning community? Are the relationships reciprocal and do they foster personal growth?

Respect

How does the online learning environment *recognize* and *respect* Indigenous cultural values and norms? Does it implement culturally appropriate assessment, use Elders, Indigenous authors, audio/video, etc.?

Relevance

How does the course work reflect and connect to the learner's current life, culture, and interests? Is this coursework relevant to the learner's larger community, career goals, or interests?

Responsibility

Does this course uphold, value and reflect Indigenous Knowledge and/or Indigenous Methodologies? What responsibility does this course have in respecting and responding to the different types of learners in the course? What is the teacher's responsibility to the community they are representing, particularly Indigenous and local communities the schools and students are located in?

Reciprocity

How has the instructor grown as an educator or community member as a result of this course and their interactions with the learners? What reciprocal actions have been taken to ensure that each person's voice, culture, and beliefs have been heard to ensure each individual learns something by the end of this course that they didn't know or understand before? How are two-way interactions (teacher as facilitator, teacher as learner, student as learner, student as teacher) utilized to maximize engagement and learning? How is the teacher giving back to the Indigenous

community when teaching about Indigenous community? Can the learners be encouraged to give to the community as a result of the course/interactions?

Roles and Responsibilities

We will be sharing the roles and responsibilities of all aspects of this project, using our collective knowledge and resources collaboratively. We decided to form a partnership when we realized we could provide historical awareness of settler-Indigenous relations, while also creating a digital resource that could be of benefit to many educators, especially those teaching in online-only environments. Throughout this project, we took Joanna's understanding of Indigenous pedagogy and settler-educator tensions and married this with Hayley's understanding of digital technologies in order to take the best practices of these two disciplines.

While many group projects take a "divide and conquer" approach, we didn't feel like that tactic aligned with our chosen pedagogy. Instead, we supported each other's individual contributions and wove those aspects into our collaborative efforts. This meant constant zoom meetings, early morning editing calls, and lots of bad jokes involving virtual high fives. Together, we were able to combine our separate perspectives to ensure our project met its goals.

Search Methodology

Our search methodology included terms and literature related to Indigenous knowledge, technology, online learning, and the tensions and relationships between the two platforms. These three questions guided our search:

1. What tensions exist that lead to educator resistance toward exploring Indigenous pedagogy in their classrooms?

2. Can the use of digital tools paired with Indigenous pedagogies guide educators and students towards reconciliatory education?

3. How can we create 'place' in a place-less space like the online learning environment?

We navigated the UVic Libraries database to scan and compile scholarship that included some or all of the following key words and phrases: Indigenous, Canada, settler, educator, curriculum, resistance, settler-educator, pedagogy, TRC, non-Indigenous, Aboriginal, online, B.C., new curriculum, place-based learning, digital, Indigenous Ways of Knowing, First Peoples Principles of Learning, decentralization of learning. Parameters were set to include relevant research between the years 2005 and 2020, although older texts were considered and referenced when significant to their field of topic. This review begins by acknowledging and exploring settler-colonialism.

We then examine settler-colonialism as it pertains to the educational system. Several themes around the scholarship are identified, including historical ignorance, the role of difficult histories, resistance to curricular reform, and critiques of cultural awareness activities. We then examine Indigenous pedagogy and the tension that exists with regards to online learning experiences. Finally, several learning design pedagogies are evaluated in relation to their ability to provide authentic learning experiences for Indigenous (and non-Indigenous) learners. This review concludes with our reflections on the scholarship.

Terminology

Throughout this review, we will refer to the processes of decolonization, indigenization, and reconciliation. Indigenous scholars believe these processes to be distinct, but interrelated mechanisms (Alfred, 2009; Alfred & Corntassel, 2005) that we must understand and implement

if we are to truly answer the call to action (TRC, 2015). Decolonization can be viewed as undoing colonial wrongs and dismantling colonial structures that do not serve the oppressed. To fully understand decolonization, we must define colonization: the gradual takeover of an Indigenous group's territory and the assertion of control over that group. When the literature refers to 'decolonizing' a place or domain such as the Canadian educational system, it is suggesting the removal of a colonial system. Decolonization can further be viewed as a component of indigenization, which is defined by Dr. Shauneen Pete (2015) who states, "indigenizing means re-centering Indigenous epistemes, ontologies and methodologies" (p. 65).

When we succeed in decolonization efforts, we recognize and value Indigenous practices. Decolonization requires Indigenous scholars, activists, and others to challenge settlers' Eurocentric biases and privilege (Alfred, 2009; Pete, 2015); while reconciliation work focuses on settlers acknowledging and creating pathways for justice and change (TRC, 2015). Although Indigenous is a globally used term, for the purpose of this literature review, the term Indigenous is used to refer to the descendants of the original inhabitants of what we now call Canada. This includes the First Nations, Inuit, and Metis peoples (FNIM). As these three groups are distinct and can occupy different geographic locations, when referring to these groups, we will try to be as specific as possible. We also respect author choice in terminology - therefore, when quoting from or paraphrasing an author, we will use their chosen terminology.

Chapter 2: A Review of the Literature

Theoretical Framework

We acknowledge that there is a definite tension that exists between Indigenous epistemology and Euro-Western pedagogy, but embedded within the tension, there is a supportive space that offers us the opportunity to reconcile our differences. Elder Albert Marshall refers to this space as "Two-Eyed Seeing/Etuaptmumk: to see from one eye with the strengths of Indigenous ways of knowing, and to see from the other eye with the strengths of Western ways of knowing, and to use both of these eyes together" (Bartlett et al., 2012, p.335). This methodology allows for multiple perspectives to emerge, affording the opportunity to value Indigenous methodologies as equal to Western methods. This opening of both eyes encourages co-learning, and "...use[s] all our understandings so we can leave the world a better place and not compromise the ***opportunities*** for our youth by our own inaction" (p.336). By viewing the process of indigenization as a dualistic perspective that marries both Western ideology and Indigenous epistemology, we are able to benefit from multiple perspectives and resources so that we may best support our learners.

Acknowledging Settler-Colonialism in Canada

In order to explore the tensions that exist within the modern educational system in regard to educators implementing Indigenous curricula, we must first attend to the notion of the Canadian school system as a Eurocentric (Battiste, 2005; Blaut,1993, 1999) and colonially rooted (Battell-Lowman & Barker, 2015; Dion, 2007, 2009; Kanu, 2005) structure that only leaves space for one dominant way of knowing. Blaut's (1993,1999) theory of Eurocentric diffusionism is defined by viewing historical progression through a European-dominated lens, and the other parts of the world (the colonized) are the receivers of this history. This theory is

further studied by Battiste (2005) as they apply it to Canada's history. This ideology, therefore, consists of two categories: "One category is historical, invents and progresses; the other category is ahistorical, stagnant, and unchanging…" (p.149). Therefore, Eurocentrism leads to a historical legacy of valuing European beliefs and knowledge and devaluing of Indigenous knowledge (p.149).

In their book "Settler," Battell-Lowman and Barker (2015) offers that Canada has been shaped by a unique form of colonialism termed "settler-colonialism" (Veranci, 2011; Wolfe, 2006). Settler-colonialism is founded on the premise of targeting a particular race for the purpose of elimination, in order to procure territory. Wolfe (2006) explains "Indigenous people obstructed settlers' access to land, so their increase was counterproductive" (p. 388). As the ultimate goal of colonialism is securing and maintaining territory, "Indigenous North Americans were not killed, driven away, romanticized, assimilated, fenced in, bred White and otherwise eliminated as the original owners of the land but *as Indians*" (p. 388). This colonization is therefore characterized by being internally driven against an Indigenous population within its borders (Battell-Lowman & Barker, 2015). Settler-colonialism is unique from traditional definitions of colonialism and can be defined by three tenets. The first, as Wolfe (2006) argues, is "invasion is a structure and not an event," whereby the history can embed itself into different modalities such as "discourses and institutional formations" (p. 398) such as the Canadian educational system. Secondly, settlers migrate and create permanent homes, to begin a new history that agrees with the right of the settler occupancy (Veracini, 2011).

The TRC (2015) posit that on the basis of *terra nullius,* colonizers felt justified to take ownership over Indigenous lands as they saw no semblance of ownership in the form of European-style agriculture. We then see the end goal of settler-colonialism, which is to

"transcend colonialism" (Battell-Lowman & Barker, 2015, p. 26) by eliminating Indigenous peoples so that the settler society becomes normalized. Wolfe (2006) further explains that throughout history, colonizers have favoured assimilation as an effective way to eliminate as this process can be viewed as a lesser evil to simple violence.

Battell-Lowman and Barker (2015) continues by contending that the public education system in Canada is an example of the many colonial structures in place that reject or suppress Indigenous knowledge systems while maintaining a goal of assimilating Indigenous people into mainstream society. This sentiment is echoed by many others (Dion, 2007, 2009; Kanu, 2005; Reagan, 2010; St. Denis, 20017; TRC, 2015) who believe that the colonial nature of our educational system is a critical and complex issue that requires further study. Battiste (2005) calls for an examination into "what is being taught, who is being excluded, and who is benefitting from public education;" (p.151) while Dion (2007) further posits the need to study these complexities as "public school classrooms are a significant site of the production and reproduction of dominant ways of knowing" (p. 330).

Researchers are answering this call and have conducted numerous studies on pre-service teachers (Aitken et al., 2018; Dion, 2007, 2009; Donald, 2011; Deer, 2013; Koelwyn, 2018; Tessaro, et. al, 2018; Tupper, 2014), practicing teachers (Gebhard, 2018; Higgens et al., 2015; Korteweg, 2010; Scott, 2013; Scott et al., 2018; Zembylas, 2017), Indigenous and non-Indigenous parents (Milne, 2017) and Indigenous youth (Dion, 2016) concerning settler-educator resistance to implementing Indigenous curriculum. Several themes have emerged from the scholarship and will be discussed further in detail.

Tensions Within the Public System

This section details the various tensions within K through 12 teaching and learning. We cover sections on educator whiteness, reconciling guilt, curricular reform, and racism. We believe that in order to decolonize our educational system, we must first dismantle our individual beliefs and feelings towards Indigenous education and understand how to reconcile these beliefs to move towards a new future.

Educators as 'The Perfect Stranger'

During her ten years of research studying pre-service and in-service teachers, Dion (2007, 2009) found that many teachers she worked with demonstrated a "perfect stranger" relationship in connection with Indigenous peoples. This position, Dion argues, is informed simultaneously by educator's prior knowledge, gaps in this knowledge, refusing new knowledge that challenge current stereotypes (Dion, 2007), as well as white educators' denial that 'whiteness' shapes their lives, and how and what they teach (Dion, 2009). It is Dion's concern that the stereotypical and dominant discourses of history such as the 'Imaginary Indian' (Francis, 1992; King, 2003) perpetuate school curriculum and therefore there is a need for the opportunity for teachers to "investigate and transform their understanding of Aboriginal people and the history of the relationship between Aboriginal and non-Aboriginal people in Canada" (Dion, 2007, p. 330).

Higgens et al. (2015) draw upon Dion's theory of the 'perfect stranger' in their study involving 71 teachers, of whom 67 were white teachers with European heritage. Collected data in the form of focus group interviews confirms Dion's earlier work and suggests that most white teachers remain 'perfect strangers' in relation to their Indigenous students (Higgens et al., 2015). In addition, the research maintains that many teachers' resistance stemmed from feelings of a lack of, or an unawareness of culture, proving how "whiteness and Eurocentrism overlap"

(Higgens et al., 2015, p. 258-259). Other teachers made statements that suggested their race (white) shaped the lens of their practice: “I teach from a white perspective, that’s all I know” (Brandon, secondary teacher, in Higgens, et al., 2015, p. 259). Finally, many of the teachers delivered sentiments of not understanding why or how their Indigenous student was acting in ways that did not conform to their familiarity of how Indigenous peoples should be. This type of thinking conforms to stereotypical versions of the dominant discourse and popular media (Higgens et al., 2015) and causes settler-educators to view Indigenous students as different or ‘not the Indian they had in mind’ (King, 2003, p. 31).

Reconciling Our Difficult Histories

The teaching and learning about Canada’s treatment of Indigenous peoples, including residential schools, the Indian Act, and Treaties is complex in nature and can cause educators to feel guilt and shame (Koelwyn, 2018). Zembylas (Bekerman et al., 2012; Zembylas, 2008, 2015a, 2017; Zembylas et al., 2012) has conducted extensive research on the topic of teacher resistance while engaging in difficult histories. This resistance can be defined as “both the emotional engagement with a difficult event or issue and the opposition to particular interpretations of this event or issue” (Zembylas, 2017, p. 663). The researcher’s findings suggest reasons for resistance stem from discomfort when educators’ beliefs are challenged and conflicting feelings towards history that acknowledges the oppressed group (Zembylas, 2017).

Aitken and Radford (2018) draw on Zembylas’ work in their study of 53 teacher candidates completing a Bachelor of Education degree. The researchers propose that although many pre-service teachers must now take a mandatory Indigenous Education course, they are often ‘disgusted,’ ‘overwhelmed,’ and feel the material is ‘too, too, intense,’ as many teacher candidates are uncovering Canada’s difficult history for the first time (Aitken & Radford, 2018,

p. 44). These pre-service teachers are ‘wary’ that teaching about Residential schools can cause tension and become emotional (Aitken & Radford, 2018, p. 45), and want to instead focus on remaining neutral. The scholarship points to this neutrality as a defense, and educators wanting to remain an expert; despite needing to learn difficult knowledge in order to engage in reconciliatory teaching (Aitkens & Radford, 2018, p. 45). In order to disrupt these colonial pedagogies, the literature offers a ‘pedagogy of discomfort’ (Boler 1999; Boler & Zembylas 2003; Zembylas & Boler 2002) that assumes discomforting feelings are important in challenging beliefs and normative practices that sustain stories on difficult histories and create openings for transformative learning opportunities.

The research (Aitken & Radford, 2018; Zembylas, 2008, 2012, 2015) considers that by viewing resistance as emotionally based, we can begin to productively engage with difficult histories. Dion (2016) believes that the discomfort settler-educators experience as they teach content involving the relationship between Indigenous and Non-Indigenous people can become a ‘starting place for learning’ as “teachers and students need to be conscious of their emotions and learn from them, work through guilt, understand fear, and question their ignorance” (Dion, p. 470). This sentiment is shared by Koelwyn (2018) who contends that settler shame can be used as a tool for reconciliatory teaching.

Curricular Reform: Un/Ease and Un/Certainty

Scott and Gani’s (2018) study used focus groups and individual interviews spanning eighteen years to examine patterns in Alberta educators’ thinking involving curricular reform towards teaching Aboriginal perspectives (First Nations and Metis). The authors’ findings suggest that the majority of educators (60%), support the curriculum mandate; however, this support is ‘generalized’ in form and limited to ‘celebrating diversity’ (Scott & Gani, 2018,

p.172) rather than specifically focusing on Aboriginal perspectives. The 40% of educators who did not support the mandate seemed to justify their resistance by maintaining one of the following three viewpoints: Aboriginal populations are too diverse, and therefore would take up too much curricular time; non-Aboriginal educators do not understand the culture well enough in order to teach; and Aboriginal perspectives should not be privileged over other cultural groups (Scott, 2013; Scott & Gani, 2018).

The researchers contend that due to these viewpoints remaining constant for over twenty years, they are 'structural in nature' and reflect a 'shared interpretative framework' (Scott & Gani, 2018, p. 174). The scholarship has identified that this framework is problematic and limits the understanding of Indigenous perspective. An example of this can be seen in the linear progression of history taught in schools; whereas Indigenous epistemology is 'spiralling...and... cyclical' (Scott & Gani, 2018, p. 175). The research suggests that resistance to teach about an unfamiliar culture can come from places of 'historical ignoring', or the viewing of Indigenous peoples as in the past (Dion, 2007, 2009, 2016; Francis, 1992; King, 2003; Scott & Gani, 2018). Milne's (2017) study details the perceptions of Indigenous and non-Indigenous parents and educators as the province of Ontario mandates its Indigenous education policy. The study highlights how Indigenous parents are positive about their children learning Indigenous perspectives, due to their own cultural loss and disconnection. Further, the teaching of Indigenous knowledge to both non-Indigenous and Indigenous learners and educators is stressed as "needed in order to build cultural awareness and understanding" (p.5). However, Milne notes that non-Indigenous educators can be 'intimidated' by the curriculum, as they are 'uncertain' what and how to teach and are 'unaware' of how to access supports and resources (p.7).

Indigenous parents also raised issues of discomfort around educators teaching Indigenous cultures as in 'the past tense' and 'obsolete' (p.7).

B.C.'s pre-2015 curriculum was structured in a manner that placed high importance on content, prescribed learning outcomes, and the evaluation of these objectives. This curricular rationale is based on Tyler's (1950) structuralist curriculum development model, which, although critiqued by many poststructuralist scholars, remains reflected in westernized school curriculum (Tilley & Taylor, 2013). This "curriculum-as-plan" (Aoki, 1991, 2005) can be seen as an idealist and generalized perspective of the realities of the daily classroom experience. Aoki further comments on the "tensionality that emerges, in part, from indwelling in a zone between two curriculum worlds: the worlds of curriculum-as-plan and curriculum-as-lived-experiences" (p.159). When the curricular document leaves out the "lived" experiences, educators are left to reconcile the tensions between these two worlds as meeting the needs of our learners may or may not align with curricular content on any given day.

In their re-envisioning of the curriculum, the government of British Columbia seems to account for lived curriculum. Gone are the long lists of prescribed learning outcomes, and in their place, big ideas, curricular competencies, and content suggestions. The student experience is at the core of the curriculum, and the educator is more freely able to use their judgement and autonomy to plan for individual student needs. Furthermore, as part of Canada's reconciliation efforts with Indigenous (First Nations, Metis, and Inuit) peoples, the curriculum has embedded content that attempts to highlight Indigenous culture in BC, and the rest of Canada. Although implemented with the best of intentions, this content exemplifies the tensions that exist between "curriculum-as-plan and curriculum as lived" (Aoki, 1991, 2004).

The Single Story

"*There is danger in a single story. The single story creates stereotypes, and the problem with stereotypes is not that they are untrue, but that they are incomplete. They make one story become the only story*" (Adichie, 2009, 13:05).

Research has shown the tendency for non-Indigenous teachers to extract cultural representations of Indigenous epistemology and develop professional development days, cultural days, or single stand-alone lessons that sometimes reinforce staid representations of Indigenous peoples (Dion, 2009; Gebhard,2018; Milne, 2017; St. Denis, 2007).

Current research supports this theory, such as Gebhard's (2018) study involving collecting data from 13 semi-structured interviews of settler-educators and Indigenous educators (First Nations and Metis) in the Canadian prairies. Cultural approaches were examined and studied in relation to racism towards Indigenous peoples within the educational system (Gebhard, 2018). The findings suggest that implementing cultural awareness curricula keeps "racial domination intact" (p. 758). The scholarship acknowledges that while cultural approaches can have a positive effect on non-Indigenous educators; there are negative impacts on Indigenous students, including "treating Indigenous people as inferior, and not leaving space for discussions in schools on racism" (p. 769).

The findings suggest that by only implementing cultural teachings, without race analysis discourse, Indigenous inequality is maintained within the educational system (St. Denis, 2007). The scholarship further recommends teacher education and professional development that recognizes an 'anti-racist education' in order to equip all teachers with the necessary tools to acknowledge, lead discourse, and combat racism within the educational sphere (Gebhard, 2018;

St. Denis, 2007). This analysis indicates that racism is deeply embedded in our educational structures, and to shift towards anti-racist education discourse relies on educators to acknowledge new representations of history in order to move forward.

Scholars such as Donald (2009) investigate the racial tensions in the educational system, which impact what is included in curriculum, and why certain topics are excluded or avoided. Donald suggests that many settler educators believe they are not equipped to teach about cultures that are different from their own ancestry, essentially "retreat[ing] behind the comforting shelter of real or passive ignorance" (p.32). This 'cultural disqualification' argument exists due to the colonial narrative that has shaped our perception of history and has led to Indigenous knowledge being viewed as 'outside' the realms of westernized systems. This perception enables educators to resist engagement with Indigenous forms of knowledge, as this pedagogy is "unknowable to insiders, and incommensurate with any formal public education endeavours" (p. 36).

As a way to mitigate this problematic tension, Donald suggests the practice of "ethical relationality" (p.38) which fosters new understandings by dismantling the belief that culture should be assimilated, and instead places value on the similarities and differences between cultures. Further, this conceptualization involves Indigenous teachers and scholars "re-educating" the public in order to place importance and value on Indigenous knowledge systems. Donald stresses the importance of "respectful engagement, beginning with building relationships outside of one's own identifiable group," as the re-framing of Indigenousness "is the first step toward decolonization" (p.39). A decolonized curriculum has the potential to disrupt and dismantle the curricular system, and would yet again, transform what we value, and what is important, in education.

Decolonizing the Canadian Education System

Indigenous Knowledge

When the Europeans colonized what is now known as Canada, Residential School Systems were used to oppose and diminish Indigenous Knowledge and enforce the valuing of Eurocentric ways of knowing and learning (Regan, 2010). “Canadian administrators and educators need to respectfully blend Indigenous epistemology and pedagogy with Euro-Canadian epistemology and pedagogy to create an innovative ethical, trans-systemic Canadian educational system” (Battiste, 2010, p. 168). In order to fulfil our promises for reconciliation, educational systems must hold Indigenous knowledge to the same value as Euro-Canadian epistemology.

According to Battiste and Henderson (2000), Indigenous Knowledge does not have a neat and tidy definition. A definition in itself is problematic, because the researchers argue that Indigenous epistemology is not a "uniform concept across all Indigenous peoples” (p. 36). Instead, the researchers posit that Indigenous Knowledge can be conceptualized as:

> The expression of the vibrant relationships between people, their ecosystems, and other living beings and spirits that share their lands.... All aspects of knowledge are in- terrelated and cannot be separated from the traditional territories of the people concerned….To the Indigenous ways of knowing, the self exists within a world that is subject to flux. The purpose of these ways of knowing is to reunify the world or at least to reconcile the world to itself. Indigenous knowledge is the way of living within contexts of flux, paradox, and tension, respecting the pull of dualism and reconciling opposing forces.... Developing these ways of knowing leads to freedom of consciousness and to solidarity with the natural world. (p. 42)

Battiste and Henderson's (2000) and Tessaro's (2018) understanding of Indigenous Knowledge is a holistic interpretation that involves all aspects of the self: physical, emotional, spiritual and intellectual. Further research has emphasized the relationality between the learner and "teacher, community, and place where the learning occurs" (Tessaro, p. 130). The research recognizes the importance of relationships and connection embedded in Indigenous Knowledge, as well the acknowledgement that "moving towards decolonization requires extensive transformation of education where learning is rooted in Indigenous knowledges rather than treating these knowledges as an "add-on" or "other" way of knowing" (Munroe et al., 2013, p. 320).

The New British Columbia K-12 Curriculum

The Ministry of Education in British Columbia implemented a new B.C. Curriculum beginning in 2015 with final grade 12 mandatory transition in September 2019. A major addition to the curriculum across all grades and subjects was the implicit and explicit reference to Indigenous Knowledge and Perspectives (Lamb & Godlewska, 2020). This change was in response to acknowledging that there was a dominating colonial structure of education, and that bringing in new perspectives would benefit our learners (Lamb & Godlewska, 2020). The new curriculum aims to introduce new narratives and teachings through community-based Indigenous perspectives that highlight the importance of relationship, respect, Indigenous knowledge, local approaches to wellness, responsibility, identity and belonging, and the connection of the earth and land to education and well-being (Morcom & Freeman, 2018). Indigenous best practices are woven into the curriculum through community-based engagement, knowledge keepers, and transformations of how we have experienced the world in the past (Morcom & Freeman, 2018). Educational pedagogies from Indigenous systems include Indigenous protocols and ethics,

talking circles, storytelling, land-based learning, and the dual role that both the learner and teacher can hold. The new B.C. curriculum was implemented with the goal of decolonizing and Indigenizing the current educational system in B.C..

History of Approaches to Online Learning in Indigenous Communities

Access to post-secondary education has been restricted in Indigenous communities compared to mainstream society (Voyageur, 2001). A reason for this lack of access is due to the geographic location of many Indigenous communities which are often located far from urban areas where post-secondary institutions are commonly located. Attending a post-secondary institution usually requires the individual to leave their community which is often located in a remote or rural location. There is a higher cost of living and additional barriers are encountered which often makes attending these institutions very difficult due to financial strain and lack of access or support from community members and family (Voyageur, 2001).

Distance education and online learning has reduced the physical barrier of Indigenous people attending post-secondary education, as the restriction of travel has been eliminated. Individuals can now attend classes without the need for travel. Additional barriers arise with the issue of connectivity, internet access, and attainment of technology. Fiddler (1992) acknowledged that for distance learning to occur and be successful, remote Indigenous communities need access to reliable internet connections and individuals need to be equipped with the proper technology to be able to participate in their online classes. Both Fiddler (1992) and Voyageur (2001) emphasize that remote communities need access to technology such as computers, internet, e-mail, voice mail, computer networking, satellite systems, teleconferencing, and other communication services.

Fiddler (1992) reflects on the access to online learning in a case study of 23 remote communities of Sioux Lookout District in northwestern Ontario participating in distance post-secondary education. Community support was imperative for this learning to be successful. Funding for the students to attend the institution was required, community members offered tutoring support, and community centers were set up as learning centres equipped with radio and internet connection to link the students to their institution. The conclusion of this study on remote learning in isolated Indigenous communities was that it requires lots of technological and financial support from the community, and this access to funding and technology can be a major barrier to students wishing to learn remotely.

Voyageur (2001) concludes that the accessibility of technology and digital connection and the willingness of students in Indigenous communities would lead to success of individuals remote learning. As access to remote learning increases, obstacles such as loneliness, lack of family support, and cultural connection will be reduced with the student not needing to leave their communities to seek education. Indigenous people are aware of the need for education to be successful members of society, and distance learning could be the solution to increasing access. With an increase in Indigenous scholars, students, and educators, it is even more important to incorporate Indigenous Knowledge into our distance and remote learning experiences and learning design.

While the Voyageur (2001) and Fiddler (1992) studies are dated, their research and data collection regarding remote communities and distance education reflect the current stress for today's remote learners, both Indigenous and non-Indigenous. The needs for connections and authentic learning for remote learners remains the same. Since 1992, the costs have come down for most of the infrastructure, although balancing where to direct scarce funds remains an issue.

With remote synchronous learning opportunities on the rise and a growing population of remote learners, new issues and considerations, such as incorporating other knowledge systems, are to be explored.

Tensions Between Indigenous Knowledge and Online Learning

Disrupting the Pedagogy of Online Learning

There is an apparent lack of development with regards to decolonizing online learning spaces and Canada has been called on by the TRC (2015) and other agencies to incorporate Indigenous pedagogy into all levels of formal and informal education, including online learning. This call to action has caused post-secondary and K-12 institutions to take note and slowly begin making changes.

However, these revisions seem to focus on face-to-face teaching and learning, and some Indigenous ways of teaching and learning do not translate well in online environments, and if they are, it is challenging to deliver this knowledge in a meaningful way due to the restrictions of being online and not in person or on the land. What is missing in most online courses are protocols and ethics such as talking circles, storytelling, land-based learning, and the dual roles the learner and teacher hold. Online course delivery is sometimes the only means of obtaining an education, especially for many First Nations, Inuit, and Metis learners who live and work in remote communities or require additional flexibility in order to balance educational and social roles.

Moreover, the current COVID-19 pandemic has forced many educational systems to implement and embrace online learning as the primary learning delivery method for all students. The COVID-19 pandemic has resulted in some schools completely shutting down, as other schools minimize face-to-face teaching and offer a mix of in-person and online learning options,

where learners complete much of their work online and spend minimal time in the classroom. As a result, education has changed dramatically with the distinctive rise of online learning, whereby teaching and learning occur using technology such as video conferencing and digital platforms.

Emergency Remote Teaching Critiques

In contrast to experiences that are planned from the beginning and designed to be online, emergency remote teaching (ERT) is a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances (Shim & Lee, 2020). It involves the use of fully remote teaching solutions for instruction or education that would otherwise be delivered face-to-face or as blended or hybrid courses and that will return to that format once the crisis or emergency has abated. Whittle et al., (2020) stressed that the primary objective in these circumstances is not to re-create a robust educational ecosystem but rather to provide temporary access to instruction and instructional supports in a manner that is quick to set up and is reliably available during an emergency or crisis.

What becomes apparent as we examine examples of educational planning in crises is that these situations require creative problem solving. Whittle et al., (2020) examined emergency online teaching models and commented that it is important to be able to think outside standard boxes to generate various possible solutions that help meet the new needs for our learners and communities. Whittle et al., (2020) suggested that ERT is a way of thinking about delivery modes, methods, and media, specifically as they map to rapidly changing needs and limitations in resources, such as teacher support and training rather than a bare bones approach to online learning.

The rapid approach necessary for ERT may diminish the quality of the courses delivered. A fully online course development project can take months when done properly. Due to the nature of COVID-19, many institutions were rushed and ill-prepared to enter the online space, which is in direct contradiction to the time and effort normally dedicated to developing a quality course (Shim & Lee, 2020). Online courses created in this way should not be mistaken for long-term solutions but accepted as a temporary solution to an immediate problem. Especially concerning is the degree to which the accessibility of learning materials might not be addressed during ERT (Shim & Lee, 2020; Whittle, et al., 2020). This is one reason that universal design for learning (UDL) should be part of all discussions around teaching and learning. UDL principles focus on the design of learning environments that are flexible, inclusive, and student-centered to ensure that all students can access and learn from the course materials, activities, and assignments.

The principles of UDL benefits all learners and must be explicitly designed into the course. We argue that Indigenous Knowledge also benefits all learners, and we will examine methods to incorporate this knowledge into the online learning environment.

Creating Space: Transforming the Current Online Learning Environment

While research notes that online learning can meet various accessibility needs, there have been multiple critiques against the limiting factors of student interaction and seemingly poor design planning when compared to face-to-face instruction. Fermin-Gonzalez's (2019) review on inclusion and diversity support these critiques, as he identifies the following barriers to online learning success: "physical, technological and technical, psychosocial, communication, and multimedia design" (p. 159). The literature further discusses how pedagogy, not technology,

should be at the forefront of online course design (Lavooy, 2003). Traxler (2017) challenges that students' needs and interests can be inadvertently pushed aside as online learning is either rejected out of hand or too quickly adopted and commoditized.

Soffer and Nachmias (2018), who compared online academic courses to face-to-face courses in post-secondary education, report claims of faculty feeling the standards of their course are compromised with teachers expected to teach without in-person students, while in front of a camera, in small increments. There is a lack of interpersonal connection that is achieved in person, and a lack of confidence that sufficient learning is happening on the other end. Interpersonal connections lacking in the online realm include fewer “aha!” moments between peers, missing the excitement of a great question asked, and few exchanges of thoughts among peers. Alongside interpersonal connections, online teaching has induced feelings of alienation among instructors, in a profession which is personable and filled with connections in a face-to-face setting (Soffer, et al., 2018).

A suitable learning environment with a well-established course design is crucial to the quality and effectiveness of online courses. Indeed, it was found that students perceived course design as affecting the success of an online learning experience (Song, et al., 2004). In order to improve course design, there is a need for a variety of instructional methods that address UDL as well as multiple methods for content learning and delivery such as synchronous and asynchronous classes (Lavooy, 2003).

Lavooy’s (2003) study criticizes the lack of interaction in typical online courses by utilizing meaningful forms of asynchronous and synchronous communication. Asynchronous communication is “time and place independent” (p. 159) and is therefore accessible to learners

who require flexibility in time scheduling. This information and instruction are relayed in the forms of course webpages, forum postings, and e-mail (Lavooy, 2003). The literature supports asynchronous communication, as it can be used to set course schedules and meeting times. In addition, learners are enabled to quickly and privately communicate with peers and instructors (Lavooy, 2003).

However, research suggests that more courses should incorporate synchronous communication into their course design, as it allows for real-time interaction between students and instructors. Interaction is at the core of the learning experience and is widely cited as a defining characteristic of successful learning in both traditional and online learning environments (Picciano, 2002; Wanstreet, 2006). This aspect is more meaningful in online courses due to the absence of physical meetings. As such, it is important to create opportunities for instructor-student and student–student interaction in online learning environments (Dixson, 2012).

The literature further suggests that student interactivity is best achieved through using a pedagogy that supports the use of both asynchronous and synchronous communication tools (Lavooy, 2003; Wallace, 2004) such as discussion forums, chat rooms, email, and synchronous meetings. Indeed, research has demonstrated that instructor-student and student–student communication are strongly correlated with higher student engagement with the course and have a significant and positive impact on students' learning and satisfaction (Dixson, 2012). In contrast, a lack of proper communication might lead to a sense of isolation and an insufficient sense of community (Song, et al., 2004). Finally, Dixson (2012) indicates that a strong instructor presence, including giving timely feedback, answering questions, and encouraging discussion, fosters a sense of connectedness and community.

Enhancing Equity and Inclusivity in the Online Space

This section offers alternative pedagogical approaches that can be used in order to mitigate the barriers to online learning design. These holistic approaches place a high importance on the students' feeling of connectedness to the learning community, and through differentiation, give all learners the tools necessary to succeed. Some of the following frameworks could support the decolonization of education in Canada. Moreover, they are models that can be applied to not just our Indigenous learners, but all of our learners. These models are intentionally ordered as they progress from Eurocentric models of learning to Indigenous pedagogy.

Universal Design for Learning Model

According to Rose and Myers (2000) Universal Design for Learning, or UDL, is a theory that consists of three main principles of learning:

> Recognition learning, which involves using multiple means of representing to flexibly present *what* we teach; strategic learning, which is supported by using multiple means of expression to flexibly teach *how* we teach and learn; and affective learning, which involves providing multiple means of engagement to sustain and generate motivation, the *why* of learning (p. 56).

These principles are intended to guide the design and development of inclusive curriculum (Rose & Gavel, 2005). Although UDL was originally designed for face-to-face instruction to meet "the diverse needs of students, including those with disabilities" (Rose, 2000, p.56), current research (Hollingshead, 2017; Tobin, 2014) applies UDL as a framework for online instructional design that, if carried out correctly, has the ability to meet the needs of all learners. Tobin's (2014) study found that systematically and intentionally designed online courses have shown to increase

student engagement with one another, with an instructor, and with the course material. Hollingsworth (2017) also supports this position, and posits UDL provides a multi-modal, multi-access, and flexible means to sustain and generate engagement within the constraints of the online learning environment.

Culturally Responsive Model

While the UDL model creates spaces for inclusive learning, it does not emphasize culture as being a factor in learning development. Smith and Ayers (2006) caution that online learning tends to "accommodate the singularities" (p. 401) of Western-dominant culture, and therefore repressing the needs of others. The literature also suggests that online learning environments tend to be in opposition with Indigenous pedagogy, as traditional online learning paradigms are unilateral in nature, and thus do not consider the cultural needs of a diverse range of learners (Dreamson, et al., 2017, 2018). Furthermore, as online learning is not typically contextual, place-based, engaging, and connective (Restoule, 2017), learners can feel disconnected, isolated, and face lower levels of achievement.

How might we mitigate these challenges in order to design online learning experiences that are engaging and connect to community and place, while at the same time, realizing the diverse needs of our learners? Dreamson et al. (2017, 2018) suggests a pedagogy that places importance on both culture and knowledge transmission in order for online courses and online learning design to become "culturally inclusive" (Dreamson et al., 2017 p. 432). In their study gathering data from eight Blackboard sites across a university in Australia, the researchers suggest that current LMS design does not reflect the needs of all learners and tends to exclude cultural components in favour of traditional knowledge transmission (Dreamson et al., 2017). In order to remedy this gap, the authors propose four dimensions of learning that should be the

focus of online course design: communication, collaboration, community, and interculturality. By valuing these components, course design for those delivered within an LMS should reflect the following tenants:

> an LMS is regarded as a technology rich learning place where effective and efficient participatory and collaborative learning are designed, supported, activated and experienced towards building an open learning community; (b) an LMS is used to offer multiple communication channels (one-to-one, one-to many, many-to-one, many-to-many), to facilitate multiple relationships through various collaboration models, and to enhance both independent and interdependent learning towards relationship and learning community building; and (c) new pedagogical values emerging from intercultural interaction have to be addressed and judged whether they strengthen Indigenous identity, which is an ongoing formation of interculturality that is inclusive of Indigenous cultures and Western culture. (p. 442)

Dreamson et al.'s final remarks on intercultural interaction sit in a space of tension. Current pedagogical values, while beginning to acknowledge Indigenous pedagogy, do not yet actively strengthen Indigenous identity. Across Canada, various efforts have been made to challenge the typical Eurocentric nature of our educational institutions. At the K-12 level in the Victoria school district, this includes developing and implementing a curriculum that incorporates Indigenous history and epistemology. For post-secondary institutions, including the University of Victoria, this involves adding Indigenous programming, creating culturally inclusive degrees, and requiring all teacher candidates take a mandatory Indigenous Education

course. Unfortunately, these efforts often only place a greater emphasis on face-to-face teaching and learning environments, and they are often implemented using Western pedagogical values. In order to begin decolonizing education, both online and face-to-face, we should choose Indigenous pedagogies which extend or depart from Western thinking in order to create successful learning opportunities for all students which represent a broad perspective of knowledge systems. By honouring these pedagogies and realizing their contributions and importance, we can move from a space of tension to a space of reconciliation.

The 5R's: Decolonizing and Indigenizing the Online Space

As a response to First Nations students' high attrition and low retention rates while attending post-secondary institutions, Kirkness and Barnhardt (1991, 2001) created a set of best practices to support Indigenous students consisting of respect, relevance, reciprocity, and responsibility, herein referred to as the 4R's. The authors suggest that a shift is needed - from students accommodating the needs of the institution, to the institution accommodating the needs of the students. This shift requires the institution to reconsider the purpose of higher education for First Nations peoples. Kirkness and Barnhardt (1991) explain how the 4R's are interwoven in order to create inclusive avenues of success:

> What First Nations people are seeking is not a lesser education, and not even an equal education, but rather a better education — an education that respects them for who they are, that is relevant to their view of the world, that offers reciprocity in their relationships with others, and that helps them exercise responsibility over their own lives. (p.14)

This Indigenous pedagogical framework has transformed since its inception, and now contains a fifth element of "relationships" (Restoule, 2008, 2019). Contextual understanding of the 5R's is as follows (Tessaro, et al., 2018):

> **Respect**: the need to recognize and respect First Nations cultural norms and values.
>
> **Reciprocity**: honouring student voice and choice, creating equitable relationships instead of instructor-centred knowledge transmission.
>
> **Relevance**: Learning should reflect the needs of First Nations culture and ways of knowing.
>
> **Responsibility**: Instructor and learner have a responsibility to uphold culture, as well as personal/social aspects of being.
>
> **Relationships**: Relationships are reciprocal between teacher and student and should foster connection to community and self. (p. 133-135)

The 5R's of Indigenous pedagogy serve as important reminders for course designers and benefit all learners. The next section highlights research that makes use of this Indigenous framework in the online classroom, in both informal and formal contexts.

Indigenous Pedagogy in Action: The Online Learning Environment

Open and Informal Educational Opportunities

In 2013, Jean-Paul Restoule created a Massive Open Online Course (MOOC) for individuals interested in learning about Indigenous Education. A MOOC is a course of study made available over the internet without charge to a very large number of people (Margaryan, et al., 2015). The researcher acknowledged the challenges of online learning, including lack of

synchronous opportunities, geographic distance, and lag time (Restoule, 2019) as well as the complexities associated with weaving Indigenous perspectives in the online space: “A key component to teaching in an Indigenous way is interactivity, responsiveness to the particular group and its needs, reading the feeling of the group and responding accordingly” (Restoule, 2019, p.1303). In order to mitigate these obstacles, Restoule (2019) used Indigenous pedagogy (specifically the medicine wheel, which was used as a model for structuring the assignments in the courses) as a means to “engage the whole person in developing spiritual, emotional, intellectual, and physical aspects of their being” (p.1304). Ultimately, Restoule was able to achieve an interactive and engaging learning environment by creating an online space that cultivated a sense of trust and fostered relationship-building; thereby allowing for heightened storytelling and critical discourse from, and with, students. Additionally, regular check-ins with students served to open lines of communication and encourage motivation and engagement with the course material. By implementing Indigenous pedagogy into his course design, Restoule’s MOOC had a completion rate of “13% in its inaugural year...showing a high level of engagement and interest sustained among course participants” (2019, p.1299). The average completion rates of MOOCs at the time of the study were around 3-4%, with averages in 2019 around or less than 15% (Restoule, 2019).

Formal Educational Opportunities

The literature suggests that the 5Rs as pedagogical tools prove highly successful when applied to online course design. Tessaro, et al.’s (2018) study involved the creation of an online course offering, adhering to 5R's framework, for 20 principals of First Nations schools. The researchers discovered that by applying the aforementioned pedagogy to the course design, structure, and delivery, the perceived intricacies and challenges of weaving Indigenous pedagogy

with online learning "were not only mitigated—they were turned into strengths" (p.141). Moreover, due to the success of the course, the Ontario College of Teachers has adapted the 5R's framework for Professional Development opportunities (p.140-141), demonstrating a step towards reconciliation as educational systems begin to recognize Indigenous Knowledge as holding equal or greater value to Western knowledge systems.

Gaps in the Research

A Lack of Canadian Based Research

Our literature review of the topic of incorporating Indigenous knowledge and the online learning environment identified gaps in the research which, when addressed, would further enrich this field of study. The first gap is that very little of the research or literature is based in Canada including Canadian post-secondary institutions, secondary or primary schools. With the embrace of the TRC, the curriculum in schools across Canada have begun to integrate other world views. Alongside the push towards online learning, research and case studies examining how educators are incorporating Indigenous epistemologies into their online courses would be beneficial when discussing how these two systems (online and Indigenous) have been intertwined. Canadian based research and case studies would add value in giving an increasingly global perspective on this research area.

Long-term Studies of System Effectiveness

The second gap in the current research is the lack of long-term studies regarding the effectiveness of including Indigenous Knowledge or other knowledge systems in the online learning environment. A majority of the studies and analysis were structured more around a critique or examination of the theory behind implementing online learning. In addition to

critiques or discussions about the theories of online learning, other studies focussed on the initial plan to bring Indigenous Knowledge into their learning environments, but there was little research on the progress or result of implementing these ways of knowing in the online realm. A beneficial research piece would include a study and conclusion regarding the effectiveness of incorporating Indigenous pedagogy and online learning platforms. A long-term review of institutions incorporating this learning delivery model would improve the critique and examination of how blending these two world views benefits both the learning and the instructor.

Analysis of Theory, but Lacking in Practical Resources

The third gap in the research was the lack of tangible resources and actions to effectively incorporate Indigenous Knowledge and online learning. Critiques of both the learning platforms were thoroughly examined, with strengths and weaknesses regarding the theory of each widely discussed. To build on these critiques, research involving the theory of Indigenous Knowledge and the theory of online learning were plentiful. What was missing in the research were specific examples, resources, and programs for the educator to blend these two platforms. In order to support educators interested in incorporating Indigenous Knowledge into their online platforms effectively, it is critical that there are resources and tangible tools to aid in achieving this goal. Readily available resources and literature regarding how to effectively incorporate Indigenous pedagogy in the online learning environment would support and enrich the current literature in this field of study.

Chapter 3: Facilitating Online Learning with the 5R's

The project we created is a Pressbook titled Facilitating Online Learning with the 5R's. This book will focus on developing resources for K-12 and post-secondary in order to guide instructors toward embedding Indigenous pedagogies into their online learning environments. Our resources will address how the 5R's of Indigenous education and research can be used as best practice to enrich online teaching and remote learning. The project is in the form of a Pressbook with each chapter addressing each of the 5R's. Within each chapter are resources that will aid teachers in supporting each of these concepts in the online learning environment.

The weblink for our Pressbook, Facilitating Online Learning with the 5R's, can be found here: Facilitating Online Learning with the 5R's.

The submitted PDF copy of our Pressbook, Facilitating Online Learning with the 5R's is uploaded to UVic DSpace with this document.

Chapter 4: Conclusion

Where Our Journey Began

As settler-educators, we want to acknowledge that we are on a journey of un-learning and re-imagining educational practices with regards to Indigenous Education. When we began our MEd program, we both had experience working in systems that have yet to fully comprehend and answer the TRC's (2015) calls to action. We also felt that although we have made attempts at teaching Indigenous Education, we remained rooted in our Eurocentric pedagogy and often taught using a historical narrative supplemented by cultural activities. As we entered into the literature review phase of our Masters, we realized we needed to approach our topic through a new lens of thinking.

Reflecting on Our Understanding of Two-Eyed Seeing

Elder Albert Marshall described Two-Eyed Seeing as "to see from one eye with the strengths of Indigenous ways of knowing, and to see from the other eye with the strengths of Western ways of knowing, and to use both of these eyes together" (Bartlett, et al., 2012, p. 335). This philosophy resonated with both of us as we began our Chapter 1 and 2 research. We interpreted Two-Eyed Seeing as the understanding that we would value Indigenous pedagogy with the same regard as Eurocentric knowledge systems. Therefore, as we reviewed the literature, we were able to glean insight into the potential benefits of an Indigenous-created framework being used in the online learning space to encourage connections between the learning community. While this project did not use the perspective of Two-Eyed Seeing and instead focused on a dual perspective of the Indigenous-created framework of the 5R's and

technology, understanding this philosophy was important to guide our literature review and initial exploration of Indigenous Knowledge and pedagogy.

Joanna's Reflection on Indigenous Knowledge Systems

"There is danger in a single story. The single story creates stereotypes, and the problem with stereotypes is not that they are untrue, but that they are incomplete. They make one story become the only story" (Adichie, 2009, 13:05).

The Single Story

I grew up in a small village on Vancouver Island. My parents were educators, and my dad drove all of us to our respective schools each morning. From my car window, I would watch students from the Nuu-Chah-Nulth nation reserve walk or bike four kilometers to school. The older students often piggy-backing their younger siblings, or waiting patiently while the smaller children investigated nature. My friend was never on time for school. He always crept in after dropping off his younger sister, silently hopeful our teacher would allow for a discreet entrance, instead of the usual public shaming:

(She notices him entering our room)

SIGHS.

"If you ***can't*** get to school on time, how can you expect to learn anything?"

Francine would come to school periodically, sometimes arriving in the middle of the day, gliding to the back of class so she could sit, eyes closed, face down, feeling the cool metal of the desk on her face.

"You need to be an active participant in this class. Stop being ***lazy*** and sit up straight."

I graduated. After completing my first degree, I decided to become a teacher. The PDPP program required all students to take an Indigenous Education course:

"Why do we have to learn this?"

"It was in the ***past***, we need to move on…"

"Some schools don't even have ***native*** students, so why do I need to teach this?"

I completed my final practicum at what was known as a "rough" middle school. Overheard:

"Always ***late***-"

"***Dirty*** clothes-"

"Well, look at the parents-"

"Going to ***drop out*** anyways-"

This is Canada's historical narrative. This is an educational system built on Eurocentric values intended for the success of white settlers. This is a single story. Uncomfortable, isn't it?

I sat in discomfort. Realizing that I perpetuated my own stereotype, this neutral, nice, white woman.

Holding my ***silence*** accountable.

I wanted some company to guide and clarify my understanding. I invited Indigenous scholars Marie Battiste, Dwayne Donald, and Mi'kmaw Elder Albert Marshall to join me and we sat together.

So why, as settler-educators, do we ***reinforce*** colonial stereotypes and ***resist*** changing the story?

I turned to Battiste: "we've been marinated in Eurocentrism...embedded within a place of dominant thinking...where there is an inside...and an outside...so basically we've got a system of Eurocentrism that is embedded today in all of our educational systems, there is a notion of superiority...and we need to rethink what those superiorities are and to rethink how we have come to know who we are and how we begin to judge others by those standards that were given to us at some point in our lives" (Battiste, 2016, 40:59-42:54).

Exactly! Exclaimed Donald, and "the social-spatial separation of Canadian (insiders) and Aboriginal (outsiders)...has been passed down generation by generation in the form of an authoritative national historical narrative…" (Battiste, 2010, p. 23).

Perpetuating Stereotypes

Canadian curriculum has been telling a single story, and in this narrative, students are taught what is important and of value based on colonial methodologies and pedagogy. This historical rendering has led to Indigenous knowledge as ***lesser*** compared to Westernized forms of pedagogy. (They all nod). Due to colonial ideologies, Indigenous education is therefore viewed as...Donald jumped in: an "anachronistic study...as a possibility...only if there is time...and a troubling form of civilizational separation is maintained" (2010, p. 24).

I recognize that in my own teaching practice I chose to value Western curricula ahead of Indigenous pedagogical practices: instead of embedding First Peoples Principles into our daily classroom experience, I would ***separate*** this learning, usually in the form of traditional cultural activities.

So as a settler, and as an educator who is afforded white privileges, I need to-

Battiste replied: "You must unlearn your biases in order to challenge this 'notion of superiority.' You must acknowledge the importance of Indigenous pedagogy. You will then be able to respect this knowledge and value its importance without appropriation" (2010, p.17).

Decolonize

At this point, I decided I needed to know ***how*** educators can begin this complex process.

Decolonization can be defined as an unlearning, or an unraveling of the current structures in place that create disparities, promote racism, and are inequitable. Decolonizing Canadian education requires us to dismantle and rewrite not only our systemic narrative, but also, our personal story.

There is a definite tension that exists between Indigenous Methodologies (IM) and Western theory, but embedded within the tension, there is a supportive space that offers us the opportunity to reconcile our differences. "Yes," replied Elder Albert Marshall, "this is Two-Eyed Seeing/Etuaptmumk: to see from one eye with the strengths of Indigenous ways of knowing, and to see from the other eye with the strengths of Western ways of knowing, and to use both of these eyes together" (Bartlett, et al., 2012, p.335). This methodology allows for multiple perspectives to emerge, affording the opportunity to 'weave' between and blend Indigenous

Methodologies with Western methods. This opening of both eyes encourages co-learning, and ... Elder Albert Marshall became animated: "...use[s] all our understandings so we can leave the world a better place and not compromise the ***opportunities*** for our youth by our own inaction" (Bartlett, et al., 2012, p.336).

The sun was setting on our time together. I thanked my guests for spending their time guiding and supporting me. It was now time to begin the work.

Hayley's Reflections on Technology

The inspiration for investigating the benefits of embracing technology in schools came from my experience of running an introduction to computer science course with my grade 8 class a few years ago. Microsoft offers a remote learning course called Introduction to Computer Science; this course brings in instructors actively working in the field of computer science and programming to assist teachers in introducing students to computer science and the world of computational thinking. The positive impact of practicing computational thinking and the cross-curricular advantages I observed in my students during this course inspired me to further investigate the research and support for implementing technology in a fun and effective way.

When incorporating technology into your classroom, it is important to do it in a way that is fun, relevant, and engaging. Teachers can do this by introducing technology in a way that connects with students, taking them on field trips to local tech industries, and bringing in real world examples of technological innovations to spark interest and inspiration. Developing learning content that is visual and interactive, and weaving in real-world examples of people creating technologies that will change and make the world a more positive and innovative place.

Technology is everywhere, and students are engaged with the digital world more than ever. Educators should be actively encouraging and recruiting a diverse range of students to engage with technology and be employing inclusive pedagogies to meet the needs and interests of these students. It is our role as educators to continue empowering students to be creators and innovators of technology by connecting the digital world to their daily lives throughout their educational journeys.

Dual Perspectives

As we conducted the literature review, we explored how we could connect our two separate interests together: Indigenous pedagogy and technology. At first glance, these two topics seem disparate. However, upon further review, new ways of thinking emerged. The digital tools could potentially improve interactivity and engagement, while increasing connections and mitigating feelings of loneliness. Furthermore, by using an Indigenous-created framework, this project strives to work towards answering the calls to action set forth by the TRC.

Where We Are Now

On Vulnerability

Our project is the culmination of countless hours of discussion, research, and reflection regarding one central question: What tensions exist that lead to educator resistance toward exploring Indigenous pedagogy in their classrooms?

As settler-educators, the authors have experienced this tension and know that this resistance can be a contentious issue among some educators. The research demonstrates that this resistance is mostly rooted in fear (Carroll et. al, 2020; Restoule & Chaw-win-is, 2018). Fear of failure, not getting it “right” or not doing enough. We think that any educator can relate to these

feelings, and we wanted to offer a solution to this resistance so that we may all take action and provide reconciliatory education.

So how can we overcome this resistance and explore Indigenous pedagogy in our learning environments? By allowing vulnerability. By giving ourselves permission to maybe fail. To maybe mispronounce words, stumble over territorial acknowledgements, and become emotional when learning and teaching about Residential Schools, the 60's scoop, and other events led by the Canadian Government that have led to stereotypes, systemic racism, and intergenerational trauma. If we can learn to teach algebra, we can allow ourselves to sit in discomfort and learn to teach Indigenous Education by embedding it into our curriculum on a daily basis.

After conducting research and studying current resources, we realized that while Indigenous pedagogy is becoming embedded (albeit, slowly) into BC curriculum, these learning experiences are usually limited to face-to-face teaching. We needed to find the intersection of "space" and "place." We needed to determine how Indigenous pedagogy fit into the online world.

We decided to further explore the potential of embedding Indigenous pedagogy into online learning experiences and used Kirkness and Barnhardt's (1991) 4R's guidelines and Restoule's (2019) 5R's framework as a starting point for educators and those involved in facilitating online learning. We chose this framework purposefully, as it was researched and created by Indigenous scholars. As white settler-educators, we want to acknowledge that for us, answering the TRC's calls to action means we choose to deliver a curriculum that is not linear in nature. We used the 5R's as a guideline and took the principles that were previously applied to

Indigenous students and their communities and attempted to use them in our own classrooms with our diverse range of learners. The purpose of this book is to form connected learning communities especially while engaged in remote learning.

Purpose

Our e-book aims to develop and highlight current resources for educators and instructors within the K-12 and post-secondary systems to support the adoption of an Indigenous framework in online learning environments. Our resources address how the 5R's can be used as best practice to enrich online teaching platforms and remote learning. We also wanted to create a space for educators to un-learn and be able to feel vulnerable. We grappled with our own feelings of white privilege, guilt, shame, and fear many, many times as we began the work, and wanted to be transparent about our journey with other educators and facilitators. Finally, we wanted to address some of the gaps in the literature so that researchers are aware of new avenues to explore. Very little research exists on practical applications of digital tools to embed Indigenous pedagogy. Furthermore, most research involving Indigenous communities focuses on place-based learning and outdoor education. We hope that future research will investigate how to implement Indigenous pedagogy into typically Eurocentric systems, and how to create space for non-Westernized thought in online environments.

TIEGRAD: A study in effective online learning

One of our biggest realizations was how our own program seemed to demonstrate each of the 5R's in practice, and therefore became a personal study as we began our own project. Upon reflection, we determined that how Valerie Irvine and other instructors designed and

implemented the TIEGRAD program exemplified the use of the 5R's in an online environment. This became a secondary framework for best practice online learning and teaching.

Relationships

From our first day, our cohort felt connected. Those who could not make the in-person summer session were present through video conferencing, and connections were encouraged through social communication channels such as Whatsapp and Slack, as well as our individual blog sites. Our instructors, especially Valerie, were honest, transparent, and at times, vulnerable. These qualities helped students connect and mitigated feelings of isolation once COVID-19 impacted our abilities for face-to-face learning and teaching.

Respect

Indigenous cultural norms were respected and acknowledged. Each presenter acknowledged the land they were on in a different way, and this allowed all students to experience multiple perspectives.

Relevance

Our required readings were varied and relevant to our program. Multiple perspectives on ideas were given and we were encouraged to seek new perspectives.

Responsibility

Learners felt comfortable bringing their own interests, culture, and dynamic perspectives into the classroom space.

Reciprocity

This program honoured student voice and choice. We were given every opportunity to embrace our own unique ideas and showcase our learning in various ways. Our coordinator, Valerie, even created a new standard of MEd guidelines so that we could work together and use multimedia formats more freely.

Throughout this program, we were experiencing the impacts of COVID-19 on learning from two perspectives: That of an educator, and that of a student. These perspectives shaped our project and encouraged us to focus on how to meet the needs of both the student and the teacher during online learning.

Moving Forward

Policy and Best Practice for Long-Term Support

As we move away from online learning as a reactive and emergency response, based on the impact of COVID-19, the policy recommendations below support online learning as an option equal to face-to-face teaching. As online learning becomes more popular and prevalent, it is important that policies are reflective of these changes. For example, school districts and other institutions need to offer in-depth training regarding course design and facilitation for their staff. In addition to training, educational resources should be curated and developed to meet the same standard and learning outcomes that our current offline materials, and moreover, these resources are managed and organized through the districts and institutions for ease of use for all. This includes searchability, curation, organization and familiarity with each digital resource in order to support and equip staff who are searching for these materials for their courses. When materials are hard to find and spread out over multiple platforms, educators are less likely to engage with

these resources due to time restrictive factors. By supporting our educators in training and providing a breadth of ready-to-use materials that support interactivity, connection, and engagement, we are in turn supporting the long-term effectiveness of online learning and teaching.

Final Thoughts

As educators, we need to support each other in order to be vulnerable and open to new perspectives. It is our hope that educators who read this resource share it with colleagues and engage in discussion around how Indigenous-created framework can be implemented successfully at their schools and institutions to build connections between the learning community.

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