“It will never be my first choice to do an online course” Examining Experiences of Indigenous Learners Online in Canadian Post-Secondary Educational Institutions

by

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Abstract

In the era of Truth and Reconciliation (TRC), educational administrators have a responsibility to answer the Calls to Action to transform post-secondary education, to increase access for Indigenous learners and decreasing education disparity between Indigenous and non-Indigenous learners (TRC, 2015a). If distance education is an option for expanding educational opportunities, online learning environments should be scrutinized to ensure learner engagement and meaningful support for Indigenous students. This thesis uses a Community of Inquiry (CoI) (Garrison, Anderson & Archer, 2000) framework to examine existing literature and to frame the voices of 21 Indigenous participants about their experiences of supports, preferences, and online best practices. By exploring, understanding and incorporating what may be unique preferences, cultures, languages, worldviews, and ways of knowing, mechanisms to transform distance learning environments to improve engagement for Indigenous students can be identified. With the aim of synthesizing potential findings with online best practices, it may be possible to transform online delivery and development to provide a rich educational experience for students.

Keywords: Indigenous learners, post-secondary, online learning, distance education, CoI, community of inquiry, Indigenous education, e-learning, student support, student retention

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Dedication

Oliver Birch Davey, this journey has been shared with you. During this phase, I watched you grow from 5 to 8 years old. I admire your curiosity, kindness and strong character. Even at your young age, you have encouraged me to persevere, every semester. I am thankful for your patience for every time Mom couldn't play, because I "had to do my work." You always lightened the mood, especially when you asked: "What level are you on now, Mom?" as if graduate school is a video game, battling levels as you complete your courses. I am grateful for the many instances you touched my heart when you said: "You're doing a good job, Mom."

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Nomenclature

Successful student. A student who completed a course with a passing grade during the first semester enrolled.

Community of Inquiry Framework (CoI). is a widely accepted distance education design heuristic, in which learning engagement is viewed through three intersecting domains. It codifies how learning occurs for a networked group of individual learners at the intersection of social, cognitive and teaching presence (Garrison, Anderson, & Archer, 2000).

Unsuccessful student. A student who withdrew before completing a course, failed to complete a course with a passing grade, or allowed a course to lapse without withdrawing.

F2F. Face to face course, on-campus course, course taken in person in a classroom setting.

LMS. Learning management system that is used to deliver computer mediated education.

GPA. Grade point average.

CMC. Computer mediated communication. Scholarly literature uses various terms to describe computer mediated communication. In this thesis, online learning, online education and distance education refers to the process of utilizing the internet, possibly a learning management system to engage in learning.

Chapter 1. Introduction

Significance of the Research

Amplifying Indigenous voices is a way to disrupt mainstream academic policies and procedures that position university researchers as inherent experts in knowledge creation (Kajner, 2015). It makes sense that the constructivist and transformative approaches to knowledge generation, underpinning the CoI model, inherently suggest that the co-creation of knowledge would also privilege Indigenous perspectives and ways of knowing. In this way, the participants authored this thesis, and their stories were connected, validated, and framed within current academic literature—generating knowledge collaboratively by using qualitative interviews ensures authentic participant voice. A variety of seemingly disparate topic areas were explored in order to design a comprehensive, cohesive narrative. The interdisciplinary approach of this thesis may shed light on underexamined areas. It brought me to consider literature on post-secondary retention, Indigenous epistemology, Indigenous education, online learning theory, learning theory, human computer interaction, distance education, educational psychology subtopics such as self-regulation and motivational issues. In literature, and in practice, there is a tendency to focus on ways to adapt technology for Indigenous students, developing specific methods to design in culturally relevant ways (Loewen, Kinshuk, & Suhonen, 2018; Loewen, Suhonen, & Chen, 2017), or adapting curriculum to include epistemological perspectives (McAuley & Walton, 2011), or delivering F2F courses locally (McMullen & Rohrbach, 2003). This thesis centers Indigenous student voices so that supportive measures may be identified to support students effectively within the digital space, whether it is by revising curriculum, devising technological changes, or developing different and improved strategies for delivery and support.

Key Objectives

The purpose of this study is to examine the effectiveness of online education for Indigenous students. By exploring and understanding experiences, unique preferences, cultures, languages, worldviews and ways of knowing, educational institutions (faculty, administration and staff) may be better informed to develop best practices, models and policies that lead to a rich online educational experience for Indigenous students. If a transformed, culturally relevant online environment correlates to an increase in Indigenous student retention, higher education institutions would stand to benefit by

creating compliance with the TRC, and offer First Nations, Métis and Inuit communities improved access to higher education. Researchers continue to raise questions about the quality of access, the ability of students to use and embrace new technology, the need for technical support, and the way to provide asynchronous communication (Packham, Jones, Miller, & Thomas, 2004; Phipps & Merisotis, 1999; Smith, Murphy, & Mahoney, 2003). Interviewing students offers us the opportunity to reflect upon student experiences, engage in detail, and for us to gain an in-depth understanding of personal stories, experiences and factors that may lead to lack of completion or success.

Research Questions

The complexity of the phenomenon proposed in this study and the interest in situating the data findings about Indigenous students within the larger context for online students influenced the process. Centering the voices and stories of the students themselves, a qualitative analysis approach guided by IM, was integral to both interpret the thematic analysis and to code the qualitative data derived from 21 personal interviews. The following research questions guided this study:

1. What are the experiences that lead to online course completion for Indigenous students enrolled in higher education courses?
2. What factors contribute to a culturally supportive online learning environment that leads to course completion in online distance education for Indigenous learners?
3. What types of supportive measures do online Indigenous learners require, and are they different for non-Indigenous students?
4. What factors lead to persistence in pursuing post-secondary education despite setbacks?

Researcher Note

Originally, I intended to discover what Indigenous students were experiencing in online courses, at any institution delivering asynchronous, self-paced courses. My focus was to discover what, if anything, could be done to improve the online educational experience from the perspective of Indigenous students, in their own words. However, as I interviewed participants, I found that they discussed various types of delivery models. I outlined my findings in Chapter 4, and also make reference to the many comparisons and preferences participants conveyed regarding various modes: blended

models; face-to-face (F2F) synchronous and asynchronous; cohort-based self-paced online and asynchronous (independent study) courses and everything in between. For the purposes of the study, I have outlined the barriers and benefits in the participant's own words, weaving their preferences for alternate modes of delivery, rather than attribute any particular experience to one institution.

TRU Open Learning (OL) partially funded this study by providing a gift card for each participant. Their interest is to incorporate the findings to inform their development and delivery practices in relationship to the broader mandate of Indigenization at Thompson Rivers University. While most participants had enrolled in a class at OL, they told stories about experiences at other institutions that they had enrolled in for distance, online education. Often, they compared experiences, and commented on preferences for various modes of delivery, which enhanced the study.

The terms Indigenous will be used primarily in this paper to represent First Nations, Métis and Inuit people. Aboriginal and Indigenous are sometimes used interchangeably. In Canada, the term Aboriginal refers to Indian (First Nations), Métis, and Inuit peoples noted in the Canadian Constitution's Section 35[1][1]. The term Indigenous refers to both local and international First Peoples that have an Indigenous language, culture, laws, and traditional territory/land base, and are influenced by colonization. When referring to literature, the term cited in a specific reference will be used.

Researcher Positionality

I am a mother, sister, daughter, aunt, and friend. I am a graduate student and a post-secondary educational professional. I am the eldest of four daughters born in Prince George, northern British Columbia. Both sets of my grandparents were originally from the prairie provinces in Canada. My maternal grandparents were Métis, and they migrated to Prince George in the 1950s from St. Boniface, Manitoba. My father is of English and Belgian heritage, and his parents moved to White Rock, BC to join his grandparents to work at a fish and chips shop they owned on the beach front.

[1] Section 35 is part of the Constitution Act that recognizes and enshrining Indigenous rights. Early drafts of the Canadian Constitution did not include recognition of those existing rights and relationships, but Indigenous groups in Canada have successfully fought to protect their treaty and Indigenous rights, though burden fell to Indigenous groups to define those inherent rights. Integral is that Section 35 recognizes indigenous rights but did not create them—Indigenous rights are defined as existing before Section 35.

Over the past ten years, I have begun to explore my Métis culture, becoming a helper in my chosen community of Kamloops, and acting as a women's representative for my local chartered community of Métis Nation British Columbia (MNBC). I am still learning what it means to reconnect to Métis culture and how to embrace and make sense of that identity. It will be a lifelong process to incorporate Indigenous worldviews and integrate those with the mainstream worldviews that I was taught. During my graduate degree, I read and became aware of many educational philosophies and pedagogical constructs. Nodding's care ethics (2002), and Freire's Pedagogy of the Oppressed (1972) both resonated with me due to their intent and potential to deconstruct mainstream power structures, patriarchal approaches and foster an inclusive educational culture.

I have worked as a post-secondary education graphic and interactive designer for over six years, and previously, as a graphic designer in the corporate marketing world. I have always had a keen interest in understanding how the end user of any device, product or interface interacts with the technology. Among my many dream jobs: I wanted to work in a design thinking company in Palo Alto, California, where I spent the better part of my adulthood. I believe student centered design is paramount in web mediated education as well, but I am mindful of casting the student as a consumer. Often in post-secondary institutions, economical, technological and financial concerns become a primary focus, and it is too easy to lose sight of the student perspective and educational process.

As a student, I have taken many and various types of distance courses, on a variety of education management systems. I have used Web CT for paced core graphic design courses during my graphics credential, as well as electives such as a history of jazz and cinema. During this graduate degree, much of my coursework was done online through Thompson Rivers University (TRU) and OL, using Moodle and Blackboard. I have also taken a few courses that were designed to use social media as a platform. Wordpress has become an educational tool that can be used as a course space, with varying success.

I enjoy studying online because I greatly appreciate the option of being at home with my son, progressing through the coursework, moving through modules at my own

pace. Being a sole parent, studying online offers me the flexibility to work around my family, community and employment responsibilities.

In terms of strategies, I have an affinity for task lists and visible evidence of productivity. I approach online learning the same way: making lists of assignments, organizing myself with tasks and a schedule, breaking things down, and jotting my assignments across a semester calendar. It gives me a needed sense of accomplishment and agency over my future. My favorite part is the beginning when I click into a course, and familiarize myself with the interface, like I am embarking on an adventure.

Technology has always been a passion, but I realize that it also has limitations. It is tempting to throw technology at a challenge, instead of pausing to evaluate the question or problem at hand. One aspect of this study was to gain some insight into whether the technological space itself requires transformation or "Indigenization," or whether something else would develop that required a deeper look. An effective way to find out this information is to ask online students directly.

Because I view research as a form of service, I approached this research study from a place of caring and respect. During recruitment and interview phases, I attempted to create an environment in which the participants felt at ease to share their personal experiences. I sent an invitation and personally asked a few participants that I knew would be interested and willing to share their experiences. Before beginning to interview, I let each participant know that they would drive the direction of the conversation, and that I was interested in anything they wanted to share. I reminded them that I had a guide, but that the interview would be organic, rather than a question and answer session. All participants were forthcoming and enthusiastic about the purpose of the study. They were happy to share their experiences of online course work. Most participants were enthusiastic, many thanked me for conducting the study, one indicated it was "necessary," and most requested a copy of the subsequent report and thesis. As the interviews progressed, memories came back to them about past coursework. I felt privileged that they disclosed very personal stories, sometimes of trauma, and often of career plans and enthusiasm about their future and current life.

During the interview phase, and especially during the theming and coding phase of the study, I became very familiar with each person's story. My hope is that the

following narrative constructed is a story that incorporates each person's voice, and by centering these voices, that the stories are influential.

Overview of the Study

This thesis is divided into six distinct chapters. *Chapter 1* provides an introduction and defines online and distance education, as well as contextualizes it in the current climate of Reconciliation in Canada. *Chapter 2* is a review of literature that examines online distance education through the widely accepted Community of Inquiry Framework (CoI) (Garrison et al., 2000) accepted by many distance learning scholars, in which learning engagement is broken down into three domains. The CoI model explains how learning occurs for a group of individual learners at the intersection of social, cognitive and teaching presence. It is believed that if significant engagement occurs in just once domain, the learning process may be deepened (Garrison et al., 2000). The literature review details some challenges and benefits of distance education recognized by Indigenous students in a post-secondary context and acknowledges gaps in the current academic literature. *Chapter 3* outlines the research methodologies and methods used to conduct the study.

Chapter 4 is a compilation of stories and participant quotes outlining the various institutional supports and barriers, motivations and strategies for success, and perceptions of distance learning, instruction, and curriculum that impacted the Indigenous student participants involved in this particular study. The goal of the chapter is to understand how these factors affect student experience and success rates, and to establish what priorities exist for Indigenous students who are motivated to enroll in distance education. Topics include institutional supports and constraints, preferences for technology, curriculum and assessment, instructor engagement, funding restrictions and educational self-concept. Contextualizing how these factors shape Indigenous student experiences within the CoI framework (a widely accepted heuristic used for course development in networked environments) may have implications for institutional policy and pedagogical revisions. Informed by potentially impactful personal participant narratives, findings could make a difference in funding allocation, hiring policies, and curriculum shifts.

Chapter 5 outlines the strengths and limitations of the research study, along with implications and directions for subsequent and further research that could complement

this narrative inquiry of a limited number of participant interviews. Unexpected findings emerged during the study. These are explored along with personal reflections to conclude in *Chapter 6*.

Chapter 2. Literature Review

Across Canadian higher educational institutions, graduation rates for Indigenous students is markedly lower than non-Indigenous students (Pidgeon, 2008; Statistics Canada, 2017**)**. The concept of distance learning has been lauded as a democratizing way to increase access to higher education and achieve educational parity (Simon, Burton, Lockhart, & O'Donnell, 2014; Sisco, 2010). A gap exists between the completion rates of Indigenous learners and non-Indigenous learners in online environments (Sisco, 2010; Statistics Canada, 2017; TRC, 2015b). Key results from the last census regarding education in Canada reflected that 10.9% of First Nations, Métis, and Inuit aged 25 to 64 had a bachelor's degree or higher, whereas 54% of Canadians, of the same age group, had college or university degrees (Statistics Canada, 2017).

In a post Truth and Reconciliation Commission Report (TRC) era, Indigenous success has increasingly become an imperative of governmental agencies and institutions across Canada. Calls to Action (CTA) Items #7, #10, #11 and #16, #63iii and iv[2] specifically require transformation for Indigenous education and educational funding (TRC, 2015a). Canadian governments and post-secondary administration have responded to the CTA with requests for faculty and staff to raise university completion rates, in face-to-face (F2F) classrooms (Pidgeon, 2008, 2014; Pidgeon, Archibald & Hawkey, 2014). In post-secondary institutions, either online or F2F, a lack of strategic institutional commitment and action to address these gaps conveys to Indigenous students that "the academy is not interested or concerned about their involvement, educational needs, Indigenous knowledges, philosophies, and cultural integrities" (Pidgeon et al., 2014, p.3). By extension, it would seem to make sense that this would also apply to the digital educational environment. If higher education institutions can

[2] CTA #7 relates to a collaborative strategy to eliminate educational and employment gaps between Indigenous and non-Indigenous Canadians.
CTA #10 relates to federal funding and (i) relates to closing this gap within one generation. CTA 10 (ii) is one that I refer to because it is specifically a call to: Improve education attainment levels and success rates. Due to the limited scope of this master's thesis, I do not thoroughly discuss funding, but mention it cursorily because the call could be extended to providing an increase in funding to hire more Indigenous supports within institutional student services. I refer to CTA #16 to mention a connection to program and course content, although during our interviews, my participants did not discuss language specifically. But research indicates the value of cultural underpinnings on educational success (Archibald et al., 1995; Pidgeon, 2008, 2014; Pidgeon et al., 2014).
CTA #63iii and iv are particularly integral to supporting and increase in teacher training as it relates to building capacity for intercultural understanding, empathy and mtual respect.

transform online educational experiences by creating a culturally relevant approach to delivery, development and student support, potential exists to mitigate this disparity within online distance education.

Characteristics of Online Learning Environments and the Learner that Contribute to Success in Distance / Online Education

Students who seek to study online learning are most likely to succeed, or complete a course, if they possess or have developed certain characteristics, such as intrinsic motivation, interpersonal and communication skills, academic self-concept (Dabbagh, 2007; Dille & Mezack, 1991), possess an internal locus of control (Yukselturk & Bulut, 2007), and a high expectation for completion, either program or course. Independence oriented terms for characteristics such as self-direction, self-control, self-starter, and goal-orientation are used when describing successful online learners. Self-regulation, effort, persistence, and achievement (Martin, 2013; Schunk and Miller, 2002) are noted by researchers as indicators of success. Various student characteristics; such as gender, locus of control (Dille & Mezak, 1991; Parker, 1999; Stone, 1992), self-regulation, learning preferences, motivations, (Yukselturk & Bulut, 2007) and self-perceptions have been identified as factors that contribute to success in online learning. Evidence exists that students with an internal locus of control have more potential for success in distance education (Dille & Mezak, 1991; Parker, 1999; Stone, 1992), even if some studies contradicted this assertion (Sterbin & Rakow, 1996). Motivation is a determining factor in student success online[3] (Pintrich, 1990) and combinations of motivation, self-regulation and goal-setting (Pintrich & Garcia, 1991; Pintrich et al., 1991) can contribute to online learning success.

Conversely, students who are low in self-efficacy are more likely to dwell on their deficiencies and view situations as particularly difficult (Bandura, 1997). Self-regulated learning is outlined by Schunk and Zimmerman (1998) as the ability to control and direct activity towards a specific goal, which is also correlated with success

[3] Motivation can be understood using Pintrich's model (1990) in which he organizes task motivation using a theoretical framework for conceptualizing student motivation, adapting a general expectancy-value model (Pintrich, 1990). The model is comprised of three components concerning student motivational beliefs: task performance reasons, self-efficacy beliefs, and test anxiety.

in distance education.[4] (Pintrich & Garcia, 1991; Schunk & Zimmerman, 1998; Zimmerman, 2002; Zimmerman & Martinez-Pons, 1990). The concept of learned helplessness[5] has been explored in relationship to distance education. The concept of internal and external locus of control[6] (Rotter, 1966; Covington, 1998) has been discussed in relationship to online education success (Yukselturk & Bulut, 2007). Generally, deteriorating effects of failure on performance were found among students that are externally oriented, rather than internally oriented (Rotter, 1966).

The intention of this study was to discover external factors that related to success, rather than to frame any of the findings within a deficit model. Characteristics of a successful learner are noted, to give a sense of what is required for successful self-paced online study, rather than to characterize students in the study. However, those students who may not yet possess these learning skills may benefit from development in this area. This presents an important implication for student support or skill development.

The pedagogical characteristics of online learning environments emphasize, and rely upon, interaction and collaboration (Anderson & Garrison, 1998). For those who have experience in independent study, the collaborative nature of networked learning through a computer can enhance the educational experience (Anderson, 2017; Garrison et al., 2000). It would seem important to ensure that students possess these collaborative skills and be prepared to study independently to achieve success in a course built upon the CoI framework. In terms of the TRC's Call to Action (2015a), it would seem

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[4] Self-regulated learning is described as a determining factor and as a basis for understanding successful learners in self-paced independent study courses (distance education). Schunk & Zimmerman (1998) describes this as a process of directing one's thoughts, feelings and actions toward goal attainment. Pintrich and DeGroot (1990) organize the concept of self-regulated learning around three constructs: metacognitive strategies for planning, monitoring, and regulating their learning; management and control of academic tasks; and strategies for learning, remembering and understanding course material.

[5] In a study by Diener and Dweck mastery-oriented children tended to emphasize motivational factors and to view failure as surmountable. Although the performance of the two groups was usually identical during success or prior to failure, research suggested that these groups may differ in the degree to which they perceived that their successes can continue and their failures are avoidable. Compared to mastery-oriented students, helpless students underestimated the number of successes (and overestimated the number of failures), did not view successes as indicative of ability, and did not expect the successes to continue. Subsequent failure led them not to value their performance but the mastery-oriented students were impacted in the same way. For helpless children, successes are less salient, less predictive, and less enduring—less successful (Diener & Dweck, 1980).

[6] Internal-external locus of control is a factor that can contribute to success in online education. In general, those students with internal locus of control tend to expect to be able to influence outcomes and those with external locus of control believe that outcomes can be unrelated to their actions (Rotter, 1966).

integral to address the CoI constructs within course and program design as well as online student support in order to align with the CTA #7[7] and #10(ii)[8] which mandate the reduction of disparity between educational and employment gaps between Indigenous and non-Indigenous Canadians, and improve education attainment levels and success rates (TRC, 2015a). To do this, ensuring that Indigenous post-secondary students, who enroll in self-paced courses, possess or can acquire those independent study skills, and are provided the most supportive learning environment possible so that the opportunity for accomplishment exists. By doing so, there is potential to avoid learned helplessness to manifest itself, which can afflict students who are not prepared for the independent nature of distance learning. Setting the context for success may improve not only institutional goals such as student retention and course enrollment increases but offer Indigenous students the opportunity to engage in distance learning with higher levels of achievement.

If interaction is integral (Anderson, 2017; Garrison et al., 2000), then well-designed courses are those that build opportunities for interaction. Recommendations for the effective use of online learning recognize that instructors must deliberately structure interaction patterns to overcome the potential lack of social or teaching presence in self-paced courses. Similarly, quality instructional design, course development strategies, and facilitation techniques need to be incorporated with supportive pre-course instructional activities provided to familiarize first-time learners with online learning expectations (Mykota & Duncan, 2007). The onus is on the instructor or course designer to foster interactions that prevent attrition, despite learner profiles.

In terms of the online learning environment, research has demonstrated that instructional design models as well as the technological environment are not contextualized for all learners but based on the mainstream epistemologies of those designing the spaces and courses (McLoughlin & Oliver, 2000). For this study, the focus was on the general and pedagogical environment in which students thrive, rather than potential deficiencies in the learner's study characteristics.

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[7] CTA #7 calls for the federal government to develop with Aboriginal groups a joint strategy to eliminate educational employment gaps between Aboriginal and non-Aboriginal Canadians (TRC, 2015a).
[8] CTA #10(ii) calls for federal government commitment to funding that would incorporate (ii) Improving education attainment levels and success rates (TRC, 2015a).

Colonial Impact on Indigenous Education

Much of the research regarding Indigenous student success in the past has been done through a deficit lens (Archibald, Bowman, Pepper, Urion, Mirehouse, & Shortt, 1995; Pidgeon, 2005; 2008, 2014a, 2014b; Pidgeon, Archibald, & Hawkey, 2014). In order to provide background, the impact that colonization has had on Indigenous peoples in the educational context warrants discussion in any current educational dialogue. The Canadian K-12 curriculum has not reflected an accurate retelling of the Indigenous histories of cultural repression, resulting in a lack of knowledge and understanding of this legacy and resulting trauma on those (and their descendants) who attended residential school (Feir, 2016), endured the child welfare system, or 60s Scoop. (Assembly of First Nations, 1994; Chrisjohn & Young, 1997; Miller, 1996; Royal Commission on Aboriginal Peoples, 1996). Teacher preparatory programs have been implicated in reproducing unequal power relations and perceptions (Schick & St. Denis, 2003). The greatest predictor of Indigenous students' school success is the availability of teachers that are engaged in a culturally responsive pedagogy of relations (Berryman, Bishop & O'Sullivan, 2010). A study done by Archibald et al., (1995) found that relationships were integral to student persistence. Institutional supports, specific Indigenous programs, welcoming and Indigenous staff and faculty, all played a large role in improving student persistence (Archibald, Bowman, Pepper, Urion, Mirehouse, & Shortt, 1995; Pidgeon, 2005; 2008, 2014a, 2014b; Pidgeon, Archibald, & Hawkey, 2014).

Battiste (2002) cautions against promoting a sense that there is one Indigenous learning style, and to use a critical lens when developing curriculum or designing learning spaces to avoid employing a stereotypical approach. More importantly, Indigenous learning comprises complex knowledge construction (Doolittle, 2006) and centers this with the learner, contextualizing knowledge for each individual (Battiste & Henderson, 2000). This is an integral concept to be aware of as educational institutions attempt to transform curriculum and programs, so that Indigenization is not done simply or result in stereotypical approaches.

In their study of graduate students, Hathaway, Nagda, and Gregerman (2002) found that engagement seemed less linked to a student's background than it is to the type and quality of instructional involvement. This resonated during the process of

analysis for each transcript of participant interviews. As a starting point, an attempt was made to identify ways to support students and provide tools for navigating institutional barriers, from their own words. Next, focus was applied to the programs, institutions, courses, and student supports that were referred to, rather than focusing on technological aspects of online learning design.

Despite growing numbers of Indigenous participation in post-secondary enrolment attrition occurs and graduation rates reflect the difference in entrance and graduation rates (Malatest & Associates, 2008; Pidgeon, 2008a; 2014. The prevailing attitude that education is viewed as a tool of "empowerment and decolonization" is not sufficient to provide Indigenous students, often first generation post-secondary students, with the skillsets to maneuver to full advantage inside mainstream institutions (Pidgeon 2014; Battiste, 2013; Mendelson, 2006). Research regarding Indigenous student experiences in education (Archibald et al.,1995; Battiste, 2000; Battiste, Bell, & Findlay, 2002; Kuokkanen, 2007; Royal Commission on Aboriginal Peoples, 1996) continue to highlight the legacy of colonial oppression, systemic racism, and continuing practices and policies that work against Indigenous agency and cultural integrity. Pidgeon (2008, 2014) articulates that to authentically address institutional responsibility and accountability requires an Indigenous wholistic framework[9]. The wholistic framework has integrated the 4Rs (Kirkness & Barnhardt, 1991; Archibald, Jovel, McCormick, Vedan, & Thira, 2006) with cultural teachings, and the relationship between self, family and community to create this wholistic framework. Literature on Indigenous postsecondary student experience in Canada continues to highlight ongoing barriers, such as lack of institutional financial support, housing, K-12 "academic streaming," systemic racism, lack of respect for Indigenous knowledge(s), inappropriate pedagogy and curriculum, and inequitable admission standards (Archibald et al., 1995; Malatest & Associates, 2008; Pidgeon, 2008a; RCAP, 1996). Transforming higher education requires identifying and removing systemic barriers. However, to do this requires a consideration of, not only institutional policy, programs, and practices, but

[9] The wholistic framework represents the interconnectedness of the intellectual, spiritual, emotional, and physical realms and the inter-relatedness of these realms to the individual, family, and community as a basis for viewing support necessary for Indigenous students in post-secondary institutions (Pidgeon et al., 2014).

also the broader societal, economic, political, and cultural contexts in which these institutions operate (Pidgeon, 2008a, 2014).

Any successful measures, policy changes or revisions to curriculum or learning spaces or supports to improve the experiences of Indigenous students who seek online education factor in the multiple historical, socioeconomic, political, and cultural factors that shape their experiences. To ensure meaningful inclusion and reflective practice that is effective in personalizing education for students, educators must also ensure that they re-educate themselves on the wide ranging and deep effects of colonialism, and how it has shaped Indigenous educational experiences (Pidgeon, 2014, 2016; TRC, 2015a, 2015b).

Some of the participants (or their parents and grandparents) in this study attended residential school, and/or received settlements that were used to fund a portion of their online education. For this reason, it is worth noting the effect that residential school, as a legacy of institutional oppression, has impacted and is still impacting learners. In CTA #7 and #10(ii and iii), the TRC mandated that federal governments develop policy so that educators may decolonize education and provide ways to increase parity for Indigenous students. CTA #7 advocates for consultation with Indigenous groups to develop strategies to eliminate educational gaps between Indigenous and non-Indigenous Canadians. CTA #10ii and iii reference participation and consent around funding to not only improve educational attainment levels, but also to create culturally appropriate curricula. One of my participants alluded to the fact that online education could be improved upon: “If it’s our only option in the North, it should be top notch” (Ben, personal communication, April 4, 2019). Next, I outline what literature I found regarding Indigenous student experiences within post-secondary online education.

Supporting Indigenous Students

Effective online learning depends on the level of support students receive, the degree to which this support is integrated into the daily curriculum, and the media used. (Sisco, 2010; Loewen et al., 2018). Delivery of distance education should respect and adapt to the needs and preferences of the learners rather than requiring learners to adjust to existing delivery methods. Delivery models need to be compatible with their personal, family, and work-related realities (Fahy, Steele, & Martin, 2009).

Learning environments, student support systems, authentic partnerships, and pedagogical shifts in curriculum development and delivery all have the potential to transform online education and increase engagement. One way to support Indigenous students in online education may be to create a more engaging online environment. Another may be to bolster support such as tutoring. Engaging in this study will shed some light in this area, in the participants own voices.

Community of Inquiry Framework

One way of framing learner support in terms of engagement is the Community of Inquiry (CoI) Framework, which places the learner at the centre. The CoI is comprised of three types of interaction with the learner at the center: teaching presence, social presence, and cognitive presence (Garrison et al., 2000). It is about the process of inquiry—teaching, relating, demonstrating and reflecting on how we engage with teachers, other students and content as we learn online.

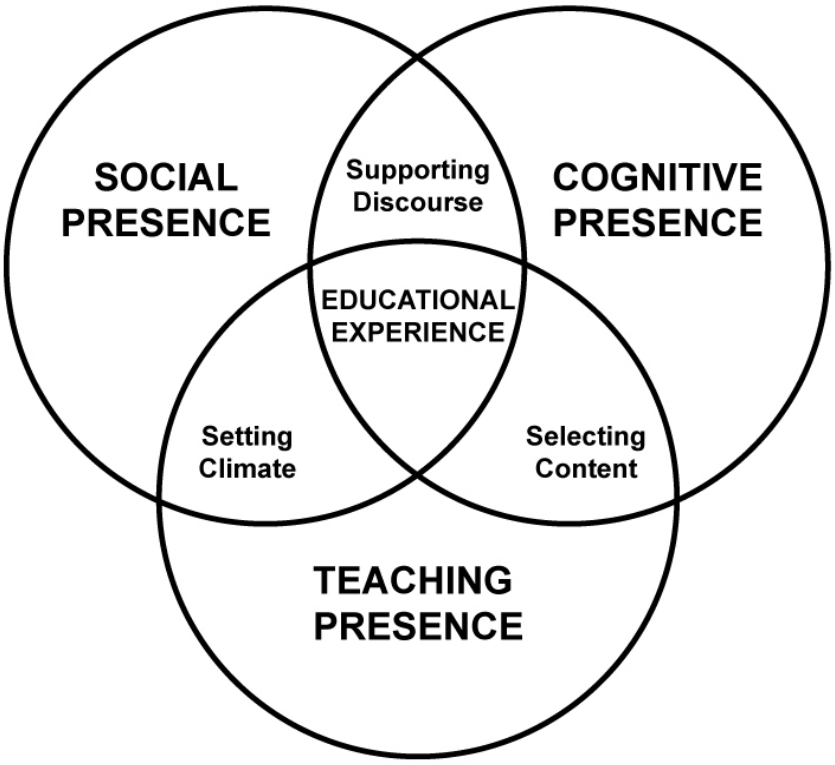

Figure 1. Community of Inquiry Model (CoI): Elements of an Educational Experience (Garrison, Anderson & Archer, 2000) is comprised of three types of interaction with the learner's educational experience at the center: teaching presence, social presence, and cognitive presence (Garrison, Anderson & Archer, 2000). A CoI describes the process

of inquiry within a learning community: teaching, relating, demonstrating and reflecting on how a learner engages with teachers, students and content.

Despite the flexibility of computer mediated learning, and reports of increased satisfaction (Allan & Seaman, 2004), barriers and retention issues remain (Moody, 2004) in computer mediated learning, especially asynchronous, independent study courses in which students are ostensibly teaching themselves. The social presence aspect of the CoI is an important factor in developing knowledge according to research. Evidence suggests that when a learner experiences a high degree of social presence, they are more likely to engage in higher order critical thinking (Garrison et al., 2000), let alone complete the course. Social interaction can be difficult to foster in independent study courses in which students often have the experience of navigating course content alone (Symeonides & Child, 2015). Although using the CoI framework is helpful as a starting point, it does not incorporate an Indigenous educational model to frame learning in way that includes notions of relationship with community, family or land, which is an integral aspect of Indigenous education (Archibald et al., 1995; Battiste, 2002; Hare & Pidgeon, 2011; HeavyRunner & DeCelles, 2002; Martin, 2001; Pidgeon et al., 2014; Pidgeon, 2008b; Royal Commission on Aboriginal Peoples, 1996; Shotton, 2008). Due to the sensation of disconnection and the correlation between connection, relationship, persistence, and knowledge construction in computer mediated educational environments, it has become integral for course designers to build online learning environments in which students feel comfortable communicating with peers and instructors (Mykota & Duncan, 2007). Studies indicate that a single significant connection in one area can increase knowledge construction (Garrison et al., 2000). For example, teacher presence, is imperative for engagement (Anderson, 2003; Anderson, 2017; Richardson et al., 2015) and "as a significant determinant of student satisfaction, perceived learning, and sense of community" (Garrison & Arbaugh, 2007, p. 163). Any further connections within the other presences in the CoI can increase this engagement, but the necessary presence for establishing an effective educational CoI is a teaching presence (Garrison, et al., 2000). It is evident from research on specific remote Indigenous educational programming, that, as well as language and epistemological

concerns, unique preferences become apparent that related to student interactions with instructors and content (Pulla, 2015; Simon et al., 2014; Sisco, 2010; Steel & Fahy, 2011; Walton, 2015).

Teaching Presence

The first component of the CoI framework is related to teaching presence and interaction. Voyageur indicates that program success is dependent upon resourcefulness and innovation (2001). Innovation and responsive design in the form of flexible delivery models, can be considered one method for increasing engagement with Indigenous learners (Loewen, et al., 2017; McMullen & Rohrbach, 2003). Continual innovation and responsive design are an important factor in effective delivery of distance education and may be even more important when addressing the needs of the Indigenous learner. In the case study of Elsipogtog First Nation, authors noted that innovative programming embodied best practices delivering online education to a remote Indigenous community (McMullen & Rohrback, 2003). Voyageur (2001) indicates interesting ways that have been used to deliver curriculum. In one case, detailed by Fiddler in 1992, radio broadcasts were utilized to deliver programming to community centers and "two-way audio and TV-conferencing" was a communicated preference for students who identified as requiring a visual connection to the instructor. These students claimed that relationships, networking and support systems were more possible through videoconferencing (Simon et al., 2014). Although, it should be noted, perspectives varied depending on the individual learner, the technology viability, and instructor (Simon et al., 2014). Storytelling was an educational process that unfolded through mutual, reciprocal relationships between social groups and the natural world. Spirituality was intertwined and interwoven within everyday life (Toulouse, 2006). Researchers (Loewen et al., 2017, 2018) investigated a method of incorporating digital storytelling into course design as a way of approaching it in a culturally relevant way (Loewen et al., 2017). This model may work for that particular community that they consulted with. Developing frameworks such as the model that Loewen et al., put forward, with which to design courses may be helpful, but it should be noted that it may only be effective for certain course types, content areas or communities. I am reminded of Battiste's (2002) caution regarding the evaluation of Indigenous viewpoints and epistemologies unilaterally.

Through this lens, online study seems to be directly opposite to traditional Indigenous learning, in which relationship and storytelling are integral to knowledge transmission. The internet, computer mediated learning, and the web itself are constructions of a mainstream dominant culture, and not designed without bias and hierarchy (Barabasi, 2003; Mejias, 2009; Bouchard, 2010). Traditionally, storytelling was a method of transmitting knowledge and relationships are paramount within communities (Toulouse, 2006). Recently, Loewen et al., (2017) attempted to validate digital storytelling within an online educational context to integrate Indigenous storytelling into the process of developing an online course, as well as utilize digital storytelling within a process of collaboration.

Online instructional best practices include relationship building with students to contextualize their experience. A recent study of exceptional award-winning US faculty members indicated that availability, presence and early communication, by the instructor, during initial parts of the course contributed to fostering community and social interaction with students (Martin, Ritzhaupt, Kumar, & Budhrani, 2019). In the case study of Elsipogtog First Nation, authors noted that innovative programming embodied best practices delivering online education to a remote Indigenous community (McMullen & Rohrback, 2003). One preference articulated by Indigenous learners is for more in-depth personal relationships between students and instructors (McMullen & Rohrback, 2003; Simon et al., 2014). In one scenario, an instructor describes the online student-teacher interaction as devoid of the non-verbal and the nuanced cues are normally required to decode communication and foster interaction (MacKinnon & MacFarlane, 2017). This is to be expected in an online environment, making it imperative for instructors to find ways to communicate with students by adopting technologies or methods of communication to bridge the void. Teaching presence, whether via email, phone or fax, was identified as an essential component contributing to distance and online learner success and program completion (Steel & Fahy, 2011). In a 2009 study of 45 Indigenous communities in Alberta, Steel and Fahy (2011) determined that 66% of 481 students surveyed stated a preference for some form of face-to-face consultation, in addition to online instruction, upgrading opportunities, especially for courses (such as math) that can be difficult to coach by email.

Criticism from Indigenous students in some programs, found a lack of personal interaction with the instructor contributed to a decrease in engagement. Student respect for instructors decreased due to student perception that their culture and circumstances were not understood (Simon et al., 2014), indicating a requirement for increased intercultural training for online instructors (Williams, 2019). Consultation and inquiry are important tools for reflection and praxis. Further criticism of online course and program development is that learners were not part of the process of a program developed for them. (McLoughlin & Oliver, 2000; Simon et al., 2014), which is also mandated by the TRC, CTA #7 and #10(ii) (TRC, 2017a). Online instruction strategies such as reflection, swift responses, thorough feedback, reflective practice (praxis), could provide an opportunity to adapt facilitation and teaching skills to a specific audience or student (Martin, Wang, & Sadaf, 2018). This can be particularly important for Indigenous students who may require customization, personalization, and cultural contextualization.

MacKinnon and MacFarlane (2017) suggest that instructor-student engagement can be comprised of adjusting expectations around academic writing, providing safe spaces for experimentation, and by altering assessment. It was suggested that assessment could be modified to increasingly weight ideas, critical thinking, and de-weight mechanical aspects of academic writing. Also, by providing an ungraded, informal communication space, students would be able to practice interaction, dialogue and writing skills. Providing timely formative assessment in the form of feedback further intensifies any student-instructor relationship, providing an opportunity for students to deepen their understanding of course material and provide motivation for continuing.

Increasing the instructor presence in an online could inform an approach to online program development and delivery, although this inevitably means policy and funding changes at administrative level for increased professional development or autonomy over course delivery and design. It is possible that policy, funding, and development changes are necessary to provide or mandate intercultural training for online instructors to foster increased interaction with students (Pidgeon & Hardy, 2005; Pidgeon, 2008, 2014, 2016; Pidgeon et al., 2014) The TRC called for mandatory intercultural training for educators (TRC, 2017a, Williams, 2019). The standard

language used in the CTA document is: "This will require skills-based training in intercultural competency, conflict resolution, human rights, and anti-racism" (TRC, 2015a, p. 7) to compel a number of ministries, departments and institutions including the Ministry of Education to provide this necessary training, along with a commitment to Indigenous education issues (CTA #63)[10]. Further research to examine instructor interaction for Indigenous students could bring more insights into this area.

Cognitive Presence

The second presence of the CoI framework is the cognitive presence associated with critical inquiry: the interaction with and reflection upon the content itself. This aspect of the CoI was built upon Dewey's notion of reflective inquiry (Garrison et al., 2010). Contextual content inclusive of Indigenous worldviews, epistemologies, and language is pivotal to increasing engagement for Indigenous learners, online or otherwise (Battiste, 2002; Simon et al., 2014; Sisco; 2010; Walton, in press). Mainstream curriculum lacks Indigenous cultural content and does not address Indigenous perspectives, histories, learning styles (or ways of knowing) and realities (Kawalilak, Wells, Connell, & Beamer, 2012; McMullen & Rohrback, 2003; Sisco, 2010; Steel & Fahy, 2011).

Indigenizing curricula is complex and inextricably related to the cognitive presence of the CoI construct. Increased resources, funding and policy shifts are required to hire Indigenous faculty, to provide training to faculty to build capacity for Indigenous knowledge and epistemological constructs are necessary. (Pidgeon et al., 2014). Anytime an online course is in revision is an opportunity for Indigenization, preferably in consultation with students, Indigenous communities, and faculty to determine and inclusive curricula (AFN, 2010; Archibald, 2017 cited in Lewington, 2017; MacKinnon & MacFarlane, 2017; Simon et al., 2014). If key requirements for a First Nations education system include First Nations languages, cultures, histories, philosophies, worldviews, and values (AFN, 2010; Battiste, 2002; Pulla, 2015), course

[10] CTA #63 is comprised of a set of actions that address curriculum at all levels of education: #63 (i) relates to developing and implementing K-12 curriculum and learning resources about Indigenous peoples in Canadian history, including the history and legacy of residential schools; (ii) sharing this information and best practices on teaching curriculum; (iii) building student capacity for intercultural understanding, empathy, and mutual respect; (iv) identifying related teacher-training needs (TRC, 2015a).

developers are obligated to revamp curricula to ensure inclusiveness of Indigenous perspectives and worldviews.

In programs specifically developed for a specific community of learners, it is possible to wrap a conceptual framework with overall goals of a program within the local sociocultural, political, epistemological, and ontological contexts, such as the Nunavut M.Ed. program (McAuley & Walton, 2011). This unique program was developed and delivered specifically to Inuit students. To overcome the challenges of intermittent internet infrastructure and low bandwidth in Nunavut, the blended M.Ed. program was customized to suit the requirements of a remote location. Program developers created an asynchronous web-based delivery component which became the Nunavut M.Ed. Knowledge Forum environment. The authors attribute its success as a learning tool to its ability to share knowledge among learners and teachers in a seamless environment (Simon et al., 2014). Using such constructs is possible with new programming and curriculum or course revisions. By developing, borrowing or utilizing an epistemological framework (or various frameworks) to seamlessly weave Indigenous perspectives and, where possible, languages into curriculum, it might be possible to increase the cognitive presence of the CoI framework and student engagement with curriculum. Inuit Societal Values and Inuit *Qaujimajatuqangit* is used to guide development of all government initiatives in Nunavut, including education. It suggests embracing all aspects of traditional Inuit culture including values, worldview, language, social organization, knowledge, life skills, perceptions and expectations" (Government of Nunavut, 2013, p. 4).

Indigenous Epistemologies

Battiste (2002) states that closing the chasm between European centered thinking and Indigenous centered worldviews is necessary to validate Indigenous knowledge construction. However, it is a complex and problematic concept to authentically validate Indigenous knowledge inside higher education institutions, and care is required to avoid generalizing all Indigenous cultures. The Nunavut M.Ed. programming was developed specifically for an Indigenous cohort of students in Nunavut. Therefore, it was possible to contextualize the program by hiring Elders, guest speakers and instructors with Northern experience. Acknowledging that this is more difficult to do in an online environment, which is by definition, untethered to a

community in which local consultation can take place, does not mean that contextualization concerns should be ignored. It is integral to discover and ensure a method of contextualizing curriculum for online delivery to potentially disparate learners based on the argument that it provides an essential foundation for learning (Chen, Mashadi, Ang & Harkrider, 1999).

Social Presence

A social presence between learners is the third component of the CoI model. McAuley and Walton (2011) found that in a blended Inuit M.Ed. program, a collaborative community of learners was enabled through a knowledge forum that generated discussion and interaction despite being separated by time and distance. Peer engagement can be difficult to facilitate in online delivery. If a cohort is not comprised of a group of culturally similar students, these cultural differences can play a part in varying degrees of learner engagement in both informal and formal discussion spaces (McCloughlin, 1999). Collaborative work can be affected by variances in expectation levels. Preferences can be contextually related to the specific cultural group depending upon particular participation styles. Opportunities for online discussions and forums, web conferences, and other forms of student interaction were cited in the Inuit M.Ed. program as positive but synchronous learning versus asynchronous was preferred (McAuley & Walton, 2011). A request for consistent opportunities to connect with others, was also identified as a strong motivator for learning (Kawalilak et al., 2012).

In a case study of students, community members of Elsipogtog First Nation in New Brunswick (Simon et al., 2014), synchronous video conferencing in a community centre was identified as integral to successful peer community development. Students enjoyed the benefit of learning together (Simon et al., 2014) and described appreciating coordinators and tutor support (Walton, in press; Voyageur, 2001). Is this a model that could be implemented in an online environment? The Elsipogtog First Nation cohort experience with Webex (outlined by Simon et al., as a flexibility delivery method), notably felt like a “virtual meeting place” (Simon et al., 2014). Recent research revealed an area of the possible e-learning innovation, influenced by social media behavior; which reveals that learning gamification (Johnson, 2010 as cited in Pulla, 2015) or storytelling (Loewen et al., 2017) offers an opportunity to apply innovative strategies to engage learners. There is a potential for further research on how the concept of

community of practice (CoP), typical of social media data interaction or knowledge construction between participants, can be used to increase engagement for Indigenous learners. Pulla (2015) stresses the important connection between informal and formal learning environments for Indigenous learners, and the aspect of learner generated knowledge construction that can occur in discussion, developing a CoP within a learning group. The author refers to the benefit of aligning informal knowledge construction with the visual and oral strengths of Indigenous learners through mobile learning (Pulla, 2015).

In other instances, Indigenous learners engaged in distance education set up working groups with each other in a community resources centers indicating that F2F interaction among peers was important, despite being enrolled in an online course (Simon et al., 2014). Technical difficulties can be hurdles to interaction: bandwidth and certain types of interactions are barriers to interaction, not just content, but with teacher and peer interaction (Kawalilak et al., 2012; MacKinnon & MacFarlane, 2017; Simon et al., 2014). More success was evident in cases in which unique platforms were developed. Researchers (Simon et al., 2014) suggest that a seamless online environment customized for a specific cohort contributes to the ease of knowledge sharing (2014). It is clear that high quality internet bandwidth is necessary for sufficient peer engagement in mobile learning (Molyneux, 2014) and that inadequate internet infrastructure exists in some locations in Canada to support innovation in educational technology (Pulla, 2015).

Barriers in educational technology could indicate that technological tutors and subject area coaches could be beneficial for those not able to gather F2F. This “coach” could act as a facilitator and bridge technological difficulties by being present in the course environment. Evidence shows that campus mentor programs have been successful in providing F2F peer community on campus for Indigenous students (Pidgeon, 2008; Walton, in press). An argument could be made for operationalizing this same type of support by providing Indigenous online tutors, coaches, and advisors who can be accessed for any course. This could mirror an Indigenous support program, like those that exist on many campuses, where students can connect with peers, locate assistance with technology, and receive support for social and family concerns. The concept of appropriate culturally relevant support for online students is an area that presents an opportunity for further research.

Technological Adoption Issues

Despite the relevance and benefits online education provides, if the technology is available, there is research to indicate that suspicion exists in traditional cultures to prevent technological adoption for educational use (Pulla, 2015). This simply emphasizes the need for collaboration and consultation with Indigenous communities during this educational transformation of curriculum and policy (AFN, 2010; Battiste, 2002; Archibald, 2002, 2017; Simon et al., 2014; TRC, 2015b; Walton, in press).

Even with the previously stated issue and concerns around online distance education, suspicions, technological barriers, and lack of inclusive curriculum, higher education institutions are making solid strides toward transforming educational initiatives in Indigenizing curriculum and space post-TRC (Lewington, 2017). To fulfill the mandates of authentically Indigenizing online environments and increasing engagement for Indigenous learners, the CoI model can be used to further investigate and frame learner engagement.

This transformation in engagement of learner-instructor, peer-peer, and learner-content means a shift in policy, additional funding, and pedagogical transformation to support students and instructors in additional education to meet student requirements for success (Pulla, 2015). Success can be translated as course and degree completion, resulting in the aspired-for metrics. But this cannot be done without discovering a path forward to authentically transform, adapt and mold the space in which this learning occurs. Course revision, authentic consultation, professional development, academic Indigenous hiring, and an increasingly elastic curriculum development and delivery model are necessary for Indigenous engagement. First Nations maintain their own concepts of knowledge, information and communication (Battiste, 2002; Simon et al., 2014) and for these reasons, Indigenous peoples must shape their own educational future according to their unique worldviews and knowledge construction (AFN, 2010; Archibald, 2002; Battiste, 2002; Lewington, 2017; Simon et al., 2014; TRC, 2015b; Walton, in press). The findings of a qualitative research study in this area could inform the aspired for transformation to authentically weave Indigenous worldviews, epistemologies, pedagogies and perspectives with mainstream current curriculum. Further research is necessary to align Indigenous epistemologies and pedagogies with educational technology (Pulla, 2015). By shifting the learning environment, revising

instructor approach, re-developing curriculum and supporting students in the ways expressed, Indigenous students may be better supported towards program and course completion.

Gaps in Research

Minimal research attention has been directed towards the experiences of Indigenous university students enrolled in online courses, online participatory styles, preferences for online engagement, perceptions of online student community or of instructor support. The bulk of the research has been focused on the online and interactive experiences of Indigenous students in remote or northern cohort-based programs, either developed specifically for them, or delivered to them as a group. (Dumbrill & Green, 2007; Fahy, Steele, & Martin, 2009; Kawalilak, Wells, Connell & Beamer, 2012; McMullen & Rohrbach, 2003; Simon et al., 2014; Sisco, 2010). For the purposes of this study, the participant is defined as a student who may or may not reside in their home community and is enrolled in an online course but is not in a specifically cohort-based program developed for a remote community of learners.

Chapter 3. Research Methods & Methodological Approach

Research Methods

The study was guided by aspects of Indigenous Methodology (IM). IM requires a researcher to adhere to ethical guidelines, which include, but are not limited to a mutually respectful approach and relationship between the researcher and participants, that the research benefits the community it seeks to gather data with, that informed consent is negotiated, and that the research is not exploitative. Respect for community ethics and protocol is integral to the process (Kovach, 2009). By centering voices of students who identify as belonging to First Nations, Inuit and Métis communities, who have been previously underserved as populations in Canada, my aim was to discover strategies and solutions, derived directly from the participants' own experiences and voices. Information derived from personal interviews offers rich insights into the phenomenon and authentic personal stories (Barriball, 1994; Bogden & Biklen, 1998; Caruth, 2013; Merriam, 1998).

IM guided the research process wherever possible. Each phase of the process—from research question conceptualization, participant recruitment, interview guide, to data analysis—was considered through this lens (Simonds & Christopher, 2013; Smith, 1999). The 4Rs of research: Respect, Responsibility, Reciprocity, and Relevance (Archibald, Jovel, McCormick, Vedan, & Thira, 2006; Kirkness & Barnhardt, 1991) are integral values to adhere to in all projects that involve Indigenous peoples. To ensure the project followed these values and fosters anti-oppressive techniques (Smith, 1999), my intention was to identify and ensure that any potential findings were of interest and benefit to the group of participants, or community of learners, that had studied online. To do this, each research stage presented an opportunity to reflect upon each value to ensure that this process was followed. For this research study, any online educational experience that Indigenous students could describe was of interest, but particularly in self-paced online courses, in which study is largely independent. In this case, the learners belonged to a group of Indigenous individuals who were seeking post-secondary education online.

To successfully incorporate IM, researchers must situate themselves in the context of the research (Steinhauer, 2002). My own identity as an Indigenous student, researcher and employee engaged in online development, informed the research process.

My personal experiences as an online student, in various institutions, contexts (certificate and graduate programs), and online platforms benefitted the project by informing the research questions, literature review and served as a basis for the inception of the project. As an Indigenous student, the researcher experienced similar issues to the participants. This allowed the researcher the ability, not only to empathize, but also to identify and understand some of the unique challenges online learning presents. As an employee with knowledge of the curricular process, the researcher had a unique viewpoint in the project, with an understanding of the pedagogical rationale for design decisions.

When designing a research project with Indigenous participants, it is integral to use research methods and methodologies that are aligned with the participants' values and the goals of the project. Research has been used as a way to colonize Indigenous peoples, so going forward, ideally, community would drive the research process or collaborate on developing the research questions (Kovach, 2009; Smith, 1999). Relevance, one of the 4Rs of Indigenous research, is a major component of IM (Kirkness & Barnhardt, 1991), and student concerns about online courses were integral to the choice of this as a thesis topic. Working in curriculum development and talking with Indigenous students during the early stages of research, it was discovered that the topic, while not requested by members of a single Indigenous community, was a worthy endeavor, because of the potential number of students impacted and the opportunity for institutional change. In this case, the context of studying online does not lend itself to consultation with a local community because all participants did not belong to one local community. Although the project did not follow a formal consultation process with an Indigenous community, preliminary conversations with other Indigenous students over the course of two years, produced evidence that this study was necessary.

Reciprocity, another important factor to adhere to when researching with Indigenous peoples (Archibald et al., 2006; Kirkness & Barnhardt, 1991; Smith, 1999). The collected data will inform improved support and course development for Indigenous students, especially if the data is made available widely and specifically to online institutions. The enthusiasm that many students expressed around being interviewed indicated that the information was much needed, especially if derived directly from students themselves as stories, rather than captured through a survey tool.

One aspect of IM is that the participants themselves are the experts on the research topic and can speak to the phenomenon's impact (Kenny, Faries, Fiske, & Voyageur, 2004). Integral to this data gathering process was to ensure that the resulting knowledge translation activities would provide some aspect of reciprocity, to benefit the participants (Kovach, 2009). For this reason, it was important to use a guide, rather than a structured survey, to ensure that the participants were free to reflect upon and offer what was important to them, but also to suggest recommendations. Preliminary conversations with others at my institution: Elders, learning strategists, student mentors, and students, some of who became participants, also provided a basis for the study. A combination of their feedback and preliminary discussions with invited participants, assisted me in formulating the research questions for this study.

Recruitment

Relevance is one of the values integral to IM. To ensure the research and data captured was relevant to the participant's lives and experience, only Indigenous students were considered for the project. The recruitment plan was manifold. Five participants received personal invitations. Two social media channels (Twitter and Facebook) and various Indigenous student Facebook groups and list serves (UBC's SAGE), comprised of post-secondary Indigenous students, were used to advertise the study and invite participation. A recruitment poster (Appendix D) was used in social media posts, as well as email invitations. Finally, a representative of OL was asked to send previous and current self-identifying Indigenous students an invitation drafted by the researcher (Appendix E) to participate in the study.

Responsibility to participants and to a transparent research process is imperative to IM. The invitation described participation, provided contact information for the researcher, the research supervisors, and the faculty contact information, communicated the purpose of the study, and outlined the consent form that followed for those who made the decision to participate (Archibald, 2008; Archibald et al., 2006; Kirkness & Barnhardt, 1991; Smith, 1999; Wilson, 2008).

As a gesture intended to convey respect and reciprocity for participant's time, energy and knowledge, the invitation also indicated that all participants would receive a gift to honour their participation. Each received a $50 gift certificate as a gesture of appreciation for sharing their time and, often, very personal stories. Gifting aligns with

Indigenous protocols, and in most Indigenous communities, gifts are offered for sharing knowledge and time and act a symbol of relational accountability (Archibald, 2008; Archibald et al., 2006; Kovach, 2009; Smith, 1999; Wilson, 2008).

Semi-structured Interviews

Semi-structured interviews provided in-depth and highly personalized accounts and allowed the conversation to flow, offering the participants the freedom and agency to control what they shared (Archibald et al., 2006; Kirkness & Barnhardt, 1991). This study followed a qualitative approach and thematic analysis of 21 semi-structured personal interviews (Sommer & Quinlan, 2002) using a technique informed by Indigenous Methodologies in which participant voice is central to the narrative (Archibald et al., 2006; Archibald, 2008; Kirkness & Barnhardt, 1991; Kovach, 2009; Smith, 1999). Guided by IM, the collaborative nature of the conversational method that was used by the semi-structured interviews allowed the researcher the opportunity to gather qualitative data of a depth that provided a thorough understanding of the phenomenon explored in the study. Relying heavily on participant voice makes it possible to weave a narrative that acknowledges the importance of each participants' experiences, perspectives and knowledge throughout. Honouring what they say (Archibald, 1995) and ensuring that the researcher is creating space for, and not taking space, Indigenous voices, is an imperative aspect of IM (Kovach, 2009). An open-ended and unstructured interview format was specifically created and chosen because it suited a conversational style and allowed the topics explored to be student-driven (Archibald et al., 2006; Archibald, 2008; Kirkness & Barnhardt, 1991; Kovach, 2009; Smith, 1999).

Qualitative data was collected through personal interviews that lasted between 45 minutes to one hour and 45 minutes, using one hour as a guideline. Over the course of three months, the interview phase consisted of sitting down with 21 willing, consenting participants. This phase was designed to offer the participants an opportunity to disclose detailed information about their online educational experiences. To foster trust and comfort, rather than follow a strict question and answer structure, I conducted each interview conversationally. This informal atmosphere is critical to IM because it aids in ameliorating unequal power relationships between dominant and non-dominant cultures, researcher and participant, and allows for free-flowing conversation (Archibald, 2008; Kovach, 2009).

To respect each participant's time and knowledge, the interviews were designed to be an hour in length, to minimize the time commitment. Each participant led the direction and duration of the interview. This was helpful in fostering participant agency and an atmosphere of comfort and ease, that encouraged participation, reflection and sharing. Participants reflected upon experiences, engaged in detail which allowed the researcher to gain a deep understanding of personal stories, experiences and factors that may or may not lead to course completion. The research has benefited from the rich narratives that have the potential to contextualize the student data that can be collected in a subsequent phase of study to further explain any phenomenon that arises. To honour their stories, the participant decided when the interview was over. When the conversation was winding down, if not initiated by the participant, it was suggested that sufficient meaningful data was collected, and the participant was asked if there was anything remaining that they wanted to disclose before closing the conversation.

Each participant was encouraged to detail any experiences that most influenced them, whether courses were paced, semester based, blended or self-paced. This allowed the study participants to engage in stories that were most meaningful, contributing to a rich narrative for data. Despite the variety of delivery types, valuable data emerged that relates to institutional and instructional support and barriers. Best practices can be similar for all delivery types. Most participants included experiences with online self-paced coursework, although a handful of participants outlined their experience with other delivery models, which was useful as a basis for comparison.

Based on a thorough literature review and preliminary conversations with students, 30 questions were developed to use as an interview guide (Appendix C) to conduct semi-structured interviews to prompt participants to arrive at stories that offered insight into pivotal moments that propelled them to complete courses or drop (or fail) online courses. Data is comprised of personal narratives prompted by the qualitative questions in the interview guide (Appendix C), and themes were derived from the transcripts. To increase clarity and reduce bias, I amended additional questions that were adapted from a quantitative survey instrument focused on technological preferences and types of interactions (Walton & Byrne, 2017). However, this study followed a qualitative approach and thematic analysis of 21 personal semi-structured interviews (Sommer & Quinlan, 2002). The bulk of the discussion relies on direct

quotes of the participants to illustrate the findings. Using a thematic analysis technique informed by IM in which Indigenous voices, epistemology and methodology are foregrounded (Archibald, 2008; Kovach, 2009; Smith, 1999; Wilson, 2008), the researcher transcribed and coded each audio recording after each interview, rather than waiting until all interviews were complete.

Using narrative and relational techniques are labour intensive (Kovach, 2009; Smith, 1999; Wilson, 2008) and required more time to complete. The qualitative phase took significantly longer especially considering that a conversational method was used to carry out data collection. When an informal conversation is used for research, the process is less predictable and does not adhere to linear and structured western constructs of time and scheduling. Indigenous participants were identified and located, and interviews were scheduled according to each participant's schedule, rather than fitting them into a pre-planned and structured program. Interviews were conducted and transcribed by the researcher over a 3-month period. Elder participation was offered but none of the participants requested this. The third phase was used to analyze, interpret and integrate emerging themes from the voices of the participants, and careful consideration and re-working was done to ensure that the resulting themes were indicative of the stories that were told during interviews, which involved re-reading and often, re-listening to the audio recordings.

Each interview was conducted either in person, or by telephone, recorded and transcribed verbatim. In this phase, data collected was coded and analyzed to discover patterns and recurring themes expressed by student experiences, stories, and opinions. Transcription was initiated before all interviews were conducted, which allowed each interview to inform subsequent interviews. To ensure trustworthiness, before the research was analyzed and compiled, each individual participant reviewed their own interview data to verify their story which offered an opportunity to sit with their words. This collaborative effort is a measure of reliability and accuracy (Marshall & Rossman, 2011) and aligns with Respect and Relevance, two of the 4Rs of research with Indigenous peoples (Archibald et al., 2006; Kirkness & Barnhardt, 1991). Respecting the validity of the narrative and voices expressed, along with ensuring that the narrative derived from the data is relevant to the experiences.

Each participant had the opportunity to redact, edit or make choices on what to include, giving a second option to shape the resulting findings narrative. Herbert Nabigon stated that respecting the integrity of this process is important, that respect actually means to look twice at our work to ensure integrity (1993). The process of validating the data with each participant is an integral aspect of IM which is also a measure of protection for sensitive cultural or personal information (Kovach, 2009; Smith, 1999; Wilson, 2008).

Each interview was analyzed in relation to the others, and data was collected into themes and sub-themes that emerged during the coding and analysis process. These included perceptions of online education, institutional supports and barriers, instructor effectiveness and engagement, pedagogy and curriculum, technological concerns and digital literacy, non-academic supports, impact of supports and barriers, and prevalence of dominant worldviews and perspectives in course content. Some of these were collapsed into main themes that are outlined in the following chapters. Quotations are taken directly from personal interviews to ensure that student perspective was foregrounded and authentic.

Participants

The participant group was comprised of 21 self-identifying Canadian Indigenous students between the ages of 27 and 56, who are currently, or have been previously, enrolled in a self-paced asynchronous online distance course within a higher education institution. The participants responded to email, social media and personal invitations to participate in the research study. Arrangements were made to connect with each participant as they agreed to participate. Before the interview date, meeting details were organized by email, and various options for scheduling interviews were suggested by the participants, either by telephone, or in person. Participants were welcome to have someone such as an Elder to accompany them. In order to engage in transparent and respectful engagement, before the interview, the consent form was outlined, and the request to record the interview was repeated so the researcher could engage in conversation rather than write notes. Respectful practice necessitates that the researcher listen attentively to each story, especially for the resulting narrative to be authentic (Wilson, 2008). The researcher did not use a question and answer style of interview structure. Using a guide enabled the conversation was able to flow naturally, ensuring

that the participants chose the discussion points. This is integral to a narrative inquiry research process and is one way to ensure relevant data, and by extension, that the study is relevant for the participants (Archibald, 1995; Kovach, 2009; Wilson, 2008).

Eight participants were interviewed in person, and 13 were interviewed over the phone. Each gift certificate and a hand-written thank you note was mailed directly to the participant on the same day the interview was completed, before transcription. I began transcription and preliminary analysis began after each interview so that it informed each subsequent interview.

Of the 21 participants, 15 are female, and six are male. Nine participants were studying at the graduate level, 15 participants had attempted or been enrolled in a Bachelor level course, and four participants are upgrading as a requirement for Native Indian Teacher Education Program (NITEP). For various reasons, an additional three students are currently taking, or require online distance delivery to upgrade as a requirement for a graduate program. To protect anonymity, each participant was assigned a unique pseudonym (Ex: Teresa), that does not reflect the order in which they were interviewed. This identifying name is used when quoting their words throughout this thesis.

Table 1

Overview of Study Participants (2019)

P	Interview Date	Community	Program	Gender	Age
Teresa	Mar 6	T’exelc (Secwépemc)	Graduate	F	30s
Jennifer	Mar 8	QayQayt	Graduate	F	30s
Kyla	Mar 25	Xat'sull (Secwépemc)	Bachelor	F	27
Marissa	Mar 25	Métis	Bachelor	F	30s
Terry	Apr 4	Esk'etemc (Secwépemc)	Bachelor	F	34
Ben	Apr 4	Inuit	Bachelor	M	31
Nicole	Apr 5	Dené, French	Graduate	F	40s
Avery	Apr 6	Tla'amin	Graduate	F	29

Diane	Apr 8	Huu-ay-aht (maternal grandmother) Ditidaht First Nation (maternal grandfather)	Bachelor (NITEP)	F	40
Dolores	Apr 10	Tŝideldel (Tsilhqot'in)	Graduate	F	43
Karen	Apr 11	Métis	Graduate	F	55
Tonya	Apr 15	Liidlii Kue	ARET	F	20s
Dave	Apr 19	Lil'wat	NITEP	M	40s
Tina	Apr 26	Inuvialuit	Bachelor (NITEP)	F	26
Bart	Apr 30	Lil'wat	Bachelor (NITEP)	M	30s
Donna	May 1	Wet’suwet’en (maternal) Llenlleney'ten (paternal)	Upgrading, Considering Graduate	F	47
Chantal	Mar 27	Nisga'a	Graduate	F	40s
Daniel	Mar 28	Tsq'escen' (Secwépemc)	Bachelor	M	20s
Shawn	Mar 29	Lhoosk’uz Dené	Bachelor	M	36
Cam	May 5	Tsuut’ina	Bachelor	M	30s
Chandra	May 24	Peguis (Cree)	Upgrading to Graduate	F	30s

Most participants were located within BC, but six are originally from outside BC. For context, the distribution of participant locations across Canada can be found on this Google map: https://drive.google.com/open?id=1olkgEH399_8GqAGvexC1X-k4XlBZ-Cvo&usp=sharing and in Figure 2 below.

Figure 2. Map of research participant locations across Canada. The plotted points describe where the participants are originally from—their nation or band—not necessarily their current locations. Only eight participants are living in their original locations. Many of the participants have relocated to enroll in F2F courses, both during or after taking online courses. Some participants had already moved to other locations for employment or other purposes. Of 21 participants, 15 are originally from locations in BC, three are originally from Nain, NL, one is originally from and located in northern NL, another is from outside Calgary, AB, and another is originally from Peguis First Nation, MB.

Data Collection & Analysis

Over the course of three months, interviews were conducted and recorded in person or by online technology or telephone, for the 13 participants who preferred. I transcribed each interview directly after participant interviews, which aided in the next interviews by informing the guiding questions. Rather than sending out transcription, the researcher transcribed each interview, allowing for a deeper sense of familiarity with the data. After transcribing each interview recording, transcripts were sent to each participant by email before commencing analysis, which served as an opportunity for the participants to validate their words, and an opportunity to shape the research, once more. Member checks are used to ensure that the experiences outlined matched the participant experiences (Jones, Torres, & Arminio, 2014; Merriam, 1995). Very few adjustments and redactions were made by participants to the text transcripts. Three participants requested a few minor redactions, mainly to request that identifying artifacts such as institution names be removed. Respecting voice, privacy and sacred knowledge aligns with IM, and is integral to the research process with Indigenous

peoples (Wilson, 2008; Smith, 1999). Identifying anything that should be deleted, was done and transcripts stored for the next phase of formal analysis.

Thematic analysis was used to iteratively code each transcript until saturation was reached and no new categories developed. Any similar segments of related text were colour-coded for each transcript, to code and develop themes (Creswell, 2011). Approximately 20 similar sub-themes emerged across all interviews, and similar themes were aggregated in order for major themes to emerge, at which time findings were validated as the transcripts reached saturation and no new themes were apparent. This was an iterative process in which similarities and differences appeared between participants, categories, and broad themes emerged. Seven themes emerged, with various sub-themes. Participants were asked to validate broad themes and narratives before finalizing the results, and very few responded to this request. These themes were reworked using a diagram a number of times, in order to establish relationships between sub-themes and themes (Figure 3).

Ethics Considerations

In addition to being guided by aspects of IM, this study followed Tri-Council policy on ethical research with Indigenous communities (TCPS 2, 2014) and was approved by Thompson Rivers University Research Ethics for Human Subject Board (#101986) on January 16, 2019.

The researcher and the research participants are from varied circumstances, contexts and locations in Canada, all who identify as First Nations, Métis or Inuit, who are studying online. The experiences of cohort-based programs developed for remote communities of learners, or blended programs was not of interest for this study, because literature indicates that these types of experiences are preferred to independent study online (McAuley & Walton, 2011). To ensure relevance, one of the 4 Rs of research (Archibald et al., 2006; Kirkness & Barnhardt, 1991) with Indigenous people, consultation was planned with community and possibly an Indigenous Elder, before embarking on this research project, to ensure that the research was informed by Indigenous people, served the Indigenous community it purports to support, and was carried out in a good way. However, because the participants were from across Canada—not from one community—this was not possible. This aspect of the project caused concern at first.

Aligned with IM is the grapple with ethical concerns, respectful methodology and research agenda in each project at each phase of the project (Kovach, 2009). After some reflection, and consultation with other Indigenous academics and Indigenous online students, it was decided that it would still be acceptable to pursue this project. A combination of the following alleviated discomfort moving forward: the study would not impact a single community negatively, the preliminary response of the potential participants was enthusiastic, and the fact that the research findings were sought by an online institution. Improving online educational experiences, thus improving retention and success for Indigenous students, is a key factor in the TRU institution wide Coyote Project (2016). Knowledge that any outcomes of the research may attract positive procedural or policy change for Indigenous students, appeased my anxiety that this particular project was not specifically requested by community.

After spending time with each participant, it was apparent that each one was eager to share their experiences with me. Each interview was effortless, carried out like a conversation between friends, ended with promises to continue the work, forward any knowledge outputs, and culminated in expressions of thankyous for carrying out the research and listening to their stories. Most participants indicated an interest in reading the resulting thesis, subsequent report, and summarized version that could be used to inform policy, procedural, and pedagogical redesign for online institutions, ensuring that a level of reciprocity is met with this research (Kirkness & Barnhardt, 1991; Smith, 1999; Wilson, 2008).

A consent form (Appendix A) was drafted to brief participants that participation is voluntary, that they have the right not to participate (at any time during the study), and the reserve right not to answer any or all questions. During interviews, it was explained that documented consent is necessary for all participants and they received an overview of the consent form. The documentation was written to ensure mutual understanding of the purpose of the research, is respectful of cultures, languages and literacy, clearly outlines the role that participants will play in providing data, indicates how the data will be used, explains how the findings will be reported, and outlines how participants will be protected or given a voice during the research and through subsequent knowledge translation outputs. For remote interviews, the consent form was sent to participants by email, signed and returned the same way before commencing

interviews. Due to their remote location and printer inaccessibility, consent forms were printed and mailed to three participants who lived remotely. To facilitate this process, a self-addressed stamped envelope was provided for the participant to return it to me.

To comply with the Respect for Persons Act, and one of the 4Rs of research (Archibald et al., 2006; Kirkness & Barnhardt, 1991), during the process of disclosure, an opportunity was provided for questions and prompts for reflection. Ongoing opportunity throughout the study for participants to decline consent at any time, for any reason. Participants understood the research purpose, the potential duration and nature of participation, and, that by consenting to participate, their legal rights remained intact. In any qualitative study, discoveries can develop that may shift the study significantly. At each stage, communication was clear and transparent. Participants had an opportunity to withdraw consent before analysis was performed on the data. To ensure trust and comfort, participants were given contact information for the researchers, and interests, roles, and responsibilities in the study were disclosed.

The intent of this research is to inform effective strategies for online curriculum development and delivery and discover support measures, particularly for Indigenous students. For this reason, the participants were required to self-identify as Indigenous. According to the 4 R's of research, Kirkness and Barnhardt (1991) assert that respect for participants is paramount (Archibald, 1999; 2008; Archibald et al., 1995; 2006; Kovach, 2009; Smith, 1999; Wilson, 2008). As such, my responsibility is to ensure that the research is relevant to the community and to my participants. It is also the researcher's responsibility to ensure that vulnerabilities are considered for any research study with Indigenous people. Historically, unfair practices, inequitable treatment, and harm has been perpetrated upon Indigenous communities for research sake, resulting in some cases, in distrust for institutions and research in general (Kenny et al., 2004; Kovach, 2009). Secondarily, there is the possibility that participants may perceive a hierarchical relationship between a researcher and themselves. Due to the researcher's previous role at OL, creating a culturally relevant and safe environment during the study was important. The researcher disclosed that the interest was as an Indigenous student, and that truth-telling was important to the process. Participants were aware that anyone could accompany them to the interview, and they were informed that the research goal was to provide a basis for institutional change, and that their anonymity would be

protected. At the outset of each interview, I indicated that I would be following a guide, but not asking formal questions, which would provide for a more informal atmosphere in which participants would direct the conversation. To eliminate or minimize any harm that could potentially occur during that time, an Elder or a trusted person could accompany the participant in the interview, if desired. Participants did not require counselling, elder accompaniment or relevant community support after our interviews.

Because reciprocity is integral to work with Indigenous communities (Archibald et al., 2006; Kirkness & Barnhardt, 1991), a goal of the study process was to embark on this research in a good way, collaborating with all stakeholders, and following all protocols of Indigenous communities, as well as re-designing the research study if requested, or became necessary due to findings during the course of the study. A second goal of this study is to develop a report and set of promising practices promising practices that could inform policy and procedures redevelopment for distance education.

During one interview with a participant, it became clear that one online remote graduate student was not informed of some unique F2F courses she was eligible for that would apply to her graduate program. Although typically a remote student, she indicated that she would be able to rearrange her employment schedule to be present on campus to enroll in those courses. The researcher was able to share knowledge of courses planned for an upcoming summer semester. Subsequently, she was able to participate in those courses, moving up her own graduation timeline. Another participant was in contact soon after her interview about her own project which was to develop an online training tool specifically for Indigenous program participants in her discipline. The reference list for this project was shared with her to support her project.

Various mechanisms of knowledge translation will be used to share these findings to participants, communities and stakeholders to meet expectations of reciprocity. This data will be incorporated into a detailed report for OL that will be used to inform increasingly supportive delivery, design and support services for students, enhance instructional design best practices, and inform delivery models. Two publications are planned that will add to the current knowledge base on this topic. An executive summary version will be available to all participants and institutions that deliver and develop online courses, students and educational centres. There are plans to connect this valuable information with leadership and at Thompson Rivers University,

BC Campus, and institutions that are passionate about distance learning via conferences and a summarized version.

Conflict of Interest

Some participants were recruited from OL. The researcher disclosed previous employment at OL and mnimal funding for the interview process. This fact may have had potential for the perception of a conflict of interest. OL administration has an interest in exploring this topic and has requested a report of findings for the purposes of informing planned changes to their delivery and development process. Bias, or perceived bias, was minimized by requesting a neutral party to review my recruitment plan and survey questions, and by disclosing my dual role as a graduate student and previous staff member of an online education institution.

Chapter 4. Findings & Discussion

Throughout conversations with participants, seven main themes arose as factors that contributed to success or failure in online education. During analysis, the recurrence of quotes and all participant references to dominant and sub-themes were uniquely colour coded and copied into one document. Figure 3 indicates the relationships between the main themes and sub-themes. Where possible, lines have been drawn to indicate relationships between various themes and sub-themes. Medium grey circles denote main themes and smaller circles indicate sub-themes.

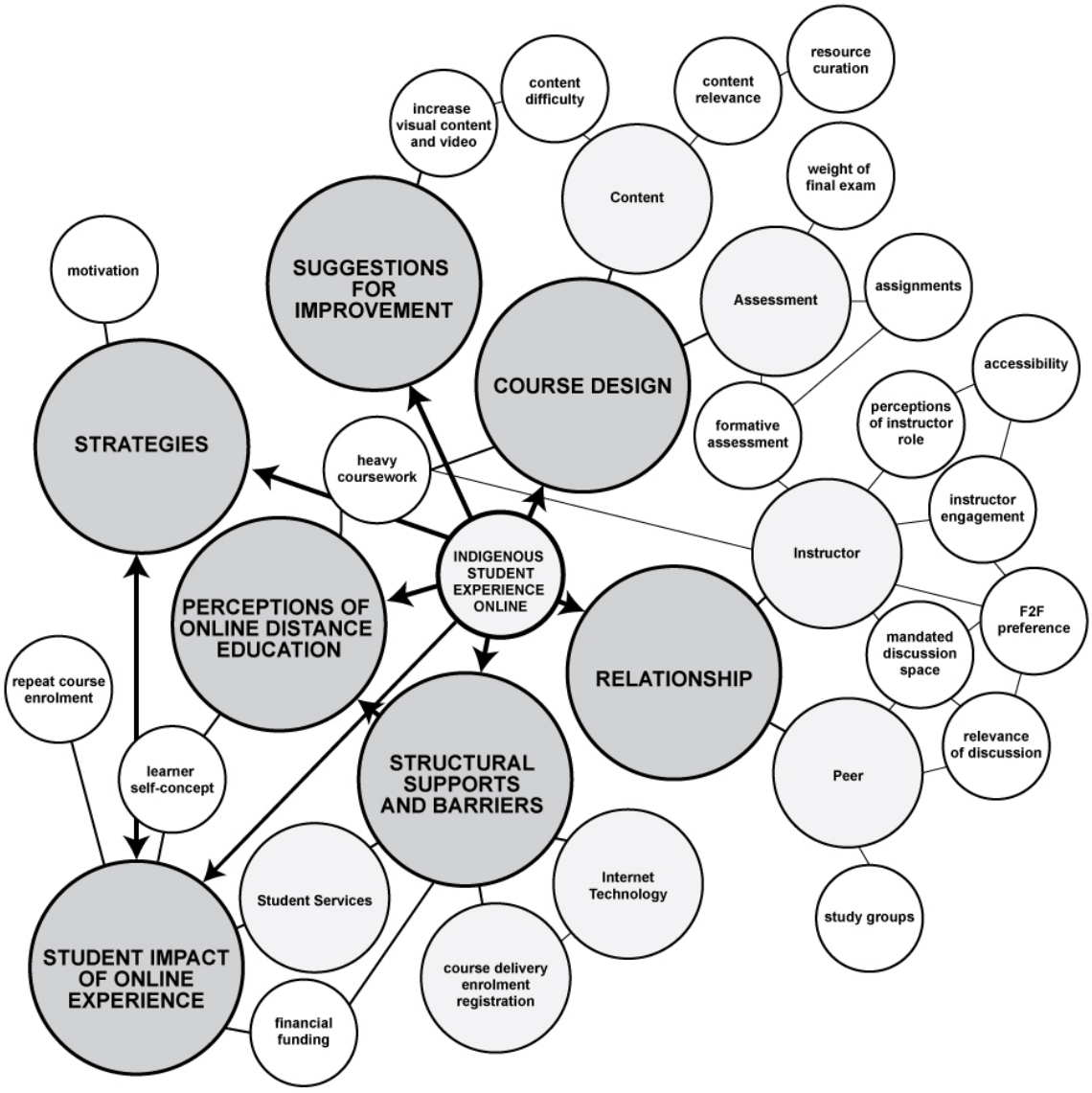

Figure 3. Emerging Themes. Themes that materialized during personal interviews with study participants that impact Indigenous student experience online distance education.

To process the data, the literature review was framed through this lens, to categorize participant findings. A successful CoI is built upon the importance of creating an online community for independent learners within which to construct knowledge. It is comprised of overlapping areas, social, teaching and cognitive presence. Specific learner characteristics can contribute to a meaningful CoI development, as well as academic success. Included was any coded text regarding dialogue with peers within the social presence, and discussion about instructor presence within the teaching presence, mindful that teaching presence can include another student, tutor, or an explainer video—that assists in scaffolding a learner through material. My findings indicated that a number of factors influenced success or failure in a course: navigating the institution; accessing student services; experiences of course design, instructor engagement, and administration; internet technology; student misconceptions about the level of difficulty of online distance education. Their own motivations and academic self-concept impacted their experiences, course completion, and grade levels also. These appeared to fall outside of the CoI framework, therefore the relationship between those findings and the CoI diagram is illustrated in Figure 4.

Although this narrative includes positive themes, participants told the story of what is lacking, and made suggestions for what could assist them in their learning online. Participants unanimously referred to the importance of relationships for themselves. It is evident from the research that relationships are an integral factor for student success and retention (Archibald et al., 1995; Hare & Pidgeon, 2011; Pidgeon et al., 2014). The significance of relationships emerged as an important theme: participants indicated that a connection was lacking in most courses that were discussed. For the purposes of this thesis, relationship was woven into the two presences (social and teaching) of the CoI framework. Observing that participants preferred a relationship with an instructor over a peer relationship. This is illustrated by collapsing teaching (instructor) and social (peer) presence under relationship (from the CoI framework) in Figure 3. The following themes also emerged: misconceptions and perceptions of online education, institutional supports and barriers, a desire for a stronger teaching presence, and numerous factors that related to resources, content, assessment, workload, and pedagogy. Many participants told stories of adverse effects of their experiences online, and also narratives about various strategies and motivations for persistence. These

themes aligned with research findings that related to general student satisfaction with online education (Roberts, Irani, Telg, & Lundy, 2005).

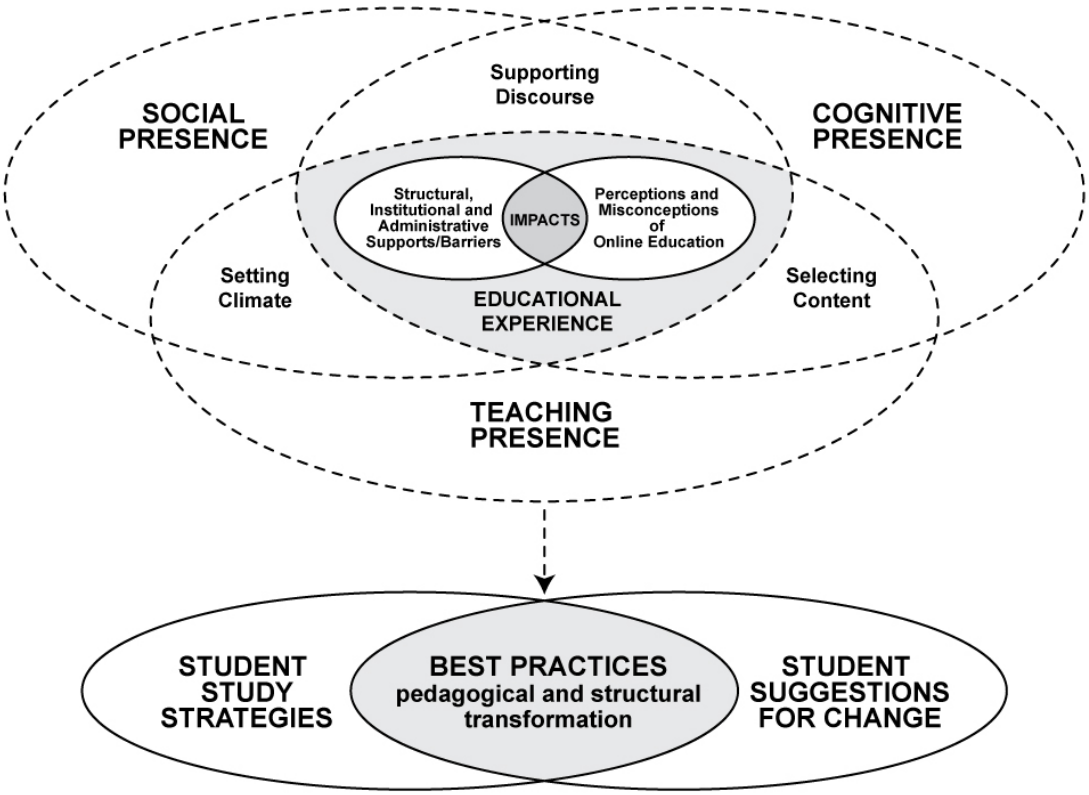

Figure 4. Emerging Themes in Relationship to Community of Inquiry (CoI) Model. Thesis themes are juxtaposed against the CoI model that is used to guide course design, but overlaid are the themes that sit outside the construct, that are based on this study's findings.

Perceptions of Online Distance Education

Various perceptions about online education emerged. Many participants were surprised at the rigour required, and all participants indicated that they believed that studying online would be more manageable than it actually was. This sometimes resulted in the under-preparedness of some participants. Online learning was often perceived as less reputable, existed to serve remote communities, and possibly to increase the revenue of institutions. One participant expressed an impression that universities in remote locations use online distance deliver to fill more sparsely enrolled

courses to a wider audience: “It's how they managed to get their seats filled...for some of the weirder courses” (Marissa, personal communication, March 25, 2019). At least two participants expressed concern that distance/online education is perceived as lower quality than a campus education:

> Yes! Even when I'm telling people what kind of schooling I'm doing, I want to emphasize the fact that it's blended. I'm also on campus. I'm not just doing it online! Because I feel like if they think if I'm doing it online, I'm not learning as much. (Avery, personal communication, April 6, 2019)

Participants noted that resources were not current. Tina’s expectation was that an online education would be more leading-edge: “I did find it interesting that it wasn’t the latest and hottest auditing textbook from 2016” (personal communication, April 26, 2019).

Perceptions of manageability or ease. Online distance education can be viewed as easy, doable, or less work based on flexibility and convenience because a student does not have to attend class in person. A couple of participants relayed this misconception, evident by the following:

> I think there’s a myth that “Oh it’s going to be easy,” like back in the 70’s, when you could send in a magazine and get a typing certificate or whatever. It’s not that. There’s a whole science around it, you can even get a degree in distance education. (Karen, personal communication, April 11, 2019)

Some research has indicated that successful students do well when they can anticipate the workload and requirements necessary to tackle a course (Yukselturk & Buluut, 2007). Ben, despite characterizing himself as a good student, characterized his situation as underestimating what was required:

> I got a 3-year diploma in civil engineering so I'm good at math and I under-estimated Statistics, which is not at all like civil engineering. I thought it was going to be a breeze, but it was actually hard. Yeah, I was surprised too. I remember it's the only time I've ever seen an F on my university transcript. I only have 2 Fs in my entire school career. Once in engineering mechanics and [the instructor] had a 66% failure rate and a lot of the people wanted him off as a teacher, but he had tenure so they couldn't do anything. So, I wasn't surprised because a lot of people failed this course and I'm not proud I'm one of them, but it was actually a normal thing. And the other one was Stats online and that's because I misjudged. (Ben, personal communication, April 4, 2019)

A sense of dissatisfaction with engagement was felt. Two participants voiced opinions about what they thought other students were thinking: “It's because it's online: It's something that they can kind of squeeze in. That was kind of the attitude or the

feeling I get from the other students" (Theresa, personal communication, March 6, 2019). Karen also felt that some students perceived that less work and preparation are necessary for an online course: "Some people haven't thought about it, they have this myth about online, it's going to be easy and I'm just going to wing it" (personal communication, April 11, 2019).

Eighteen of 21 participants indicated that this misconception of ease initially led them to believe that they would be able to manage the same number of courses online as they had taken in a face to face setting (F2F). Due to the fact that they had young children at home, four participants attempted to take courses this way, to take advantage of the flexibility. Online distance education was an opportunity for them to continue their post-secondary education without the necessity of childcare, and quickly found this difficult to manage: "I'm pretty sure I tried to take one in the summer when I was taking my undergrad, and that was when I had little people. I thought, 'Ooh, I'll take [distance education].' Yeah. That was not a good plan" (Jennifer, personal communication, March 8, 2019). Jennifer also indicated it was the only time she has ever asked for extensions: "I just don't ask for extensions, but I completely underestimated what this program was going to be like" (personal communication, March 8, 2019).

Challenging reality of taking an online distance course. In reality, the online experience can be the reverse due to the number of pressures on a student's time. Competing responsibilities (such as employment and family), time management and goal setting issues can be barriers to effective online study (Lee, Choi, & Kim, 2013). Many participants validated this. One stated that: "It was a challenging course to do online, for sure, hands down" (Donna, personal communication, May 1, 2019). Another simply stated: "online learning is tough" (Ben, personal communication, April 4, 2019). A third was adamant about not taking another online course: "I hope I don't have to take an online course, ever again" (Chantal, personal communication, March 27, 2019). A fourth alluded to the discipline and time management necessary for success, and the potential for procrastination, as challenging aspects of online learning: "Ah...it's not the easiest…it's for the most disciplined people, I don't know, it's not impossible. It's way easier to put off doing it than actually doing it under the 4-month period that people normally do a course" (Tina, personal communication, April 26, 2019). A few

participants reflected upon their first online experience. One participant related the barriers increased for those students without prior online learning experience, which aligns with literature (Roberts et al., 2005; Lee et al., 2013) that indicated students experiencing online courses for the first time may have a higher drop-out rate:

> If you're new to post-secondary, or even the whole online thing, if you haven't done it before, there are definitely some big hurdles to go through and overcome. And even just understanding on what needs to be done, to do it. I've talked to other people at work that are interested in doing certain things, and when you start telling them how long it takes and what they need to do, it's a sacrifice right? (Cam, personal communication, May 5, 2019)

One participant ultimately dropped the course for a variety of reasons. One factor included difficulty, as she says: "So, I received all the stuff, had a look, started pouring through it, and definitely, challenging, not undoable, but it was challenging" (Donna, personal communication, May 1, 2019).

Technical hurdles can add another layer of frustration to a student's online experience. When participants experienced technical issues, it became a deterrent to returning to study online. One participant commented:

> The technical issues I was having: It was frustrating. And then, when I mentioned to other people I knew, they would say, "Oh, we took a course and they would just have technical difficulties" and "That's why I wouldn't take an online course ever again, because of the technical issues." (Chantal, personal communication, March 27, 2019)

One participant outlines how her difficulty was compounded by technological issues:

> I think I enjoyed it for the most part. It was a bit difficult and was a big learning curve because I've never taken online courses, and then to have to do a lot with online and just the technical issues I was having. It was frustrating. (Chantal, personal communication, March 27, 2019)

This participant had mixed feelings, stating that she enjoyed her course for the most part, but then changed her mind mid-sentence upon remembering the technical hurdles. She added that it was common for other students also, that technical problems compound the learning curve, and served as a deterrent for returning enrolment.

> And then when I mentioned to other people I knew, they would say: "Oh we took a course and yeah, they would just have technical difficulties," and: "That's why I wouldn't take an online course ever again, because of the technical issues." So, I do understand that. Yeah. I don't really care for the online, other than it is convenient if you can't get on campus. (Chantal, personal communication, March 27, 2019)

The disconnectedness of the digital education space can contribute to a lack of accountability for many participants. Theresa, a graduate student who possesses a high academic self-concept and study strategies, commented on the lack of relationship with the class. She described the significance of that this had on her motivation to stay engaged:

> That was one of my concerns, was that I would fall behind on it because if you've never met your instructor, or any of your classmates, you don't feel you have the same responsibility I suppose, to keep up on your work. That's what I feel like anyways. Like it's just not as present, that feeling of responsibility. I still feel it, but not as insistent as I do with my other on campus course. (Theresa, personal communication, March 6, 2019)

She felt less accountability because relationships were lacking within the digital classroom:

> It's because you've never met your instructor or any of your classmates, you don't feel you have the same responsibility, I suppose, to keep up on your work. That's what I feel like anyways. It's just not as present, that feeling of responsibility. I still feel it, but not as insistent as I do with my other on campus course. (Theresa, personal communication, March 6, 2019)

At least half of the participants indicated that the workload was more intense than in a classroom setting and wondered why it wasn't similar: "They should, I don't know why they cannot give us the same amount as they would in the classroom. Why don't they?" (Dolores, personal communication, April 10, 2019) and "Oh god, [online courses] are a lot heavier" (Nicole, personal communication, April 5, 2019). A few participants did not mind the rigorous workload. Despite preferring to study online, another participant indicated that: "...it's pretty grueling, but I think the last course I took was the career counselling. It was a lot, it was like 6, it was a 300-level grad course" (Karen, personal communication, April 11, 2019).

This misconception that online education is more manageable than expected led to most participants not being sufficiently prepared for the reality of the workload. Funding guidelines often require full-time enrolment. This can contribute to a student registering in too many courses and result in a workload that is too heavy to manage, especially if a student is working full-time or has family responsibilities. Many of the participants had been enrolled in more than one online course concurrently. When asked

about the experience of taking more than one online course at a time, a participant outlined a few suggestions within her answer:

> No, I would never do that. If it was changed like how I said, to be more fun and interactive, then yes, I would probably do that, maybe. I don't know. That's actually a really good question. If it was changed to be less sterile, then I probably would. Less institutionalized, then I would. If it was more fun, I don't know how to make it more fun, but if it was I would probably like that [laughing]. Even having the opportunity to verbalize it, would be cool, not necessarily having to write it out. But right now, taking three: Hell, no. No. Oh god, [online courses] are a lot heavier. (Nicole, personal communication, April 5, 2019)

Another agreed that taking three online courses concurrently is too difficult and inhibits a student from succeeding and mused about what improvements in interaction could help it be more engaging: "I wonder, if thinking about changes for the future, we do live in a world of technology, right down to FaceTime if you needed it. Just for, or maybe there are other platforms and formats" (Donna, personal communication, May 1, 2019).

Expectations of technology. At least four participants expected a higher level of innovation in online distance learning. A particularly adept student appreciated and expected when an institution maintained a "contemporary space and method" when designing online courses and programs (Karen, personal communication, April 11, 2019). However, most scenarios fell short of that. Ben was an undergraduate student with excellent grades, and effective at moving through his university experience on campus. He was disappointed in what he termed a lack of technological advancement, and how that had ramifications on his inclination to return to online learning:

> And there hasn't been that much of a change actually between 2004 and—11 years—in 2010 even. No changes. I was surprised because technology has grown leaps and bounds in that time period, but the online learning...Oh yeah, I did take an online course in 2017, as well. But yeah, I was surprised with both of them, how they haven't evolved, and they should. Especially from the north, like for anybody, but I'm not in the city and I can't. If I lived in the city, I would probably NOT take the course. (Ben, personal communication, April 4, 2019)

Another study participant simply made the assumption that online education utilizes all the latest technological communication advancements. She assumed that "all this stuff is already in [the institution] around Skype meetings and how you Skype in with instructors, but I almost wonder if you're not located in the city" (Donna, personal communication, May 1, 2019). One participant wished for web conferencing that

resembled a classroom setting: “Why don’t they just do us on skype or something in the evening. In the evening, go on skype or something and then obviously, we’re in the class or smart board or something” (Dolores, personal communication, April 10, 2019). One study participant was surprised to receive paper materials:

> Well, I know there was an option when you signed up for the course, to receive your materials online or to receive them in paper. I chose online. So, I’m wondering, and what I got, was just the textbook, the answers book, whatever, there’s two books, the cd, and the one pager. I can’t even remember what it was about, maybe just a receipt of registration. So, when they gave that option, did they mean, all of the course modules, outline, introductions, that I then had to go onto Moodle? So, I’m thinking that when I chose that box, that was them, if I had said “Send it in paper” I would have gotten everything in that Moodle in a package? But I don’t know. Because when I got the textbooks, it surprised me, thinking cuz I’m a paper saver. “Oh, I thought the textbooks would come online,” which I actually wouldn’t have liked anyways. I don’t mind having the reference book, but I don’t have to print 10 thousand other things cuz I’m using different things as well, right? (Donna, personal communication, May 1, 2019)

Student readiness. Four participants mentioned that because of the steep learning curve, to be successful in an online course, preparation could be useful. “Like when I looked at [online institutions], you know you got to be darn ready. There are deliverables and there are challenges, and there is going to be stretch” (Donna, personal communication, May 1, 2019). One participant suggested that self-assessment, or preparatory guidelines could be helpful. “Yeah. Yeah, for sure. And maybe screening. Maybe we need to screen kids. You know what I mean? There needs to be, ‘Is this person suitable for online education?’” (Marissa, personal communication, March 25, 2019). Researchers found implications for policy and practice regarding identifying and addressing student weaknesses early in the semester and subsequently providing necessary and contextual supports for student success (Roberts et al., 2005). The same participant surmised that students who had studied online in high school may be more prepared for post-secondary online instruction. They would already have had the opportunity to develop characteristics required of a successful online student:

> There are kids in remote communities all over the province that finish high school via distance...and if they're going onto a college into a program where they're online-based, they're going to be more successful than someone who's had a small class, private high school, and then being expected to be completely self-motivated. That doesn't...those are two different things. (Marissa, personal communication, March 25, 2019)

In fact, one participant is an example of this:

> Oh, [online distance learning] has got a long way to go. I've taken a Biology…and Statistics credit, and before then I took Environmental Stewardship when I was 18, but what really counts for myself is I got through high school in open (distance) learning. (Ben, personal communication, April 4, 2019)

Benefits. Participants had a variety of positive perceptions and assumptions about the benefits that online distance education offers. Lower campus fees were one bonus that was mentioned:

> I know my management one, last summer, was $700 and you don't have to pay the lab fees. You don't have to pay all the [newspaper] fees, and the childcare. And I don't use the daycare here, why am I paying for it. You don't pay all of those fees. (Tonya, personal communication, April 15, 2019)

However, the implication of the lower fees is that students are not classified as campus students, and thus not entitled to the benefits that those fees fund. Students who are not located near campus may not be able to use campus supports. But for an online student, a suggestion that the option to pay campus fees might be desired.

Increased rigour was identified by one participant as a positive, leading to a preference for online courses over F2F courses because she felt that discussion is enhanced when students have the opportunity to participate when it suits them best, rather than being confined to a specific time frame:

> I prefer to do distance education because I find that, at my current university now, people are, they just don't read, so it affects when you attend classes, when people aren't reading things, it affects the discussion. So, with distance education, people are participating in the participation section, which is usually 10% of the grade, where you add some kind of thoughtful comment on the blog, or the online platform, and they, they're putting it in at a time when it's convenient for them, when they have read what they need to read. But at my current university, in class, it's not very scholarly. And so, I find it very frustrating. (Karen, personal communication, April 11, 2019)

Karen maintains a position that studying online is an improvement upon the classroom experience because "it affects everybody, when people are taking on in-person training, when they don't really have it, to fit in their time, they're just trying to get through" (Karen, personal communication, April 11, 2019). Others felt that when discussion is mandatory and students do not allocate sufficient time for their course work, it has ramifications in the online dialogue. Often, the level of participation felt

perfunctory, and that it was not the primary focus for others. Theresa comments: "Discussions we have right? So, it's not very, like I said, it's not very deep. It's just everybody is just trying to get their work done and get on with their other actual work" (personal communication, March 6, 2019). Karen compares her online experience with her F2F experience, stating that online is increasingly scholarly. She attributes this to the type of student inclined to study online:

> I would say there is a definite difference. And it may be the type of person that is attracted to online learning is different. For example, at [this institution], the average age is in the 40s, in the master's program. So, these are professional people who have been working for 20 or more years, in their field, or changing fields, the level of writing or thinking and engaging, it was game on. (Karen, personal communication, April 11, 2019)

Many participants mentioned a variety of positive factors related to online education. Flexibility, course availability, self-pacing and the fact that they could attend to discussion or coursework at times that worked for them is evident in the following comment:

> Like with distance education, you kind of have to plot what you're going to take, and you have a lot more freedom...I could take from different areas, and certainly, there were some courses I took because they were individualized study and I didn't want to start 2 courses in September or January kind of thing. So, there were some that were not exactly my favorite course, but there was more freedom. (Karen, personal communication, April 11, 2019)

Three participants perceived online distance courses as flexible: "I really like the idea of flexibility for the online, because I will be taking two more courses" (Diane, personal communication, April 8, 2019) and "I guess that's part of the online learning thing...being more engaging, at your own leisure and your own time. To do it at your own time and own pace" (Terry, personal communication, April 4, 2019) and although difficult, one participant stated: "This is hard. I do recommend it, like I said before, if there's no way to get on campus. I would recommend it to students because there is some flexibility" (Chantal, personal communication, March 27, 2019).

Dissatisfaction. Dissatisfaction was expressed by 90% of the participants. One participant was eager for the results of the study to be incorporated into practice: "By the time I sign up for the courses, will you have made an impact? There's definitely ways they could be improved" (Tina, personal communication, April 26, 2019). The dissatisfaction seemed largely to center on a lack of relationships with other students

and instructors, summative assessment not matching assignments or course content, experiences of heavier workloads than in other F2F classes, relevance of course content or discussions, and disjointedness regarding exam scheduling. Significant differences exist between delivery models in distance education. For example, it is difficult to build peer relationships in asynchronous self-paced continuous enrolment courses. In these situations, instructor engagement became even more integral. Final exams do not exist in some courses, and less dissatisfaction seemed present in cohort-based courses in which a learning community is more possible to develop.

One participant noted that the course seemed to be designed by someone other than the instructor. It was difficult to understand the instructor's position on a particular topic, in an online environment. In one scenario, she felt that it was integral to her mark to understand the instructor's viewpoint. She stated: "A typical student might try to ascertain the prof's viewpoints in a class that's not written by the prof. How do you do that?" (Jennifer, personal communication, March 8, 2019) if the course did not have significant teacher instruction. Cam, a full-time working student enrolled in an online only undergraduate program, indicated that he would be sending feedback to his Dean. He stated that his program was a pilot and not that popular, that the institution could become more competitive, with improvements. He went on to outline what he planned to suggest:

> "Hey, some of the stuff we've talked about, here's where I could see:" some easy wins, and if there are some other institutions not doing it, it's a pretty easy way to sort of stand out and say "hey, we offer this and the other guys don't." (Cam, personal communication, May 5, 2019)

I observed his dissatisfaction when scheduling an exam was more difficult than he expected it to be: "Especially when there's a test centre on campus someone could utilize. That's my biggest frustration with the course or program" (Cam, personal communication, May 5, 2019). Some participants mentioned that disjointedness occurred due to an administrative process can adversely influence content retention. A delay between the course end date and the official exam schedule created a time lapse. This concerned Tonya, a student enrolled in an online diploma program in business:

> then you have to work within those 2-week time frames that [the institution] gives for the exam schedule. It's only certain times of the month that you can take it. So just sometimes you're jacked of 3 weeks of your 30-week time because your exam has to be taken way up here to suit the exam schedule, so

> that can get kinda frustrating. And then if you don't get an exam period right after you finish your work, and you you're waiting a full month, and now it's been a month since you've done all this work, and you have to come write this 60% final exam. (Tonya, personal communication, April 15, 2019)

Four participants specifically expressed a disconnect between assignments (or content) and the final exam. Another participant perceived that the exam content was not created by the instructor teaching the course, essentially, that the instructor did not have control over the content, evidenced by this statement: "No, they don't…it's like randomized, I think, from what [the instructor] told me….It could be anything and everything, generated random questions" (Tina, personal communication, April 26, 2019). This participant felt that it may not be possible for the instructor to align assignments to the exam. For most participants, a final assignment was preferred over an exam: "There's no final exam in it. It's just a final project you work on. I think something like that, it would be easier to juggle two courses" (Tonya, personal communication, April 15, 2019). For some participants, there's a sense that specific courses are preferred over others, and they will research before enrolling. This usually centers around workload, final exam weight, and difficulty, because as one participant indicated: "a final exam worth 60% of your mark is terrifying... 60% like all of the courses that I've been looking at have 60% final exams, and that's ridiculous" (Tonya, personal communication, April 15, 2019).

One participant related a lack of meaningful discussion to the fact that enrolment in the course might have been low: "And it might be just because of the timing, like summer school. I don't think a lot of people were taking the course then, but I don't know. I could've been wrong too, yeah" (Shawn, personal communication, March 29, 2019). Another participant just did not agree with the necessity of a breadth requirement: "I was wondering why am I doing a first-year science course for a trades and technology degree. All they told me was that they wanted their students to be well-rounded. I don't agree with that either" (Cam, personal communication, May 5, 2019).

Despite positive perceptions of flexibility and innovation of distance learning online, many participants expressed general dissatisfaction. Negative experiences or perceptions resulted in seeking out another institution for online, or switching to a F2F course, for a requirement. "I think this course, it all depends. It would not be my first choice. It will never be my first choice to do an online course" (Theresa, personal

communication, March 6, 2019). One student determined that he would have to enroll again, despite a desire to: “Looks like I'll do that through distance, because again. I don't live in the city and I don't really want to” (Ben, personal communication, April 4, 2019). He also noted the fact that his remote location makes it difficult to take a course in a classroom setting: “that especially from the north, like for anybody, but I'm not in the city and I can't. If I lived in the city, I would probably NOT take the course” (Ben, personal communication, April 4, 2019).

For some, it was a first-time experience: “[I] never had any other online experience. So that's why I said this is kind of, it's a bit different for me and I will admit that it was not my first choice” (Theresa, personal communication, March 6, 2019). Another participant indicated a preference for the classroom drove her decision to switch to F2F courses: “Then, I didn’t take an online course again for several years because I did prefer being around people. I would take online courses because they were the only ones available” (Diane, personal communication, April 8, 2019).

Some courses have gained a negative reputation. One participant recounts a story in which she had been warned by a program representative of the institution not to take a certain statistics course, at that particular institution:

> It’s an open house for the public, for the students to come, and they give out swag, and social work is there, math is there, and nursing is there. They talk about their programs and answer questions. So, I’d been pre-loaded by [an instructor] who was [promoting a] program. (Donna, personal communication, May 1, 2019)

She was cautioned that “the first-year stats, is really hard, something like that” (Donna, personal communication, May 1, 2019). As a preferable alternative, the program representative recommended a course at a different institution. The same participant is still considering another institution that delivers a blended program, offers more variety of courses, and a unique focus that appeals to her.

> I am actually looking at [a different institution] right now, if you’ve ever heard about that. It’s a bit of a different style, not that it’s any less hard, or challenging but just a little different. As much as a master’s in interdisciplinary doesn’t really, it’s really not a whole lot of anything. I’m actually looking at that because there’s some courses on aging, gerontology at [the university] that I would love to take. I wanna take a few Nursing. But as far as leadership, I don’t just want to do 2 years of leadership because there’s just so many things out there. (Donna, personal communication, May 1, 2019)

A few participants disclosed a perception that certain institutions maintain increasingly innovative course delivery. Most of those comments related to levels of interaction and better-quality instruction. A few participants wondered about building upon or borrowing innovative practices from other institutions, and related dissatisfaction in current courses to a lack thereof: “Well, could [this institution] learn from other institutions how to do these online courses, because you have more connection, I just remember from my Bachelors” (Chandra, personal communication, May 24, 2019).

Participants expressed preferences for different delivery models such as classroom instruction and an increase in instructor interaction for online courses. In small classes, either F2F or online, the likelihood for an increased instructor-learner relationship exists. A preference for lower class size is evident from the following two participant statements. One participant commented: “Well, I like the face-to-face courses better, but I was also taking them at a community college where the maximum kids I had in it was, like, 10. Right?” (Marissa, personal communication, March 25, 2019). The other referred to smaller class size online: “So, it was great, because...I took statistics and had three people in my course” (Kyla, personal communication, March 25, 2019). The following participants outline how much better it would be to have taken a particular course in person:

> and the textbook was also pretty difficult, like it didn’t matter to be just kinda like looking at and reading like, even the PowerPoint slides and like, the videos, I wasn’t just absorbing it like at the same quality that I would have, had I taken it in person. (Tina, personal communication, April 26, 2019)

Misperceptions of what online education entails may impact student persistence, satisfaction and subsequent enrolment, especially if the student is a first-time post-secondary student, studying online for the first time, or had taken on more than they could manage. The following theme relates to factors that influenced participant satisfaction and persistence that are outside the online space or pedagogy itself. Many participants told stories of interactions with various departments and expressed difficulty locating or navigating the institution itself.

Administrative Supports & Barriers

Navigating the institution can be challenging. Researchers outline the value of supports such as mentorship, program advising and any supportive measures that assist

Indigenous students with transitions to the post-secondary institutions (Archibald et al., 1995; Archibald, 1999; Pidgeon et al., 2014; Pidgeon, 2008). As online students, study participants mentioned that locating institutional services is not always clear or obvious, and that, they are not always aware of what services they are entitled to. This, coupled with the fact that navigating the institution is not straightforward, affected them negatively. One participant compared one institution to another: "And if you need help, the right hand doesn't talk to the left. And it's not, it's a frustrating, whereas at [that institution], it's fast, it's clean, it's intuitive" (Karen, personal communication, April 11, 2019). It improves student experience when student services are visible and obvious. There was a general sense of being on your own, or teaching yourself: "Yeah, the last year and a half was pretty much all [distance learning] and that was tough being self-taught--trying to teach yourself calculus, chemistry. No one here uses that and the online support was horrible" (Ben, personal communication, April 4, 2019). Research shows that a decrease in motivation level can result if students feel isolated, lack direction or connection (Ludwig-Hardman & Dunlap, 2003), so mentorship and clarity is integral when supporting students.

Preparation and responsible enrolment. Before discussing administrative or institutional supports, it is imperative to highlight the fact that, in some cases, the participants did not feel prepared for independent study online. Most of the participants relayed stories of difficulty with self-paced online distance courses in which they were largely expected to engage in independent study. Four participants indicated that did not like being without guidance to find their way in distance courses: "They just dropped you in." (Diane, personal communication, April 8, 2019) and another student exclaimed: "Nope, it was just, here's your stuff, get working" (Tonya, personal communication, April 15, 2019). Another participant mentioned student recruitment techniques not aligning with student retention strategies: "They give them a tour, and I don't know what they do right after that. It's not the same as when we went to school. One tour and you're…on your own" (Cam, personal communication, May 24, 2019). It was mentioned that student preparation is integral to independent study online. Research demonstrates that when participants already possess the characteristics conducive to online success and institutional supports existed for identifying and providing scaffolding early for students experiencing difficulty, the experience was

increasingly positive (Roberts et al., 2005). Only four participants discussed using study strategies including goal setting and time management.

Student success courses can provide students with a foundational who do not already possess study skills necessary for online learning. Tonya noted her institution lacked a student success course that she had taken at another institution: "And they don't have anything like [student success courses] at [the institution], no, nothing like that course" (personal communication, April 15, 2019). This student success course was comprised of topics such as time management, study strategies, syllabus decoding. Participant 12 attributes some of her success to gleaning techniques from that course. Avery communicated the critical importance of a preparation phase before a course that is comprised of potentially difficult concepts to grasp: "Before I entered my first statistics course for my graduate program, they did a statistics ramp-up because a lot of students had been out of university for a while" (personal communication, April 6, 2019). Studies show that certain concepts such as math are particularly difficult to learn alone, online (Steel & Fahy, 2011). In this research study, six participants referred to a critical course (a breadth requirement for an Arts degree or eligibility requirement for their next program) as a barrier. If unable to pass, it prevented them from moving forward, and often forced them to repeat the course, or find an alternative.

Institutional barriers: processes and communication. A sense of separateness, or lack of integration with campus, was mentioned if the student was solely enrolled in online courses. Communication was mentioned by a few participants as especially important because these students cannot simply stumble upon information in the same way as a campus student. When a student is not part of a physical community, it is not possible to run into another student on campus, engage in that casual conversation that can result in information exchange about resources. One participant expressed frustration when she became aware of unique Indigenous focused, intensive campus courses that were added to the program without her knowledge. Her annoyance was clear regarding the lack of communication about these opportunities: "How come they don't tell us these things? I never saw it on that schedule…Let me see the schedule again" (Dolores, personal communication, April 10, 2019).

For Dolores, online is not her first choice. She is remotely located, and normally, her only option is to enroll in distance courses for her program. She typically does not

attend campus courses. Due to the unique nature of these particular courses; their intensive nature, short duration, Indigenous content and worldviews, and course dates, these F2F courses would work for her. She rearranged her schedule to attend one of the course offerings recently. Her intention was to attend all three, but even taking one course this way shortened her program completion and provided her with an improved student experience. She comments on how happy she was about the possibility of shortening her timeframe, the course topic and delivery model (F2F): "And that healing from the land, I'd love that, god, you made my day even brighter...because you know that's like 1-2-3, and I'll only have my capstone [project remaining]. Oh my god, I love you, I love this" (Dolores, personal communication, April 10, 2019). Despite persevering, this particular student has struggled with online study. She would have registered in these intensive courses in previous semesters, had she been made aware of them. It would have moved up her timeline for graduation evident in her comment: "I wish I knew this before. I would have been done. Right?" (Dolores, personal communication, April 10, 2019). This type of quote from a student indicates a need for improved communication to ensure that all students are aware of courses that become options for them.

Tonya, also a campus student, had enrolled in an online class for the summer semester. It appears for online students, all support is accessed online as well, although the university has a campus. She was surprised by this inefficiency and recounted two incidents in which she had attempted to access support in person. In one case, she experienced a delay in receiving her textbooks. When she tried to pick them up in person before leaving town at the end of a semester, she found that she could not access anyone on campus:

> I'd registered while I was down here thinking: I'll just grab everything here and then head up north and do it up there. And they told me my books, and everything were all ready to go. I thought, instead of you paying for shipping, I'll just come pick it up. They said, no, we can't do that. But it saves me money… and I'm right here, and, ok. So, I had to wait for that. (Tonya, personal communication, April 15, 2019)

In the second situation, she wanted to clarify her registration. She was dismayed that she was not able to connect with someone in person:

> I didn't realize that they don't deal face to face at all. I had a question and my bus stops right there. It was really quick, and it was a registration question. And

> I was right there, and they told me to go pick up the phone to talk on the phone to the guy that I could hear on the other side of the wall. You could have just walked out and had a conversation with me. (Tonya, personal communication, April 15, 2019)

In general, participants preferred outreach and direct communication over program announcements or adjustments that are delivered inside a communal, collaborative space, especially if there are changes to a program. Even when a resource such as a group Moodle page, or community space is set up, students still preferred direct email or personal connection to hear about changes to program or course additions. They had the sense that they were uninformed. One participant indicated that she located information by performing an internet search: "Yah, but I didn't even go [to the resource page], I just went on Google and found it that way" (Dolores, personal communication, April 10, 2019).

Due to the fact that an exam has to be moderated, the logistics can be arduous, especially if a student is not near campus. Descriptions of the administration around final exams and subsequent results reflect that they are sources of frustration. "Well, they said it would take six weeks to get the whole process approved" (Cam, personal communication, May 5, 2019). In one case, the administration of finalizing a participant's mark caused distress because it would potentially delay registration for the next program because time required to administer results: "you write an exam and it takes 3-4 weeks to get your transcripts back. So that's not going to match up very well" (Chandra, personal communication, May 24, 2019). Two other participants reported difficulty when the time came to finalize the exam process. At one institution, a specific block of time exists for final exams, regardless of when your course has ended. For those in self-paced courses, the exam period and personalized course end dates do not to align. Cam recounts the convoluted process he went through to set up a final, to tailor it to his work and family schedule, and to ultimately give up, because it proved too difficult to organize it to suit his work schedule. Instead, he opted to lose wages to simplify the process for and adhere to the formal exam time period, set by the institution. He detailed the futility he felt:

> No, you have to do it when they're offering other exams or other finals. So, you go and write with a whole group of people, which is fine, but it's on their schedule and I've even ran into where they'll give you an exam week. And they'll say: OK well, we'll write at this time. So, you request a date, and then

> they say: "Well we're not offering your test that day, you can only do it on, say, this Tuesday, right?" (Cam, personal communication, May 5, 2019)

This participant remarked on the irony of a formal exam process not matching up with the marketed flexibility of self-paced distance education. Although he was willing to pay the extra fee necessary to customize the exam period for himself, he decided to re-arrange his work schedule to suit the predetermined exam period, at a loss of wages.

> So you go from [distance education], where you're moving at either a set pace, or your own pace, and then when it comes time for the test, you know, you have to do it, if you want to do it for free that is, you have to do it on their exact date. I have asked to do it, either through the test centre, because there are other options, but then you have to pay for an Invigilator, I believe they're called, and then set up all your other stuff on your own. And if they approve it, then you can go that way. But they even told me that that could take 6 weeks to get approval on it. (Cam, personal communication, May 5, 2019)

Tonya, an online student who lived outside of the campus area, detailed the arduous process to set up her final exam. The institution near her is not approved to supervise final exams, and this resulted in a difficult process to set up. Her frustration is clear regarding the inconvenience of the institutionally pre-determined exam period. She explained that due to the set period in which a student is able take an exam, it is possible to be unable to use the entire time allotted for a course, or potentially, to have to delay the exam. The weight of the final exam, compared to the rest of the course, became a source of anxiety. Either way, it seemed inordinately inflexible:

> Because we're not an approved…examination centre. So, I have to go through the whole application process to take the exams at home. The nearest like approved one is 7 hours away, and I'm not going to drive that far to take an exam. I have to go through the process. They always get approved…it's just a little bit longer, and then you have to work within those 2-week time frames that [the institution] gives for the exam schedule. It's only certain times of the month that you can take it. So just sometimes you're jacked of 3 weeks of your 30-week time because your exam has to be taken way up here to suit, the exam schedule, so that can get kinda frustrating. And then if you don't get an exam period right after you finish your work, and you're waiting a full month, and now it's been a month since you've done all this work, and you have to come write this 60% final exam. (Tonya, personal communication, April 15, 2019)

The process was less complicated if a student was able to use another office on campus to organize a final exam—either an accessibility office or because of special

employee circumstances. In this student's case, because she was an employee, she was able to simplify the process:

> I had to phone them about the exam to see if I could write the exam in a room by myself, just the stress of people getting up and leaving. So, they were quite accommodating to that. They said to just phone them 3 weeks before you're going to write, just to message them and I could get a co-worker or supervisor to supervise. And that alleviates that anxiety about the test. I did say I was staff, and they did make it sound accommodating. I was worried I had to take time from work and go through accessibility services, like all the rest of the students do. Just seeing them go through that process was quite arduous and time consuming. (Chandra, personal communication, May 24, 2019)

When another office assists, such as accessibility, it can streamline processes. Tina conveyed how this simplified process improved her experience:

> I've always done it through email and it's always been super…I know what I need to do and I know what paperwork I need to send them, so it's just the waiting time, and making sure I get everything in for the time, whatever block they've decided will be the exam block for that month. (personal communication, April 26, 2019)

Participants suggested ideas to further streamline the process of final exams for everyone. Cam gave up on rearranging his exam at the cost of missing work and at a loss of wages:

> Especially when there's a test centre on campus…someone could utilize…No, I told them that I wasn't going to bother with it. Because it was too much a pain in the ass and I just ended up taking a couple days off work" (personal communication, May 5, 2019).

The disconnect between the flexibility of a self-paced course and the structure of the exam period did not make sense to him:

> That's my biggest frustration, that [an institution has] a test centre on campus that is staffed, and I just think that could be something they could offer students that no other place does. "Hey, when you're ready, you just come write the test, and away you go, would make it a lot easier. (Cam, personal communication, May 5, 2019)

He felt it was an example of unnecessary bureaucracy, arduous process and lack of integration with campus services that would enhance student experience.

Student services and supports: existence, visibility, availability. The participants I interviewed for this study indicated that they often were not aware of the academic or non-academic supports and services they were entitled to as online

students. One participant admitted: “Well, it was difficult, I made it through and I'm grateful that I made it through. Even though there were resources there that I, at the beginning, didn't know about until later on” (Chantal, personal communication, March 27, 2019). Chandra characterized her experience as being left alone to figure it out herself: “‘Here’s a book, here’s your online Moodle.’ I even had to ask another student how to do Moodle, because I didn’t even know how to do Moodle. I was really frustrated because I haven’t been in school for 10 years” (Chandra, personal communication, May 24, 2019).

Participants outlined a variety of supports that they were not aware of, or had difficulty accessing, from health care to library services:

> I think what was probably missing is something like trying to look for articles. And again, I didn't know. The library, I didn't know they had Ask a Librarian. All these services I was unaware of that could have helped with making my online experience better. When you click on the library site, there's “Ask a Librarian.” So yeah, that would have been so helpful if I knew about those things. (Chantal, personal communication, March 27, 2019)

At least nine participants (43%) indicated that it was not easy to locate various types of supports that they required for the online course they had enrolled in, either in the online space or on the institution website. Terry mentioned this lack of awareness: “checking out whatever resources are available through the school and not everybody knows it either, right? When they sign up, they're just like: ‘oh, I have to stay at home and there's nothing anywhere to help me’” (personal communication, April 4, 2019). I asked one student what would help in terms of support. Her response was that a telephone number, visibly located on a main page for students to call and get immediate assistance, would be ideal: “YAH! Like that and I don’t want to put that all on [the institution] but could there be a support number” (Chandra, personal communication, May 24, 2019). This was echoed by another participant who reported the lack of immediate assistance as problematic, and that he would have moved on by the time the instructor had answered his question.

Knowledge of withdrawal policies and procedures would have been valuable for a few participants. One mentioned receiving Do Not Complete (DNC) status and F grades before she was aware of those policies:

> The third time, when I went to do my one course, I felt a lot better knowing that I could withdraw. I didn't know that you could withdraw from courses. Right?

> So, I just failed the first three, my GPA dropped really low, and then the second time, I just contacted my teachers and I was like, I'm not going to finish, and they're like, 'Well that's fine. You're within the withdraw date, so it won't affect your GPA.' That really made a difference. (Kyla, personal communication, March 25, 2019)

Two participants mentioned that they would like to receive a comprehensive list of what institutional services online students are entitled to, and transparency around where to locate those services. For instance, because she lacked awareness of the what software is available free for students through her institution, this student incurred an additional unnecessary expense to load necessary software to engage in her course:

> I think just an e-mail, where you have your welcome letter, that it has a list of resources that will help you through your course. I didn't know that you can get free Word 360, the internet. What is it called? Windows. Yeah. So, I bought that...because I bought a new laptop, and then ended up paying for that when I didn't need to be paying for it, and then I paid it a second time because I don't know what happened to the program. I still had my pin number for it, and then the person who was helping me charged me another $40 to help me get it back on. And here it was free, because I'm a student at the university. So that's another technical issue I had. That was during my online course that I had all this trouble as well. So, if I had the letter saying, "Welcome…. These are all the services that we offer, and you have free Windows through the university." Then I could have saved some expenses that were not necessary. (Chantal, personal communication, March 27, 2019)

Generally, when the technological aspect of the institution's online education delivery is smooth, participants experienced less hurdles at a point that is pivotal—the onset of their first course with the institution (Roberts et al., 2005). It was not always clear that they were entitled to receive IT support, or that they should reach out to IT for technological issues in courses. Research indicates that students who have more experience with technology, or had previously taken an online course, fare better in online courses (Wojciechowski & Palmer, 2005). Some students are able to navigate easily:

> Which one, using computer and all that? Yah! I had to learn quite a bit. I didn't really get help, but I just messed around with it when I got onto the course site. Like when I went onto [the system] and then I just looked around and figured it out for myself. (Dolores, personal communication, April 10, 2019)

Online students want to feel like campus students. Clarity is desired regarding the various options for student fees and how paying those fees may create eligibility for

health services on campus or student health insurance. One participant noted: “So, you’re not automatically obligated to pay the student union fee, but if you want the health insurance, you need to. That would be really good information to know” (Tonya, personal communication, April 15, 2019). She continued to recount how she stumbled upon the information, and that eligibility for this insurance made it easy for her to go to the doctor on campus:

> You can, as an online student, opt into the health care plan but it’s not something that anyone tells you. Like I knew it, just because I happened to be reading the health care plan page, because I needed to know if I was covered for something and just off hand, came across this piece of information. I have it through the northwest territories, and I use the Student Union for their dental, because I don’t have dental...and I can keep seeing the doctor on campus. (Tonya, personal communication, April 15, 2019)

Even for a student who has health care coverage through a parent or their own plan, eligibility for dental insurance is a motivating factor for school enrolment.

Advising. When institutions provide support through advising, registration and the enrolment process, participants recounted finding this helpful: “Even when I was applying to the graduate program, and I reached out to somebody, and they helped me through the application process and stuff” (Avery, personal communication, April 6, 2019). Personalized support assisted Tonya in shortening her timeline to attain a management credential through an online institution. By investigating her courses, assessing existing transfer credits, and looking for ways to apply her credits to the management credential she was working towards, an advisor was able to find a way to shorten her timeline by two courses. She referred to the process as:

> pretty easy. It was just an email, the first time. When I was doing the business skills certificate, I thought I needed one course, it was like a math course, or something because the math we do in [our] program is a little different. But [the program advisor] came back and said: “Nope, everything is fine, everything is good.” I thought I needed four courses, and he came back, and said: “We pulled these transfer credits from when you did nursing 4 years ago. So now you only need two courses.” (Tonya, personal communication, April 15, 2019)

Another student appreciated how easy it was to ascertain approval to take an external course: “Yah, I just have to find one, and run it through them, and if they approve it, then you’re good” (Cam, personal communication, May 5, 2019).

On the other hand, Cam, a participant working towards a bachelor's degree online, would have preferred to receive more structured planning at the outset of his program rather than being left to design it alone. This concern about planning without assistance was demonstrated by the following sentiment:

> Even doing the whole program [plan]. I know when I signed up, there's all the courses you can pick from, and you know, away you go. There wasn't too much [advising] around what should someone pick and choose, or how they should go about setting out the course. I actually had to go back to them again and go through a whole bunch of courses, saying "Hey, I wanna do these courses, does all this work?" You know, some sort of structure, instead of saying ... ok pick these ones and you need to do this, this, and this. Especially when applying, they ask for all sorts of stuff from you: resumes, experiences, and everything else, and to go through all that, and to then have it spit out, here's all the courses, just pick whatever you figure you want to do. (Cam, personal communication, May 5, 2019)

Financing these types of support positions can be critical for an Indigenous student to stay motivated and persist (Pidgeon, Archibald & Hawkey, 2014), evident from the following comment about an advisor (specific for Indigenous students) who was a source of motivation and consistent unjudgmental support:

> It kinda brings you back, like, you know, I did lose interest and that. But he doesn't give up on you...that's a good thing about him. Usually some people, are ok, well you know… you don't have to explain nothing to him. I just tell him: "Ok I'm ready now." (Dolores, personal communication, April 10, 2019)

A single, unfavourable experience with staff or faculty can be a deterrent for an Indigenous student to persevere (Gallop & Bastien, 2016). Fear or expectations of racism and bias towards students is present. This can be because there is a perception or reality that racism is in play during various institutional interactions. (Gallop & Bastien, 2016; Pidgeon, 2008). This aligned with some participant comments about interactions with student-facing employees and faculty members.

Dolores, an online graduate student, told a story of an institutional response to a medical issue that prevented her from progressing in her courses. After falling behind, she received a call from the coordinator of the program. Her perception is that her identity as an Indigenous person contributed to the lack of empathetic or compassionate treatment she received in strategizing for the remainder of her program. This single negative interaction with the faculty member resulted in her dropping the courses that she was enrolled in, without medical withdrawal. Not only did she lose a semester of

time and tuition, but the F grades that she received significantly lowered her GPA. She did not return for one year. She detailed the scenario:

> [The instructor] sends me an email. And I was so busy and one year, I think it was from January, January last year (2018), not this year, last year, I started getting sick…The very next day there was a doctor here, on my reserve, so I went there, and he told me: "You have pneumonia." So, I was like, oh my gosh, so that kinda put me back too, from all that… I couldn't even do anything, I couldn't do anything. And so that put me back too. (Dolores, personal communication, April 10, 2019)

Setbacks like this are difficult to surmount for any student. Had she received empathetic advising or had the institutional withdrawal policies communicated to her which entitled her to receive medical withdrawal and leave, this situation could have resulted in a different outcome for her. Medical withdrawal would have afforded her the option to receive her tuition to be returned, but also to avoid an F on her transcript.

Research has found that students often do not feel that their circumstances or cultural backgrounds are understood (Pidgeon et al., 2014; Pidgeon, 2008; Simon et al., 2014) and that mainstream instructors and teachers do not have adequate intercultural training (Hickling-Hudson, 2003) to effectively support Indigenous student success. This participant's story is an example of the impact on a student's progress or even decision to continue. Had she received sufficient information to navigate institutional policies and provided information on policies such as medical withdrawals, this student may have felt more supported to take of time off, without the significant impact it had on her GPA, finances, and subsequent decision to continue. She expressed that she perceived that bias or stereotypical expectations were at play in this particular interaction. Confidence and belonging are integral to a student feeling entitled to navigate institutional policies for their own benefit (Gallop & Bastien, 2016; Kirkness & Barnhardt, 1991; Pidgeon et al., 2014; Pidgeon, 2008). Concern about being stigmatized and stereotyped can limit an Indigenous student in persisting to discover their options that can aid them in advocating for themselves. Researchers describes mentorship circles, relationships with peers, and instructors as key to belonging, and in becoming aware of policies and opportunities that can impact their trajectories (Pidgeon et al., 2014; Pidgeon, 2008).

Schick and St. Denis (2007) established that racism can take many forms in educational settings. Anything from low expectations, policies that limit education,

funding, to verbal or psychological abuse, or simple unkindness can adversely affect Indigenous students. The results can be low self-esteem, negative attitudes, and interactions with peers and teachers and early school exit. Again, Dolores explained one of the interactions she had with a program administrator. She felt judged, defensive, and unheard:

> I wasn't really paying attention, and then this lady phoned me…one of the staff, I don't know who it was, she just asked me how I was doing. And I told her "Well, you know, I was really sick." And then she just said "Bottom line…you got this, and you got that, blah blah blah, and I was trying to explain why I got these Fs eh?…And then I just shut down, and I just let her talk on the phone. And then she wanted this master plan, and I did all that, and I went to [my educational coordinator] who helped me out and we fixed it and everything, and we sent it. (Dolores, personal communication, April 10, 2019)

Thus, culturally relevant support staff are instrumental in assisting participants: "Yeah. Yeah, and having enthusiastic support staff at the college, like the people I actually went to talk to at the beginning" (Marissa, personal communication, March 25, 2019). This particular student re-engaged in her program, finally, with support from her educational coordinator. For this participant, who was undergoing personal setbacks, the added stress of negative interactions with the institution was a deterrent to completion.

Because of the systemic oppression that has impacted health and wellness outcomes in Indigenous communities along with additional responsibilities that can arise from being a community member, Indigenous students may need to be away from class more often, requiring an increase in flexibility in terms of deadlines, leave, and compassion. It is evident from the following account that communication with support staff and faculty should be positive, understanding and flexible. Systemic inequities have contributed to lack of success (Hare & Pidgeon, 2011) and transforming student facing approaches is one way to create a more comfortable atmosphere for students. Hathaway, Nagda, and Gregerman (2002) suggest that instructional and academic engagement can be useful supports for navigating and perhaps transforming systemic barriers. Of customer-facing employees of the institution, one participant made this suggestion:

> They need training, like all of us front line workers greet everybody who's at the door. It would be good if it was…for everyone. It was really good. It would be good if it was, yah, we were doing it all the time. I think, maybe some of us can forget, how to greet people who come through the door, with a smile on our

> face, and say our title, what we do here, how can we help you? Like, if you've got your bad mood, leave it at home, because it really can deter people from coming back. (Chandra, personal communication, May 24, 2019)

To mitigate the types of interactions that can disrupt Indigenous student success, Indigenous student support can be a positive factor in student persistence. An advisor solely dedicated to Indigenous students (Archibald et al., 1995; Pidgeon et al., 2014; Pidgeon, 2008), preferably with an online focus could be effective as Chandra explained a negative interaction with front-line staff:

> And for me, it doesn't work… because I was using that free service before, before their hours got cut back. And now it doesn't work at all with work. It barely did before, because it was only open till 5:30 or something. So, I had to book it over there for 30 minutes. And it was only because I would let them know that I was there. Or that I was coming. Because I think that some of our students are really shy, and we personally have to walk them to these services. If not, they won't attend. They're reluctant, and school is hard enough as it is. We have to walk them there. And me, even dealing with anxiety, I had a hard time with this one who I didn't know, putting up my hand and saying "I'm here, can you help me? I only have 45 minutes!" And I didn't even wanna walk over there. Because there was this one person, she was working with this one group of people and she didn't come over and ask. (Chandra, personal communication, May 24, 2019)

She went on to outline the types of interactions that could help. Indigenous specific navigators or advisors can ease those interactions, act as liaisons between students and front-line staff, and provide a connection to campus community, highlighting the importance of relationships in Aboriginal student persistence (Archibald, et al., 1995; Pidgeon et al., 2014; Pidgeon, 2008). Service excellence training would be valuable training for all front-line staff and faculty as a reminder to immediately greet students, because this builds a sense of belonging. As she relayed her own experience with a help centre, she summarized how many of her students feel when accessing services:

> Yah, even if just going to ask: "Do you need any help?" That would be helpful, I didn't get that from the Math help center…But the other [tutors], I didn't even go on their days after a while. I wanted to walk out the one day…It was a struggle. Now I know what the students feel like. So now I personally walk them over, (laughing) and ever since then, I've been walking them over to the Math help centre, and the Writing Help Centre, and I know there are lots of good folks that work here, but maybe there's not an entire understanding of what courage it took for our Indigenous student took to walk their butt over to the service just to sit down. And even if they're not greeted well, if there wasn't a great attitude, I've have had some of our students come back crying from just registering, or

> just trying to get connected to the university and they weren't greeted well. I personally walk them over, because I don't know how they're going to be treated. I just don't want to see them not accessing any services. (Chandra, personal communication, May 24, 2019)

Accessibility services. When a student is aware of his or her particular learning preferences or requirements, they can ensure that they organize the correct types of support for themselves. A number of participants outlined strategies that they used to accommodate certain characteristics or preferences. Tina uses accessibility services on campus to support specific requirements for midterms and exams. The office deals with logistics for her, liaises between her online institution and provides a solitary space for her to write alone. A number of the participants in the study were not aware that this was a service available to them online. In fact, Tina mentioned: "I think that there's probably a lot of other students that could benefit as well" (Tina, personal communication, April 26, 2019). One of the participants reported that he has a formal diagnosis of ADHD, which would allow him to be eligible for support from the office. If participants are aware of supports that they are entitled to, they can attain flexibility, extra tutoring or supplemental support that benefit them towards their goals.

At certain institutions, the exams are scheduled in a formal exam period, rather than at the end of the particular course, which may force a student to delay or move up an exam before they have completed their course, resulting in less study time. For Tina, the accessibility office coordinated with the online administration so that the student could write her exams at a flexible time and place that worked best for her. She remembered the process as slightly disorganized, but in the end, helpful:

> So, we got everything cleared up and the lady that was working, works with me personally, she is really understanding. She was like 'No, I could see how that would be really confusing, how about we just set for you to write it next Friday.' I was like, that works…so… that was it. It was just a bit of confusion." (Tina, personal communication, April 26, 2019)

Ideally, institutional departments would work seamlessly to support students. In this case, accessibility services made it possible for this participant to have flexibility and avoid the typical exam logistics that impacted other participants:

> Yeah, I think, not so much overriding but they really work together at least. They finally contacted [the institution] and sorted it out...They pushed it back, instead of making me write it the whole month later during the set exam period.

> Yah, DSO is really great for that, I like their services very much. I like writing exams with them. (Tina, personal communication, April 26, 2019)

If students were aware of and the supports and services, experiences were increasingly positive. When one participant had to connect with the institution, she indicated that: “Yep, they were really straight forward, they were good” (Tina, personal communication, April 26, 2019). Another student, who ultimately dropped her course, noted that resources were available and obvious to her.

> So, as an online learner, and I want to say that there were definitely resources there, they were evident, so it was well laid out that I could call the instructor and that was identified. It was well laid out, the different resources and tutorials, I think, to help me. And there was also, I was also directed to the [institutional] handbook, or something in there that I thought was good. It guided me that there was support up at the university. You could go up there, there’s writing centre, a math centre, I think. If I’m remembering. Some of this might be overlapping with things I already knew. I have reached out to [an Indigenous Student recruiter]. (Donna, personal communication, May 1, 2019)

It is interesting to note that this participant reached out to an Indigenous student recruiter again, another indication of the importance of a specifically Indigenous support unit for Indigenous students. She already had built a relationship with her, so she approached her again about issues unrelated to recruitment.

Indigenous student spaces: student community. The flexibility that online learning offers was not always taken advantage of by the Indigenous students that participated in the study. Distance education does not provide students with the campus spaces such as Indigenous gathering places or classrooms. Researchers indicated that communal spaces are helpful to provide a supportive environment to do course work. (Pidgeon, 2014a, 2014b; Pidgeon et al., 2014). The following participant discusses the value of this space for campus students:

> I love the gathering place. I use the one here. Yeah. I go there and I use all their services, I eat their food. I love it. I prefer working there actually, just away from my kids and I can just put in my earphones and just focus. But there's other people around. It's just, maybe I like the environment there. Everyone's really welcoming. Yeah, it's nice there. (Kyla, personal communication, March 25, 2019)

The Indigenous gathering spaces can be act as a major support in terms of providing tutoring, as highlighted in the following example:

> I went there a couple of times in my first year. They invited me to my orientation and then when I was having trouble in that Java course. The first time I was taking it, they offered me a tutor for that as well…and that was super helpful. I wasn't organized enough for that. I did not do enough outside of the tutoring sessions, to come prepared, and have questions. (Tonya, personal communication, April 15, 2019)

An available education centre or Indigenous space on campus also provides computers and printers, not available at home, to submit their assignments: "Yeah, because I know that's helped me financially to get back in force because sometimes they—at the time, I didn't have a printer or a scanner, so I had to go into town and scan whatever work I had done to e-mail in, or whatever" (Terry, personal communication, April 4, 2019). The same participant also indicated that it can be a hub of information: "Yeah, and then the gathering place is also a good place for information and using their printer" (Terry, personal communication, April 4, 2019).

This preference for gathering in a communal space may correlate to a preference for campus courses. For this reason, it is important to foster community for remote students. Clearly this is possible because some of the participants reported gathering to study together, even if not enrolled in the same course: "Well, we're all in the same community… so we'd go and meet and our friend's house" (Dave, personal communication, April 19, 2019).

Often, online students frequent campus and may be able to take advantage of the supports that are at Indigenous student spaces on campus. Ensuring that online students are aware of these campus spaces can benefit Indigenous students who reside close to campus or are enrolled in campus courses as well. When the Indigenous student navigator was asked if they support online students, she indicated that: "You know, I don't even know if they think to phone us. We get some, but not as many as I think that we could be getting. Maybe our number should be on the page or advertised" (Chandra, personal communication, May 24, 2019). Ensuring students are aware that this space exists can impact their experience online, too: "I didn't even know that working at the Indigenous space was an option, until now. Yah…I didn't know you could go and work there" (Tonya, personal communication, April 15, 2019). The Indigenous navigator suggested that it may assist an online student to feel less disconnected. The value that

warmth and kindness by student-facing employees can offer students cannot be overstated:

> I do end up supporting the ones that call, I will never send anyone away and we try to answer the questions the best that we can. All we need is a smiley face on the other end of the phone. Somebody who says: "How can I help you? can I do this? how can I find this for you?" Yes, it was mainly bursaries, scholarships, housing. Even if they just have our number, if our number was online, because I think, somewhere, because we have a direct line...There's the phone number and an email to contact us, if they're feeling like they need to get connected more or need resources. (Chandra, personal communication, May 24, 2019)

While Daniel does frequent the space, he does not study there, an indicator that the space functions in a variety of ways for various students: "No, not at all actually if I'm on campus. I usually, I don't do work here, I just do all my course work at home, so if I ever come here it's usually just to check the emails or something" (Daniel, personal communication, March 28, 2019). As the Indigenous advisor mentioned, Indigenous student spaces can offer students a much-needed connection, and a space in which they can receive support for navigating the institution because that can often be frustrating. Karen references this difficulty while comparing one institution to another: "And if you need help, the right hand doesn't talk to the left. And it's not, it's a frustrating, whereas at [that institution], it's fast, it's clean, it's intuitive" (personal communication, April 11, 2019).

Counselling. It was evident from some of the participant stories that Indigenous students could be supported well by an Indigenous specific counsellor. They can serve a multitude of purposes: help navigate the institution, foster belonging, support student social emotional development, and assist with institutional issues and policy: "I have used the counselling service up here in Williams Lake" (Terry, personal communication, April 4, 2019). Terry revealed being affected by intergenerational trauma and oppression that has impacted and still impacts many of the Indigenous students seeking post-secondary education (Brave Heart & DeBruyn, 1998). Advisors, counsellors and navigators who are familiar with and have been trained in understanding how the institutional systems such as Indian residential school, Sixties Scoop, and general racism, are best positioned to assist Indigenous students. Archibald et al., (1995) attribute a number of factors such as low self-esteem and academic confidence to a legacy of historical discrimination. Navigating mainstream institutions

can be difficult for students, but for those who may possess a low academic self-concept, or be encountering an institution for the first time, navigating policy and procedures as a student can be difficult. The existence of personal counselling was mentioned as a significantly helpful factor. “It really does and when you're being hard [on yourself]—I think we are our own worst critic” (Terry, personal communication, April 4, 2019). This same participant also indicated that it helped with the educational experience:

> Yeah, that's one of the things that definitely helps and I'm pretty sure that's included in the fees, right? But people might be scared, or they don't even know or realize that counselling is included in the fees. But I have used the counselling service here in Williams Lake. (Terry, personal communication, April 4, 2019)

Attending post-secondary education may result in Indigenous students encountering content or engaging in processes that are triggering. Reflective writing, discussion, historical content, or simply engaging in mainstream worldviews can be emotionally triggering, and students may be impacted adversely. An available Indigenous counsellor may help to mitigate this and assist with processing these experiences. One participant suggested: “That would be so sweet, if the counsellor could serve on campus and off campus, how cool. I think we might have less of a turnover rate, to be honest, that would be the great thing” (Chandra, personal communication, May 24, 2019). For example, one participant discovered that she fell into the category of the Sixties Scoop during a classroom discussion: “But I remember a gentleman in my class had said, ‘Oh, I’m part of the Sixties Scoop’ and I just looked at him and I thought: ‘What’s that? And it was really quite fascinating because, maybe you can relate’” (Diane, personal communication, April 8, 2019). Chandra mused that other institutions have increased their staffing with Indigenous counselling supports such as: “a Master of social work student and a clinician, and people that are there to talk to them. Because we’re having to have those conversations, while working and helping them find resources” (personal communication, May 24, 2019). Participants wished that there were more Indigenous focused advisors, and the previous comment indicates that those Indigenous staff are under-resourced.

Encountering difficult personalities in the institution can be a deterrent for Indigenous students to accessing services they may want or require, evident in the following comment from Chandra:

> Yes, Yah! Those people should not be answering the phones and the front-line people should maybe be doing a different job at the university, but not the front line, the ones that answer the phones or greets you.…And she makes people cry. That's not great. It affects people. (personal communication, May 24, 2019)

This participant continues to outline the necessity for institutional units that focus solely on Indigenous students:

> [They exist] for a reason, because [they make up] for student services. Really should there be that? Well, there will be this need for a very long time. [Students] get the run-around here, even coming to campus, distance education and on campus. Oh, go here, when it's here, and they end up here last. And they tell us, they've had the run around, and they end up here, at the Indigenous student services. (Chandra, personal communication, May 24, 2019)

Furthermore, relationships are paramount to success for Indigenous students (Hare & Pidgeon, 2011; Pidgeon, 2014; Archibald et al., 1995). Many Indigenous knowledge systems and values include relationships as an important factor in their worldview and foundations for daily interactions. In the Secwépemc language, *kweseltnews* is the word for relationship, one of the four Secwepemc values (ALBAA Project, 2010) and a central value of many Indigenous knowledge systems (Simpson, 2000 as cited by Hare & Pidgeon, 2011). Chandra reports that relationships as integral for Indigenous students to succeed:

> Because that social emotional support is really needed to get through education for a lot of [us]. Like, some are really self-sufficient…but there's the ones that definitely come and seek help, and it seems like there's a such a need. (personal communication, May 24, 2019)

Tutoring. From discussion with the participants in the study, tutoring seems necessary for certain courses, math specifically, for twelve participants. It was mentioned that an increase in free tutoring would be preferable, which seemed to be because the teaching presence was not strong enough. "It was kind of tough because I was on campus and there was only 1 or 2 people who tutored statistics on campus…like people with full on math degrees tutoring statistics" (Ben, personal communication, April 4, 2019). Current tutoring resources were not sufficient for most participants: "Tutor is also well-booked though. There are not that many tutors and there's quite a few people that need help. He would be available for 2 hours but for those 2 hours you might only get him for 10 or 15 minutes" (Ben, personal communication, April 4, 2019).

Tutoring is effective at overcoming lack of instruction, and can be offered at institutions students are enrolled in. In the absence of teaching presence, tutoring was an alternative that scaffolded participants through their coursework by offering formative assessment for assignments throughout the course. Particular courses seemed to take on a mythology of their own. Faculty at the institution delivering a particular course cautioned one participant, such as the following:

> I don't know if he was the head of Math, but he was the instructor in the booth. I said 'Yah, I've been told the stats course is difficult.' And he said, "It is, it's a tough one to get through." So, I went, ok. And we know another nurse who went through it and had got a tutor. (Donna, personal communication, May 1, 2019)

Donna continued on to enroll in this particular statistics course because she stated that it was her only option but hired a tutor from the outset because of the warnings she received. "So, I hired up a tutor, which was shared, but then it was about halfway through, I started thinking, ah, in my personal life, am I ready?" (Donna, personal communication, May 1, 2019). She ultimately dropped the course due to personal reasons that impacted her ability to stay on top of it. Even with tutoring, Dave indicated that it was not sufficient to complete the course successfully. "We had lots of help, but learning Math all over again, was a challenge for me. I had a tutor as well. And I still didn't… and now even when I try to do some of the math, I can't remember it" (Dave, personal communication, April 19, 2019).

Another participant was able to take advantage of free tutoring at another college that was near her location, but was not able to maintain consistent support:

> I reached out to the college, and they had a tutor available that I could use. So, I was seeing this tutor for a few times, um. I think I saw her 3 or 4 times, and I submitted one assignment working with her and it didn't get very good marks at all. And then it got to the point where she was like, "This isn't really my area of expertise and I don't want to tutor you anymore." So, I lost that resource. I don't know what to do, working over email doesn't really work for me for a math course. (Tonya, personal communication, April 15, 2019)

In the end, the tutor was not effective for the particular content and creating a relationship with a new tutor, proved to be a barrier. Chandra echoed this: "…this is my second tutor, or third tutor. And that's another thing. When one tutor can't tutor you anymore, you have to find another tutor. And make a relationship… then I stopped for a

bit, because I lost my tutor, and I had to find another tutor. Just that stress" (personal communication, May 24, 2019.

Effective tutoring is invaluable. One student enthusiastically communicated the tutor's commitment:

> He's really, really good. He didn't have my book, but he found the 9th edition or the 10th edition. He reads at home, and then looks it up before he comes to see me. I give him the questions, and he knows the topics that we'll be working on, so he does his homework beforehand, so it's really sweet. (Chandra, personal communication, May 24, 2019)

Increased complexity, time and effort is involved when a student requires tutoring for two courses, illustrated by the following example: "And also, I had to take statistics, so doing that online, I had two different tutors, at different points" (Karen, personal communication, April 11, 2019). Free tutoring was deemed helpful when students were aware of the service. One student wished that she had known about the free help earlier: "[she] *just* found out about them, like this year, my brother went to them for help. He's in his first year. He went to check it out and I wish I knew this was a thing." The teaching assistant (TA) was mentioned as an effective teaching presence by one participant: "Yes, for my statistics course and my first epidemiology course in my graduate degree the TAs were the main people we reached out to" (Avery, personal communication, April 6, 2019). Being able to engage with an effective instructor, TA or a tutor, that can provide guidance through the material, seems integral to success: "Not that it was explicitly offered. I think if I needed a tutor, I would have to find that on my own. In some of my courses we had TAs and they were pretty helpful" (Avery, personal communication, April 6, 2019).

The additional cost of tutoring is a barrier to success are not covered consistently by all funding sources. As mentioned above, free tutoring services is a coveted resource, and not always accessible, relevant, consistent or reliable. This means that the actual cost of taking an online course can double when the tutoring fees are added up. "Not all bands fund tutors. Sometimes it has to come out of [student] pockets. Some of the bands do, though" (Chandra, personal communication, May 24, 2019). One participant who also works in an advisory position, explained that if funds do not exist, students would have no other recourse:

> For students, that is a lot. [Tutoring] wouldn't be there, so it doesn't happen. So that's why people are failing, and I'm not sure, because yah. During our busy, our Fall and Winter semesters, we have tutors. The Math tutors come in two times a week, and then we promote that Math help centre. It's just in summertime hours, they cut back. (Chandra, personal communication, May 24, 2019)

At $40 per hour, one participant felt that she needed to attend 3-4 sessions of tutoring per week to navigate her course material, which roughly amounted to $160 per week. Over the course of 5 modules, that could add to an additional $800. Since reported tuition for her course was $700, that particular course more than doubled in cost.

Community & family supports & responsibilities. Community networks, relationships and cultural traditions are some of the foundations of Indigenous student strengths (Deyhle, 1995). Some communities have educational departments and coordinators that can play an integral role in scaffolding Indigenous students with formative assessment, tutoring, offering encouragement, providing program and course advising, researching funding options, and acting as liaisons for students with a variety of institutional departments. "We had a good educational advisor, we had an Indigenous education advisor, they were both great that way, so even going on, helping me plan to go on" (Marissa, personal communication, March 25, 2019).

> It works really good because, she's very helpful with my assignments and also, [he] is very helpful too, because during the week, I would just email him the assignments and he would send it back to me with feedback and I would, you know, fix it up and, you know, whatever he tells me to do. (Dolores, personal communication, April 10, 2019)

Essentially, individuals in these positions can provide wrap-around support could assist Indigenous students to succeed in distance online education. Attributing student success and persistence to the instructor connection and commitment: "he just wants to see them succeed, which is really good in these kinds of roles. A person that wants to see that student success, because the work is good" (Chandra, personal communication, May 24, 2019). Participants spoke of receiving support from educational coordinators, either in institutions or in community, to locate courses at various institutions that would suit their particular requirements, especially if the student is struggling or has failed a course in another institution:

> For example, I need some 300 or 400 level credits for this summer, and she emailed us yesterday and said well, she found one and it's a two-week intensive.

> And there's one spot left, but by the time I logged on, it was gone, so, but that's alright. Everything happens for a reason. I was a bit disappointed, because it would have been nice. (Dave, personal communication, April 19, 2019)

This student required a breadth requirement for entry into Native Indian Teacher Education Program (NITEP) at an institution. Due to the fact that he had not received a passing grade in the previous distance course, he is searching out a similar course at another institution. The affect that an educational advisor or coordinator can have on a student is evident in this statement: "my Indigenous facilitator…she helps us. She's been really good for us. She does a lot of stuff. We actually did one of the field centre courses with her, the Education NITEP course. She really helped" (Dave, personal communication, April 19, 2019). In the end, he could not take the course she located for him, but he was able to take another distance course, this time, at a different institution.

Educational coordinators were reported as providing encouragement and strategies for time management and study skills:

> When I was home, I could find other things to do. I think that's what the [Indigenous facilitator]…here was talking about. You need to get out of that space, you need to come out here, and sit out here. [He] also encouraged me to go to the gathering place on [campus]. (Terry, personal communication, April 4, 2019)

Their role includes assisting with accountability:

> My education coordinator, actually, my enrollment officer, he was the one that helped me get into the online stuff. He tried really hard to keep asking me every couple of weeks, how are you doing? Do you need help? There's tutors and a math center there. I don't know. I just didn't do well. (Kyla, personal communication, March 25, 2019)

When Kyla did not complete her first attempt in which she enrolled in three distance classes, the educational coordinator ensured that the student did not internalize this, and nonjudgmentally offered another viewpoint and a strategy for next steps: "He just told me that it was a learning curve and that a lot of people struggled. He is the one that told me just try one" (personal communication, March 25, 2019). Often, tutors provide students with formative assessment that an instructor might normally: "Yes, he helps out with that too, [distance education], and whoever comes into the gathering place" (Dolores, personal communication, April 10, 2019). Terry, who relies on her educational coordinator, referred to the guidance she receives to comprehend an

assignment as invaluable: “It helps that he tries to switch the wording around so that I'll understand it. If I still don't get it, then I'll get ahold of the teacher, but if he's able to explain it to me in a different way it helps. Yeah it makes a difference” (personal communication, April 4, 2019). This last statement is evidence that the participant felt more comfortable reaching out to a person she has a relationship with, rather than the instructor.

Enrolment officers streamline processes and uncomplicate issues that might potentially hold a student back: “I would bring [a module] to my enrollment officer…then he'd be like, same person? I'd be like, yeah. Then he would put it in a manila envelope in the mail it off for me. If I didn't have him as a resource, I probably would have had to pay for all the packaging” (Kyla, personal communication, March 25, 2019).

A source of information, connection, consistency, formative assessment, encouragement, and unconditional support, educational coordinators, either at an institution or community education department, can break down barriers such as arduous paperwork, funding opportunities, and pedantic tasks done such as faxing, mailing, printing. They offer effective strategies within courses, and program advice, along with keeping track of students, and providing updates on opportunities they might be eligible for:

> He helped me get a computer for the course. At the time, there was something going on with the residential schools where if your relative was going to school, there was a $3,000 grant that you just had to sign a paper and then it would be sent to my student account. He always kept track of all those things. He's the one that sends me all the information on funding, so he still does. (Kyla, personal communication, March 25, 2019)

Simplifying the process for this student, he also ensured that the student had a computer with which to study online:

> He got the papers for me and they had a code and everything. They had to get mailed and everything. It's very official. Then he was like, get your mom to sign this, bring it back to me. I'll put it in. Then he called me and he's like, all right, it's in there. He's like, you just need to give Simply Computing a call. Then he got me a computer through them. (Kyla, personal communication, March 25, 2019)

Spouses can be sources of support by sharing study strategies: “She’s really organized. She knows how to study. She’s really helped me in a lot of ways” (Dave,

personal communication, April 19, 2019) and offsetting the responsibilities of taking care of a family: “I think at the time, having a co-parent that was reliable” (Marissa, personal communication, March 25, 2019). Family responsibilities impact a student’s opportunity to focus solely on education: “I had to get an extension because I'm a single mom and it's just a lot of things coming up in my life” (Chantal, personal communication, March 27, 2019). Full time employment can detrimentally affect student success. Tonya’s parent was an integral part of her success in an accounting course, as she relays: “It was difficult in that I was working full time...and I think the reason I got through the accounting was because my mom is a finance clerk…She helped me a lot through that one. Yep, she got me through” (personal communication, April 15, 2019).

At least two participants suggested that the level of responsibility in their roles as a full-time employees proved to be a barrier for her in finding a suitable program: “I guess my barrier is that I am a full-time employee and have been for years, and it’s not a small little role...I’m Monday-Friday, and I don’t leave that office much before 5:30 or 6pm on a good day” (Donna, personal communication, May 1, 2019). Another commented that full-time employment affected his decision to drop a course: “I was working full time; I had a bunch of stuff happen to me in the summer…I was taking in person classes in the Fall, while doing the online course” (Tina, personal communication, April 26, 2019).

Personal circumstances proved to be barriers to completing courses, as Donna pointed out:

> That’s when I realized I wouldn’t be selling our home as was planned. And that’s kinda critical to my next stage of committing to school because we have properties and (unintelligible) so this needs to be taken care of which will be done in a month, hopefully. So that was part of my reason for withdrawing. (personal communication, May 1, 2019)

Another usually A-student recounts a personal situation which contributed to a drop in her GPA, delaying her graduation date:

> Yah, because that was when, like, school hit, and this really bad event happened to me in the summer. So, I’m going to chalk it up to…that also really delayed my education. One thing happened after another, and then next thing I know, I’m trying to move because I work in Whitehorse in the summer and I move back down to Kamloops for the school semester…I was busy with packing and moving, and it was just a matter of studying for my other courses on top of

> finishing my current assignments that I had in the auditing course. (Tina, personal communication, April 26, 2019)

Family responsibilities can prevent students from using the Indigenous spaces on campus, which have proven to be effective in providing support. Kyla was concerned about bothering others in the space:

> No. Well, because it was always at home. Right? My kids were kids, right? So, I can't have little toddlers and little baby squealing around at the Gathering Place. I just felt like they would be a burden, so I just stayed home. (Kyla, personal communication, March 25, 2019)

Community responsibilities, as well as financial needs, prevented the following participant from progressing. These distracted him from his coursework, and it was easy to allow the course to drop on the list of priorities:

> As well as doing cultural activities too, because I got asked to do stuff back home, as well. There was little tiny stuff that I did to make enough money to get by, and over the summer like that. I needed to prep for and whatnot. So yeah, it was easy to get busy and it was just hard to focus and be engaged in that course. (Shawn, personal communication, March 29, 2019)

Shawn outlined three factors that resulted in him letting his course lapse: the learning curve of a full-time job, internet access, and lack of instructional support for the course:

> I got busy with the full-time employment and learning and everything. And time expired [for the course] and I didn't bother. The only place that I could have properly got access maybe was on campus at the time, but that was limited to whenever the labs were open. And then, yeah, and no support for the course. (Shawn, personal communication, March 29, 2019)

Funding barriers. Eligibility for most band funding requires a student to be enrolled full time, 60%, which can be a barrier for students enrolled in or whose only option is distance or online learning. Participants expressed that some band funding won't cover online or distance learning and most won't cover the student for tuition or living allowance unless they are enrolled or registered in at least 3 classes.

> The way that my funding was at the time, I had to be in a full-time workload. Right? Which is 60%. So, I had to pay for that myself. They don't fund you for one course. You have to have at least three. It's kind of like they set me up for failure from the beginning because they're not very flexible in their policies. (Kyla, personal communication, March 25, 2019)

Many participants referred to concerns around full-time study: "I have to take 9 or more credits to get the funding" (Dave, personal communication, April 19, 2019), which is

three courses. Participants also stressed that 3 online courses were too heavy a load to be completed successfully. As mentioned by many participants, taking three online courses can be quite a heavy workload which most likely is a result of a lack of concrete on the number of hours students spend on asynchronous activities. In F2F courses, contact hours are calculated to arrive at credit allocations (Phillips, Schumacher, & Arif, 2016).

In order to receive funding, Kyla attempted to take three online courses in one semester and did not complete any of them. The concept of online education historically was that students could take a class or two while working full time, making an education possible for an individual to continue schooling, while maintaining a full-time job. Often Indigenous students cannot take advantage of this aspect because of band funding requirements, as Terry pointed out: "Oh here's the other thing. The band will not pay for any [non-campus] courses. Any [distance] course I have to pay for myself" (Terry, personal communication, April 4, 2019). Consequently, this prevents a student from enrolling part-time. Because a full-time (3 courses) course load was experienced as too heavy to manage, students expressed a wish that funding would cover part-time or less than full load for online learning, indicated that it would be a really good thing to offer that type of funding (Avery, personal communication, April 6, 2019).

Often funding policies are incentives for a student to attend immediately after secondary school, articulated by this quote by Chandra:

> You'll get band funding money if you're a grade 12 high school and you go right into university, but if not, you'll have to wait. If you don't go right out of high school, there's a chance you'll have to wait a couple years, till you get funded, or funded at all, for some. (personal communication, May 24, 2019)

Two issues can arise with this incentive: a student may feel compelled to register for post-secondary before they are ready, or a student is at risk to lose losing the opportunity to receive funding if a student delays attendance. Dave found himself in this exact predicament, paying for his own tuition until he was accepted into an approved program:

> When I first went back to school, I had to pay for my own courses, linguistic courses, I think they were like $5 or 6 hundred dollars a term. Then I had to travel to Lillooet to go to courses, so that costs a lot of money. And once I finally got into NITEP, I got funded by my band. So we got an allowance and they gave us, paid for the courses, but now this summer, I have to pay for my

> own again, because they don't sponsor students in the summer courses, unless it's part of your program so next year, I can go from September till July so they'll have to fund me. (personal communication, April 19, 2019)

Funding varies depending on the community, which can allow more flexibility for some students to take online courses. Tina describes additional funding support that allowed her to focus on school: "No…I'm from Inuvialuit. We kinda have a different set up. We get monthly living allowances, so I got $250 every month of the semester." (personal communication, April 26, 2019). Other students have no access to funding, like Donna, who is a potential graduate student whose nation is not able to support her: "I know that my home community certainly doesn't have any funding" (Donna, personal communication, May 1, 2019). Two students, Tonya and Chandra, referred to a reimbursement policy that they have used for part-time studies which does not support a student if they cannot pay for the course to begin with while waiting to be reimbursed. Tonya outlined the rules: "If I do it as a part-time student, then it's course reimbursement. So, when I get my successful grade, they'll give me the money back. So, you have to finish and complete" (Tonya, personal communication, April 15, 2019). Full funding and incentives such as living allowances, employment incentives, and books, whether it's for campus or distance, summer or traditional school year, vary depending on context, and location:

> We get such great incentives. Like the government has this student assistance financial program. So, they have different tiers. I fell into the status, Indigenous, born and raised in the north tier. Which is the best you can get…So, my grants covered an entire 6 years' worth of tuition and they give me $850 bucks a month in living expenses and $400 bucks a semester for books. And if you get approved for SSA, the band will step in and they give you $700 a month, for living expenses. No, I don't work during school, and then the government, on top of the funding they give, have the summer student employment program. So as long as you're a student somewhere, online or in person, they set aside entry level positions and they'll try to match your field of study and give you a government job for the summer. So, I've been a government employee since I was 17 years old. (Tonya, personal communication, April 15, 2019)

In some cases, for example, Diane was provided resources to pay for a tutor and was grateful that funding existed for a one-on-one.

An additional barrier to online study is not possessing the necessary tools to get online. For example, Tonya was able to secure a laptop with her parent's residential

school settlement, which has been mentioned as another source of funding that students may be eligible for:

> I never thought about that, I was really fortunate that my laptop was paid for by those educational credits. Like, my boyfriend is wanting to go back to school. And he was thinking of upgrading a couple of courses. But, no computer, can't do it. I think that's why some people go to the Gathering Place. (Tonya, personal communication, April 15, 2019)

This example is evidence of how integral funding and financial support can be for a student. It's not enough to simply have tuition paid for. Books, resources, materials, living support are all important so that full time employment is not necessary, allowing the student to focus on education. Shawn was not able to access funding for textbook and materials for a course he had enrolled in during a summer semester, which was a major factor in getting behind and ultimately dropping the course:

> I know those materials that I needed that I didn't really get either, too. And I was doing this all on my own. I didn't have funding from sponsors, from my band. I think I had enough money saved up to pay for the course and that was it. I didn't even have the money to get [books]. And yeah, so that slowed things down a lot. And I don't think I got them 'til mid-way through the summer. (Shawn, personal communication, March 29, 2019)

Technology. When support for any technological issues arise, participants were frustrated if they could not seamlessly get online. Staying on track in an online course is paramount to success, so any delays in starting out is a potential barrier to completion. Donna received a non-functioning and outdated resource in her distance packet that was mailed to her. The back and forth with IT to solve the problem never resulted in obtaining the resource. She finally dropped the course, but reflected on the cost of the tuition for the course, commenting that it affected her view of the institution:

> The second thing…the disc in the back of the textbook itself, wouldn't load. So, I started with the… IT support, and then that wasn't going to work, which is fine. And then I went to the company of the textbook. I actually emailed their support, whatever the textbook company was, and they did email back, which was good, and asked me all sorts of questions. And said it could just be this or that. And in the end, I dropped it. So again, I guess it would be on my end, I never reached out to the instructor to say, the disc, which wasn't necessary, it was a supplemental, for practice, more practice than was in the book or put online by the instructor in the online course module thing. So, there's that piece too. You know, like you pay that much money and the disc doesn't work, like what's going on? (personal communication, May 1, 2019)

In another example of technology causing student frustration, Chantal referred to the arduous process of getting online to register. She specifically drove to campus so she could avoid the potential issues of doing so alone. She explains:

> So, I was registered and then I went back home. I didn't realize that I needed a textbook. When I got home, once the course started, I tried to go on, but I was unable to get into the course. So that was just frustrating for me because I made a point of going directly on campus to register. Then it wasn't until later that I found out that I needed a couple of textbooks. (personal communication, March 27, 2019).

Donna made some suggestions about online support, that it be more didactically laid out, to assist those students who are not already familiar with the various systems:

> because the people that are really confident or bang this stuff out all the time. They'll take it or leave it. But at least you've laid out, hey I'm here. But I think it needs to be more than 'Hey I'm here.' Because I've had that, you can send out the [institutional] handbook and all this stuff. This is when the Math help doors are open, the Writing [help] is here, these hours. (personal communication, May 1, 2019)

Clear and easily navigable online spaces assist in the learning process and reduce doubt and uncertainty. Students with previous experience navigating an online course or sufficient training fare better than novice online takers (Carter, 2013). Donna also noted that she was unsure of what the particular differences are between a print version of a course, and an online course, evidence this as a gap in service: "Somehow figuring out how does that work, is it when they register, is it the paper material that comes out, even an email? (Donna, personal communication, May 1, 2019).

Community of Inquiry

CoI is about the process of inquiry—teaching, demonstrating and reflecting upon how students engage with teachers, other students, and the pedagogical aspects of learning as knowledge is constructed (Anderson, 2017; Garrison et al., 2000). Because a peer community has long been acknowledged as integral in the classroom (Johnson & Johnson, 1994; Springer, Stanne et al., 1999), the main goal of constructing CoI for computer mediated education was to provide a framework for viewing and facilitating cognitive presence and constructing knowledge via the social presence (peer engagement) and teaching presence (teacher facilitation). Online instruction could begin to utilize network-based technology to facilitate peer-peer interaction, as the tools matured. My research goal in this study was to investigate how this heuristic can

currently be used to view the Indigenous student experience online, to frame existing scholarly literature, and to understand how it relates to Indigenous students currently working towards an education online.

One of the most recent inquiries into the CoI by Anderson (2017) encompasses some of the questions that are relevant to my participants' stories. The CoI model relies heavily upon the teaching presence to affect a meaningful social presence. He recommends that the model could shift to recognize the importance of motivation, self-efficacy and personal skills in effective communities of inquiry (Anderson, 2017). Themes that emerged in participant interviews were woven into the CoI framework that served as a lens for the literature review and to develop the research questions.

Social presence. Development of a social presence has been indicated as a predictor of retention (Visser, Plomp, & Kuiper, 1999), of critical thought development (Garrison et al., 2000), meaningful participation in discussion spaces (Danchak, Walther, & Swan, 2001), and general satisfaction in online courses (Gunawardena & Zittle, 1997). Despite evidence that innovations such as found in social media improve the social presence (Yang, Crook, & O'Malley, 2014), these types of innovations have not been adopted in LMS in higher education These innovations are items such as the "like" button in social media, discussion threads in online discussion spaces, and classification systems such as meta-tagging and keywords that serve to classify knowledge (Makos, Oztok, Zingaro, & Hewitt, 2013).

Improving posting for students relies upon instructor and can be facilitated in various ways. Anderson (2017) outlines such methods: instructor provided assessment rubrics (Makos et al., 2013; Pelz, 2010), clearly defining response requirements using model student answers (Chen, Zydney, & Patton, 2017) and sharing exemplary contributions from past courses. Other instructional techniques exist to promote the social presence development, such as mandating student participation, offering "bonus marks" for participation or, requiring students to provide a final summary posts, that provide an opportunity for self-reflection (Anderson, 2017).

Ninety percent of participants communicated that the social presence was lacking, especially in independent-study courses. They preferred to rely upon the instructor, if anyone for their engagement. For the few paced courses that were mentioned, there was a higher potential for a valuable social presence but not in any

significant way for the participants. Theresa asserted that the dialogue in the classroom discussion space was not meaningful, evident by the following: “Discussions...right? So, it's not very, like I said, it's not very deep” (personal communication, March 6, 2019). Despite the ubiquity and adoption of social media, students are not always able to or inclined to build social media presences in relationship to their educational experience.

Emotional presence, community cohesion, instructor involvement, interaction intensity (Whiteside, 2015) are all nuances that Anderson defines in the CoI model. These nuanced aspects particularly resonated with the Indigenous participants that were interviewed. Connections, despite the lack of social presence in most of their experiences, was a common theme in their stories. It was revealed as integral and desired as part of their learning experience, however that community is accomplished. Student privacy concerns and issues such as developing a variety of social media profiles are barriers to incorporating commercial social network providers into private educational spaces, but at times, students have turned to Facebook or Google docs to facilitate group work mandated by the instructor.

If the social presence in the CoI potentiates the cognitive presence and promotes successful accomplishment of any educational goal (Anderson, 2017; Garrison et al., 2000), it is worth looking at how this resonated for the 21 students that took part in the study. Researchers remind us that synchronous communication can establish connections between peers that can be helpful in providing community during coursework, even in an asynchronous course, or independent study course (Anderson, 2017; Garrison et al., 2000; Tolu, 2010). Most of the participants suggested a preference for some kind of connection with the instructor and less with other students. For this reason, it often resulted in disclosing a preference for classroom instruction. Chantal conveyed an instructor’s attempt to build synchronous discussion by constructing an online introductory activity such as pair-based introductions or group icebreakers that researchers suggest can be effective (Anderson, 2017). She remarked that: “It was just kind of like an open forum to introduce each other. I guess it was kind of a way to get to know who else was in the course” (personal communication, March 27, 2019).

Preference for classroom when it comes to connection. Synchronous communication is preferred by most of the participants. Many conveyed a preference

for personal interactions, and for this reason, would rather be in a classroom. Kyla: “I really like the classroom setting. I think it's really worth it, because sometimes you're in a room full of geniuses and they can help you out more than, say, your teacher” (personal communication, March 25, 2019). Others referred to personal relationships as essential to processing concepts, emotions and material, such as Terry who stated: “Yeah, it makes a difference to have somebody, like my partner and I, even after class, we'll have some discussion on our drive home about some things that were discussed, or some things that were not discussed” (personal communication, April 4, 2019). She also reported that it was integral for her to “[Feel] another person's energy and that [helped] be accountable to the self and to the other person” (personal communication, April 4, 2019). She explains: “So yeah, I guess within a classroom it's nice to see other faces, and to be included, and to have a little connection with somebody else.” (Terry, personal communication, April 4, 2019). This aligns with the research on communication in which text is described as a “lean medium,” difficult to affect the richness of verbal communication (Garrison et al., 2000). Nicole wished there was a way to communicate without text:

> Sometimes the last thing you want to do in an online course is get on a computer, like this is the last place you want to be. It would have been cool to be like “can't we just talk about it and discuss it instead? (personal communication, April 5, 2019)

Students who are more confident in their verbal skills or find it easier to talk than to formalize their thoughts in writing are at a disadvantage in an online space, in which much of the interaction is designed for text entry.

Comfort and emotional safety are also required to have the confidence to share. A few participants mentioned the importance of developing relationships with other learners. For some, it is important to read non-verbal cues. For others, to feel comfortable enough to share, it was integral to have a connection, as described by Jennifer:

> You don’t even know who you’re in class with…And just getting to know somebody...In certain courses that are kind of emotional and quite intimate, like you're sharing quite close things, it's easier to be present for somebody if you know their story. It's easier to have conversations, when you have some idea of who they are, instead of shouting into the abyss and wondering if anybody's listening, you know? (personal communication, March 8, 2019)

At least three participants noted that online discussion was intimidating. Jennifer elaborated:

> Well, for me, because I'm verbal and I can communicate verbally quite easily, instead of being in the role of the person who is not prepared and not operating at the level that others are, I'm the opposite. I'm better at expressing myself verbally. If people just read what I wrote, I don't know if I can convey the same intention and thoughts. (personal communication, March 8, 2019)

This led to a hesitation to use class forums, echoed by many study participants:

> So, when we do discussions, for example, read an article and then discuss, I'd read everybody else's and they all sound like they're the freakin' professors. "And the ocean is good." ...I wasn't doin' that, but it was challenging to write in the scientific way. (Dave, personal communication, April 19, 2019)

By building relationships with peers, it is possible for this sense of intimidation to subside. Terry again, noted that the proximity and connection of an in-person class facilitated her connection to the material being discussed: "being in the classroom you're able to share thoughts with the group. In class, when you see someone and you feel their energy, you feel like you're able to ask the appropriate questions" (personal communication, April 4, 2019). Creating this ease by breaking the ice, could occur with an early opportunity for synchronous communication that is built into the course. To alleviate performance anxiety, model answers can be used to provide examples for students (Chen, Zydney, & Patton, 2017), which was not discussed as often by participants, although many discussed the importance of understanding expectations.

Otherwise, creating community can be difficult to accomplish, especially in a self-paced course in which students can be located in disparate areas of the globe, including a variety of time frames that they are accessing the course material:

> We had people from all over the world, but we didn't really connect with them, really. We just kind of were focused. This is what I found, anyway. Myself, I was just focused on learning the material and getting through the course. But I find on campus, I find it more rich because then I'm able to see the other students in the class and I learn from them and they learn from me, and we can make more connections in the classroom than online. (Chantal, personal communication, March 27, 2019)

Two participants mentioned a preference for online education with a residence component, in which connection was built between people during face to face phase of the course. Avery pointed out that: "it would have been a lot more difficult to connect if

we hadn't met each other in-person. I think maybe we would have connected but it wouldn't be on a personal level" (personal communication, April 6, 2019). Marissa agreed that spending some time in person assists with connection building: "Yeah, and also, having been on campus for a week, in the beginning, I did know some of these people face-to-face, I had met them" (personal communication, March 25, 2019).

Community: lack of, quality and experiences. Peer interaction is an important aspect of creating community online. However, this is difficult to establish in independent self-paced courses. An effective social presence requires an instructor to develop the cognitive presence by scaffolding students and monitoring the discussion space. Best practices for online facilitation include, as opportunities arise, shaping the discussion with effective questions, or providing those at the outset (Anderson, 2017). One of the factors that led me to borrow the CoI as a lens for examining Indigenous student experiences online is that there is a current interest in how to include Indigenous knowledges, epistemologies, content, and languages as well as how to support community building in self-paced courses. Participants expressed interest in enhancing the digital community, but that doing so is not as straightforward as simply making a discussion space available for students to connect with one another. Theresa alluded to this lack of relationship:

> It's like because you've never met your Instructor or any of your classmates you don't feel you have the same responsibility I suppose, to keep up on your work. That's what I feel like anyways. Like it's just not as present, that feeling of responsibility. I still feel it, but not as insistent as I do with my other on campus course. (personal communication, March 6, 2019)

When a discussion space is available for students to connect with one another, generally, students in self-paced courses do not find that it effective in developing community, but that participation became perfunctory, as Theresa reported: "I noticed that they're quite shallow surface level responses" (personal communication, March 6, 2019). She understood the instructor's intention, but noted that few relationship building interactions occurred:

> I suppose it's a way of getting us to interact with the other students in the online course, which I appreciate but it also doesn't kind of feel the same as having an actual conversation with your...almost seminar style...it doesn't feel the same. Because for [the discussion space] we have to write 300-400 words, post it up...And then we also have to, then afterwards we have to actually respond to somebody else's post, one of the other student's posts. It is definitely a way of

> keeping some interaction in the course. But it feels very surface level. It doesn't feel very, like a very deep connection. It's just we need to get this done because we've been asked to in order to get a mark. I have noticed that there are a couple of online students who to actually take that really very seriously and respond. But I would say that the majority of us are just saying "wow, that's a great point." You know, thank you for bringing it up, and that's pretty much the response that we get. (Theresa, personal communication, March 6, 2019)

Most meaningful connections were usually pre-existing, created before the course. Theresa conveys this as she comments about her interactions with a family member who was also in the course: “The only other person I connected with was my cousin, of course. And that was just because I know her, and she had her own concerns about online courses” (personal communication, March 6, 2019). Diane echoed a similar sentiment in independent self-paced courses, that a sense of community was missing: “I think they were completely independent programs...and then all I was given was an instructor who would mark my papers, but no sense of a community of class” (personal communication, April 8, 2019). Cam referred to the disconnection of the self-paced course with the attempt for discussion: “I had my comments up, and as other people joined in, or when they started. It wasn’t a conversation” (personal communication, May 5, 2019). Another participant’s comments further validated this sense of disconnection. Shawn described the difficulty when connection is required in a non-cohort delivery model: “And there was just a couple of random posts that we had to comment on or something or engage in, but it was so hard because nobody else was in the course but three of us, I think, as far as I could see” (Shawn, personal communication, March 29, 2019).

Theresa described this disconnection as a deterrent for her to take another online course, even though she may have to, to complete her program:

> And the lack of true real interaction with my classmates, that really kind of that I think that is the one thing that's really sort of saying, no, I won't, I don't want to do this again. I might have to take another online course. (personal communication, March 6, 2019)

Perception exists that the discussion aspect is simply unnecessary—and a waste of time. Many participants felt that discussion forums are not effective in a self-paced course. As Daniel mentioned, when the discussion is not synchronous, there can be a disconnect, and the interaction may be shallow: “But the forum, they had students from

the past year on there, basically just said 'hey.' I think that was it, just hello" (Daniel, personal communication, March 28, 2019). Chandra referred to the lack of community, as opposed to F2F versions:

> Yah there's no peer interaction. And it's only because I work at the university that it's something I could do. I think if I was at home, I'd feel a little lost. Because there's students here and they're talking about their real struggles. I don't get that on Moodle. I don't get that. I wouldn't feel that same connection. No, I would feel lost and would probably just cry all the time with this book. But I'm glad I am here, and I can feel connected because you NEED to feel connected. I definitely don't feel like that within that online course. (personal communication, May 24, 2019)

Tina dismissed the discussion space altogether:

> I think there was an option to, there was some weird section, like connecting to like a Moodle group. I didn't really understand it, but no one ever posted anything into it. And I think it was like for other online auditing students to post into. But I don't think anyone else did. I don't know how frequent that class use it. I didn't really understand it and I didn't really care. (Tina, personal communication, April 26, 2019)

Cohort based courses were preferred over independent study courses, whether online or not. In a paced course, a difference in engagement level may occur due to the fact that the students are working on the same content at the same time, often expected to respond to another during that same week. Interest in a particular topic triggered participation in an online dialogue, although the following participant was not normally inclined to do so. Theresa described an example of this:

> There was one I got kind of excited about because I, that was something that I wanted to, I wanted to comment on as well, but I felt torn in two directions in which way I wanted to actually respond in this activity, this assignment....So I commented on theirs and said, thank you. And then I gave them some other resources that I possibly would look at, and in terms of if they wanted to learn more, right. Yeah, they did. And they said, yeah, thank you for that. I'll definitely check into that book or whatever. So, it was really that, was a little bit more, yeah, that was a little bit more interactive. (personal communication, March 6, 2019)

A reminder that this type of engagement an anomaly, despite the value:

> That was the only, interaction with another student that I felt was positive and meaningful. And, I wouldn't mind having more of those types of interactions, but I guess I get the overall feeling I get from everybody in terms of these activity forums is that everybody is so busy that they're just getting it done. And you know what I mean? Yeah. And that's kind of what I gather from, that's just

> an overall general idea I would have for people who are taking online courses anyways, is that they're trying to get, they're doing this as something that's on the side of their desk as well. (Theresa, personal communication, March 6, 2019)

When students compared institutions, they remarked that they preferred it when: "There were students you could talk to. There was open dialogue happening between the students. That the digital discussion was effective if it was current and you could chat on the side…we were able to connect just with the other students in the class. So, we had some dialogue" (Chandra, personal communication, May 24, 2019).

Creating their own community outside of the learning space, emerged as a motivating factor for participants. Six participants mentioned participating in or organizing in-person groups to study outside of their online course. "Just because I appreciate the in-class, communication with both the instructor and the other class, my other classmates" (Theresa, personal communication, March 6, 2019). Diane reminded me of the relational and social nature of learning:

> So that was my solution...I would just put out a post and say: 'I'm going to be at the First Nations House of Learning between this time and this time on this day, if you wanna come. I would love it, I have food.' and I would always bring a snack. So, I created these little study groups that not many people would show up, but it still helped. (personal communication, April 8, 2019)

In some cases, interaction was sought out by the learner to design a way to structure their time and ensure they allocated time to studying. In these four instances, gathering was more about socializing, and less about constructing meaning. Accountability was a factor that became apparent consideration in a number of participant interviews, in which participants alluded to the fact that collaborative work motivated the students to pace themselves better, as Avery mentioned: "Yeah. I found courses that required you to stay on top of work, either by mini-assignments or weekly discussions or posts like that were more effective for me staying on top of each week's work and required readings" (personal communication, April 6, 2019). Accountability, surrounding oneself with individuals in the same head space, supporting one another, and carving out specific timeframes to work were all mentioned as critical to success. Dave attributes success in the one online course he completed to a sense of community: "One online course. That was the Natural Disaster, the earth science. I passed it, because there was a group of us, and we all worked together" (personal communication,

April 19, 2019). This can occur when students reside in the same community: “Well, we’re all in the same community…so we’d go and meet and our friend’s house...On our first exam, our first quiz. We were going to help each other…Forming groups really helped me” (Dave, personal communication, April 19, 2019). This aligns with research that indicated that when education can be delivered in the community in which a group of students reside, a higher chance of success rate and improved experience exists (Simon et al., 2014).

Collaborative work is an instructor technique that can enhance social presence. These group projects are derived from the F2F classroom and can include activities like icebreakers, such as group, self or pair-based introductions, opportunities to talk about personal histories, check-ins and digital storytelling (Anderson, 2017). When an instructor mandates interaction between students, either with incentives like additional marks, (Anderson, 2017) with a grade or by a mandated group project, there was an increased uptake in the social presence.

> There was a required interaction every week on a topic in the course. Actually, that was nice I looked forward to that. You know, like this week were discussing the shoulder and everyone would chime in about what they know about the anatomy of the shoulder. That was nice. But statistics course there wasn't that at all. (Ben, personal communication, April 4, 2019)

Participants mentioned the effectiveness of connection if it occurred early in the course, expectations outlined, and connection was consistent throughout. Donna outlined an instance in which:

> there was an expectation that you would blog…to the people in the cohort. So, when you first signed up, they reached out to you, and then your first assignment was introducing yourself in the blog, a bit about yourself and what you hoped to get out of the course. Introducing yourself to others. And as it went on, it’s like how you’re saying, and maybe there’s lots of other courses set up this way, where you felt comfortable because we were in a cohort together for 8 weeks. (personal communication, May 1, 2019)

Ideally, technology can facilitate effective online interactions (Anderson, 2017; Garrison et al., 2000). Chantal recounts missing the synchronous session that the instructor intended to use to launch the course with a connection:

> The first part I didn't realize...she just wanted to have an introduction so that we could see who we were talking to. It was kind of like an open session, and again, it was a technical issue, or I wasn't able to get on when everybody was on just to see the instructor. I'm not too sure. Like I said, I didn't get on there, so I don't

> know whether I was able to see other classmates, but it was kind of like an open forum. But I don't know. I missed that date, but it was just after I realized, because I e-mailed the instructor to say I'll miss that and she said, “That's okay.” It was just kind of like an open forum to introduce each other. I guess it was kind of a way to get to know who else was in the course. (Chantal, personal communication, March 27, 2019)

Participants referred to instructor techniques as disjointed, not making sense, as though the activities were tacked on, incongruent with the context of the course. Sometimes the discussion seemed disjointed. In one self-paced course, the reflective nature of the particular assignment did not align with the business skills context of the course. This caused participants to consider other institutions for the remainder of their degrees at times. Cam describes this scenario:

> I know the one course I was doing was business writing. You had to do some blogging and talking with other students. And a lot of them were under the same impression I was because there was a lot of online stuff that she had us doing, like starting our own blogs, and a whole bunch of things that weren’t really tied into I guess the more traditional sense of business, and what everyone was assuming what the course was about. (personal communication, May 5, 2019)

Students were more inclined to engage in dialogue if the assignment was attached to a participation grade or graded final reflection (Anderson, 2017), as mentioned by the following statement from Avery:

> Yeah 100%. Yeah depending on the course. I took an introduction to public health course and they would grade the content and I took an Indigenous health course and they would grade the content as well. So, I guess depending on the quality of your writing and how much you contributed something new like a new idea. I'm assuming that's what the grade was based on as opposed to just saying something like "that's great. (personal communication, April 6, 2019)

Participants often would not voluntarily venture into the discussions: “Not if it's just recommended. It has to be required for me to want to like do something like that” (Kyla, personal communication, March 25, 2019). Expectations of the type of interactions required or desired by an instructor should be clearly laid out such as timing, interaction type and potentially a rubric (Makos et al., 2013; Pelz, 2010), otherwise students will not be incented to contribute meaningfully. Marissa revealed an experience with an instructor’s expectations:

> There would be discussion posts that you were required to make and how many responses you had to do as well as part of a participation grade, and it was not ... it had to be in-depth participation, it couldn't be one-liners or anything...Well, I

> think that having a free space isn't as effective as having it a graded space. So, the way that a lot of the social work courses would work would be you would have to have your initial post up by Tuesday of a week, and then you would have to have two or three responses put up by Saturday to other people's initial posts, with feedback or with questions or whatever. Yeah, it was definitely a structured discussion. (Marissa, personal communication, March 25, 2019)

Despite its potential, Shawn reported dissatisfaction with asynchronous conversation of LMS's threaded discussion. He experienced it as a disconnected space, was disappointed with the delayed response time, level of discussion, and struggled to relocate where he was in the conversation. He described his experience:

> I could see the potential it had. It was supposed to be a place where we can all engage on a conversation. But how it worked was that the question was asked and then you would comment and then somebody would comment to that. And it was only maybe three or four of us that commented and that was it. And it never went anywhere. There was no depth of conversation. And I didn't know who the other people were in that and what kind of information I could or wanted to share about the subject...I guess the thing I like about face to face is that the feedback's immediate, right? I had the ideas at that time, but then there was no engagement and so I just kind of disengaged in it. And when I kind of came back afterwards. I just like starting over again. (Shawn, personal communication, March 29, 2019)

Jennifer mentioned a similar disorientation within threaded discussion that resulted in less meaningful dialogue:

> 12 to 15 people comment...I just can't keep track of it. I have a few that irritate me, but that's it. The discussion. I think the way that we post, and then someone comments, it's fine, but we're not having real discussions personally, I don't think. (Jennifer, personal communication, March 8, 2019)

Findings in this study indicate that the satisfactory creation of a social presence for many participants depended upon course content. Courses that rely more heavily upon reflective process tend to elicit deeper responses and are more suitable to discussion. One particular participant found that when viewing a concept through another student's lens, it added to her reflective process, contributing to the cognitive presence:

> Sometimes, and it would be sometimes, you would have to re-read something and then you'd have to put your lens on that, "Okay, I have to remember that this is online, and what am I misconstruing? Or do I need to ask for clarification?"...And [this student's] life and my life look completely different, so some of that tone and context could be lost. And you have to be really careful

> that you don't get offended easily. You have to make sure that you clarify and make sure. (Marissa, personal communication, March 25, 2019)

Chantal, a graduate student who preferred campus courses, simply found the entire process of locating the discussion space confusing, evidence that the user interface of this particular learning management software could have been improved for this particular student. The mandatory aspect of online dialogue can become a chore, rather than the meaningful interaction that contributes to the cognitive presence and ultimately the educational experience for the student:

> They have it kind of set up differently and I remember having to...With the second one, where we weren't put in groups, it was just one big, long list of comments. To go in and out of it, okay, you've got to click on the module, go through the readings and it'll tell you to go into the discussion board. So, you go into the discussion board, and I found the second one ... I'm not too sure about the first one either, because I was more focused on just getting the reading and do my best to comment in my group. (Chantal, personal communication, March 27, 2019)

Collaboration is also a mechanism for an instructor to facilitate social presence between the students or with each student. This became an interesting topic of tension. While necessary, most participants, such as Marissa and Chantal, vehemently mentioned disliking online group work. Sometimes aversion to group work is due to the nature of the independent study: students who are engaged in full-time employment, or leading busy lives, do not have the flexibility or time to engage in campus courses. This can make it difficult to schedule time to gather in groups, online or in person.

> I was thankful she didn't put us into groups because I would have felt bad because I wasn't able to comment right away, and I did my best to keep up with commenting on the other students' comments and looking at what other students were posting on the post boards. (Chantal, personal communication, March 27, 2019)

Marissa echoed the stress of accountability in collaborative work:

> It was tortuous, though. But I don't know if that's just because I don't like group projects or if it was just...In some ways, it's easier when you know you're not expected to meet with them face-to-face, because we all operated on such different schedules, and I was parenting three children, and working, and going to school full-time, so sometimes it was like 3:00 in the morning, because I was working graveyard shift and that's when I was doing my homework. So, being long distance for those kind of group projects was easier for me in that sense. But sometimes you miss context and it's hard to contextualize people's

> comments when you're all typing, not talking. (Marissa, personal communication, March 25, 2019)

Benefits of asynchronous group work are what Anderson (2017, para. 11) refers to as the "time shifting capacity of asynchronous communications." Both Marissa conveyed the ease of collaborating with other students using web collaborative tools:

> Well, and too, if you're doing a huge group project with a presentation and it's got slides and everything else and people are across the country, different time zones and everything else, at least that you can go in and log on and see where everyone's contributed ... there is a conversation. Right? (Marissa, personal communication, March 25, 2019)

Dolores also referred to the ease of collaboration:

> Yah, they just put the website down, and we got on it, and we set ourselves on there, and it was good. So, she was in both the ones that I picked, was environmental and multicultural. Yes, it was, there was questions there, the discussion question, and we were all talking about, you know, like one person would say something about the questions and then we were all doing that. I used a lot of my students, you know, and what I went through in residential and all that. They really liked it, so it helped out, helped out quite a bit, and you know, reading everybody's was really good too. (Dolores, personal communication, April 10, 2019)

Instructor techniques within learning activities can make a big difference for students, evident above. The opportunity to personalize an assignment allowed Dolores to deepen her reflection, key to the development of cognitive presence (Anderson, 2017; Garrison et al., 2000). Effective questions, both authentic and grounded in the personal experiences of learners, is referred to as integral to the development of cognitive presence (Richardson, Sadaf, & Ertmer, 2012). Clarity and expectations are key: a higher level of thinking may be elicited from the student if a facilitator provides prompts, clarity, relevant learning tasks, rubrics and exemplary models for students to follow (Richardson et al., 2012).

Due to ambiguity of social cues online, a few participants expressed preferences for collaborative work in a classroom setting: "I think I'd rather do group work face to face rather than online. There's always a lack of, there's a miscommunication all the time with it" (Dave, personal communication, April 19, 2019). Additionally, instructor flexibility was appreciated by students:

> The one where they want you to be in a group, I didn't like that too much. Yah, I just couldn't do it. I just ended up doing something on my own, because that's

> what the professor told me, to just, it's ok, let's just do it this way, so … and I can't remember what paper it was, but I did good on that one and we just ended up doing it ourselves because we were not connecting. (Dolores, personal communication, April 10, 2019)

One participant, a particularly adept independent learner, expressed a strong disinterest in collaboration, mostly because it led to heavier workload: "Both, I just don't wanna do it" (Karen, personal communication, April 11, 2019). Despite the ease of collaborative tools such as Wiki, Google docs and slides provide, she has an aversion to group work because of the experiences she has had with collaborative projects. To manage her time, she ends up taking on more of the workload. In order to get ahead of schedule, she ends up taking on more work:

> Working with a small group. So, somebody is researching something, you're researching something and adding it. I find those kinds of things: I end up doing most of the work. Because people who are on it, they don't manage their time, they wait till the last minute, and I couldn't wait. Because I'm taking full courses, and I needed to get a head start. The workload does not end up being equal in group work. (Karen, personal communication, April 11, 2019)

Depending on course content, dialogue can affect how meaningful the interaction can be for constructing meaning for a learner. When asked if discussions were effective in content retention, one participant answered:

> Absolutely. Because it was so much of that it...With social work too, it's all grey, a lot of it is interpretive and open to discussion so you need that different lens from different people and different cultures to actually make the material more relevant, and rich. (Marissa, personal communication, March 25, 2019)

Karen, one of the two participants that described herself as successful in online courses, (whether it was independent study or paced courses) indicated that she valued online dialogue. She particularly enjoyed online discussion that was challenging, rigorous because it contributed to developing a more enhanced cognitive presence. The asynchronous nature of the discussion space allowed students the opportunity to participate at opportune moments that suited their schedule. For this student, it resulted in an increasingly robust interaction:

> It was like, Oh game on. People who are in their 40s, like really thoughtful, reading things, posting during the week when their brain is fresh. It's not like they're showing up at class at 4:30PM and they're kinda checked out because they're tired. They have had the time to...read something and post thoughtfully, and then others respond. It grows because people have put something thoughtful

> that's what helps. And I like that, but some people just want the credit, or the degree. They don't want to go through the process. But it's really meaningful when you can do that. (Karen, personal communication, April 11, 2019)

Jennifer felt that an asynchronous dialogue offered an opportunity for contemplation and reflection that contributed to an enhanced cognitive presence, or more effective learning, as she puts it:

> I actually find I do some of my best and most effective learning when I sit with the words of others. I know. I totally forget to ask them how much paper they have behind their names. No. I've realized, I'm an observer of people, and ... No, I thoroughly enjoyed the discussions and hearing where people are coming from, without a doubt. (Jennifer, personal communication, March 8, 2019)

During interviews, I asked the question: How often did those interactions and connections help you through the course? Ben answered this with a resounding yes:

> I think they helped a lot. When I had to write my stats exam, another student was doing stats also and had to come into the same place and then we went face to face and we didn't know each other at all but we were both like "oh you're in stats—me too" and then we wished that we'd seen each other before so that we could have helped each other. Even the professor at the end when I called him, he was like: "Yeah, I wish I linked you guys up because you could have helped each other in the course." (Ben, personal communication, April 4, 2019)

Interactions can be valuable to understand other student perspectives and provide a sense of camaraderie: "I did, I thought it was good to get other people's perspectives on, on things, so, if you're the guy that's frustrated, you get to see that you're not the only one" (Cam, personal communication, May 5, 2019). For Ben and Cam, peer interaction fostered camaraderie, so students did not feel alone in a struggle:

> I found I didn't necessarily need the help, but I needed the understanding that "hey everybody else is also struggling and they're here to get help." And I found that was a lot more rewarding that I set aside a time with other learners to do it. We were all doing different math and different strengths of math, but we were all doing, we were all going towards the same goal. (Diane, personal communication, April 8, 2019)

Online learning and especially self-paced courses can be isolating (Ludwig-Hardman & Dunlap, 2003) and a space in which students can digitally gather, interact with one another and receive peer support can be invaluable (Anderson, 2017). Diane outlines the value of peer discourse:

> Yes, exactly. And also, the fact that it was the tutoring session it also helped that they were struggling, and it wasn't just me. We were asking for help. I was there to ask for help. Others were asking for help. So yes, it was support. I'm not alone struggling. (Diane, personal communication, April 8, 2019)

Relationships. Relationships are integral to Indigenous education. Traditionally, these connections are important aspects of transferring knowledge (Hare & Pidgeon, 2014). Subsequently, it was not surprising to find that students preferred to forge connections with instructors or peers, within their learning, and ultimately were more successful if able to make connections. Donna uses that exact word—relationship—when she outlines one of the positive experiences with a cohort-based, collaborative project:

> And we learned a lot, built relationships. We had a project to do over the six months with a group. And so again, that was the same type of thing I said about Sanyas. Having that cohort and that support in a course. (Donna, personal communication, May 1, 2019)

Jennifer also indicated that relationships are integral to the process of reflection and her willingness to share with others:

> And just getting to know somebody...In certain courses that are kind of emotional and quite intimate, like you're sharing quite close things, it's easier to be present for somebody if you know their story. It's easier to have conversations, when you have some idea of who they are, instead of shouting into the abyss and wondering if anybody's listening, you know? (Jennifer, personal communication, March 8, 2019)

Reflections by both Theresa and Terry indicated a preference for in-person connections, stating that the digital space disrupted their sense of connection to others: "Feeling another person's energy and being accountable to the self and to the other person" (Terry, personal communication, April 4, 2019). Some participants stated that video would provide that necessary glimpse into the other person's persona which could aid in creating that connection. Regarding student created videos, one participant noted that being able to see another person was an incentive to engage in dialogue: "I liked that because then I was able to see the other students and see who they were, and I'd comment on them" (Chantal, personal communication, March 27, 2019). Chantal also remarked on the value of relationships with others: "I made some really good friends

through that program. I did make friends, we are connected, we helped each other out" (Chantal, personal communication, March 27, 2019).

Suggestions to improve social presence. Participants made comments that indicated they would prefer discussions to incorporate more real life social media interactions: "Like if it was more incorporated bits of social media then yeah, it would probably make it more personable and those interactions would be able to meld into personal" (Nicole, personal communication, April 5, 2019).

When instructors facilitated the discussions and interacted with the students, it affected their level of engagement. In this example, Dave compares one course to another. When he had more support from an instructor who organized small groups for discussion, he was able to connect better: the smaller groups facilitated better discussion. As Jennifer stated, small groups: "...[were] way better, because you had a small group of people you could talk to and get to know and get to know their story" (Jennifer, personal communication, March 8, 2019). Not only are they effective for fostering desired relationship, but also for supporting one another.

> There was more support, and we had groups. And when I was doing these other ones, I was just on my own…even though we didn't use the groups much, we sure encouraged each other. And with this group, the last group I was in, we helped each other. (Dave, personal communication, April 19, 2019)

While it can be intimidating for students to video themselves, this type of learning activity can foster the type of interaction some are seeking, in terms of replicating F2F experience:

> Oh, we did this video. We had to actually discuss a conflict, and then we did a video where we had to video record ourselves. Holy shit, I found that really intimidating. (Nicole, personal communication, April 5, 2019)

McLoughlin and Mynard (2009) suggest effective teaching practices should be used with any technologically assisted learning. Instructor prompts and clear guidelines support social presence critical for creating knowledge. Both Jennifer and Shawn suggested that the instructor had an integral role in facilitating discussion, to keep it on topic, but also to provide academic scaffolding.

> So, what would be really lovely to do is to have a post specifically for discussion, and then us post our pieces, people read it, and then if you want to discuss it, especially if it's...one of those things where you're collaboratively working, then maybe by the prof or whatever, they should create a discussion

> post, because it's very easy for it to get out of control, right? (Shawn, personal communication, March 29, 2019)

Jennifer agreed that the instructor was necessary to shape the discussion and provide guidance:

> We're on the right track. We need to discuss what we would agree are themes. I said, "Let's just all do this thread, instead of looking at each ... Go read this person's thing, and then let's have a discussion." You know? Instead of: "Let me comment on this and blah, blah, blah." I mean, it can get super out of control. (Jennifer, personal communication, March 8, 2019)

Another effective instructional strategy is to personalize learning activities, which incented reflection in this case:

> The assignments, I remember, some of them were personal questions so it was more like "share your thoughts on this or that" so that allowed us to kind of share freely and bring our own experiences into the sharing and not necessarily rely on what was provided in the book. (Nicole, personal communication, April 5, 2019)

Many participants were interested in enriching the discussion via technology that would facilitate a visual or digital face to face of the other student(s). Research has shown that visual cues are important factors in developing the social presence in F2F settings (Garrison et al., 2000). Participants were unanimous in their interest in using the latest technology, such as video, live streaming, web conferencing, connected classrooms, smart boards, and other educational tools to connect with each other and the instructor. Finding ways to replicate the classroom and offer opportunities for the students and instructor to be visible to each other was commonly mentioned, illustrated by Diane's following comment:

> Oh yes, we have something here called Connected Classrooms, for the high school students. And then, how that is structured, is one teacher is for the class and the students log in to the smart board, we have smart boards here. Do you know where smart boards are? Just had to double check, ok! So, we have smart boards here, and so then the students are in the classroom, they can be seen by the one professor, or one teacher who is elsewhere, and he can see all the people who have logged in on his, somehow, on his monitor. And that way he can teach the class to several students at once, but we're all, but most of them are in different places. And then the discussions can happen as well. I'm not sure, because it's videoed, it's on video, so they can all just talk. And it's all heard, they each hear each other. Yah…so I haven't been part of it. I'm pretty sure that's how it works, I've been described how it works, I haven't seen it in action.

> It seemed like a really great tool, to be able to participate and still get a class. (personal communication, April 8, 2019)

Facilitation role of instructor. Discussions are more thoughtful when the instructor shapes or moderates: “10% for participation online, usually the teacher would put some questions or something and people were responding thoughtfully” (Karen, personal communication, April 11, 2019). One participant experienced that students were less overwhelmed in an online class because they can show up when it works best for them (Karen, personal communication, April 11, 2019) and “I’d rather hear from an expert, like an instructor on this, than classmates who are overwhelmed, who pull something together last minute. A lot of it feels like a checkmark” (Karen, personal communication, April 11, 2019). The students who are less engaged in the course may not contribute to an online forum, so she perceives online courses as more rigorous.” Some participants expressed that they had more connection with instructor or a desire for an increase in connection: “So I didn't really receive feedback or there wasn't really reciprocity [in the discussion space], it was more with the teacher” (Nicole, personal communication, April 5, 2019). Again, Marissa explained the value of the instructor role in shaping the discussion:

> There were a few incidences, but nothing serious. I know other people have experienced other things, but it was like where sometimes the instructor would just come in and post and say, "Well, I think you're a little off track and I think," ... And maybe those conversations were held in private as well. Right? I think it's just part of any kind of course where you're having those kinds of discussions. Someone's going to see things completely different or say something wrong or just be an idiot. (Marissa, personal communication, March 25, 2019)

Nicole noted positively that another instructor “tried to build a community. It was like sharing off the get-go, where you're from” (Nicole, personal communication, April 5, 2019).

Indigenous space only. A few of the participants referred to a difference in candor and comfort when they were in an Indigenous-only space. Marissa, a Bachelor of Social Work student commented: “Yeah, for sure. And it was definitely a different feel when we went to the indigenous-only classes” (Marissa, personal communication, March 25, 2019). This particular participant completed her entire undergraduate degree online and successfully navigated a number of institutions. Even though Marissa is a confident student, savvy at navigating mainstream academic spaces and online courses

successfully, she maintains the fact that Indigenous-only spaces “feel” more safe, which aligns with research in on campus retention (Archibald et al., 1995; Pidgeon, 2008; Pidgeon et al., 2014). Issues would arise in discussion, and she did not feel like wading into the discussion with her opinion or educating a non-Indigenous student on Indigenous issues. This was echoed by Terry who held back in discussions or felt triggered due to racist comments in the discussion space. Marissa admitted to feeling annoyed by student comments, but also indicated that it was interesting and valuable to view issues from a different lens. Other students like Jennifer indicated that they worried about stereotypes, which impacted their academic behavior until they were made to feel safe:

> Well, I'm very honest with my [distance learning] professors, also very cautious, as being an Indigenous student, that I never want to ask for extensions or anything like that. I did though, with [one course], because she made me feel safe to do so. But I needed to see her. There's something, for me, I need to see...If I'm struggling, I need to see you before I make any… (personal communication, March 8, 2019)

A number of participants mentioned that an understanding of who is in the room is integral to feeling safe to share, such as Terry. Comfort is a factor in forging, not only relationships, but safe spaces within which Indigenous students feel comfort sharing. Anderson (2017) notes that it is critical that instructors engage in praxis and adapt to the shifting needs in each learning community, especially since each course can be significantly different or comprised of varied participants. Technology can be used to deliver content, but the instructor is integral to facilitating the experience, and that interaction can occur outside of the technologically mediated space. In one case, Karen, a graduate student enrolled solely online, indicated that she valued interactions that were constructed to occur outside the learning space, either as a reflection or as a group project.

Informal learning space. A few participants ventured outside the learning space to initiate or continue conversation with other students. One participant indicated it would have been positive: “No, we didn't. I wouldn't have minded. I mean we didn't do that, but it would have been nice, actually. No, we never did” (Ben, personal communication, April 4, 2019). Studies have found that when students opt out of the LMS into other social media channels, it can enhance the social presence online (Yang,

Crook, & O'Malley, 2014). Another student listed the various non-institutional collaborative tools that she has used: "We had a group conversation with WhatsApp, and we've also used Skype, although we found Skype didn't work as well as using Google Hangout. So, we would use Google Hangout if we needed to talk all together" (Avery, personal communication, April 6, 2019). Facebook messenger was mentioned as a preferred tool used by two participants, one who was seeking peer support:

> I did try to reach out to other students for support, because I figured we were learning the same thing and that they could share, but I found it difficult. I tried making a friend. There was like three people I thought I could make friends with, and there was one, but she didn't have Facebook and so usually I communicate with people through messenger, and I find that's a lot easier because you can message or video the person and you could talk to them or call them on there. (Chantal, personal communication, March 27, 2019)

In the other situation, the social media was set up by the instructor:

> We had a Facebook page, a group Facebook page, that we all contributed to and that was also part of our grade by our contributions....I guess the nature of the course, was still self-writing and so it wasn't like we were all sharing ideas about the articles. It was that we had to write our interpretation of the articles. (Diane, personal communication, April 8, 2019)

Older technology remains relevant: chalk blackboards, telephones, textbooks, chat and many other technologies are still used in education–despite the development and adoption of advanced educational technologies (Anderson, 2017). A simple telephone call was also mentioned as an effective mechanism for forming connections between students: "Yeah, we got on the phone. We had to connect, so we exchanged emails and numbers and then talked to each other (Nicole, personal communication, April 5, 2019). At least two participants resorted to the telephone to connect with one another:

> I think there was one instance I remember. There was group work and we had to connect with our fellow classmates on our own. So, we did that through phone, we phoned each other. It was interesting. It made me feel a bit more connected to the community feel within the course. It was a little daunting to be like "oh hey." It was kind of weird at first to phone and share when you never really had that relationship formed before that. (Nicole, personal communication, April 5, 2019)

Additionally, participants expected the learning software to be similar to commercial social media, which would not be out of the realm of possibility. The following

comment alludes to the fact that the learning space lacks relationship-building potential, which has been a indicated throughout the interviews as a helpful factor in persistence. Nicole notes the disconnectedness of the learning space that she was required to use, comparing it to the potential that social media holds for connection-building:

> No, I just thought that would be—if it was more of a social media platform then yeah, I definitely would have made more connections online. Because it was so institutionalized it was like keep it there, keep it separate from something like social media where adding them "oh hey I met you online." It was weird. (personal communication, April 5, 2019)

Anderson (2017) notes that there has been a lack of innovation in institutional learning systems, such as "like buttons" and "tagging that have been suggested to improve knowledge construction that occur in popular social networking software. Classification can be useful and assist students by scaffolding them toward creating meaning. They do this by classifying and organizing data and information through tagging and categorizing, basically, which fits in the second level of Bloom's Taxonomy (1956), under the heading *Understanding*. This learning activity can develop deeper cognitive connections.

At least one participant found it difficult to navigate the discussion spaces and expressed a preference for videoconferencing with the instructor, but not for peer conversations. This preference for increased connection with an instructor aligns with much of the existing literature about Indigenous student online experience (McMullen & Rohrback, 2003; Simon et al., 2014):

> I think there was an issue with trying to manage. When we did the project, it was hard to get the three of us talking by that certain time because of the schedules. I think if the instructor said, instead of typing, because the criteria was that you had to put the information in, in order to get the participation...I think it was putting in the information and being involved to get a participation mark. I think having even the opportunity to do video conferencing with the instructor instead of that part would have been kind of cool. I don't know if that would have even been feasible, but it could be an option because sometimes you would rather just talk about it rather than formally write about it, right? (Nicole, personal communication, April 5, 2019)

This same participant also indicated that she would not be inclined to watch all the presentations posted online in a course, due to the amount of time involved. She stated that the experience was not equal to a F2F class: "No, even if we had the option, I don't think I would have, just because of time. Yeah, it's different from having like a class

presentation where you're all in the same room watching" (Nicole, personal communication, April 5, 2019).

Teaching Presence. Literature tells us that an active teaching presence of the CoI heuristic is critical to developing higher levels of cognitive presence (Anderson, 2017). Anderson lists many best practices that an online facilitator can do to foster learning for students. They include: "designing meaningful learning activities, triggering questions, effective assessment and pushing students to go beyond observing and sharing to actually resolving and testing solutions" (Anderson, 2017, para. 7). A teacher or instructor typically provides this aspect of online courses. In the CoI, facilitation may be shared among the teacher and participants/students (Garrison et al., 2000). Teaching presence can be comprised of other students who can play a role in scaffolding concepts or ideas within a learning discussion space. From these examples, it is clear that the participants prefer the instructor to shape their learning experience. Initial contact with an instructor can be critical in welcoming and creating comfort for the student (Simon et al., 2014).

A warm, welcoming environment can be critical for an Indigenous (Archibald et al., 1995; Hare & Pidgeon, 2014; Pidgeon, 2014a; 2014b), indicated by the following quote:

> The teacher was really friendly and she kind of set the tone with sharing online and she really tried to build a community. It was like sharing off the get-go where you're from in the discussion space. So, she had a picture of herself up and shared about where she came from. (Nicole, personal communication, April 5, 2019)

Most Indigenous traditions follow protocols for introductions to a community, a space or gathering of people. The existence of this online, has ramifications on a student's comfort level. An instructor who is mindful of this can build into the course an opportunity for culturally appropriate introductions that can facilitate connections. One participant indicated that a course in which an instructor did just that: "Yeah, way different. Totally different. But she was a really good instructor. I think her feedback and just the way she made it feel like there was an online community. It felt good doing the course just by what she shared" (Nicole, personal communication, April 5, 2019).

In person connection. Another student was able to connect in person forging that personal connection she needed:

> You know I went online for this course and I told the instructor, I went to go talk to her the other day—I was telling her: "I don't know what the hell I'm doing in this course and I just want to quit. I don't understand what you want in this last paper." I get it now after we had that talk. But when I was in there, I was like: "Oh I'm just so frustrated this is crazy" and she was like "Oh come here we'll talk, we'll talk. (Terry, personal communication, April 4, 2019)

When participants were able to forge relationships, experiences were more positive:

> I mostly needed her to rein me in, because for me, [the topic] is new, and writing is new, and I had no idea how to do it. I just thought she was lovely human, and I just really appreciated her spending that time with me. (Jennifer, personal communication, March 8, 2019)

Trepidation about transition to her program after a lapse in school was important to this student: "But meeting with [the instructor] in person changed that" (Jennifer, personal communication, March 8, 2019).

Instructor relationship was valued over peer connection: "I connected with the teacher more than I did with my peers. It was more active with the teacher and with peers it was less engaging, I guess" (Nicole, personal communication, April 5, 2019). Lack of community in a course can be compensated by an increase in teaching presence (Anderson, 2017, Garrison et al., 2000). Instructor behaviour plays a role in most participants' experiences. Nicole indicated that the course space contributed to the lack of community online, but that "But I think the instructor really made up for that" (Nicole, personal communication, April 5, 2019).

It was evident that relationships are important to Indigenous students (Pidgeon et al., 2014) by the following student's account of the ongoing connection he felt with an instructor: "Yeah we always look for each other at TRU, like I see him pretty regularly on campus and he would come by" (Ben, personal communication, April 4, 2019). Ongoing and welcoming interactions with instructors were an incentive for students. Kyla had received 3 DNC in one semester, and subsequently an F in her second attempt. She ultimately went on to complete one online course, in which she received an A. She attributes consistent, clear and positive feedback from the instructor to her success. Connection through encouragement was key for her success in this course.

> I did have a connection with [the instructor]. We corresponded at least once or twice a week whenever I had questions, and he'd send an email and be like, you did really great. This was your grade, keep it up. I mean, he was nice. Once I started showing that I was putting in the work, then he would help me with

> anything that I had any questions with…. it's not like we were face-to-face, and he seemed really nice, very to the point and always very encouraging. I would finish something, and he'd be like, that was so great. Keep up the work. I'm looking forward to your next assignment. And the fact that he was like, you were doing great. He was giving me A's on all my papers and all my assignments and stuff. It felt really good to get those grades. (Kyla, personal communication, March 25, 2019)

Over half of the students mentioned that the importance of feeling safe, in or having non-judgmental feedback from an instructor. This was evident in Tonya's description of her instructor: "He was very easy to talk to, whenever I sent him an email, it was, like, within a day that he was getting back to me with a full thought out answer" (personal communication, April 15, 2019). Chandra, a participant who is upgrading statistics to enter graduate school, also revealed her feelings about instructor responsiveness:

> He's really good. He's in Vancouver, I guess. Yah for a teacher, he really will sit there and if I have tutor support, he'll totally do that. If you have a question, just call me up. It's just 2 days a week, Monday and Wednesday. He has 2 hours, and yep, and if he missed your call, he'll call you right back. Or email him too. I think he feels like it's full time job because he's getting students asking him questions… maybe because he is so open. (Chandra, personal communication, May 24, 2019)

Overall, the lack of significant interaction with a teacher leads to attrition, a lack of completion, which can result in Fs, a decrease in grade point average, and early exiting. There was a negative impact on students when the instructor was not engaged. One participant mentioned that if it was hard to connect with the professor, it made it difficult to learn the content: "He was a very difficult prof. I found it easier to learn computer programming on my own than it was to learn it from a teacher who was extremely boring" (Jennifer, personal communication, March 8, 2019). A sense of caring was critical for students, which is clear from the following participant's description of an instructor who seemed uncaring:

> But the instructor also plays an important part because sending out reminders are good—as sad as that is being a university student—but also having them available to respond to questions quickly because my epidemiology course was really confusing. We had lots of questions, the textbook wasn't really clear, and she would take forever to get back to us through e-mail. So it was that much more frustrating. I felt like she didn't care. (Avery, personal communication, April 6, 2019)

Kyla echoed this sense of alienation as a factor in dropping out of the course. She recounted the reasons that created lack of engagement for her, that ultimately led to her allowing the course to fall by the wayside: “I guess life kind of got in the way and I didn't have a connection with any of my teachers. Nobody was really checking up on me or anything, so I just kind of lost interest, I guess” (personal communication, March 25, 2019). Disconnection was mentioned as a factor for losing interest: “I guess I didn't really prioritize my homework when I didn't really have anybody to be face to face and answer to” (Terry, personal communication, April 4, 2019). Kyla mentions that this was common among the four other classes she took: “No one else checked up on me in the other classes” (Kyla, personal communication, March 25, 2019).

Accountability was a key factor in self-paced courses, and many participants mentioned that if accountability was lacking, it created a sense of dissociation from the course that often resulted in them dropping the courses, outside of the course withdrawal period. Kyla related the importance of that structure and encouragement for her success. She appreciated his encouragement and prompts from the instructor: “If he didn't tell me, you need to start your project, I probably would have left it to the last week” (Kyla, personal communication, March 25, 2019). Her preference for the instructor providing that structure, and subsequent increase in performance, is evident in the following: “We're assigned homework and structured courses. Yeah. I don't know. I just thrive in structured courses. I get A's and B's (Kyla, personal communication, March 25, 2019).

When the instructor noticed that this participant had not been engaged in the course for a month, he reached out to remind her of an approaching course deadline:

> Then I just left it for a month and he's like, oh, your course deadline is coming up. He's like, did you want a course extension? I'd be willing to grant you that, because I was almost done. Yeah. He said my deadline was looming. No, nobody else did that in the other courses. They sent me and original, welcome to the course, I look forward to corresponding with you. I think I got two or three modules into MIS. I can't remember who that was with. Yeah, I can't remember who that was with. I don't know. (Kyla, personal communication, March 25, 2019)

Assessment. For many participants, a connection with the instructor was important. Formative assessment provides scaffolding and unjudgmental feedback to enrich learning, whereas summative assessment is useful for course improvement and

assessing teacher effectiveness. In a few cases, participants voiced specific preferences for not only an increased connection with the instructor, but also scaffolding for assignments. They wanted assistance to break assignments down, and also to go through the syllabus. A few participants relayed that they were impacted by a lack of institutional and instructor support. In previous online courses, this particular participant had received formative assessment throughout the semester before handing in her assignments for grading. When this type of formative assessment is not present, it had detrimental ramifications for a few participants, as evidenced in the following student's experience. Diane stopped attending class after receiving an indication that she would not be able to receive feedback on assignments before handing them in. She dropped out: "Two whole semesters. Yep, that's where my two Fs came in" (personal communication, April 8, 2019). This experience resulted in a reticence to reach out to subsequent instructors. Instead, she relied on her enrolment officer for educational guidance. "Yah, I can see him in person, and you know, I guess I was scared to connect with her because of the previous two professors that I had" (Diane, personal communication, April 8, 2019). For this student, one incident resulted in a break in trust that led her to drop out completely. For Indigenous students, in which relationship is integral, this is a major factor for persistence. When she finally returned to her program, she did so with the help and advice of her enrollment officer. She was afraid to reach out to her next instructor and found it uncomfortable to connect: "But no, I never told [the instructor] that, maybe I should let her know, when I'm done, I might email her and thank her and let her know what my situation was, that's why I had a hard time connecting with her" (Diane, personal communication, April 8, 2019).

Formative assessment was a preference of most of the study participants, especially for self-paced courses, in which they could easily feel isolated within (Anderson, 2017; Garrison et al., 2000). Formative assessment and the teaching presence are critical to the development of the cognitive presence, that this supportive discourse, is important (Anderson, 2017; Ludwig-Hardman and Dunlap, 2003; Roberts et al., 2005). The cross-section of cognitive presence and teaching presence, supportive discourse, that occurs between student and instructor, tutor or teaching assistant, are integral for students to co-construct knowledge. Most participants expressed a preference for consistent dialogue and feedback—not just a mark, but significant

ongoing, consistent feedback for all learning activities and assignments (Anderson, 2017).

> I took [a management course]. And that one went really, really well. [The instructor] was really helpful in that one. The assignments were short answer questions, so I read through the text book and then would put answers together based on what I read, and he came back with full on paragraphs with "This is what you did right" and "This is wrong, but you were close, and this is where you find the information." He was really thorough in the feedback that he gave me. (laughing) And I think it was the textbook, came with the online. Like you can go and do practice questions, and I did those, and those were really helpful. (Tonya, personal communication, April 15, 2019)

The benefit that significant formative assessment and scaffolding have for a student, as opposed to a simple mark, is evident from Daniel's explanation:

> I didn't really have much interaction with them actually. Once I started the course, they introduce themselves and said you can call them or whatever and then if I had any problems, but for the most part all the work that I had was something I could learn on my own so I just read whatever they wanted me to read to review and then submit the assignment for the review and also the quizzes and then they gave their feedback on it and told me what I could do better after I submitted assignments or quizzes. They said I could've done this better or could do it differently. Just regular feedback on my work but that was about the extent of my interaction with them actually. Just reading what they wrote when they marked my assignments. (Daniel, personal communication, March 28, 2019)

Formative feedback was critical for success. One participant felt that if she had she received more detailed feedback, she could have incorporated it throughout her course, as illustrated by her quote:

> I think that if there was a little bit more available for support, I'm so used to teachers on campus like, going through your assignments and giving you comments, and giving you feedback, and if it was more than just: "Oh, you got a 40% on this." "Can you give me a little bit more here, to work with?" (Tonya, personal communication, April 15, 2019)

Certain content areas may be more difficult to grasp without feedback from the instructor. Math was often mentioned by participants, aligning with current literature (Steel & Fahy, 2011). This is evident in the following quote:

> For math, I did awful on the first assignment, and I didn't really get any feedback, on, like, he marked me, this is wrong, and this is the right answer. There was no, so here's the process you should have used. And I was like, "ok, well, what do I do now? Like, is this worth my time, is this not going to work for me. I don't want to waste your time; I don't want to waste mine." He said that

> he's had many students, that have done really poorly on the first assignment and can catch up. It's just getting used to teaching yourself the principles as opposed to being in class. (Tonya, personal communication, April 15, 2019)

Participants desired more interaction with the instructor to make sense of an assignment before it was due, to understand the expectations. Without a strong teaching presence, clear guidelines, examples of model assignments, and thorough rubrics are helpful in constructing opportunities for higher-ordered thinking that contributes to the cognitive presence. (McLoughlin & Mynard, 2009):

> Yeah. Usually I just like to do the work on my own and then submit it, but after the last class I had, or online course I had, there was a point where it was kind of challenging based on the content they gave me. It wasn't really a very clear at their direction on what they actually wanted as far as work goes so there was a point where I didn't understand what they clearly wanted from that assignment. (Daniel, personal communication, March 28, 2019)

A few participants preferred to check in with an instructor before handing assignments in, to provide scaffolding to improve grades, evident by the quote below:

> Although now I think I'd rather have more interaction, so before I submit an assignment I can show them what I have so far, and perhaps what I could do better, before I submit it so I can get a better mark that way. (Daniel, personal communication, March 28, 2019)

Requiring students to curate resources is an effective learning activity that deepens the cognitive presence (Anderson, 2017). By asking them to be more active in filtering content, students can engage in content selection, which is at the intersection of the cognitive and teaching presence in the CoI framework. A few participants relayed experiencing this as a deficit in the teaching presence:

> The instructor is very active in interacting with us as students, which she has so many resources available for us to actually look into. Sometimes, some of them seem almost optional a lot of times, though, so you never know which ones are required and which ones are optional, so it's kind-of an issue for me. Yeah, because I feel like I'm reading three books for one tiny assignment, and I only needed probably a paragraph from one of those. You know what I mean? So, in terms of assessing priority. (Theresa, personal communication, March 6, 2019)

This quote from Theresa speaks to a preference for clarity. This could be resolved with a connection to the instructor, or by ensuring clear instructions or transparently defining the task as a structured learning (Anderson, 2017; Tibbo, 2015; Ungerer, 2016). If the purpose of the learning task is outlined clearly by the instructor,

doubt and anxiety that the learners expressed in relationship to this activity can be mitigated. In some of these cases, it appears that not enough guidance was provided by the instructor. Another participant recounts instances in which she was searching the internet for explainer videos to teach themselves statistics content in their self-paced online statistics course. While fostering critical thinking, this student felt that this could be improved upon, and that the instructor has a responsibility to teach the content.

Chandra indicated that, instead of receiving help from the instructor, she and another student spent a lot of energy parsing explainer videos to assist their understanding of the course. But, since the material was not tailored to the course, she often doubted that she was evaluating content correctly. She mentioned that it would be great if instructors would:

> create their own [videos]. I don't know what she was using. One of our Indigenous students recommended Kahn Academy. Some people find that helpful because they have little videos too. But then you have to figure it out, too. (personal communication, May 24, 2019)

Filtering content was not viewed positively, or accepted as a learning activity, by the participants. A key aspect of the teaching presence in the framework CoI is to curate content and facilitate discourse towards a goal of increasing the cognitive presence, aid the student in constructing knowledge for students (Anderson, 2017; Garrison et al., 2000; Tibbo, 2015; Ungerer, 2016). Instead, many of the participants did not perceive the instructor role as teacher. A fuller description of this is below:

> Well you've got the idea, but you didn't get the right outcome. So, he would give me marks for partial work, but he couldn't explain to me what I needed to do. His role wasn't about teaching me, it was about marking me. (Diane, personal communication, April 8, 2019)

This same student outlined an instance in which she preferred instructors use smartboards and connected classroom technology to facilitate experiences resembling classrooms. She specifically mentioned him "teaching" that way:

> They can be seen by the one professor, or one teacher who is elsewhere, and he can see all the people who have logged in on his, somehow, on his monitor. And that way he can teach the class to several students at once, but we're all, but most of them are in different places. (Diane, personal communication, April 8, 2019)

Diane indicated that it was difficult to be taught over telephone: “That I couldn’t, it seemed too easy for him and to discuss it over the phone was not easy to do. Being talked through email was not good for me at all” (Diane, personal communication, April 8, 2019).

Positive effects of direct instruction were felt by some students and referred being challenged by instructors, providing not only direction for the assignment, but also served to deepen learning, evident from Theresa’s comment: “So she's asking me to reflect on my reflections. I actually do go through my own writing, and check to see what I have, how I've grown, I guess, as an educational philosopher person” (Theresa, personal communication, March 6, 2019). For one participant, the lack of feedback was frustrating because it was evident that she wanted to learn and improve:

> I sent her an email and was like, "Okay, got my paper back. Can you let me know what I did wrong? Was it my grammar? Was it my formatting? Was it my arguments? Am I just totally off base? What is happening for me, and how do I fix it?" She wrote me back. She said, "I have a doctorate in philosophy, and that was a 50 paper. A doctorate in philosophy is the highest level of education you can get." I was like, "Okay, then. Thanks for that. That's super helpful. So, you're telling me, just get a doctorate in philosophy. Thanks! (Jennifer, personal communication, March 8, 2019)

In terms of teaching presence, generally, students expressed interest in being brought through the content. Kyla indicated that the teaching presence was non-existent often: “There's no classes where someone talks to you and teaches you what's going on in the book” (Kyla, personal communication, March 25, 2019) and Marissa indicated that a passion instructor resulted in an increasingly engaging learning environment for her:

> And it's interesting, because when you're taking courses like economics or oceanography or something, generally the people you're learning from in the north are very interested in what they're doing. Right? It's not some boring...they're usually...I found, in my courses with ... being taught from the Northwest is that you had passionate instructors, whether or not you were really interested in whatever it was you were doing, they were interested, so that makes it better, too. (Marissa, personal communication, March 25, 2019)

The value that summarizing material, shaping content and packaging material has for students studying for a final exam, is evident by the following participant comment about preparation:

> They would have certain hours set aside once per week that you could go meet online. I wanted to add this —because it really worked well for statistics and epidemiology —were weekly tutorials. You didn't have to be online in-person for them, but they would be videos that would summarize that week's content. That was actually super effective. I'm surprised I didn't mention that before. Then when it came time for studying you could go through those videos and it was like a little concise summary of each subject as we progressed through. Kind of like having a weekly lecture. (Avery, personal communication, April 6, 2019)

Satisfaction in online courses correlates with the importance of instructor engagement. This positive effect was evident from a few participant's comments who suggested that they would seek out an instructor they connected with, and dependent upon their program requirements, enroll in subsequent courses with that instructor:

> I didn't get very far with it, but I did find that when I had to find my own courses. I would start with the professor and then take whatever course that they were teaching. Yah, so that was also a very, that was my method as well. I would seek out professors, but you only find those out after you've taken a few courses. And then it matters, and it's just a personality match, right? (Diane, personal communication, April 8, 2019)

The instructor role in moderating dialogue (Anderson, 2017) and role in scaffolding learning was noted by some participants. Importance and value of instructor shaping online discussion: "Well, I think instructors can set the tone, right? I think, as people in education, I think that's a really important thing for us to know, that we, as the power holders in that space, set the tone for that space" (Jennifer, personal communication, March 8, 2019). Whether it is true that the instructor holds power or not, this participant valued and relied upon the instructor to set tone in the space:

> But I really appreciate that, in the course I'm taking now, the instructor also comments on the discussions. I find that hugely valuable, because she could set the tone, and she shares. So, that piece that I was missing, of that contact and where the prof is coming from, is now ... at least you have a glimpse into what they are thinking, so that was hugely valuable. I find it so good. Yeah. I really appreciate that she does that. (Jennifer, personal communication, March 8, 2019)

Expectations and interest in the instructor molding the class community is also clearly outlined by the following participant. She said: "the instructor was fabulous, the way she responded and connected everyone together" (Donna, personal communication, May 1, 2019). When the instructor does not have an influential presence in the

discussion spaces, for those whose courses contained mandated discussion, it frustrated participants, illustrated by the following quote from Avery:

> Yeah, she didn't take part in any of the discussions or anything like that. If we had specific questions or we were confused and we went to email her she, would take her time to get back to us. It would be very frustrating. (personal communication, April 6, 2019)

Exams were mentioned by most participants as a stressful factor in their experience with online courses, especially the fact that often the summative assessment, final exam, was weighted heavily in relationship to the entire mark for the course. Anxiety about final exams, perceptions of difficulty, and the relationship of the summative assessment to course content was reported by most participants. Some believed that another instructor prepared the exam, and that this instructor was not the same one who prepared the assignments. Others felt that the exam was just extremely difficult compared to the assignments. Students have complained and felt frustration when the exam seems disconnected from the content that they studied throughout.

> I'm fairly confident that I can do this, but with maybe not this course. This course has been giving me some stress. I'm so confident in other areas, but this is making me feel a lack of confidence and the fact that the exam is going to be like 50%. (Chandra, personal communication, May 24, 2019)

Tonya also shared her trepidation about the weight of the exam, using fairly strong language to describe how stressful it was: "Because a final exam worth 60% of your mark is terrifying...60%. All of the courses that I've been looking at have 60% final exams, and that's ridiculous" (personal communication, April 15, 2019). Almost half of the participants talked about the stress and fear they experienced with courses that had final exams weighted above 50% of the course grade. Three participants were enrolled in courses in which the exam was over 50%, one was weighted at 51% and two at 60%, which are against the institutional policies for weighting a final exam. The anxiety that this high valuation for final assessment for that particular course is evident from this quote in which she gives examples of other course assessment indicating her expectations/preference:

> Yah the 60% I find really scary. The exams I take for my...program, my lowest one was worth 15% of my final grade, and it's just because it was a design heavy class. So, it was more about the designs we did, and I think the exam I wrote this morning was worth 45% of our final grade and that's the highest one

> we've ever had. Usually they're around 30%. (Tonya, personal communication, April 15, 2019)

Combined with low teaching presence, guidance, scaffolding, exams that were highly weighted in the valuation for marking caused significant distress for students, especially if the content in the course did not build toward the exam. Two students commented that they felt that the exams were not created by the instructor teaching the course, and that this led to the feeling that the exam was disconnected, rather than an in class exam in which the instructor could scaffold the student toward the exam, or personalize the exam to the particular cohort:

> No, they don't…it's like randomized, uh, I think, from what [the instructor] told me….It could be anything and everything, generated random questions. Yah, I think in person, I know [the instructor] will create and tailor midterms, but I think with the [institution], they're supposed to follow this and that, and the textbook, like, the teacher's manual questions, the test questions. Yea, so they have less leeway to personalize it. (Tina, personal communication, April 26, 2019)

At least four students indicated that the exam content seemed disconnected from the course content. In this participant's case, the feeling was just that it was harder than the course: "Yeah, I was doing okay [in the assignments]; the exam was surprisingly tough. They took all the content from the course and they made the exam as hard as it could be actually for that course." (Ben, personal communication, April 4, 2019). Students avoided, if they could, certain courses because the final exam is weighted so heavily that it becomes insurmountable in their minds: "Because it's such a high final, and I'm one of those people who freezes up during exams. So, it's like I know these things. I did really well on the assignments but because so much of the grade depends on your final exam" (Dave, personal communication, April 19, 2019).

When assessment aligns with content, students felt more prepared and potential exists for a more positive experience, and subsequently a better grade. "Like at [this institution], there's an exam, and it's based on the objectives, and at the end of chapters, you need to study them" (Karen, personal communication, April 11, 2019). The ability to predict what will be on an exam is vital for success, and follows best practices for instruction (Kibble, 2017). Participants mentioned that instructors had used a variety of methods to scaffold them towards the final exam. Mechanisms such as instructor

preparation, clear learning objectives, or video summaries were particularly effective strategies for participants:

> I wanted to add this—because it really worked well for statistics and epidemiology—were weekly tutorials. You didn't have to be online in-person for them, but they would be videos that would summarize that week's content. That was actually super effective. (Avery, personal communication, April 6, 2019)

Participants preferred to be assessed using assignments, it appeared that summative in the form of final exams caused a great deal of stress, combined with a lack of teaching presence. They also appreciated a variety of assessment types which aligns with scholarship that indicates that integrating variation and flexibility in assessment types offers the opportunity for students to excel in the areas that they are good at and connect to their reality (Lock & Redmond, 2015). Karen, one of the few participants who is successful and prefers online education, described the value of reflective learning activities on her personal learning:

> So, I'd go to UBC to do the exams, a short paper like 3 or 4 pages, and then the next assignment would be journaling, or something interactive. So, it could be like, finding collages about gender and writing a reflection of what I was observing in it. Some of it was interactive and wasn't exactly writing. It could be media and doing collage. It was a lot of work, but it was also, got me to engage in different ways for real world experiences. (Karen, personal communication, April 11, 2019)

Feeling a warm welcome. When introductions do not occur, it felt jarring and surprising to students: "I did not reach out to the instructor, I believe when you open the package. It came in a box, 2 textbooks, a disc, and one cover sheet, actually...And the instructor didn't reach out" (Donna, personal communication, May 1, 2019). This student alluded to the fact that simply receiving the materials is not sufficient. A welcome email or call was expected. Students had the perception that the onus was on the student to contact the instructor: "But I guess through [distance learning] it's up to the person to get ahold of the instructor" (Terry, personal communication, April 4, 2019). A general sense was that it would have benefitted the student if the instructor were to reach out early:

> I believe I didn't hear from him at all. And yet, I'm sitting back here hiding behind my computer not reaching out, that's definitely, maybe had I done that, I might have prompted myself to bang this course out. It would have helped to have him reach out. (Donna, personal communication, May 1, 2019)

The same participant compared this experience with another course in which she depicts instructor engagement built right into the course: “So, when you first signed up, they reached out to you” (Donna, personal communication, May 1, 2019). The same participant stated that increased visual between instructor and student would improve the experience and potential for satisfying that relationship piece:

> But if you put that face on a screen to each other, one on one, and had a conversation, whether it’s 10 minutes or 30 minutes, you’ve planted the seed for a relationship. You’ve built some trust, some communication, and I guarantee you, that people would be more apt to reach out than, because what happens is. Well, I’ll tell you the analogy later. What happens is that I didn’t reach out for a bit and then I started feeling guilty. (Donna, personal communication, May 1, 2019)

Many participants mentioned that it was important for the instructor to connect first. Donna outlines the importance of this, for all students, especially those students with less confidence:

> I think it would be a good idea for the online instructor, within the first week or two, of someone initiating their course, for them to pop an email and introduce themselves. Is that a standard? I didn’t hear anything. And when I get time I’ll go back and double check, and pop you an email if I was wrong. And I feel like I didn’t get that. And it wasn’t until we were 6 weeks in, or whatever, and there had been no assignment, an email came in from him, saying: “Hello, da da da, just wondering if you have any questions, I’m here. And so, I feel I dropped it for other reasons, but if you were someone with less experience with education, let’s say, or not a lot of confidence, maybe you’d be struggling and not reaching out. (Donna, personal communication, May 1, 2019)

This student indicated that she was relieved that the instructor reached out and shared her own barriers with the technology: “And then I got an email from my instructor, asking how come I wasn't online. I was very thankful that my instructor emailed me and showed her concern, and she had let me know that it was her second time” (Chantal, personal communication, March 27, 2019). Lack of welcome or introduction by the instructor surprised a couple of the participants: “Yah I haven’t gotten any messages from my instructor. I am surprised my teacher hasn’t been like ‘Where are you? You were so excited about it.’ I was hesitant but excited because I was still messaging him” (Chandra, personal communication, May 24, 2019).

Participants would rather the burden of first contact remain with the instructor. Donna appeared sheepish in the following comments she made about reasons that

prevented her from connecting with the instructor when she needed to. Especially when a student falls behind, it is idea if the instructor engages with the student because there is a perception that the student will feel judged: “I hadn’t handed any assignments in, and the instructor is going to think I’ve not done anything, which, in fact, was a whole lot of true. I mean, I had gone to the tutor” (Donna, personal communication, May 1, 2019). Students affected by previous trauma may not feel comfortable taking that first step to connect, illustrated by Terry’s description of her willingness to take that step. Even though the syllabus stated it, she avoided connecting: “I know it's right in there too about being able to contact the teacher (Terry, personal communication, April 4, 2019).

Instructor prompts were well-received, offering significant guidance that contributed to keeping the following student on track:

> If he doesn’t see anything rolling in, he keeps poking at ya. You know, to make sure everything is ok, if you need help with anything, or whatever is going on, just to. It doesn’t get forgotten, or if there’s problems or struggles, he keeps reaching out to make sure everything is good. (Cam, personal communication, May 5, 2019)

Another participant quote illustrates how integral it is for the instructor to adapt to the students in the class, and for the instructor to be the one responsible for connecting, especially if someone appears to be falling behind.

> But if you can't even speak in class, then if you're doing a [distance] course it's not easy to ask the teacher for something when you can't even speak out loud about your own self in the past. (Terry, personal communication, April 4, 2019)

Impact of residential school on teacher relationships. The impact of colonization, racism and residential school system on Indigenous students (Hare & Pidgeon, 2014) was mentioned by a few participants, indicating that it affected their willingness to share with their peers and their instructor. For these reasons, it is imperative that educators understand this context and their potential role in disrupting this balance of power (Freire, 1972).

> But they don't understand because they've never been there and even our teacher, she doesn't get it. She doesn't understand really about residential school. You know when somebody has grown up in a good home and they haven't been out on the streets at all and everything has kind of been given to them and they feel confident enough to say whatever because they don't understand that they don't know. They haven't experienced it. But if they experienced it, they'll be a little

> more conscious about how they say things and how they put themselves across. I guess energy is really—you know, feeling another person's energy and being accountable to the self and to the other person. I know it's right in there too about being able to contact the teacher. (Terry, personal communication, April 4, 2019)

It is not simply neutral when a relationship is not built. The lack of connection can impact a student adversely and manifest itself in many ways. Distrust can be built, students may not feel safe to share, it may influence a student not to reach out to the instructor, or dissuade a student from participating, or simply encourage attrition. Participation is integral to creating knowledge in the CoI construct (Anderson et al., 2000) and lauded as one of the important factors in building a successful CoI. Relationships are integral to Indigenous cultures (Pidgeon et al, 2014) so it would seem integral to build those relationships that provide that space in which an Indigenous student feels comfortable participating in the social presence.

Conveying accessibility can be especially important if the student perceives a power differential. Text communication can break down, evident in Theresa's reaction to a particular email exchange between a student and an online instructor.

> Just the tone that her email had, and it was sent out to everybody, so she didn't target just me on that. But it was the tone that she had in the email. It just sounded very, 'this is the way it has to be done. It's my way or the highway', kind of tone. It was really weird. (Theresa, personal communication, March 6, 2019)

At least four participants experienced this same phenomenon:

> So when I was talking to [another student] about our experience within this course online, we both kind of got that feeling of it's a little bit like she's, I can't say it's really, really condescending, but it's, you know, she's placed herself definitely as that instructor and she's not part of the class, the overseer, you know what I mean? It's kind of that feeling. And so yeah, we both kind of got this feeling like she's not going to be very much help in terms of if we really needed help with stuff. (Theresa, personal communication, March 6, 2019)

Negative experiences with staff can be discouraging and a deterrent to accessing services because of the lens that Indigenous students may have regarding racism, bias and mistreatment based on their Indigeneity. Students have come to the university with a variety of life experiences, especially those that have returned as mature students. A heightened sense or a reality may exist that negative experiences at the institution are related to racism, or a particular bias held against Indigenous students or individuals.

The fact that racism may be in play may impact student perception and experience. It was the first thought of each participant who described a negative or detrimental interaction with staff or instructors. Jennifer, a graduate student, mentioned that she was always worried about playing into a negative stereotype. This impacted her interactions with instructors and prevented her from advocating for herself like a student is entitled to. She was afraid to ask for extensions on assignments for fear of appearing unprepared or not entitled to be at the institution:

> I have never in my history of education ever asked for an extension… [I am] also very cautious, being an Indigenous student, that I never want to ask for extensions or anything like that. I should not be here. I should not be in this space. I am not prepared. I don't know what I'm doing. I am not good at this. I should not be here. (Jennifer, personal communication, March 8, 2019).

In her graduate degree, she has found that a particular instructor's warm and receptive responses allowed her to feel safe enough to take advantage of these options. Jennifer says: "she made me feel safe to do so. But I needed to see her." (personal communication, March 8, 2019). To be clear, this trust had to be built, and was not the default starting point for the student. Additionally, this student felt strongly about seeing the instructor in person. In this circumstance, both were able to access campus, though it was an online course.

This concern around mistreatment seemed to result in a reticence to forge necessary connections with staff or faculty that were necessary to advocate for themselves in relationship to personal circumstances. Indigenous students are at a disadvantage if they do not possess the entitlement or institutional confidence to make necessary connections to advocate for medical leave, extensions, or navigate the institutional policies. For example, Terry admits that she was often thinks about past experiences, racism, her behaviour related to education can be impacted: "You know being angry at the world for all of these things that happened, like residential school and all these addictions. I know it's nobody's fault, it's just how it is and here's what happened and let it go and lets all go forward. It's hard to separate" (personal communication, April 4, 2019). Dolores, a graduate student taking most classes online, referred to a feeling of fear to connect again with another instructor due to previous difficult interactions with the institution. She attributes her hesitation to residential school past context of residential school:

> So that's where, I shut down, I think. Because…I'm a residential school survivor eh? And anything like that, I would be like, ok, fine, and I just, I think that's where I just shut down for a little while because of the rudeness and not the understanding. (personal communication, April 10, 2019)

Another example of how one negative experience at an institution can be detrimental to a student's success. This particular participant, who has also worked as an advisor, indicated that accessing student services can be a barrier, even for her. For example:

> Because I think that some of our students are really shy, and we personally have to walk them to these services. If not, they won't attend. They're reluctant, and school is hard enough as it is. We have to walk them there. And me, even dealing with anxiety, I had a hard time with this one who I didn't know, putting up my hand and saying "I'm here, can you help me? I only have 45 minutes!" And I didn't even wanna walk over there. Because there was this one person, she was working with this one group of people and she didn't come over and ask. (Chandra, personal communication, May 24, 2019)

These experiences, described by participants who have this lens or viewpoint, have implications for purposeful intercultural training that the TRC in many of the CTA. They specifically recommend that individuals employed in service-oriented positions be mandated to take part in intercultural training, specifically anti-racism training. This is highlighted in CTA #57 as: "skill-based training in intercultural competency, conflict resolution, human rights, and anti-racism." Post-secondary institutions, as government funded bodies, employ many public servants, or maintain various jobs that fall under this category. In order to be compliant with the TRC, this would have to be in place.

Exemplary interactions. Exemplary interactions between instructor and student were correlated with not just course completion, but also with a positive GPA. Kyla received an A in the first online course that she finished after failing or dropping four courses (after the semester drop date). She attributes this to instructor responsiveness, significant feedback, and encouragement:

> I did have a connection with [the instructor]. We corresponded at least once or twice a week whenever I had questions, and he'd send an email and be like, you did really great. This was your grade, keep it up. I mean, he was nice. Once I started showing that I was putting in the work, then he would help me with anything that I had any questions with. (Kyla, personal communication, March 25, 2019)

When Chandra explained that it was arduous to have to retype the math into Word, that it was extra work. “He was actually accommodating about that. The teacher said if works for you, you can do that” (personal communication, May 24, 2019). Participants appreciate flexibility and instructor relationship, as noted in the following:

> I asked my instructor for an extension on the final piece, and then I was able to meet the instructor on campus and go over my final assignment, and I felt that was very helpful, and I was very thankful that I was able to get the extension in order to complete the course. (Chantal, personal communication, March 27, 2019)

Furthermore, teaching presence is enhanced when an instructor is able to personalize the learning of each student, or the space allows for that flexibility within the course curriculum, pedagogically, making the assignment increasingly meaningful to the student’s personal research (Garrison, et al., 2000; Anderson, 2017). Evidence suggests that activities that are authentically based and assessed have the most potential to affect a student’s learning (Lock & Redmond, 2015). The interaction the following participant had with the instructor offered the opportunity to personalize an assignment. This made it increasingly meaningful to her own research and effect of excellent teaching had on Nicole is illustrated by her comment:

> It was more the language that she used in her sharing. It was really—Yeah, I remember the language that she used, and I remember one assignment she gave us the flexibility to change the learning outcomes. She was flexible enough to be like: “Okay if you want to do something else to meet this learning objective or requirement, let me know.” I found that really awesome. She was the only instructor throughout all the other instructors that I have on campus that actually suggested that to me and said we can make this fit for what you're doing and what you're researching. (Nicole, personal communication, April 5, 2019)

Cognitive Presence. Researchers point out that development of a cognitive presence in the CoI heuristic is dependent upon effective questions that are posed within the learning environments to students (Anderson, 2017). These can be planned or serendipitous. This has implications for responsive teaching and adaptive instruction—what Freire terms praxis. McLoughlin and Mynard (2009) indicated that technology is best paired with responsible and responsive teaching (Anderson, 2017). That said, Indigenous students that participated in this study outlined some of the areas that hindered progress in online courses, especially self-paced courses in which a student requires independent study skills in the absence of a strong teaching. In this section, I

outline some of the barriers to successful completion that occurred when content or topic areas are difficult, relationships with peer or instructor were not strong, self-regulation and study strategies were not in place, mandated discussion spaces seemed not to make sense or be useful. Also, most participants also perceived the discussion aspect of online courses as an additional workload not existent in F2F classes. Included in the list of factors that contributed to student stress and lack of completion was summative assessment, exam anxiety made worse by heavy valuations, and lack of preparation for a final exam, either because of content difficulty or low teaching presence. Pedagogical practices that participants noted that improved their experience and provided scaffolding toward course completion, are woven throughout this section.

Content: relevance, difficult content, and student interest. Praxis is integral to teaching practice, and as Richardson, Sadaf and Ertmer (2012) found, when students perceive that content is grounded in personal experiences of the students, it has the capacity to improve or induce the development of cognitive presence. This is clear from the previous quote by Nicole who was able to adjust one of the existing learning objectives to align the assignment with her own research. Diane indicated that this personalization should be embedded in the design process: "It is really important to have some kind of advisory position to help with curriculum and personalize material" (Diane, personal communication, April 8, 2019). Karen referred to one particular course assignment as increasingly meaningful and innovative, because it required personal investment and reflection on the part of the student:

> So, I had to change a behaviour of myself over the course of a semester. And there was like, literature in the beginning on the process of change and psychology, and so some paperwork around that, and then tracking my own change. It was quite a lot of work, and it was also interactive. And they had a few texts, that were short, like smaller textbooks on change. That was a pretty innovative one. It makes it more meaningful. Because you're applying something that you're learning and you're sitting with it and doing it. (Karen, personal communication, April 11, 2019)

Not only were students less satisfied when learning activities were not aligned with personal goals or career objectives, but also when the learning activities seemed disconnected to the course content. This dissatisfaction was clearly stated by the following: "Because one of them, we had to do a budget, and I was like, What? What do we need to do that for?" (Dolores, personal communication, April 10, 2019). Tina

commented: “there are some things I could see being way more relevant, oh, once you actually get to working. Like that’s what they do here, they train you towards… once you’re out and actually working in the field” (Tina, personal communication, April 26, 2019). And one participant pointed out that one particular assignment style did not seem relevant to the course objective. For him, there was a disconnect between using a reflective writing style for assessment in what was reported as a professional skills course:

> Yes, a disconnect. My take on business writing would be more reports, structuring and all that sort of business side of it, and then you know, her take on it was more, I guess, 21st Century and the journaling and blogging and all that other end of it, right? Yah, and that must be why I chose that one, is because it sounded a little more up my alley for what I wanted to do. This one would have been more, or was supposed to be more, around the business end of it. It goes over resumes, email structure, and all that sort of stuff. (Cam, personal communication, May 5, 2019)

The same participant expanded upon this to indicate that he would like to see courses more specific to the program that they are developed for “instead of throwing a generic, ‘hey this is what we have at the school already’, tailoring it to what these guys are doing and using, it would be more beneficial to the student, I know that much” (Cam, personal communication, May 5, 2019).

> But if the mandatory courses were more trades specific, it would be nice to see, cuz there’s some definitely some sciences that are potentially, put into that program. It would just be a matter of finding a place to do it. I’m a welder by trade, so I would be super interested in more of a metallurgy type thing. And I don’t know if that would go with the sciences...you start breaking down the structures of steel, you get into all the molecules and carbons and all that stuff. At least that would play into you know, what I do on a daily basis. (Cam, personal communication, May 5, 2019)

Without an active teaching presence, if the content itself is interesting, there was a higher chance of the participants engaging in the course.

> The materials seem really interesting though. And I picked the courses based on the subject matter because they were electives, right? So, I really wanted to take these courses. I think it was environmental studies and something else, globalization. So, one was in study of environment, one was about globalization and it just didn't pan out like I hoped it. (Shawn, personal communication, March 29, 2019)

It was clear from the following quote from Jennifer that it adds to a positive experience when a student is interested in the content:

> Yeah, I really liked the content. It was kind of like common sense, but not in the sense that you would just know it. I read it and I'd be like, “oh, that's common sense,” but I wouldn't have thought of that if I didn't look at the textbook. But it was good. I really liked it. It was a lot about motivation and people in the workplace, so it was interesting because it wasn't the dynamics with economics. It was like how to manage people and their feelings and their emotions and stuff. It was kind of a little psychological, which is probably why I really liked it because I really like psychology. (Jennifer, personal communication, March 8, 2019)

Lack of interest in content was cited as a factor related to persistence:

> It was tough, but I was also not very interested in two of the three courses. That made it harder, and then once I decided I didn’t want to be in computer sciences anymore, I was like, why am I doing this to myself. (Tonya, personal communication, April 15, 2019)

Research indicates that Indigenous worldviews and content are required in courses, and that revisions to online courses should include this perspective (Archibald et al., 1995; Battiste, 2002; Hare & Pidgeon, 2011; Lloewen et al., 2017) When content relates to student goals, perspectives, it can be more engaging (Anderson, 2017; Garrison et al., 2000; Lock & Redmond, 2015). Four participants mentioned that adding Indigenous content or worldviews to courses would improve their experience. One participant, enrolled in a graduate program, mentioned that the course would have been improved by including not just an Indigenous perspective, but other cultural perspectives on the same topic, rather than solely the mainstream one. Due to the global reach of an online course, it should especially be required to include other perspectives, epistemologies and worldviews:

> So, yah, there was room for including alternate content. Yeah, particularly, I was thinking about representation in an online setting, it's worldwide it's global so it's like we're not just Western students taking the course. I think different cultures...have different ways of dealing with conflict resolution, Indigenous peoplesdo. It's so subjective and to not have that in there I was kind of disappointed. (Nicole, personal communication, April 5, 2019)

One participant enrolled in a specifically Indigenous teacher preparation program indicated that she was able to include her own individual identity or culture

(Anderson, 2017; McLoughlin, 1999; McLoughlin & Oliver, 2000) and weave it into her assignments:

> I could choose, using the Ditidaht First Nation language, I could choose to use artwork from Ditidaht. And others would be from Nuhulk or they would be from Dene or something, wherever they were from, they could take their own identity and bring it into the work. (Diane, personal communication, April 8, 2019)

Generally, participants indicated that they were accustomed to not seeing Indigenous worldviews represented, evidenced by the following quote:

> Yeah or even just some more focus on it. That's just a normal thing I think for Indigenous students we're always like "where's the Indigenous stuff? Why aren't my culture's ways of knowing being reflected back to me?" And it's like "okay that's normal it hasn't been for years. (Nicole, personal communication, April 5, 2019)

Despite Indigenous worldviews, epistemology, and perspectives largely missing from curriculum (Archibald et al., 1995; Battiste, 2002; Hare & Pidgeon, 2011), this fact was partially ameliorated by some instructor's flexibility to mold an assignment to a student's particular needs, identity, or culture (McLouglin & Oliver, 2000). The TRC includes a specific mandate in CTA #10iii to develop culturally appropriate curricula (TRC, 2015a), but no evidence of this existed in the courses that were described by participants. In some instances, pedagogical strategies such as encouraging students to personalize assignments and adjusting learning objectives in order to accommodate various cultural perspectives and orientations served this purpose. If culturally appropriate curricula are not integrated at the course design phase, Indigenous students must rely on the instructor to meaningfully include this at the delivery phase.

Only three participants indicated a lack of Indigenous perspectives existed in their courses. There could be a variety of reasons for this. It is possible that Indigenous students do not expect to have their Indigenous worldviews, content or knowledge reflected back to them in post-secondary institutions. Nicole indicated that they expected this to be the case, but the few times her cultural perspectives were present, or an assignment could be molded particularly to fit her interest, work or research wise, this was valuable to her (Nicole, personal communication, April 5, 2019).

Factors that keep students moving through material became particularly important when a student finds the content difficult or inaccessible. Chandra mentions that it became difficult to progress if held up by a problematic concept. If subsequent

modules or content build upon the previous content, this does not allow for a non-linear approach to a course. Teaching presence becomes integral in this case: “Yah, but then it creates problems when you’re having problems throughout, because you put a little note around that one, going through it” (personal communication, May 24, 2019). The participant was not able to just bookmark it to go back to and move forward to the next module.

In most participant cases, topics such as math, statistics, and accounting were problematic to study online (Steel & Fahy, 2011) without sufficient instruction, evident in Chandra’s comments below: “But the concepts are so new that it’s, it feels hard and overwhelming and daunting…It’s a LOT. It’s a lot to take in” (Chandra, personal communication, May 24, 2019). She was enrolled in statistics as a requirement to enter a graduate program, and admittedly, not a “math person.” However, even Ben, a self-described competent student, who is good at math, underestimated a Statistics course in the same way. He recounts his experience:

> I think Statistics is just tougher than it sounds. I got a 3-year diploma in civil engineering so I'm good at math and I underestimated statistics, which is not at all like civil engineering. I was like, “It's going to be a breeze” but it was actually hard. (personal communication, April 4, 2019)

This suggests that the participants enrolled in math, statistics types of content, in which independent study is not as effective at progressing through the course, would benefit from an increase in instruction. This type of content requires a teacher to teach the concepts. Another participant noted a similar sentiment about math, but added that an in-person presence would have improved the situation:

> And they told me I needed to take 0610 so I took the big one altogether online. I just found that I don’t do, with math, it wasn’t easy to do online without having someone like, there, physically with me. (Tonya, personal communication, April 15, 2019)

Certain topics lend themselves better to independent study, and preference expressed for certain topics to be experienced in class, rather than through text only. The developers of the CoI model describe text as a “lean medium,” lacking nuance of verbal communication (Garrison et al., 2000) and non-verbal cues.

> The textbook was also pretty difficult, like it didn’t matter to be just kinda like looking at and reading like, even the PowerPoint slides and like, the videos, I wasn’t just absorbing it like at the same quality that I would have, had I taken it

> in person. And I think it's just the difficulty of the course itself. The subject matter was a lot more vague and a lot more theory for accounting, and it's just the worst. (Tina, personal communication, April 26, 2019)

Although this student is self-motivated and able to manage in an independent-style course, she indicated that certain content would be better taught in class. In these cases, when it's very heavy theory or concept based, student stated a would prefer a F2F experience because an instructor bringing them through the concepts was preferred. She felt that she would learn more if there was more interaction and she could "talk about it" (Tina, personal communication, April 26, 2019).

Many participants either hired tutors or used a math help center on campus (or both) as a strategy to manage difficult content. This provides difficulty for students who do not have access campus supports. This particular participant has been dreading Statistics since her undergraduate degree ten years ago. "Honestly, I didn't know what I was reading. It really didn't feel like I was reading English…like Biology too, I needed the tutor to explain the language so I could figure out what they're even talking about" (Chandra, personal communication, May 24, 2019). She also indicated that because the new concepts were all new again for her, even though she passed the pre-enrolment self-test to ascertain her readiness for the topic, she still required a tutor. This speaks to requiring a teaching presence to bring you through this topic. She stated that it was difficult to stay on top of her studies, but that a tutor helped because she had to prepare for working with him. The content difficulty was made worse by the fact that assignments were nested within, so not obvious at first glance the amount of work entailed for one module:

> Yah because it's taking longer than I'd hoped to do these assignments. One question has like five questions within it. There's only like six questions in 1 assignment, but then each question has like five questions within, like A, B, C, D. (Chandra, personal communication, May 24, 2019)

Conversely, Karen, an online graduate student, indicated that she appreciated the level of difficulty in her courses:

> The courses there were really hard, and each course was three papers of 16-20 pages long, and 10% for participation online. Usually the teacher would put some questions or something and people were responding thoughtfully. It was grueling and, but I learned a lot more, and it made me sit a lot more with the concepts and ideas and writing. (Karen, personal communication, April 11, 2019)

She correlated an increase in learning to the required discussion component that the instructor facilitated by shaping the online dialogue. The instructor pre-populated the discussion space with questions she wanted the students to consider, which is one of the effective pedagogical strategies that researchers indicate can increase cognitive engagement online (Anderson, 2017; Brooks & Jeong, 2006; Darabi, Arrastia, Nelson, Cornille, & Liang, 2011; Dennen & Wieland, 2007).

Tina, a student with a high academic self-concept who refers to herself as an independent learner, developed successful strategies to manage difficult content. She specified that anything she could not understand or locate, she could search on the internet. From her comments and observing her approach, this student is comfortable learning independently, and is able to use an internet search for anything that she can't access inside the course easily. Tina is a self-starter, comfortable with independent learning, flexibility is appealing: "But with the 4-assignment set up, you can do the assignments on your own pace, so you can do them all immediately or whatever" (Tina, personal communication, April 26, 2019). However, for certain types of content, she noted that the instructor, for her is integral to shape her learning and provide scaffolding towards the exam. When instructor shaping was not present, it was difficult to ascertain content priority, and resulted in the perception that she was required to memorize the entire textbook. She would have been more gained more if the instructor had explained what was integral:

> It felt like there was just...a lot, because there is just a lot of auditing and like, controls, and um analytical tests. There's a lot for each cycle and there's 6 different cycles. It was just really heavy content, so there's a lot that I had to memorize. Like all these different controls, and like, internal control problems and then try and bring up solutions to those and it was a lot of questions like. "Here's this company, here's these current systems with revenue and blah blah blah. And then it's like "where's the internal control problem ad what could fix it?" I wasn't doing too well on memorizing every single one of those and I think that really held me back. (Tina, personal communication, April 26, 2019)

Improved pedagogical approaches. Pedagogical approaches such as resource curation, course design, using assignments to scaffold students toward completion, and mandated discussion spaces. For example, pedagogical approaches to learning math were suggested by all the participants who had considered registering in, had been unsuccessful in or experienced difficulty in a math course. Difficult content is hard to

wade through without a teaching presence and has the potential to lead to reinforcing a student's already low academic self-concept.

If one goal is to provide an excellent online learning environment, a good guide is to follow the TRC. CTA #7 articulates a federal mandate to develop joint strategy (between Indigenous groups and the federal government) to eliminate educational gaps between Indigenous and non-Indigenous Canadians (TRC, 2015a, p2). Care and concern to support and develop student academic self-concept should be integral to any pedagogical or administrative improvements. Improving access and educational outcomes for Indigenous learners, described by TRC CTA #10ii, is the ultimate goal and identifying ways to improve teaching presence, as mentioned by most participants would be ideal. Low levels of teacher presence or engagement can be replaced to a certain degree with pedagogical constructions such as learning objects or explainer videos that satisfy student needs. More importantly, finding ways to satisfy student requests for improved facilitation should be key, especially in order to satisfy the CTA mandates that are clearly outlined.

Most participants mentioned certain content as difficult to progress through without a significant teaching presence: "Too much terminology...and I really struggle at doing, writing academically, and in the sciences" (Dave, personal communication, April 19, 2019) speaks to a lack of academic confidence in this particular area. Tutors and video clips featured high in participant comments about what could improve their experience in courses and aid in learning. I noted suggestions from 17 participants regarding a desire for increasingly visual approaches and didactic explanations, especially for difficult concepts and topic areas, such as math. Participants seemed to suggest that short video clips might replace a teaching presence for math and statistics concepts. To mitigate these circumstances when the teaching presence is not high, a few participants suggested either sourcing existing explainer videos, or the course designer creating video specifically for the course, describing themselves as visual learners. "My suggestion then was something visual, because that thing is so dry. If you see it, it's all just a bunch of words and it's just really, really dry" (Chandra, personal communication, May 24, 2019). Karen indicated that she had more success in a course in which video was used to augment the textbook. Without video, she experienced more difficulty: "And, ya, that was kind of hard. Back then, they had videos, that, VHS

videos, so you would watch the video, and then work through the textbook" (Karen, personal communication, April 11, 2019).

At least six study participants advocated for other means to deliver content besides a textbook or text on a screen, to be used to explain difficult concepts, or content, that could bridge the gap where instructor presence is not high. In self-paced courses, instructor presence was not characterized as high (Anderson, 2017). Explainer videos, either sourced or created specifically for the course content, taped instructor lectures, or livestreaming F2F classroom lectures were preferable to text-only courses. This preference for curated or created resources is evident in this quote from Chandra:

> This is my suggestion; this would be really awesome. I don't know if the instructors ever have enough time. It would save so many people, I think, maybe, just to have videos. I have been trying to find YouTube videos and finding all this old stuff, but even just to try to type in the titles so I can get the gist of what they're talking about, so I can… because literally you have to read this book from cover to cover because it's just one of those books you can't skim read. Yah, and cuz I'm not getting it other than just to read it word for word. Then I need to do the tutoring or YouTube. (personal communication, May 24, 2019)

Again, Chandra goes on to discuss the preference for an increase in teaching presence and more didactic instruction, to explain difficult concepts. The following quote also indicates a perception that other institutions are operating more innovatively than the one that she is enrolled in:

> That would be so great, like on YouTube, some of them are really, really good. It sounds like they're accents are from the States. Like maybe they're more advanced. They're using just whiteboards and they're doing the formulas and showing step by step how you do them. There are 5 steps to each thing like it's just go through and do the steps and then show what these Greek letters are. Just be… like it would be nice if they could go through that way. Like each chapter, or the concepts in the chapters. (personal communication, May 24, 2019)

This participant would have liked instructor-created material, so it would relate directly to the course content. In her previous comment, it was clear that she had doubts that she was finding the correct material to augment her knowledge, by searching on her own. A significant level of student preparedness is a requirement for independently progressing through online education. Along with this necessary readiness is a desire to engage in reflection and curiosity because online courses are often built using the CoI construct as a framework which is built upon the constructivist approach. This paradigm

requires the student to be complicit in building knowledge, and this has implications for the student readiness. Despite the fact that this is an enhanced learning technique that is instrumental in developing the cognitive space for the student (Anderson, 2017), Chandra wishes:

> the instructors did videos and they had them up on Moodle where you could just…like you're in class, videos themselves. Then the entire class would be met. They could just do some kind of short 5-minute video for like each little section. (personal communication, May 24, 2019)

If videos were available, difficult content could be replayed, evident in the following quote:

> Or even if it was taped, it would be there…I know that some of our students have struggled with the on campus one. Because they go through it so quick. That's why I think, honestly, if you had the online videos for the stats course, or for some other courses that are really problematic that it would be helpful, because, especially being Indigenous, being visual, it's such a key part of our learning that I think that it would be helpful to pause it. You could play it back again and again, however many times. Even sitting in classroom, you only get it one time. You might have been tired when they went to class when they missed it. (Chandra, personal communication, May 24, 2019)

Ben observed the value video had for other students in a biology course.

> Well, in one of my other courses [the institution], we had questions at the end like an A and B assignment. We go and answer questions and a lot of people actually watched YouTube clips for biology. I know a lot of people watched biology clips and it helped them a lot actually. If there could be more access to different ways the course was taught. (personal communication, April 4, 2019)

Chandra reported a learning preference for visual content:

> Yah, YouTube videos. I really do think that Indigenous students need visual. No, some people, no, my tutor says he likes to just read the book. He's not Indigenous… he's a math guy, so he's going to read this book. Maybe Math people could read it. (personal communication, May 24, 2019)

Two participants mentioned the effectiveness of video summaries for each module in a course, evident below:

> I wanted to add this—because it really worked well for statistics and epidemiology—were weekly tutorials. You didn't have to be online in-person for them, but they would be videos that would summarize that week's content. That was actually super effective. I'm surprised I didn't mention that before. Then when it came time for studying you could go through those videos and it was like a little concise summary of each subject as we progressed through. Kind of like having a weekly lecture. (Avery, personal communication, April 6, 2019)

Chantal reminds us of the value that a variety of resource types offers a student, and choosing media that suits the content:

> They had readings. They were fairly structured, and you really had to keep up with the readings, and I liked that they had different videos that you can watch. So, I liked the different materials being visual and also to have a book in your hand to read, and also there was different articles on there that you would read throughout the module. So, you had so many modules that you had to go through, and there were different steps in each module. You might have a couple of YouTube videos on the subject, whoever you were learning about that week. I found them very helpful. The first one, the methods course, what I appreciated about that was there was original content in there. (personal communication, March 27, 2019)

A variety of academic and accessible readings was appreciated by students, evidenced by this quote from Nicole:

> That's what I remember from that course. A lot of reading and thankfully for the readings she did provide some good academic stuff. It was nice to have the balance with those two books [one book] was an easy, simple, layman's read...and the metaphors within the book really helped not make it so...it was good to have a book that was very easy and relatable. (personal communication, April 5, 2019)

Resource curation was an area of concern for participants. Ubiquity of information has led to a requirement for students to develop filtering skills. The capacity to find, filter and retrieve information from the Internet is integral to success in the current online educational setting. The CoI relies upon knowledge co-construction between learners and teaching presence. (Anderson, 2017). This has implications for the effect that teaching, and instruction have, as well as such cognitive and analytical skills, such as resource curation and filtering material from a variety of disparate sources. When students are included in the areas of supporting discourse and content selection, cognitive presence is enhanced (Anderson, 2003; 2017; Garrison et al., 2000; Garrison et al., 2010). Despite the fact that many participants expect the content to be curated or clearly indicated by the instructor, this learning activity is valuable to the broader educational experience. While participants in the study appreciated the discrete set of resources to be clear cut and obvious to alleviate that sense of ambiguity, literature suggests that an increase in cognitive presence, and student learning occurs when they are engaged in selecting content and supporting discourse. For instance, if one of the

learning activities is to filter resources, and comment on why they may be appropriate or not, it may be more beneficial to the student to know that this curated list will be persistent, and built upon by the next set of students (Anderson, 2017; Tibbo, 2015; Ungerer, 2016).

For Teresa, it was clear that she would have preferred to know which resources were mandatory. Students have limited time. This aspect of the particular course was perceived as a waste of time, and an oversight, on the part of the instructor. If the act of curating resources was intended to be a learning activity, the intention should be front-loaded and transparent to the student. It is evident that this activity was not described as such from the participant's statement: "I really liked the structure of the course, but, like I said, with the resources, I don't know which ones most important, and which ones are are least. So that kind of puts me off a little bit" (Theresa, personal communication, March 6, 2019). This ambiguity led Theresa to ambiguity about the resources, unaware of the intent as a learning task:

> I question their validity or with any, because I don't know. If there, I mean a lot there. It seems like a lot of really great information, but I don't know if they're, like I said, they're a valid source. Right. It could be anybody doing a little YouTube video about the [topic]. (personal communication, March 6, 2019)

Course design is implicated in this case. Doubt could have been ameliorated if the learning activity objective was outlined in advance. Theresa was helping another student to evaluate which resources were absolutely required to do the weekly assignments. Theresa and another student she was supporting both felt that this caused consternation, required extra energy and wasted time:

> She actually asked me to help her out with her structure, and with helping her figure out, well, what's really needed because she felt, and I know I'm kind of putting words in her mouth, but this is kind of what she said to me anyways...she pretty much noticed the same thing about our resources and that there were so many and that we didn't really need all of them. (Theresa, personal communication, March 6, 2019)

As Anderson (2017) points out "In an era of 'alternate truths,' filter bubbles and media saturation, it is of utmost importance that students learn to critically explore and evaluate information they encounter and knowledge that they are constructing" (para. 6). It would alleviate the confusion and frustration that students felt when they couldn't

trust the material, if the learning activity was laid out clearly, and student expectations clearly outlined, (McLoughlin & Mynard, 2009) as Theresa stated above.

Nicole felt that foundational knowledge was missing from the course, and expressed a wish that instructor curated resources for that content were offered in the course: “So I was thinking if it had links to some major theorist or people that made impacts in that field then that would have been interesting to further along my learning. Because it's almost like you learn in isolation when you're online, like you're an independent learner” (personal communication, April 5, 2019). However, in this case, because that material was not present, she purposefully engaged in a search to provide that background for herself, which may have been intentional course design:

> Yeah. I noticed in a lot of my searching I would be like “Okay, who has written a lot of stuff on conflict resolution and conflict management? Who are the fathers?" So, it was like going back and learning that part of it on my own. In my undergrad I did law and I think with the Master of Education program there's so many different undergraduate degrees that can go into it. Not everyone is necessarily education. (Nicole, personal communication, April 5, 2019)

A disconnect exists for many of the participants in which the learning activity that many online courses contain in which students curate or source their own resources. The expectation or perception is that the course is disorganized, not well set-up, or missing pieces. This content search, and subsequent knowledge construction enhanced the cognitive presence for this student, whether the student was aware of this or not (Anderson, 2017).

Course design emerged as an important element during interviews. The structure within a course as well as an understanding of the learning space can contribute to a student’s persistence (Wojciechowski & Palmer, 2005). Many participants mentioned structure as a large factor in their progress or success, as evident by the following:

> Yeah. I still got to the end of the course, I think, 20 weeks or whatever, and I still couldn't finish it. I still had to get an extension. I think it's because there's no structure. Do you know what I mean? There are no like classes where someone to you and teaches you what's going on in the book. I think I'm more of a visual learner as well. I don't know. I think I don't get as much just reading the textbook and doing it myself. (Kyla, personal communication, March 25, 2019)

In terms of clarity and structure, participants indicated that they found it easier to navigate when the interface of the LMS was clearly organized and instructions were clear. If not, participants were adversely affected in a few ways, such as simple

frustration, confusion or concern about moving forward, or that there is nobody to clarify. When students have to spend time searching for what they are required to do, they spend less time on cognitive tasks. This led to participants wishing for an increase in communication, essentially a stronger teaching presence, and less opportunity for learning:

> Yeah, I feel I didn't know what I was supposed to do, and it didn't seem it was clearly laid out like a pathway that I needed to follow. I didn't see that. And it seemed like, it's just work on your own and that was it. And then I don't know if I could move on or look ahead to what was next. I think I remember you have to finish just before you can move on to this. Right? Yeah. So, I think that was part of...I had some questions around that. I wanted to kind of get some direction or some insight into this, but so that was left to just assume, yeah. We had so much modules to do and we just work away one at a time and get it done. And the question. (Shawn, personal communication, March 29, 2019)

Implicit in this participant's quote also says something about the need for a teaching presence in the course. A teaching presence can provide structure necessary for student to progress through material alone (Garrison & Arbaugh, 2007). Theresa also indicated that she appreciated when the course was structured well. However, this quote of hers also indicates that when it was unclear what resource was mandatory or optional, she found it confusing.

> I'm finding that course is really well, it's very well structured. I find it's really well structured...she has so many resources available for us to actually look into. Sometimes, some of them seem almost optional a lot of times, though, so you never know which ones are required and which ones are optional, so it's kind-of an issue for me. (Theresa, personal communication, March 6, 2019)

Cam mentions the importance of transparent organization, and for expectations to be clear, especially for those who may be experiencing university, online or F2F, for the first time:

> I haven't agreed with how some of the courses have been laid out, like what the description was, and then how it was actually set up...A more established course outline, and obviously that can change as you go. But to set up and give students an idea of what they're looking at, and even establish time frames and have those talks with kids, or adults, who might not have ever done this. (Cam, personal communication, May 5, 2019)

Material sequencing and placement within modules and the course was mentioned as a key factor for alleviating that any potential anxiety students may feel, especially when working through material in isolation, as indicated by Nicole: "Because

it's almost like you learn in isolation when you're online, like you're an independent learner" (personal communication, April 5, 2019). Avery indicated: "Yes 100% you got it" (personal communication, April 6, 2019) when I asked her to confirm that she wished that all material required be obvious without hunting to ensure that she had clicked on everything. Although this comment relates more to the user interface aspect of the course design, most participants validated, that especially in self-paced courses, structural clarity was ideal.

This last section indicates the integral nature of the teaching presence in developing a substantive cognitive presence. (Garrison et al., 2000; Anderson, 2017). Iterative assignments and quizzes have a primary role in scaffolding students toward progressing through material. It is key to maintain progression through material and provides a mechanism for time management. Participants spoke about relevant assignments, iterative quizzing and assessment throughout the course, as factors that motivated them, and kept them accountable:

> Then he also gives us homework, but I do really well after I do an assignment online and that I don't even need to really study to do a quiz. It's almost enough to do the assignments online. I feel like if I would've had something like that, where the assignments weren't on paper, that I mailed in, if it was an online thing. (Jennifer, personal communication, March 8, 2019)

Participants in the study appreciated when either the course structure, or the instructor, guided progression. When a course is comprised of one main assignment, and an exam, it was increasingly tempting to let the course lapse while paying attention to the one that required progressive weekly work, either within the discussion space, through paced deadlines, or simply because there were weekly assignments. Avery compares a couple of course situations in the following comment:

> I found courses that required you to stay on top of work, either by mini-assignments or weekly discussions or posts like that were more effective for me staying on top of each week's work and required readings. I did courses like that and then I also did another psychology course where it just had like one main assignment and exam and you were supposed to do the rest of it at your own pace, except they had a schedule of where you were supposed to be. But I was taking science courses, so I ended up putting everything off for that course until the last week before the paper and the exam; and that was stressful. I would not do that again. (Avery, personal communication, April 6, 2019)

This preference for iterative assignments that support accountability was evident in the following quote: “And you do these three courses. But they don’t, they do papers and things, but they do lots of mini block assignments that build up over the 2 years” (Donna, personal communication, May 1, 2019). Building in accountability through the use of summary assignments after each module as a learning check was appreciated by some participants:

> I’m trying to, it kind of gives you a work study guide on there, the teacher did, how you kind of do it and you go through the questions and see how you do…after each couple pages, it has a learning check, which is good. (Chandra, personal communication, May 24, 2019)

When the instructor or course designer builds into the course an opportunity to assess their learning such as when a student is unable to move onto the next module without doing a small learning check. This can be a mini assignment, such as a journal entry or an answer. It provides an opportunity to self-check and to go back if needed to fill in the information. Donna summarizes this in the following quote:

> And yes, you could not move on, so you could listen to the modules, but you could not move on, but you could not play the next module without blogging something. And I think you had to have a minimum of characters before it would let you go on. It was a way that the program enforced. (Donna, personal communication, May 1, 2019)

Accountability can be built in when a schedule is set up, either by the student, the instructor, or the course developer. Paced courses are, by far, preferred by all students interviewed in the study. “Oh yeah, the stats one was open like 8 months or whatever, but the biology one was on a schedule” (Ben, personal communication, April 4, 2019). This same student admits that the paced course created accountability and iterative deadlines to keep on top of, that completing the course with a satisfactory grade. “[The schedule] probably had something to do with it, yeah.” (Ben, personal communication, April 4, 2019). Participants expressed preferences for courses that follow traditional semesters, rather than self-paced courses. “So, they have these different ones that are within the semester period, so they’re very different than [self-paced], so they do follow the same deadline as the actual in class course” (Diane, personal communication, April 8, 2019). Participants cautioned that the factory design format (self-paced courses that rely upon independent study skills) may not be appropriate for courses with content perceived by the target audience as difficult.

Online discussions increase workload. This last section relates to the aspect of online courses in which the participants perceived the workload as heavier than the F2F counterpart course on campus. Most of them characterized the workload as heavier online and based their perceptions on two items. First, if a discussion space was required in the course, discussion space formatting dictated a level of formality not typical for an in-person classroom discussion. Second, the reading workload did not seem equivalent when compared to a typical course in a classroom setting. Either this is because the online course designer has misjudged the amount of workload in hours within classroom versus the online course or is compensating for the number of hours a student may typically spend in the classroom.

In class, a conversational tone would be typical, but online, most discussion spaces require all references and sources to be cited in APA formatting, which equates to an increase in workload. One participant indicated how odd it would be to cite a source in APA formatting in person:

> Oh, and then this is from, you know, Karen's document...blah blah blah blah blah and, you know, you don't say that. It's kind of weird having it [APA] in the form of discussion, but whatever, we just all sort of throw it in there at the end. Right. But it's funny because every single one of us has our resources, cited at the end of [our post], it's really just usually from the textbook. (Theresa, personal communication, March 6, 2019)

Remarking on the differences between in-class versus online, Chantal also noted the same:

> For when you had to comment, every time in that second course, I had to reference everything. I found it difficult at times to... reference everything I have said. And then you had to quote and page number and everything, which I understand, but we're all reading the same book. (Chantal, personal communication, March 27, 2019)

All participants indicated that the formatting, formality, and required rubrics for discussion space as mini assignments, increased the workload in the course, and required participation in discussion spaces felt like extra assignments. While discussion, in some cases, enhance the cognitive presence, this activity compounded to increase the workload in an online course when compared to the same course in person.

> I suppose it's a way of getting us to interact with the other students in the online course, which I appreciate but it also doesn't kind of feel the same as having an

> actual conversation with your—almost seminar style…it doesn't feel the same. (Theresa, personal communication, March 6, 2019)

These discussion spaces are often used to replace discussion that ostensibly occurs in the classroom, but as this participant points out, often the informality of the classroom seems easier compared to the online discussion as an assignment, with a word count, as suggested by this quote:

> Sometimes there's two activities that you have to post to a forum, but most of the time it's only one. Then, the second one that you have to do at the end of each module as a journal reflection, and that one is either between 300-500 words depending on the week. (Theresa, personal communication, March 6, 2019)

Students all agreed that this created a heavier workload, akin to two small essays per week, plus a thoughtful response to another student post, to get full marks:

> Because for that we have to write 300-400 words, post it up...And then we also have to, then afterwards we have to actually respond to somebody else's post. One of the other students post. It is definitely a way of keeping some interaction in the course. But not…it feels very surface level. It doesn't feel very, like a very deep connection. It's just we need to get this done because we've been asked to in order to get a mark. (Theresa, personal communication, March 6, 2019)

Any classroom discussion is valuable for building knowledge if facilitated by a teaching presence (Anderson, 2017). Dave referred to the value of a variety of interaction types that led towards constructing knowledge:

> 10% for participation online using the teacher would put some questions or something and people were responding thoughtfully. It was grueling and, but I learned a lot more, and it made me sit a lot more with the concepts and ideas and writing. (Karen, personal communication, April 11, 2019).

All participants perceived that workload was heavier online than in their F2F courses. Even in courses without the added requirement of a discussion space, comments on the imbalance of workload were prevalent:

> I think for my statistics course, which didn't have any discussions, the workload for face-to-face versus online would probably be the same. But there were some courses where I think the online version had more assignments and more work probably to make up for the fact that you weren't in-person. So, the workload seemed kind of heavy. Yeah okay so I'm not the only one. I definitely think for some of my online courses, the work was heavier than it would be in class. Even going way back to when I was in high school, they couldn't fit me into a classroom, so I had to take social studies online. Social studies in high school was supposed to be the easiest course ever, right? I had all these insane

> assignments every week and none of my classmates ever had homework, but I always had homework. It was crazy. (Avery, personal communication, April 6, 2019)

The CoI is one model of intersecting phases of peer engagement, teaching presence and teacher facilitation that frames an understanding of how knowledge construction is built. This heuristic was helpful to frame the participants' experiences with online community building and to discover the value that participants placed on various types of engagement that were most effective for them to persist with online study.

Resulting Impacts

The ramifications of students not being supported or not possessing the necessary tools and skills to progress successfully through online courses can be significant. Anything from letting a course lapse without dropping it within the institutional timelines for reimbursement, to being prevented from moving forward with future career or academic plans is possible. Beginning with some reasons that students decide to study online, this section outlines some of these impacts on students.

Reasons for studying online. All except two participants, indicated that taking an online class was not by choice. Ben stated:

> I just wish that [distance learning]—because it's important to people up north, and it's going to be important for a lot of people who don't have choices—I just wish that [distance learning] could develop to the point where it's not like you see [it] and you're swearing inside: "darn that." (personal communication, April 4, 2019)

For various reasons, it may be the student's only option to enrolling during the semester.

> Before, I wanted to do it on campus, but I had gotten to registration too late and I couldn't register...You're only allowed to take two extra courses that are of interest to you, and I already taken two of them. And so, all I was left with taking were my core courses, and this is one of them. (Theresa, personal communication, March 6, 2019)

Ben is committed to remaining in a remote area, so studying online is the only option: "Yeah because I'm Inuit—I'm going to stay up North. The majority, I'll be up here" (Ben, personal communication, April 4, 2019). In the following quote, Diane

referred to her past online experience dissuading her from re-enrolling in future online courses:

> Then I didn't take an online course again for several years because I did prefer being around people. Being in class study until my third and fourth year, well, technically still third year, but in my final year, my last 2 years of my schooling, I've been, I would take online courses because they were the only ones available. (Diane, personal communication, April 8, 2019)

Despite preferring an on-campus option, a few participants were grateful that online options exist because full-time employment prevents them from attending in person:

> If I didn't have to work, I would probably do school in-person. It's the necessity of me having to work that made this really beneficial for me. So, for my graduate degree, I wouldn't have been able to do my graduate degree if it was completely on campus. (Avery, personal communication, April 6, 2019)

Diane reveals a similar sentiment: "I was really grateful because I thought I couldn't go to school, and then this online option was able to happen" (personal communication, April 8, 2019).

For various reasons outlined previously, all except two participants indicated that online study is not their first choice, that they would not choose it again, or dread taking online courses. The various adverse effects on academic performance, persistence, self-concept, motivation, and GPA are outlined in the following section, culminating with participants own suggestions for what would help them moving forward.

Academic performance. Participants indicated that experiencing barriers adversely affected their academic performance and persistence. Lack of success in their online courses caused grade point averages to decrease, students to drop courses after the withdrawal deadline, and subsequently repeat the same course two and three times, often leading to stress and lowered academic self-concept.

Not receiving a passing grade affected participants who stated that their only option was to repeat a distance course to replace their grade. "Looks like I'll do that through distance because again, I don't live in the city, and I don't really want to" (Ben, personal communication, April 4, 2019). A second participant stated that he thought his new grade would replace the previous F: "That's why I'm taking a couple more courses because of that. Yah, the same as the one that's doing the math" (Dolores, personal

communication, April 10, 2019). Ben said that receiving an F in a particular course significantly brought his GPA down, and, more importantly, it has prevented him from gaining admittance to a graduate program:

> I'm strongly planning to do it again and I am planning to do it with [the same institution] because that goes on my transcript and so I need to get into the physiotherapy program at Dalhousie and so it's a prerequisite but I want to take it through [distance] because if I take the course again, and I get a B or an A, it raises my GPA. Because right now my GPA fell from that. It's not that I love [distance] learning I just want to raise my GPA. I can only take statistics through distance now because I don't live on campus. (Ben, personal communication, April 4, 2019)

GPA anxiety and fear, that not completing/passing one course will be a barrier to attaining a goal, is prevalent among participants, illustrated in the following quote:

> Yah, that's the thing. I need a decent mark to get into the master's program that I am accepted to. It's not even just a passing mark, it's, like it could bring my whole GPA down too. As it stands, my GPA got me into the Masters. But this course, if I don't do so well in it, it could bring my whole GPA down, and then I may not get accepted for that reason alone. Even if it was a pass, but like, not a good grade. It has to be a, B+ which is going to be hard. (Chandra, personal communication, May 24, 2019)

Concerns about the detrimental effects on GPAs were shared by other participants, and this information was not easy to locate. In the following quote, Donna, a potential graduate student, who is particularly adept at maneuvering through institutional policy, was able to ensure that she dropped a course before incurring tuition or impacting her academic record:

> But I would assume it would kill your GPA because that's why I waited until the last moment to withdraw from the stats. But I was very careful, and went in, it took me while to find the right stuff, but I was checking the TRU student policies for all of withdrawal rules and I was checking the online policies. I wanted to make sure, I didn't want to do this too late, and get an I or a W. Not that an I, I'm not even sure that an I would impact your GPA. Certainly, I wouldn't be very impressed at this late stage to have a 0 sitting somewhere, or an F. (Donna, personal communication, May 1, 2019)

More commonly, participants stuck with a course and were not able to drop before the deadlines. Dave was not as successful in locating or navigating the institutional policies or online courses, which he fears will influence his future education goals:

> my success rate was not what I would like it to be. I do better when I'm in a classroom. It really affected my GPA, and honestly, I don't know… I don't

> know if they're going to accept it at UBC. If you look at my transcripts, the online stuff, I passed, maybe 2 of 5 courses. Yah… I passed… Natural Disasters and Earth Science and the Mesozoic, which was about dinosaurs. And I failed the Psych course by like 1 percent. Yah… and that was too bad…Then I failed another Psych course terribly, and I just failed another Oceanology. (Dave, personal communication, April 19, 2019)

Implicit in the previous statement is the perception among study participants that a F2F version of the same course in a traditional classroom would have garnered different results. Ben concurs:

> I'm confident that if I had been in the classroom, I would have got it, but I'm not holding grudges, I don't want to come off that way. I'm just saying if I had taken it in the classroom, I would have done it. (personal communication, April 4, 2019)

Essentially it appears that if any of the previous themes present as barriers, it can impact student perseverance through courses. When institutional experiences, course design, social presence, (instructor or peer relationships), teaching presence, online experience is not what was expected, students reported a less positive experience, and noted that they dropped or let various courses lapse.

Allowing courses to lapse, after the deadline, without completing the coursework was common, evident in the following quote: "I've taken three courses at [this university], I withdrew from one and I failed two" (Dave, personal communication, April 19, 2019). In the next example, the participant remarked that he ignored the course he enrolled in, creating a narrative for himself that it was his choice because he wanted to focus his energy towards a new job. In this case, lack of reliable internet and personal circumstances related to moving prevented the participant from accessing course materials in a timely fashion. His description:

> I think I started the course but didn't do much work on it. And there was just too much...it was just too much and I just couldn't get the time and really had to explain what happened. I was kind of embarrassed about all that and I just kind of put it away and just said I wanted to work. So, I left it at that and continued on working. And so, the time expired for these courses, and I don't even know what I took in it. I think it was a withdrawal for those or another. I did not complete, something like that. The DNC. So that was some of my experience. I think the challenge was said I didn't have [internet] at home, and I was moving around." (Shawn, personal communication, March 29, 2019)

In many cases, withdrawing in this manner had financial ramifications as well: "I withdrew from one. I hated it. I didn't have to pay for that one… it was so boring. It doesn't matter because if, anyway, I don't want to get into that" (Dave, personal communication, April 19, 2019). In a few cases, participants were able to drop their course within the time frame necessary to receive a withdrawal grade (W) and tuition reimbursement, rather than a DNC.

> I can give you my experience with the recent course that I signed up for and dropped. So, and I'll just let you know that [a colleague] and I, she had been pushing on me, and I'd been pushing on myself. So, I took it and so of course, she was disappointed when I dropped. (Donna, personal communication, May 1, 2019)

In cases in which participants experienced difficult content, and they were unable to obtain sufficient help to successfully complete the course, they tended to rationalize their failure as a result of a lack of effort on their part. For Dave, the participant who indicated that if he had worked harder, he would have passed, the reality is that without sufficient guidance through the course, he had difficulty. He referred to it as challenging and attributed not completing the course to his own lack of effort, which aligns with what researchers have indicated about self-efficacy being linked to student engagement, that students who feel discouraged may give up on tasks more easily (Linnenbrink & Pintrich, 2003).

Dave's next comment indicates that a number of students failed the same course which implies that passing the course was not as simple as a putting in sufficient effort.

> All of us failed the math. There were 4 of us that took it. We all. Failed. Like I said, it's been a challenge. I'm not going to you know, I didn't put a cherry on top at all. It's my own fault. I'm pretty hard on myself, but if I really, really wanted to pass, then I should. (personal communication, April 19, 2019)

Repeated course enrolment and failures (in the same course) not only can potentially reinforce feelings of low self-efficacy or learned helplessness but have the potential to impact student finances adversely by requiring them to repeatedly pay tuition for the same course. This serves to reinforce failure for students such as Dave, who may benefit from a different delivery model, and an example of the CoI is not effectively being built or benefitting students within the digital classroom. In light of the TRC and in consideration of an ethical responsibility to students, institutions have a responsibility to ensure support for online students. The technology exists to monitor and aggregate data

from certain courses in which there is a high rate of unsuccessful attempts, especially in light of the CTA that mandates parity of educational attainment for Indigenous students (TRC, 2015). Providing an environment, free of barriers, in which students can succeed, could provide an opportunity to close the gap in educational levels. For example, a bell curve distribution of grades should not be a strategy to aspire to, but it can be viewed through an equity lens. Students may fall in the lower area of the curve, if pedagogical strategies to scaffold all students of varying abilities are not in place. Especially in light of the TRC recommendations, institutions have a responsibility to revise courses if necessary, and include sufficient instruction to scaffold students through difficult material. One recommendation is to aggregate data on math and statistics courses to understand the effectiveness of such courses and identify what is missing.

Without sufficient teaching presence, certain topics are simply difficult to progress through independently. The tendency exists for a student to blame oneself, rather than address external factors that impacted the student. The fact that math is a particularly difficult topic to learn online (Steel & Fahy, 2011), it is not a surprise that the course remains a hurdle. From the discussion, the fact that four students that were doing this course at the same time, failed, is an indicator that the course itself, does not work for a significant number of students.

> I got an extension in the Math course, the computer thing, and I paid for it with my own money and I still didn't pass it. Yah, my wife was so pissed with me for my lack of care, she says. (Dave, personal communication, April 19, 2019)

Many participants are in the position to repeat these courses after failing or dropping them. In some cases, participants failed courses by so little that with extra support, they might have passed. Dave failed a required math course by 3% (personal communication, April 19, 2019) resulting in a need to retake it. Chandra (who also works as a student advisor) expressed her frustration, about how difficult a particular course was to pass. She shared anxiety that she may possibility have to attempt the course again, if she fails:

> Or like even doing this course, and then failing it, it's like, ahhh, I don't know. It just does something. It dissuades them from doing it again, they may never do it again! Like for me, I know, I may end up doing this again if I do fail. Just because I need to do this thing, and I know that some people are passing, even if they have to take it 2 or 3 times, which is unfortunate. (personal communication, May 24, 2019)

Psychological impacts: academic self-concept and stress. It was evident from many of the participant's accounts repeat failures, repeat course taking and lowered GPAs caused students stress, exam anxiety, and to reflect upon their effort and abilities, often suggesting that they do not belong at school. Dave's previous statement about "his lack of care" is evidence of this reflection and self-blame. Dave is a musician and language knowledge keeper, accomplished in areas of his life that he values. The comment he makes about himself portrays that not having the support to complete these courses, is not only holding him back from his teaching program but costing him extra money, and potentially reinforcing a negative sense of self with regards to learning:

> I just really, really struggle with online. I have so much, I hunt, I go fishing, I am a musician, I got gigs, I got a band, I am doing this other work. I've got all kinds of other work. I've got ADHD so I'm just constantly freakin' doing shit, I can't help it. (Dave, personal communication, April 19, 2019)

Other participants express similar thoughts of disappointment in themselves. Common comments emerged such as the following: "Even as a working professional. It's making me feel—not so great" (Chandra, personal communication, May 24, 2019). A negative experience with a particular instructor reinforced a student's academic self-concept: "So, I just dropped it. Then, that reinforces the fact that I'm a terrible writer" (Jennifer, personal communication, March 8, 2019). Not attaining goals, failing courses when it is unusual to do so, and taking too many courses without strategies in place to support themselves can adversely affect students.

> That's probably the biggest one because overlooked myself and I didn't have enough discipline to make it through the courses. I kind of went in there and pushed in and hoped I could give it everything I got, but it wasn't enough actually. (Ben, personal communication, April 4, 2019)

It can be demoralizing when a student perceives that their lack of success is related to their own effort. I noted that there is a common theme related to effort among participants for difficult courses, known for their difficulty. The sense is that if they had tried harder and simply applied themselves more, leads to a sense of futility, and implies these students may operate from an internal locus of control, but suffer from learned helplessness.

> I think at first, I was like, oh, I've got lots of time. Then when I was midway through and I realized that I hadn't even gotten halfway through the modules, it

> kind of just made me feel hopeless, like I can't do it anyway, so I just didn't do it. (Kyla, personal communication, March 25, 2019)

Giving up is a reality for students who are behind or at risk of failing, evident in Chandra's account of her own feelings, as well as those of other students:

> If they have a hard time hearing a no, if they've put themselves out there, or they put their name forward for something, and they hear no. Or like even doing this course, and then failing it, it's like, ahhh, I don't know. It just does something. What it does, is dissuade them from doing it again, they may never do it again! Like for me, I know, I may end up doing this again if I do fail. Just because I need to do this thing, and I know that some people are passing, even if they have to take it 2 or 3 times, which is unfortunate. But some of our students, I think they might just give up. It might be hard to hear. I'm putting all this hard work in and I'm not passing, because sure there might be the ones who don't put any effort in, and you don't pass. But the ones who are honestly putting in an effort, and doing well in studies, and just keep failing this one course, that would be really frustrating. (Chandra, personal communication, May 24, 2019)

This situation can be framed in more practical terms. To study online, one requires a strategy, independent study skills, and support. When students are aware of all policies and strategies that are available to them, they gain a sense of agency over the course outcome and have the potential for more success. In the following quote, Kyla detailed a subsequent attempt in which she was better informed of institutional policies:

> The third time, when I went to do my one course, I felt a lot, I guess, better knowing that I could withdraw. I didn't know that you could withdraw from courses. Right? So, I just failed the first three, my GPA dropped really low, and then the second time, I just contacted my teachers and I was like, I'm not going to finish, and they're like, well that's fine. You're within the withdraw date so it won't affect your GPA. That really made a difference. (Kyla, personal communication, March 25, 2019)

One participant indicated that her self-concept was slightly affected by a course she did not complete. "It did a little bit, but because it was the only course I was taking through [the institution], and everything else was through [the other institution], I just pretended it didn't. I just ignored it and it went away" (Marissa, personal communication, March 25, 2019). Marissa was not primarily enrolled in this institution, so she was able to dismiss the course, whereas other participants still required the courses they allowed to lapse or that they dropped. In this case, she lost tuition and time, but did not need to repeat the course.

Students, that know themselves well, tend to place the strategies necessary for success. Evidence can be seen in this participant's statements about her personal strategies:

> When I did my master's degree, I took 2 at a time, and I'm by myself, and that was all day, every day. So, I can't imagine doing 3 courses online, unless you have a sort of a staggered start, which is what I did. I would, you know, start something in September, and I'd take an individualized paced one, like a month in, so the due dates were staggered. I was able to finish most of that within a year, and then the thesis project after that. So, it was still about 2 years. So, for a full year, 13 months, I was at home, all day every day, writing.

Success is not as simple as "trying harder" which plays into that deficit narrative (Hare & Pidgeon, 2011) and places the focus on the student rather than examining what could be improved in the support, course or program design. Taking responsibility for one's actions is important, but by not addressing the external factors contributes to a sense of defeat. That, coupled with the fear and test anxiety, creates situations in which courses seem onerous. Strategies can benefit in these situations, to get past those hurdles, but often require support.

Strategies and realistic goal setting, planning and a sense of agency over one's future are all characteristics that be factors that can assist with the self-reliance required for successful independent study. One student indicates that she did not have a sufficient plan for the course, a method for bridging those periods which are easy to fall into, in which you leave the course for too long and it may be easy to forget about it. Defeat is evident in this statement by one participant: "I know at the beginning I could really manage it. It seemed probably around half-way through I just kind of like lost that steam" (Nicole, personal communication, April 5, 2019). Instead of personalizing the failure, it is possible to frame the situation in terms of the student missing strategies such as goal setting, scheduling and organizing one's life to support goals were missing.

Literature reflects that a multiplicity of factors such as "commitment, visualizing future, reflection, valuing education, self-esteem, and educational self-efficacy are crucial in each student's commitment to postsecondary education" (Linnenbrink & Pintrich, 2003). If strong efficacy beliefs are necessary to surmount the difficulty that online education can present, then support staff, instructors and course designers could effectively provide scaffolding for success. Preventing individuals who may have little or low self-efficacy to further reinforce self-doubt should be part of a student success

strategy (Linnenbrink & Pintrich, 2003). Because learned helplessness has been linked to low efficacy and a history of failure and researchers have also found that individuals who have low self-efficacy are less likely to seek help or support when they run into difficulty (Karabenick & Knapp, 1991; Linnenbrink & Pintrich, 2003; Newman, 1990; Ryan & Pintrich, 1997). For this reason alone, responsibility for forging connections with students should be placed with the instructors, rather than the student.

Participants shared feeling high levels of stress due to either the final exam anxiety, navigating the courses, or fearing failure, evident in this quote: "Yes, I went to the doctor because I was stressed out, specifically about the course." (Diane, personal communication, April 8, 2019). Some of the courses mentioned in the study had attained urban myth status in participant's reported much anxiety around those. Many participants have been dreading certain courses evident in this statement by Chandra: "It's overwhelming...I really just wish it wasn't 50%. It's been nerve wracking from the beginning. I've been thinking about this course since I [graduated] from my bachelors" (personal communication, May 24, 2019). Shawn referred to personal and work stress that caused him difficulty in persisting with his course:

> And so yeah, that was that and I just struggled the whole summer financially. I worried more about those and my nephew, my financial situation and then about my new position that was going into. Those were my high priorities, and this fell down the line really fast and it wasn't...I had the other immediate needs that I think I needed to focus on. (Shawn, personal communication, March 29, 2019)

Most of the participants expressed concern similar regarding motivation issues, falling behind a real or imagined deadline, and trepidation about re-connecting with the instructor, fearing judgment:

> So, I guess I'm comparing that to when you get a little behind you kinda hide and think "I don't wanna email the instructor because I hate to tell him, I've only got one assignment done and it's been 3 months." But likely they know that. I would assume most people don't hang onto them and submit them all at once. (Donna, personal communication, May 1, 2019)

Two participants who expressed preferences for online education, did not have issues with this.

Financial. Dropping a course outside of the institutional policy time frames and repeating courses, adversely affects a student's financial situation because the fees are lost. Losing tuition for one course, and then taking the same course repeatedly, one

more or two times, as mentioned above, results in a higher cost per course. This happened to many of the participants, in which they just gave up:

> I signed up for this course and I didn't even do it. I paid for it and everything. It had to do with resiliency, but I wasn't even—at that point—I don't even think I was really right with what I was going through, so I didn't even do it. (Terry, personal communication, April 4, 2019)

Jennifer also referred to a financial loss, but for more courses: “Oh, no. I ended up dropping...I dropped a bunch, because something came up. How many did I drop? I did drop five. That includes the philosophy” (Jennifer, personal communication, March 8, 2019). When asked how many courses she was able have reimbursed, she answered: “[None] of them. Because I dropped them, right?” (Jennifer, personal communication, March 8, 2019). And another: “It says, did not complete. It was one whole summer term and then another one the following year, and I failed all those.” (Kyla, personal communication, March 25, 2019).

Further complications arise when a student receives funding. Most participants were required to enroll full-time to receive funding, so compelled by funding limitations, they may register for more courses than they are prepared for. Many participants stated the following: “I needed. I have to take 9 or more credits to get the funding” (Dave, personal communication, April 19, 2019) and “I did have to have a minimum of 3 courses. And then subsequent years, minimum 4 courses to be considered full time” (Diane, personal communication, April 8, 2019). In all cases except one, participants were required to be enrolled full time, which is at least 3 courses. If participants have found online courses heavier, then three was unmanageable for all except one student. Subsequently, in Kyla’s case, she recalled her decision to enroll in just one course after two unsuccessful full-time semesters. Her enrolment officer encouraged her to continue, implementing a new strategy, even if she could not receive funding:

> He just told me that it was a learning curve and that a lot of people struggled. He is the one that told me just try one, and then I tried to get funding and they're like, no, we're not going to fund you to take one course. So, I just got the money together myself and that's when I paid for it, and I actually finished it. (Kyla, personal communication, March 25).

Misconceptions of the difficulty of studying online play a role, as I mentioned earlier. Perceptions that online courses will be manageable between other

responsibilities often resulted in a lack of time or strategy to study, which can lead to getting behind. This occurred in at least half of the participants. Also, participants experienced online courses as heavier in workload than a F2F course. So, when enrolled in three online courses, they were unprepared for the workload, evident in Diane's statement about the outcome of taking too many: "I dropped only one, and the other two, I was not successful with" (personal communication, April 8, 2019). Only two participants were prepared for the workload and shared their strategy that they treated it like a job. They were not working full time so studying all day was possible. Others did not feel prepared for the workload they found: "I should not be here. I should not be in this space. I am not prepared. I don't know what I'm doing. I am not good at this. I should not be here" (Jennifer, personal communication, March 8, 2019). This comment also reveals how integral preparedness can be for a student in this context. Being prepared can mitigate the reality of reinforcing a low academic self-concept.

Heavy workloads that seem out of line with other campus courses or other online courses, impacted students who typically attain above average grades and get behind on course work, illustrated by the following from Jennifer: "I have never in my history of education ever asked for an extension" (personal communication, March 8, 2019), but because of the unanticipated workload, she felt compelled to utilize the extensions.

For three participants, the cost of not completing courses has an added layer of injustice. Two participants used residential school settlement money for tuition for courses they let lapse. For Kyla, not completing three courses meant losing residential school settlement funds and a BC Tuition waiver she had set aside for education. Responsible enrolment, ascertaining student readiness, conflicts with an access university mandate, and this may not align with the TRC mandate 10(ii) of improving university attainment levels.

> At the time, there was something going on with the residential schools where if your relative was going to school, there was a $3,000 grant that you just had to sign a paper and then it would be sent to my student account...Then I paid for the three courses with that. (Kyla, personal communication, March 25, 2019)

Another participant also lost a residential school settlement when she dropped courses. She indicated that "It was like $1,500 worth, that I just kind of" let go (Diane, personal

communication, April 8, 2019). One participant chose to use it for courses she ended up dropping, even though she was able to purchase a computer to continue her education:

> It was really helpful financially because those three that I did all at the same time, I paid for those out of pocket, just because that's when I did those, that's when the government was giving out all of those residential school payout, credit things, educational credits. My mom got a bunch, and she gave them to me, and that's how I paid for those courses, and that's how I got my computer too. And that was all out of pocket and [online], because I had taken Java before, I had the textbook already, so they took the textbook off my tuition and just didn't send me a textbook. That was super handy, because there are always cheaper ways to get textbooks than the brand-new ones that they send to you. (Tonya, personal communication, April 15, 2019)

Participant 12 was strategic about her funding options, she utilized residential school credits her mother received because there is a limit on her band funding.

> My band would have paid for it if I did it that way, and I purposely didn't do it that way because I was limited on the 6 years of schooling. So, I didn't want to waste a semester's worth of funding on three distance, that I was able to pay for out of pocket, because I had the education credits. (Tonya, personal communication, April 15, 2019)

Although she lost tuition retaking Java three times but was able to leverage her funds to purchase a computer she required to study online.

> I ended up with a DNC, because I didn't do enough that they had anything to grade. Yah, so the Math and the Java was DNC. Yah, Java was the third time I was taking that course. I was trying to get through it, but it didn't work. (Tonya, personal communication, April 15, 2019)

Limitations affect student funding, and the ability to attend school. Typically, students will not be funded unless they are attending full time, which presents a barrier to online study, if a student is only able to manage one course. Funding is often tied to certain grade point average, further impacting a student's financial situation if unsuccessful. Much can be at stake for a student who receives incomplete or failing grade. It creates an impossible situation for a student studying online. Students can lose their funding if they have a semester in which they drop below the benchmark required for funding or fail.

> Then I was like, well I don't want to pay for this again. Right? Because I think the third time you fail a course, you have to go in front of the tribunal or something like that and explain that you still want to continue because I think after, I think you get four tries...Just even online courses. If you fail three courses, then your educational advisor, the department will contact you and then

> you have to go and speak with someone and tell them that, “Yes, I still want to continue with the program.” Then they'll tell you if you fail one more time, then we're going to have to advise you to drop out of the program. That's just how it is. (Kyla, personal communication, March 25, 2019)

Tina is not as concerned about meeting those standards, but aware of the policies that could affect other students adversely:

> They do have some requirements, like you have to be full time so 3-5 classes a semester. And you have to maintain a B- average in all your courses. If you get, even like a C, in one of your classes, they’ll contact you and be like “Hey, if you don’t get it together next semester you won’t get funding.” Well, I’m motivated for bursaries anyways. I normally get As, in my classes. I just study at the time. I’m not really concerned about trying to meet the standards because I surpass them. (Tina, personal communication, April 26, 2019)

Dave stated that because of many incomplete courses, the time and the GPA, the ramifications of this are that he may not get funding:

> I might have to pay for my last year of school on my own…[This summer] I have to pay for my own again, because they don’t sponsor students in the summer courses, unless it’s part of your program so next year, I can go from September till July so they’ll have to fund me. (Dave, personal communication, April 19, 2019)

Another factor that results in student unpreparedness relates to the fact that students are incented to attend university directly from secondary school, because, in some cases, they may receive funding immediately. If a student decides to delay post-secondary, they may be put on a waiting list. This incentive to return to post-secondary for education may be detrimental for students who are not ready or prepared for the post-secondary experience.

Funding can come with limitations. Some funders demand that courses be done within certain time frames, or semesters to be eligible, which puts added pressure on a student taking a self-paced course. Students have been unable to use the entire course time to complete the work, which can add some pressure:

> The math course...I did get through the course. I finished it within the time frame of a semester, although [the university] gives you ample time, it’s a very different time structure. Um, the agreement I had to have with my Tribal Council was that I had to complete it within the semester time. So that probably increased my stress too, because I was taking an hour on a problem, and I thought what if I’m never going to get all this done. So, I did finish it in the time I was supposed to. And I got a passing mark, which I was ecstatic over. (Diane, personal communication, April 8, 2019)

Dave also outlines a similar situation in which funder's time frames are required to be followed:

> We had to do them within the funder's time frame though. Yah, it was a paced course. It wasn't self-paced. It was timed. 20 weeks, or 13 weeks, or I don't know. I don't remember. And even the ones that were self-paced, the one that I failed, I really liked them, cuz I'm a computer technician as well. I have a diploma in that. I should have easily passed that but because I didn't do the work. (Dave, personal communication, April 19, 2019)

Participants used tutoring to replace a lack of teaching presence. However, paying for tutoring is an additional burden and requires a further time commitment. Some participants indicated that they were uncomfortable seeking out the free help centre on campus, after realizing they required additional support in the course:

> No, I could not. I would not have felt confident enough to seek it out. Ya, and also, I notice that there are math tutors but it's all for first of all, it's for high school, right, that's the … who would be around you. And then second, if it was a private tutor, then the cost would have been way more than what the tribal council would have been willing to pay." (Diane, personal communication, April 8, 2019)

Chandra outlined the cost and the time required to seek outside tutoring that she feels is required to pass: "And then the tutoring is going to add up. So, 3-4 hours a week tutoring. It's usually $40 per hour, but this guy is pretty good, he's $30 an hour" (personal communication, May 24, 2019).

Switching institutions. Some of these negative experiences caused participants to look to alternative institutions than the one they were originally considering, as an option for a whole program or just one course. In one case, a program representative at an institutional open house dissuaded a potential graduate student, Donna, from taking a pre-requisite at the school she was visiting. She was counselled to enroll in a different course at a different institution. She said: "At the time, [that university] didn't have it running so I went for it. But I'd also gone to the open house" (personal communication, May 1, 2019). She ended up dropping the class because of the difficulty she began to experience and began contemplating other programs at other institutions.

Dave discussed his plans for re-taking Math for teachers at a different university where he hoped to pass this time:

> I have to take another course. I'm starting in 2 weeks, because Math is a prerequisite to go into this NITEP last year...No, no, it's 162 out of [another] college, (laughing), at a different place. No, I'm not going to take the one from [that university] again, hell no. That was, that goes up to grade 9, and grade 10. And this one goes up to grade 7 so I'm hoping I can pass it. I have to. (Dave, personal communication, April 19, 2019)

Cam conveyed the fact that he passed all the assignments, but when it came to the exam, he failed, resulting in failing the course, despite receiving an overall passing grade:

> I did pass the course, but I failed the exam, which means I failed the course, the way it was set up. Yah and actually a lot of them, I notice that, that if there is a final exam, if you get less than 50% on the final exam, you fail the course. (Cam, personal communication, May 5, 2019)

He indicated that some of the frustrations he's had led him to:

> [debate] whether [he] should stay with [the school] and the program with some of the frustrations around having to do courses that aren't related to what I'm doing, and then with the test centre and everything. Because I had been looking at switching to an MBA, and I've just been sort of, actually figuring out you know, wrapping up these courses, and then looking at the next ones to see...So ya, I've been toying with switching to another institution to, either finish the degree, or switch to an MBA. (Cam, personal communication, May 5, 2019)

Exam anxiety. Final exams had significant impact on participants in various ways. Anxiety, logistics, and the exam percentage in relationship to the course grade, are some of the issues that caused concern. Other participants expressed disappointment and surprise that their final exam content did not align with the assignments in the course. To a few participants, because there was a specific exam period, scheduling a final exam did not align with the flexible mandate of online education. It was necessary for Tonya, an online business diploma student, to write her final exam during a specific period set by the institution:

> I had to write between August 15 and like, August 25 or something like that. But my course didn't end until mid-way through September. So, from the end of the exam period, to mid-way through September, I actually lost out on that time from working on the course. And for me, it worked out, I got it done in time but if you need the whole 30 weeks. So just sometimes you're jacked 3 weeks of your 30-week time because your exam has to be taken way up here to suit the exam schedule so that can get kinda frustrating. (personal communication, April 15, 2019)

Exam policies can impact students negatively. Some participants described situations in which they are required to re-take a course they did not pass because they failed just the exam. In these circumstances, it appeared that it would be integral that the assignments scaffold the student toward the final exam, but it appeared from the number of comments related to this that it is integral that the content and final exam be aligned well in order to provide the most opportunity to pass. This is evident in the following quote:

> I did pass the course, but I failed the exam, which means I failed the course, the way it was set up. Yah and actually a lot of them, I notice that, that if there is a final exam, if you get less than 50% on the final exam, you fail the course. I'm going to have to redo it at some point, but it's going to stay on the back burner until I get all the courses that I'm interested in, buttoned up and then I'll worry about that one last, in all honesty. (Cam, personal communication, May 5, 2019)

Ben reported a similar scenario in which he was achieving in the assignments but was not able to pass the course due to the final exam mark:

> Actually, you know what? I failed statistics. That was the only course I ever failed in university. I had 75% in all my assignments. There were 6 main assignments and I had a 75% average. I was taking about 6 university courses as well and Statistics...because that's how I am, and then I actually didn't pass the exam. I have to re-take it so I can do a master's because it's a requirement for the program. But that's the only one I didn't pass. Everything else—my GPA is not flawless but it's 3.45. I usually get decent grades and I'm not going to doctor school, but I usually get a B+ or A. (Ben, personal communication, April 4, 2019)

A common theme was expressed by many participants who commented on how high the exam was weighted, and because of test anxiety, most felt that their work would be best evaluated in an alternate way. This anxiety influenced the entire course for this participant, because she put a lot of pressure on herself to achieve high grades in the assignments to offset a potential lower grade in the final exam.

> I got an A- [in my assignment] but I was hoping for higher because I want to get as high as I can on the assignments for my test anxiety. So, if I can get the percentage up there. I really just wish [the final] wasn't 50%. It's been nerve wracking from the beginning. I've been thinking about this course since I gradded from my bachelors. (Chandra, personal communication, May 24, 2019)

Expressed wishes and desires for support. Participants in this study wished that campus services were more visible, suggesting that institutional support should be

increasingly transparent and easily found, whether it's eligibility for dental insurance or available tutoring: "Maybe that should be on the website too. Any kinds of tips, because it's really, you really have to be a self-starter with this one" (Chandra, personal communication, May 24, 2019). Tina weighed in on this as follows:

> Definitely, [support] would be a really good thing to look at because it kind of seems like they're not themselves if they're not fully offering their students, through the online learning courses, what they offer to their students in the in-person courses. So that makes sense. They should do that. (Tina, personal communication, April 26, 2019)

In terms of financial, many participants mentioned that funding for one online course would be valuable. Many students find themselves in this predicament:

> So, the reason why I'm taking two courses this semester, one of them being online, and having to take it online, is because that I'm band-funded and sponsored. I need to be full time and two courses; two master of education courses is considered full time. (Theresa, personal communication, March 6, 2019)

Throughout the various participant stories, there were many indications that warmth, outreach, flexibility and personalization is ideal; one terse interaction can be a major barrier to persistence. Participants indicated that they would prefer increasingly clear and transparent communication, obvious indications of the benefits, supports and services that online students are entitled to, whether online or on campus, illustrated by this comment:

> Well, if you phone over there, you get the run-around, not very good customer service again. And you can hear it in their voice that they're frustrated on the phone. Like, really? I'm frustrated, why do you sound frustrated? Cuz you can hear it in the tone of their voice right on the phone. I was just simply trying to figure out Moodle at that time and trying to figure out how to get a hold of my teacher. And I thought they would have a phone number for him. Like, you know, I was about to march over there and deal with it by knocking on the door or talking to somebody. I got stuck with this 1-800 number trying to find somebody. An older lady…could hear it in her voice. (Chandra, personal communication, May 24, 2019)

When asked what would have created an increasingly supportive environment, one participant listed items that could improve his experience: more thorough advising to plan a student's program, fleshed out course outlines, established time frames/deadlines built into the course, and improved preparation for students attempting online for the first time:

> Setting up the program. I think there should be a little more hands-on [assistance] with that. Just going through the whole process, they ask for a lot of information, and then once everything was in, it was like, ok have fun. A more established course outline, and obviously that can change as you go. But to set up and give students an idea of what they're looking at, and even establish time frames and have those talks with kids, or adults, who might not have ever done this. So, they might not know what they're looking at for, even completion, on how long is it going to take me to do so many years of school online, or even courses, or laid it out. (Cam, personal communication, May 5, 2019)

Improved support was noted by a participant who ended up providing that support for another student in her course. The other student required an alternate delivery (audio) for her textbook, and this delay caused her not to receive a textbook in time to maintain pace with her cohort. Theresa described the situation: "She had issues with getting the textbooks transferred over to audio, which they didn't show up, the actual textbooks didn't show up until the very last week of her online course. So, she wasn't able to actually take it" (personal communication, March 6, 2019). Theresa acted as a tutor or educational assistant to break down the modules because there was so much excessive information, it was not obvious what was mandatory. She advised the other student: "I gave her those things so that she actually knew exactly what she had to read, in order to get her assignments done, and to understand, I guess, what we need to understand for that particular course" (Theresa, personal communication, March 6, 2019, 2019). Shawn also had issues receiving materials in a timely way: "Another thing too, is that I didn't get the materials and the books and stuff, so I think that was a challenge" (Shawn, personal communication, March 29, 2019).

Indigenous recruiters were mentioned as a supportive measure, a resource for information related to programs, campus, and courses: "They know most of the programs. They can definitely help and do that transitional piece…As soon as students want to go to school, they go to them first. As soon as they're on campus, they come to us [educational coordinators]" (Chandra, personal communication, May 24, 2019).

Strategies & Motivations

Strategies. A number of strategies were used by participants to deal with the hurdles and barriers of online education. Strategies to keep on track were mentioned by some participants. A couple of participants were able to take two courses at a time, but

one participant used a particular strategy to begin a course one month apart so she could stagger assignment deadlines:

> I took two at a time, and I'm by myself, and that was all day every day. So, I can't imagine doing three courses online, unless you have a sort of a staggered start, which is what I did. I would, you know, start something in September, and I'd take an individualized paced one, like a month in, so the due dates were staggered. (Karen, personal communication, April 11, 2019)

Regarding strategy, another participant indicated that he allocated his time off to intensive course work. He works away from home, so he does not study during periods of work. However, during time at home, he focuses on course work. In doing so, the flexibility of self-pacing works for him. Because he does not intend to work on two courses simultaneously, the staggered start is not necessary.

> No, that would have been smarter. I signed up just before, I had really bad timing on these two. I signed up both of them, just before Christmas. The first block off, on my days, was Christmas time, so I didn't get anything done, and the second block off, we had our first child. So, I didn't get anything done for a couple sets. (laughing). So I didn't really think these ones through, but yah, I'm getting through them, that would be a better way to do it, in all honesty, to stagger them a couple weeks, so it gives you a good jump start one to get up and going, if you wanna bounce back and forth. (Cam, personal communication, May 5, 2019)

Cam's strategy is to work on one course intensely until he returns to work. This strategy is effective for someone who has bursts of down time, and conversely, work time. He described his motivation and strategy:

> So, I can come close to getting a course done on days off, but you know, instead of doing a normal job, I'm doing schoolwork, I'm doing schoolwork 12+ hours a day. Right? So, it's just a matter of what you want to sacrifice and how are you setting yourself up to getting things done. (Cam, personal communication, May 24, 2019)

Setting oneself up for success seemed to be a common theme, not necessarily accomplished, but participants knew this was integral for successful completion. Goal setting, time management and other motivational factors can be helpful with online education in which accountability can be low, especially in self-paced courses that tend to have a low teaching presence. Strategies were mentioned by a few participants: a combination of planning out the semester or course by creating or plotting deadlines to adhere to, consistently engaging in the course and an overall strategy to manage your

time. Karen is a particularly adept student who knows herself well, and how to structure her time, but also how to strategize overall. She mentions quite a few strategies within this statement, particularly about planning so that workload is manageable:

> That is the main thing, managing time, and plotting it out, when you get the syllabus, plotting when things are due, and doing it all day, every day, anyway…So, planning when I was going to research certain things. With my undergrad degree, I didn't want to do certain things at the same time. Like statistics, just sort of, and it was better, because you're more in control of your schedule, compared to like at [the other institution]. There's no template for anything, then people are missing courses at the end, because there is nothing visual to see … what to take. Like with distance education, you kind of have a plot of what you're going to take, and you have a lot more freedom. My degree was in cultural studies, I could take from different areas, and certainly, there were some courses I took because they were individualized study and I didn't want to start two courses in September or January kind of thing. So, there were some that were not exactly my favorite course, but there was more freedom. You kinda have to do your research on how you're going to manage your time, and what's available, and use their resources that are available. Like the professors who, either have phone hours where you can call in and get their advice. (Karen, personal communication, April 11, 2019)

One pattern woven throughout the participant stories was the difference between paced, cohort-based courses and continuous enrollment courses. For example, from the descriptions, it seems that paced courses facilitate the creation of a learning community more easily through synchronous/asynchronous discussion forum. Asynchronous courses present a challenge because there is no cohort to belong to, to work together through content. Essentially, in these contexts, a student is working through content alone, sometimes with instructor facilitation, and often without. Attempts by learning designers to create or rely on peer learning communities in courses in which learners are largely independent is difficult and possibly futile. The implication is that the instructor is integral in these courses to support students, especially those who are inexperienced in online study or have not gained sufficient independent study skills.

Those students who had clearly defined goals were more likely to persist at online learning, which speaks to motivation, preparedness, school readiness, and responsible enrolment on the part of the institution. Breadth requirements, in which students are taking courses that are usually not the focus of their degree, such as a language requirement, or math requirement, present specific challenges. Many participants were either taking math or statistics in order to be admitted to teacher preparation or graduate

programs. The combination of interest or affinity for content type and faculty facilitation factors into the attrition and failure rate in these courses. Math can cause anxiety in students, and taking it online just exacerbates this issue. Combined with a lack of teacher facilitation within continuous enrolment courses, student persistence and success can be impacted, resulting in many repeat course takers and extra dollars spent on tutoring.

Providing transparency regarding various pedagogical strategies can assist students in understanding the metacognitive aspect of learning online. By foregrounding the value of a learning activity, it provides students with a purpose for the task, and has the additional value of deconstructing the hierarchy that can develop between instructor and student.

Learning online requires a specific skillset. One way to develop those techniques are to experience online learning itself. Students with experience in this modality have an opportunity to develop those skills. Learning to learn online, or developing certain strategies, is necessary for successful independent learning. Success courses were mentioned by two participants, validating that an online success course could provide valuable strategies for those students with less experience online.

A culturally supportive environment may lead to course completion for the Indigenous students in the study. Many participants indicated that an increase in teacher interaction is preferable to a peer connection, especially in the continuous enrolment context, in which the cohesiveness of a cohort is not possible. A preference was expressed for instructor communication to be interactive, rather than solely by email. Video chats, skype calls, or even phone discussions, were described as more desirable than email conversations. And the onus for early connection with an instructor was clearly indicated to fall to the instructor. A relationship with an instructor factored highly as integral for participants to persist and complete online courses. This included and fostered a sense of belonging, and the connection seemed to be preferred over a connection with peers. In continuous self-enrolment courses, a digital community between peers is difficult to forge, so using the CoI framework, relying on peer discourse to facilitate learning, will be impossible. Increasing instructor presence should be a consideration for this delivery model. An affinity for a connection with an instructor emerged, which could be an interesting next research question.

Financial support for part-time and online courses that may be taken while a student is working full-time would be a benefit. Currently, most Indigenous students are only funded by their bands for a full-time program or course load. So, taking one course online is not as possible for Indigenous students, if they require financial assistance. Additionally, most bursaries and scholarships are only applicable to full-time students. This puts the part-time student at a disadvantage. Financial support to provide tutoring, support that is provided for courses that have the most attrition or re-taking or failure rates, such as those in content areas such as Math or Statistics.

A few participants described their enrolment in online education because they were not located near a post-secondary institution at that time. In a few cases, the goal was to upgrade for entry into either a graduate program or a teacher preparation program such as NITEP. One student had completed an on-campus bachelor's degree and, after moving back to his community to work, his only option was to take a course by distance. Two other participants described scenarios in which they were unwilling to move just to take one upgrading course. It was indicated that to be able to upgrade and remain in community was ideal.

Warm, friendly, and unbiased interactions with all aspects of the institution assist in creating an increasingly welcome environment for Indigenous students because one negative interaction has the potential to be discouraging to a struggling student. This is exacerbated by the fact that those negative interactions tend to be perceived by Indigenous students as racism or bias. Indigenous students feel most comfortable in situations in which their context is understood. Many describe feeling at home at Indigenous student spaces, even digital ones, in which students are all Indigenous, which has implications for providing not only culturally relevant instructional approaches, but culturally specific Indigenous only digital spaces as well.

Without adequate support, an opportunity for learned helplessness is possible, in that if a student experiences too many attempts, there is a risk for learned helplessness to set in. However, a certain level of endurance and persistence emerged where futility may have surfaced. This phenomenon may be a topic of further investigation. It appears that participants who had a multiplicity of identities maintained a certain level of resilience in the face of failing the same course a few times. Strong cultural identity and community responsibilities can contribute to this resilience. Interesting, also, to note,

that students who require accessibility services, gain an increase in support because of the extra level of support they are entitled to. Ensuring online students are aware of and utilize all services that are available, increases opportunity for success.

For participants, cultural connections and multiple identities can be barriers to study because of the time commitment associated with community responsibilities. However, identifying in more ways than just as a student can buffer a student from being impacted by negative student experiences such as not completing a course or receiving a failing grade. Experiences such as these can affect persistence and student self-confidence. Endurance in the face of failure is a strength, due to defining the self in multiple ways than just one. Resiliency and endurance were a higher than unexpected factor, that emerged with regards to overall persistence. Stamina and endurance serve as a source of strength that would be an interesting next research project, to interview participants about this aspect of their motivation and persistence especially as it relates to difficult courses in which they have received a failing grade or had to repeat.

Many participants are mature students, with previous life experiences, which may serve to clarify motivation and goals. The fact that the participants often had other responsibilities besides their student role, in their home communities, or as parents, may make it more difficult to schedule time for study. However, it is clear that for certain participants, identifying in ways other than solely a post-secondary student, have provided a basis for resiliency. Other commitments can result in less time available for study, but multiple identities can provide a resiliency. Failure in one area does not impact someone who identifies in multiple ways.

The participants belong to different contexts: those prepared to study independently and comfortable navigating supports, and those who are still developing those skills, and rely more on teacher presence and supportive measures at the university. Skills for online learning can be developed: such as goal setting, time blocking, time management, self-reliance and self-motivation. High levels of independent study, self-management skills that can be developed with time and practice. This is an implication for developing time management and study strategies, and offering non-credit or low credit online success courses, like those offered on campus. Grit and persistence, endurance, patience are qualities in participants that led to persistence, despite repeated failures in the same course, or low engagement with

instructors. Participants with specific goals, appeared to be able to dedicate or carve out time to make strides to get through online course work even if faced with less than satisfactory experiences.

Instructor engagement featured largely in participant satisfaction, specifically encouraging and effective feedback on assignments which aligns with what researchers have found about the significance of sense of community and learning (Garrison & Arbaugh, 2007). This was a common thread among participants. Formative feedback was viewed as an effective way to move forward, a motivating factor in continuing. If it was absent, it seemed easier to disengage, either because it was harder to understand difficult material, or it provided necessary motivation and encouragement.

If basing course development solely on the CoI framework, it may be possible to miss an opportunity to connect with Indigenous students, who appear to prefer opportunities to build relationships with instructors. Most participants described positive interactions with instructors as factors that supported their progress. Recommendations were made about increasing opportunities for engagement, even if it was a simple telephone call, and that the onus be placed on the instructor to make that first connection early in the course, preferably the first week. Expectations for peer engagement were higher than resulting findings, especially in continuous enrolment courses. Unexpectedly, findings resulted in higher levels of motivation and persistence in general, than might have been expected by the number of reported repeat course taking, exam anxiety and discussion of learned helplessness in literature. A meaningful connection with an instructor, simple encouragement, guidance, positive reinforcement and formative assessment on the part of instructors emerged as instrumental in providing participants the encouragement for students to progress, in difficult circumstances such as difficult content, even without a cohort.

Chapter 5. Strengths, Limitations, Implications & Directions for Future Research

Strengths

Strengths of this study include a comprehensive search strategy that included extensive search terms for the intersection of distance and online learning and Indigenous students. Due to the lack of scholarly material specifically on Indigenous student experience in distance education, academic literature regarding post-secondary retention, Indigenous education and online learning theory was woven together. The Community of Inquiry is a model for best practices in course design, so it was sensible to frame the literature review with this heuristic. The same lens was used when conducting interviews, to determine what factors led to engagement for Indigenous students, assuming that engagement would correlate with course completion.

Personal interviews in which participants guided the conversation provided in-depth, personalized and sometimes intimate accounts of their experiences. Each interview ran between 45 minutes and two hours long, and the data collected was in depth and extensive—over 400 pages of interview text was transcribed. Dialogue was not constrained by the researcher and participants had the freedom and agency to control what they shared (Archibald, Jovel, McCormick, Vedan, & Thira, 2006; Kirkness & Barnhardt, 1991). By fostering a collaborative and decolonizing approach to interviews, I ensured that the participants' experiences are tangible, transparent (Gilgun, 2005) and authentic. When participants guide dialogue and their story is respected, not only does this align with IM (Kovach, 2009; Smith, 1999; Weber-Pillwax, 1999, 2004), it also provides authenticity to the data (Barriball, 1994; Caruth, 2013). In order to influence institutional policy and procedure, the student voices evident in this research study may help address institutional development, program and course design, and support for students.

Limitations

There were a few limitations due to the scope of a master's thesis. The sample of participants for this research project was limited to 21. Participants were interviewed as a result of personal invitation, advertisement using social media channels, and an email invitation through one of the institution's list of self-identified Indigenous students who had enrolled in an online course. The number of hours it took to conduct and transcribe

each interview, combined with the time it took to invite participants and coordinate each interview, made it difficult to increase the participant sample. Had time allowed, I may have been able to interview more participants, to coordinate a second interview, or conduct a complementary quantitative aspect of the study.

Earlier iterations of this proposal included a quantitative survey, combined with institutional data, and subsequent participant interviews. Careful comparison and analysis of pertinent quantitative data regarding grade levels achieved in each course mentioned, the number of times courses were attempted and repeated, GPA for each participant, and subsequent comparisons of those GPAs against specific grades received in courses noted as difficult, might yield useful information.

Directions for Future Research

Participant voice is integral to a qualitative analysis (Creswell, 2011) so by examining more student experiences, it may produce an even more comprehensive data set by interviewing more participants. I recommend devising a secondary interview guide based on the data that was revealed in this study. More than 21 participants were willing to share their experiences, and I expect that sending an invitation to the entire list of Indigenous students at institutions that deliver online education, would generate even more rich data that would contextualize the stories that developed in this study. Computer assisted qualitative data analysis software (CAQDAS) could then be used to analyze the increase in data from participant interviews.

Furthermore, many participants commented that certain advisors and learning coordinators were instrumental in their educational planning, assisted them with assignments, and program planning. It might be possible to create a fuller picture of the phenomenon to devise a subsequent study in which advisors, learning strategists, educational coordinators and tutors are interviewed because of the knowledge they possess regarding Indigenous student support.

Again, time constraints did not all for a second meeting with each participant to discuss themes and potentially gather secondary data after I performed analysis and coded the transcripts. However, four participants responded to an email request to assess the themes to ensure that their experiences were portrayed accurately. Despite this process, improvements could be made to coding by including a second independent

coder who may catch missing codes or themes in the data, and mitigate personal bias inadvertently projected in the coding and theming process.

The findings of this thesis will be disseminated using multiple methods to maximize the opportunity that they may provide a basis for developing best practices in course design, instructor engagement and student support services. I plan to submit manuscripts for publication in academic journals and outside of the academic realm. Outside of the academic realms, a comprehensive report will be available to institutions interested in Indigenous student support.

Implications

Possible implications of these findings include increasing teaching presence within all online courses (especially those with high enrolment, independent self-paced courses) bolstering online student support, mirroring supports that are in place for F2F students, providing access to Elders online, increasing Indigenous tutors, designing an online peer mentorship program, revising certain courses that appear to be ubiquitously difficult, and early identification of students who are falling behind. Researchers found implications for policy and practice regarding identifying and addressing student weaknesses early in the semester and subsequently providing necessary and contextual supports for student success (Roberts et al., 2005).

The number of students that had difficulty learning math and statistics online was significant. Improvements to pedagogy, content and delivery of online courses could incorporate suggestions participants put forward during interviews that would assist in re-designing problematic courses and support systems for Indigenous students to align with one of the 4Rs: Reciprocity, and also address the TRC. CTA #10 (i, ii, and iii) mandates that educational achievement gaps between Indigenous and non-Indigenous students to be closed, education attainment levels and success rates to improve, and culturally relevant materials be developed (2015a). An effective project that has the potential to begin improving educational attainment levels, would be to pilot these re-designed online courses, offering them to students who have repeated them a number of times, waiving their tuition and providing additional support. Research can be transformative (Weber-Pillwax, 1999). In that regard, collecting data on the effectiveness of these re-designed courses for Indigenous students, may provide further evidence to inform content delivery in a more culturally relevant way.

Relationships and connections are integral to Indigenous education (Hare & Pidgeon, 2011). One of the four Secwépemc values, *kweseltnews,* mentioned earlier in this thesis, is the word for relationship, one of the four Secwepemc values (ALBAA Project, 2010). However, this word encompasses a much broader concept: *we are all family*. Implied is that relationship is integral to all aspects of life. Indigenous epistemologies comprise a wholistic worldview (Pidgeon & Archibald, 2014), and many Indigenous peoples apply that to their approach in all aspects of life. Another example, *wahkohtowin*, literally "kinship", is the Cree or Michif word that describes this value. It refers to the ways in which relationships, communities, and nature are all connected, and cannot be separated. This word often refers to Cree laws, or codes of conduct. The way in which epistemology is coded within the language is also indicative of the importance of using a wholistic lens. The fact that these values, or words, contain deeper philosophical meanings, and invoke codes of conduct is an indicator of the importance of these values, and should not be overlooked in learning environments. Interactions and relationships of all types are integral to learning and identifying how to use an Indigenous lens in development and delivery is key to delivering online education that aligns with the TRC recommendations. Rather than attempt to discover how the digital space can be transformed with technological innovations, reducing the gap in education levels might be accomplished by providing the types of support that Indigenous students have defined in these interviews: counselling, tutoring, online student success courses that teach online strategies, additional pedagogical devices such as learning objects, explainer videos, and increased teaching presence are some suggestions directly stated by participants in this study.

Further work to integrate an Indigenous model of education with online learning theory could further enhance this area of interest. To discover additional detailed information that affects student success, a variety of methods could be employed. Conducting subsequent studies with a higher number of participants, employing quantitative surveys, analyzing existing institutional student retention data, comparing grades and retention rates for problematic courses (between online and F2F delivery models), and designing pilot courses could elicit rich information that might be productive in developing guiding principles for supporting Indigenous students.

Chapter 6. Conclusion

This thesis was limited to Indigenous student experiences of an online educational environment and identified a number of overarching themes. The purpose was to derive data from real experiences to discover what factors related to persistence in online courses that rely largely upon a student's independent learning capabilities. "It is no longer enough for teachers to ask what types of presence(s) do I need to develop in my teaching, but rather how do I match my teaching model and behavior with the learning capacities of the learners" (Anderson, 2017, para. 1). An increase in teacher presence and pedagogical strategies was desired by most of the participants in the study. This suggests that praxis and reflective practice on the part of instructor is necessary to adapt to the learner needs, and that course designers not rely solely on the CoI to guide development. It would be advisable to look to a framework or develop a model with which to address the relational aspect that is integral to Indigenous students in a way that works with delivery models such as non-cohort based, or self-enrollment that require high levels of self-regulatory behavior.

The main themes that emerged during analysis of the participant transcripts aligned with general student success literature, but, with some specific nuances. After reflection upon the themes and attempting to organize them neatly into the CoI construct, the importance of relationships ultimately emerging as common across all the themes, and across most participants' experiences. I attempted to illustrate this by overlaying relationship across the CoI model (See Figure 5).

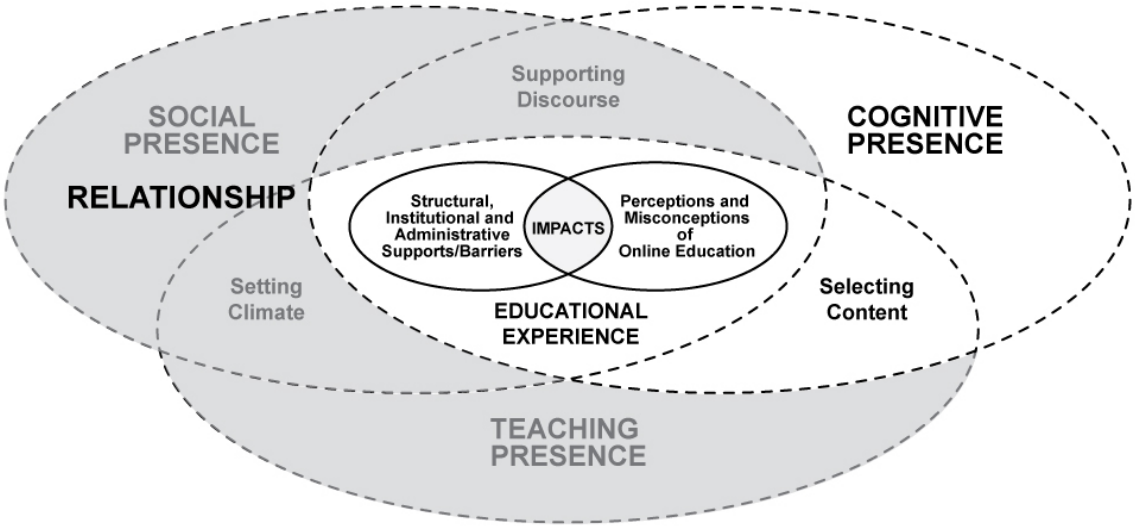

Figure 5. Relationship: A Theme Overlaid on the Social and Teaching Presences of the Community of Inquiry (CoI) Model. Creating community and forging relationships is an integral factor in providing support for Indigenous students, existing in both teaching and social presences.

The CoI construct is essentially an aspirational model of networked relationships to enhance knowledge construction. It was designed to guide course designers to build opportunities for connection into learning activities and course objectives, utilizing innovative web-based social media advances that offered an increase in asynchronous communication not dependent on upon place to collaborate. Based on a constructivist model of education, it assumes that knowledge is co-constructed within these social, teaching and cognitive presences.

However, the stories shared by participants contained narratives of relationships that hindered and supported them. Consequently, later in the analysis process, I overlaid this theme across the other presences in the CoI model. The Indigenous concept of relationship is not fragmented into peer and instructor, but encompasses all relationships within the university, home and with the land. It is more aligned with Indigenous epistemologies to make connections and models that overlay one another, or exist on continuums, rather than separate. The main theme of relationships and connections, and how those impact Indigenous students cannot be easily delineated, or separated, using the framework I started out with. Although it was helpful as a starting point, it does not

address Indigenous education models or frame learning in way that includes community, family or land.

Subsequent themes were related to experiences outside the learning space itself, to misconceptions of online education that led to work overload, institutional supports and barriers, a desire for a stronger teaching presence, and factors that related to course content. These included: structure, resources, assessment, workload, and pedagogy. Most participants shared that they preferred F2F instruction, further evidence of a preference for a personal connection. The adverse effects of online experiences on participants was a theme, as well as strategies and motivations for persistence. The CoI framework was useful in analyzing the background literature for this research study, but in the end, the findings related more to the nature of the entire experience including administrative hurdles, barriers, and logistics.

Participants preferred this relationship with an instructor, indicative of valuing teaching presence over a peer relationship. Guidance seems to be a contributing factor in the relationship, especially in self-paced courses in which students are typically expected to possess self-regulatory characteristics such as advanced study strategies discussed. When they do not, as many participants expressed, adequate support in the form of tutoring or instructor guidance is not as strong as participants would have wished. When an instructor uses facilitation skills, it is apparent that it improves, not only retention, but effort, and the guiding aspect of the instructor acts as an accountability measure to encourage progress. The fact that participants seemed to prefer and seek a relationship with an instructor aligns with a previous study (Gallop & Bastien, 2016) in which on major theme that emerged was the importance of a relationship with an authority figure. This fact seems to be incongruent with the CoI which is predicated upon a less hierarchical structure for co-creating knowledge. Built into the model is that students and peer dialogue are expected to play a large part in knowledge construction.

With reflective practice, instructors can adapt to a variety of learners, even in virtual classes. Remaining open to perpetually learning, experimenting with students in new learning communities is critically important (Anderson, 2017). A successful teacher learns how to use what they are most familiar with and proficient at, but also to

experiment and adopt new tools that may increase the efficacy of students' educational experience (Anderson, 2017).

In terms of the online learning environment, research has demonstrated that instructional design models as well as the technological environment are not contextualized for all learners but based on the mainstream epistemologies of those designing the spaces and courses (McLoughlin & Oliver, 2000). The results of the study highlighted insights into student support that is lacking, misconceptions of online learning, social and instructor interactions and the influence that these experiences had on students, especially when adversely affected. Teaching presence surfaced as a major factor in the success or persistence in a course for many participants, which emphasizes the importance of responsiveness to learner needs (McLoughlin & Oliver, 2000). Many participants perceived themselves as visual learners and made suggestions to increase explainer videos to replace the low teaching presence. Many utilized a secondary tutor for their courses to increase the teaching presence in the course.

In terms of building courses for cultural inclusivity, focusing on enabling learners to utilize learning resources and adapt assignments in ways that align with their values, beliefs and preferences for learning (Chen, Mashadi et al., 1998) is integral for the participants in this study. Participants did not largely focus on the lack of Indigenous content or missing epistemological angle but did appreciate flexibility afforded to them in assignments and communication style. This flexibility offered an opportunity to integrate their culture and epistemological views. Indigenous students may be accustomed to a teacher-centered pedagogy. On the whole, the participants in this study desired more communication and guidance. There are many instances in which students are comfortable with communities of inquiry in which knowledge construction is generally driven by the learner, but these students have pre-existing experience in independent-study courses and may possess sophisticated study skills. Students who require a great deal of direction are not as prepared for a constructivist approach to building knowledge that the CoI is modelled upon (Anderson, 2017). Tension exists between direct instruction advocates and constructivist theorists regarding the value of teaching (Anderson, 2017), and it can be argued that a constructivist model requires a learner to be comfortable and experienced at independent study.

Many scholars have tied postsecondary education and overall success of Indigenous students to relationships and connections with family, community, culture, and place (Archibald, et al., 1995; HeavyRunner & DeCelles, 2002; J. V. Martin, 2001; Pidgeon, 2008b; Royal Commission on Aboriginal Peoples, 1996; Shotton, 2008).

To comprehend Indigenous student persistence, one must understand the importance of relationships and interconnections between family, community, nation and themselves (Pidgeon et al., 2014) and instructor (McMullen & Rohrback, 2003; Simon et al., 2014). This emerged as a major theme in the study, and as I deliberated over a model incorporating the CoI framework to understand engagement, I realized that relationships were overarching above peer/instructor (Figure 5). Isolating experiences such as self-paced online courses can be difficult to navigate for students who are oriented to prefer relationships, either with each other or with an instructor over sole study.

This relationship piece extends into general institutional experiences online as well. When a participant experienced a negatively charged interaction, it had the potential to disrupt the student's participation. Indigenous students rely upon welcoming interactions and support in all areas of institution (Archibald, et al., 1995). An American study on post-secondary graduate education found that engagement seems less related to a student's background experiences but more strongly correlated to instructional involvement. (Hathaway et al., 2002). This is aligned with the findings of this study.

Reflections

Championing Indigenous voices is a way to disrupt colonial research traditions that position university researchers as inherent experts in knowledge creation (Kajner, 2015). Constructivist and transformative approaches to knowledge generation mandate that the co-creation of knowledge that privilege Indigenous perspectives and ways of knowing. In this way, the participants are authors of this study. One way to generate knowledge in a collaboration is to use qualitative interviews to ensure authenticity in the findings. Despite the fact that the participants do not belong to the same community and originate from a variety of communities and backgrounds, they were equally interested in sharing their experiences as a path forward for transformation and increased supportive measures in an online educational setting. The participants in the study formed a community, and I created a relationship with each one. I felt privileged to

carry out this research and to amplify their voices to initiate change, and to ensure that sensitivity is used when disseminating research findings. Relationships continue with a few participants, and a copy of the defended thesis will be sent to each participant, some of who anticipate systematic changes because they are still working towards their degrees.

When presenting my proposal at a conference, Dr. Evelyn Steinhauer's words resonated with me during my analysis and writing phases. Her reminder was to analyze as each interview was conducted and transcribed—not to wait all conversations were completed, because each interview would inform the next. Weber-Pillwax's (1999) words regarding the transformative nature of research sit with me as I reflect upon my process over the past few months. The research process, and various research projects I had the pleasure to be involved in over the course of my graduate degree, have offered me a deeper understanding of myself, my relationships, and how to engage in community-based research. My hope, and the hope of many of the participants, is that their voices are heard and contribute to larger systemic change that supports equity measures in all educational environments.

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Appendices

Appendix A: Participant Consent Form

RESEARCH STUDY PARTICIPANT CONSENT FORM
Examining online distance education for Indigenous learners in a post-secondary environment

Researchers:
Graduate Supervisor: Rod McCormick, PhD
Professor, BCIC Research Chair
Faculty of Education & Social Work, Thompson Rivers University
rmccormick@tru.ca | 250-299-5052

Robline Davey, M.Ed graduate student
Faculty of Education & Social Work, Thompson Rivers University
rforsythe@tru.ca | 250-819-4899

Purpose of the research:
The purpose of this qualitative research study is to examine the effectiveness of online education for Indigenous students by exploring online supports, online best practices and participation styles to identify ways to transform distance learning environments to increase success, program and course completion, for online Indigenous students.

What you will be asked to do in the research:
The research study will be conducted as an interview and/or discussion circle phase that will be recorded and subsequently transcribed. You'll be asked to answer a few demographic questions, and then engage in a discussion about your experiences in online courses, at your convenience. The resulting audio data will be transcribed, analyzed, and stored separately from any contact information or details that could identify you. Within 2 months, a text version of your interview will be returned to you to ensure that it is accurate. Anyone of your preference can accompany you. An Elder may be present with us. Interviews may take up to 1.5 hours. Your consent can be withdrawn at any time, for any reason, and your data will be returned to you. If you'd like to withdraw consent and you have participated in a focus group or discussion circle that is recorded, references to your information in the transcription will be removed.

In any study, discoveries can surface that could shift the study significantly. At each stage of the study, or if methodology changes, timely transparent and clear communication will be delivered to you. You will be notified of any adjustments to the study if they arise and provided another opportunity to withdraw consent. If the requirement for new data collection arises during the course of the study, I will seek consent again. You are always free to refuse or revoke your consent to participate in this or subsequent data collection.

You will have an opportunity to go over your interview with the researcher to ensure that the researcher has accurately recorded your experience(s). Each participant will receive a gift for sharing their knowledge, time and energy with the researcher.

Risks and discomforts:
There may be significant benefits associated with increased understanding of what may be the unique needs and requirements for Indigenous students studying online. By exploring and understanding experiences, unique preferences, culture, language, worldviews and ways of knowing we may be better able to provide educational institutions (faculty, administration and staff) information to develop best practices, models and policies that lead to a rich online educational experience for Indigenous students. During research study interviews about academic experience, it may be possible that participants may find that sharing personal experience triggers strong emotions. Anything that is disclosed during this survey and subsequent interview, if you consent to the second phase, is confidential.

Privacy and Confidentiality:
Participants will be assured that the privacy and confidentiality of the data collected through the analytics system at TRU, and the interview transcripts from the second phase of study will be maintained through alphanumeric coding of each participant. Safeguards will be put in place to ensure that the contact information, alpha-numeric key code, and various forms of data for each participant, will be kept separately. Data, contact information, recordings or transcripts that are stored on computer systems will be encrypted when stored, and locked safely behind a password that is only known to the researcher. Any data stored on cloud computing systems, will be stored in a way that does not violate privacy act, using only Canadian data storage servers, rather than cloud-based software that is American owned. Furthermore, any presentations based on the research findings will be carefully designed so information does not identify participants. Confidentiality will be provided to the fullest extent possible by law.

Data will be retained for future studies. In this case, identifying information and linking files will be destroyed 5 years after the research study is completed. All records will be de-identified before use. Careful data storage for subsequent use prevents researchers from collecting the same data over and over again, protecting participants from inefficient research practices and exposing them to less risk.

In the case that the data is destroyed, after the research study is completed, paper records will be shredded and recycled to preserve confidentiality. Records stored on a computer hard drive will then be erased using commercial software applications designed to remove all data from storage devices.

Voluntary participation:
Your participation in the research is completely voluntary and you may choose to stop participating at any time. Your decision not to continue participating will not influence their relationship or the nature of their relationship with researchers, faculty or staff of Thompson Rivers University, either now, or in the future.

Withdrawal from the study:
You may stop participating in the study at any time, for any reason, if you so decide. Your decision to stop participating, or to refuse to answer particular questions, will not affect your relationship with the researchers, Thompson Rivers University, or any other group associated with this project. In the event that you withdraw from the study, all associated data collected will be immediately destroyed wherever possible.

Questions about the research?
Each participant can receive a copy of a summary of completed projects and receive updates during the course of the research, if they wish. If you have questions about the research in general or your role in the study,

you may contact the researcher or the researcher's supervisor. All questions are welcome.

This research (#101986) has been reviewed and approved by the Canadian Tri-Council Policy Research Ethics office, the Ethics Review Board at Thompson Rivers University, and meets the Ethical Conduct for Research Involving Humans (2018) guidelines for the core principles of respect for persons, concern for welfare and justice. If you have any questions about this process, or about your rights as a participant in the study, you may contact the Thompson Rivers University's Senior Manager and Policy Advisor for the Office of Research Ethics at tru-reb@tru.ca or by phone at 250.828.5000 and the Dean of the Faculty of Education and Social Work, Dr. Airini at airini@tru.ca or by phone at 1-250-828-5249.

Legal Rights and Signatures:

I consent to participate in the study: **Examining online distance education for Indigenous learners in a post-secondary environment** conducted by Robline Davey. I have understood the nature of this project and wish to participate. I am not waiving any of my legal rights by signing this form. I have received a copy and my signature below indicates my consent.

Signature _____ Date _____

Participant name: _____

Appendix B: Certificate of Approval—TRU Research Ethics Board

January 16, 2019

Ms. Robline Davey
Faculty of Education and Social Work\Education
Thompson Rivers University

File Number: **101986**
Approval Date:January 16, 2019
Expiry Date: January 15, 2020

Dear Ms. Robline Davey,

The Research Ethics Board has reviewed your application titled 'Examining distance education for Indigenous learners in a post-secondary environment.' Your application has been approved. You may begin the proposed research. This REB approval, dated January 16, 2019, is valid for one year less a day: January 15, 2020.

Throughout the duration of this REB approval, all requests for modifications, renewals and serious adverse event reports are submitted via the Research Portal. To continue your proposed research beyond January 15, 2020, you must submit a Renewal Form before January 15, 2020. If your research ends before January 15, 2020, please submit a Final Report Form to close out REB approval monitoring efforts.

If you have any questions about the REB review & approval process, please contact the Research Ethics Office via 250.852.7122. If you encounter any issues when working in the Research Portal, please contact the Research Office at 250.371.5586.

Sincerely,
Joyce O'Mahony
Chair, Research Ethics Board

Appendix C: Interview Guide

Overview of Participant Consent Form (Appendix A) and Participant gift
Demographics

1. Current age: ____
2. Do you identify as: First Nations__ Metis__ Inuit__
3. Gender: Male ___ Female __ Other __
4. Where have you lived most of your life? Rural community__Urban community__ Both about equally__
5. Can you speak your Indigenous language? No__ A bit__ Some__ Fairly well__ Fluently__
6. Can you write your Indigenous language? No___ A bit__ Some__ Fairly well __ Fluently__
7. At what education institutions have you taken distance/online or blended (F2F or online) courses?
8. What program are/were you enrolled in? If current, what year of your program are you in? ____

Course/Program

9. How many online courses have you or are you taking? ____
10. What (device) do you use to do your coursework? I have access to a computer or tablet at home. Yes__ No__
11. Online courses were: Not timed? Paced? Semester based? Cohort based? Part of a program?
12. Did you complete your online course?
13. If no, what led you to the decision not complete the course material?
14. If yes, what factors supported you to complete?

Technology

15. Which learning system(s) were provided, expected that you used?
16. Did you use any other technology, systems to connect with instructor, students or content? (including F2F meeting, phone calls, skype calls)
17. Describe your experience with the technology provided?
18. Describe your experiences in the discussion/forum spaces.
19. Did you venture outside the expected learning spaces, and connect on your own with any other digital tool of choice? (group work)
20. How was group work accomplished?

Interaction

21. What types of interaction were built into the learning for the course?
22. Did you find that you connected with students in the class?
    a. Outside of the formal learning space?
    b. Inside the discussion space?
23. If so, how meaningful were the discussions?
24. Were the posts/discussions perfunctory, just to get the participation grade?
25. How does this differ from the classroom environment?

Supports and Barriers

26. Several factors can support students, which factors supported or hindered you?
    a. Related to the course itself, content, instructor, academic help, learning environment.
    b. Peer discussion?
    c. Registration process, enrolment, transfer credit, work experience
    d. Non-academic supports such as family support, flexibility with work schedules, child-care, internet access, computer access, family responsibilities?
27. Anything that kept you engaged, or supported you to finish?
28. What factors helped to create a supportive online environment for you to learn?
29. What was the biggest source of your support in achieving success in the course? Or conversely, what was the largest factor in your choice to drop the course.
30. Do you have a process that you use to approach your coursework?
    a. If so, what is your process?
    b. Does it differ from your approach to studying/doing assignments for an in-class course?
31. Is there anything particular or that stands out that really impacted you during the course?
    a. That impacted you to persist?
    b. That motivated you?
    c. Caused you to quit the course?
32. Online education can be a great way to advance one's education, if the right attributes are in place. What would you recommend be changed that would help you to take advantage of the flexibility that online education can provide. In the class:
    a. What worked for you?
    b. What worked against you?
33. Would you take a/the course again? With Open Learning? with another institution?
34. If you've taken a course in another institution, how did your experiences differ?
35. What types of supportive measures would you require if you were to enrol/register again?
36. Tell me a story about anything that comes to mind that impacted you negatively or positively.

Appendix D: Recruitment Poster

Appendix E: Letter of Invitation

Good morning, Taansii,

I am sending this email on behalf of Robline Davey, a graduate student in the Master of Education Program at Thompson Rivers University.

—

I am conducting a research study as part of my graduate degree requirements. The study is entitled, *Examining distance education for Indigenous learners in a post-secondary environment*. I am of Métis ancestry, and particularly passionate about this topic: I would like to understand how we can shape online learning and take full advantage of the flexibility that it may offer.

The purpose of this study is to explore and examine our experiences of distance and online learning so that we may inform educational institutions (faculty, administration and staff) with information to develop best practices, models and policies that lead to an improved online educational experience for Indigenous students. Your participation will contribute to the current literature on the subject of Indigenous experiences in online distance education in the post-secondary environment.

You are being invited to participate in this study because you are currently, or have, enrolled in an Open Learning course as part of your post-secondary education. If you would like more information about this study send a request to **rforsythe@tru.ca**. If you decide to participate, you can contact Robline Davey to set up an interview. Participation would entail an interview of approximately 30 min-1 hour that can be done by phone, video conference or in person, at your convenience and preference. The first 20 participants that contact me will be able to participate and will receive a $50 gift card for sharing their time and experiences.

By agreeing to participate, you will be giving your consent for the researcher or principal investigator to include your responses in data analysis. Your participation in this research study is strictly voluntary, and you may choose not to participate without fear of penalty or any negative consequences. You will be able to withdraw from the survey at any time and all survey responses will be deleted, including the informed consent agreement. An informed consent agreement would be signed upon agreeing to be interviewed. There will be no individually identifiable information, remarks, comments or other identification of you as an individual participant.

Committee co-supervisors:
Rod McCormick rmccormick@tru.ca or Courtney Mason cmason@tru.ca

Warm regards,
Robline (Robbi) Davey
rforsythe@tru.ca | 250-819-4899
robbidavey@gmail.com | @RobbiDavey

Graduate Student, Faculty of Education & Social Work
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