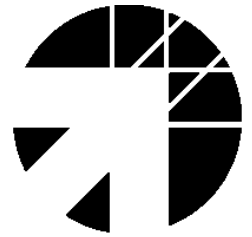Higher Education
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An Indigenous Knowledge Mobilization Packsack:

Utilizing Indigenous Learning Outcomes to Promote and Assess
Critical Thinking and Global Citizenship

Negahweewin Research Centre

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Preamble

In the current landscape of teaching, and researching Indigenous Knowledges there is a practice where writers and thinkers are expected to situate themselves in the discourse. This past year, this article that I have co-authored with colleagues was reviewed by Indigenous scholars through peer review that explicitly sought clarification on our credentials. Our individual bona fides had not been described in the draft. Feedback solicited through the peer review process suggested that this additional introductory context be included.

Where did I come from? What were my credentials to do this work? How do I situate myself in this discourse? What is my experience? Why am I engaged in this research? In terms of location, where is this work taking place? The questions as to my legitimacy in terms of my connection to the Indigenous community were explicit. Who are the Elders and Teachers with whom I am engaged? How have these Elders provided guidance?

Up to this point in my work, which spans over 25 years in the postsecondary sector, I have not been asked to situate myself, to explain who I am and how I have come to this work. Quite frankly, I was not happy about this line of inquiry. I felt that people outside my own Indigenous community were asking me to come up with my bona fides.

I will answer these questions through my ancestors; that is, my family, my Eeyou community, and my Nation. I am an Eeeyou skow. I have come to this work because of my upbringing in northern Ontario and my relatives from northern Quebec. I was raised by Eeyou parents.

My family is from the Eeyou/Cree Nation of northern Quebec. We lived near the Ontario-Quebec border ten miles south of James Bay, on the Moose River, at the island of Moose Factory, Ontario. While the Moose Cree First Nation has an established reserve there, I grew up on the off-reserve portion which was known as "unorganized territory."

My parents come from strong, independent Eeyou families from the east coast of James Bay. My paternal grandparents lived in the bush near Hannah Bay close to Rupert's House which is now known as Waskaganish. They summered at Moose Factory after living in the bush all winter. Every summer they arrived with their children to join relatives and community on the island. My maternal grandparents were Eeyou but considered non-status Indians who worked for the Hudson Bay Company in the interior and coastal region of northern Quebec. Later in his life my maternal grandfather was ordained in the Anglican Church. Eventually, both sets of grandparents settled in Moose Factory in the early to mid-1950s.

My paternal grandparents spoke Cree and did not speak English. My maternal grandparents spoke English and Cree. As a child I had the privilege of living close to my grandparents, aunts, uncles, cousins and extended family. My immediate family was made up of my mother, my father and my brother. I was the eldest child. We grew up with Cree and English spoken in our home with an emphasis on not losing our mother tongue. My mother was a librarian, cashier, bookkeeper, writer, singer-songwriter, translator and ethnographer. She was politically engaged, helping to organize local actions when the province decided to build a liquor store instead of a secondary school. She passed away in 1986 when we were in university. My father was a hunter, trapper, translator, construction worker, carpenter, guide and entrepreneur. He was a wonderful step-dancer, a winner of dog team racing, and an outspoken man who was extremely perceptive. He passed away in 2016. My father attended the Indian Residential School in two

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locations at Fort George, Quebec and at Moose Factory, Ontario for a few years. My mother did not enter residential school but attended day school. Both my parents were victims of tuberculosis as teenagers and were hospitalized — my mother in Quebec and my father in southern Ontario.

It is important to note that my parents provided me and my brother with the best formal educational opportunities. In fact, we relocated to Sault Ste. Marie, Ontario as a family so that my brother and I could graduate high school. My maternal grandmother lived with us while my parents worked at various jobs to support our family. Eventually we graduated from more than one university. I became a lawyer in Ontario.

My brother was a writer, thinker, leader, chief, advocate and devoted father to his two children, a girl and a boy. His wife, who currently lives in Minnesota, raised their children with a combination of home schooling and on-reserve elementary school on the White Earth Reservation. Fortunately, my brother helped raise his first grandchild before he passed away in 2012.

I work with Indigenous and non-Indigenous people in public postsecondary education systems and in a local setting within the City of Thunder Bay, Ontario. I have extensive work experiences in access education, Indigenous Studies, Indigenous research, and strategic planning centred on Indigenous education. I have long-term, authentic relationships with individuals and communities among the Anishinaabe where I live.

I trust that these details sufficiently demonstrate my qualifications and credibility in the work described below.

S. Brenda Small

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Background

Over the past five years, a number of postsecondary institutions across Canada have been taking steps to renew and reshape their curriculums as part of a response to the vision of the Truth and Reconciliation Commission's Calls to Action (2015). These initiatives are meant to make postsecondary education more Indigenous; but, equally, the goal is to make education more Canadian, as these initiatives include a more genuine account of Canada's past, present and future, one in which Indigenous cultures and contributions are fully recognized and in which the colonial legacy of Canada is fully acknowledged. The overarching objective is to prepare individuals within Canadian communities to have meaningful conversations about the moving target that is "reconciliation." While learning institutions are seeking to become more inclusive and to remove barriers to learning for Indigenous peoples, they are also approaching reconciliation by correcting absences, silences and inaccuracies in the learning itself.

A useful means of reshaping postsecondary education is to introduce Indigenous-focused, overarching learning outcomes in the institution. These curriculum-based initiatives function similarly to other projects that promote sets of standards such as "intercultural competency," "global citizenship" and "critical thinking."[1] A project of this type thus identifies learning that is meant to have universal application in the institution; that is, every graduate of the postsecondary institution would benefit from and would graduate having met these outcomes.

With the leadership of Negahneewin Council — an Indigenous community-based council whose guidance has been integral to Confederation College for more than 30 years — Confederation got an early start in the movement towards decolonization. In 2007, Negahneewin Council gifted the College with a set of Indigenous Learning Outcomes (ILO), which envision that each of our graduates will be able to:

1. Relate principles of Indigenous knowledge to career field;
2. Analyze the impact of colonialism on Indigenous communities;
3. Explain the relationship between land and identity within Indigenous societies;
4. Compare Indigenous and Canadian perceptions of inclusion and diversity;
5. Analyze racism in relation to Indigenous peoples;
6. Generate strategies for reconciling Indigenous and Canadian relations; and
7. Formulate approaches for engaging Indigenous community partners.

The infusion of these ILO into program-specific courses throughout the College is intended to provide students, both Indigenous and non-Indigenous, an understanding of Indigenous worldviews; allow them to draw connections to their own field; and also provide them with a broad understanding of historical and political awareness relevant to every graduate. With its emphasis on Indigenous Ways of Knowing, the ILO also afford students the opportunity to nurture good habits of thinking, reflecting and acting, and then to emerge as global citizens as they enter the working world, in harmony with local realities. Moreover, depending on where the

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1 Notably, the Association of American Colleges and Universities has developed a comprehensive set of "value rubrics" which can be adopted and adapted to evaluate student progress in understanding and applying citizenship-focused ideals and principles (Rhodes, 2010). The use of a rubric is intended to provide an objective measure of specific student learning activities in relation to the outcomes.

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outcomes are delivered, they can be fine-tuned to have even more local relevance, and can include material related to the people and communities of the region.

Confederation has been dedicated to this community-based vision for postsecondary education since long before the TRC's *Calls to Action*, and as Confederation has become known for this work, a number of postsecondary institutions both in Ontario and across Canada have approached us for advice or guidance in setting up their own Indigenous Learning Outcomes. We have developed a reputation as leaders in the development and implementation of ILO — yet at the same time, with 10 years of experience in this undertaking, we have come to appreciate the degree and substance of effort required to approach reconciliation and decolonization in this way. The Indigenous Knowledge Packsack Project therefore originated from a drive to create some process to measure the progress of inclusion of the ILO in Confederation's programs, appreciating that there is an acute need to provide a model for our teachers and administrators to monitor their own progress.

In keeping with the goal of encouraging and reinforcing good thinking/good knowing in graduates, and with HEQCO's support, this project sought to create an assessment tool that is congruent with both Indigenous and western understandings of critical thinking. Such a tool could be used by teachers across the college, in a variety of disciplines and learning contexts, to provide a consistent standard for elements of the ILO related to Indigenous Ways of Knowing. To be clear, this instrument would not measure the level of inclusion of the ILO as a whole, as the latter must be a separate process, but it would measure the achievement of a certain way of thinking that is informed by Indigenous Ways of Knowing and also be very much of a piece with what is otherwise called critical thinking.

As Confederation, under the aegis of the Negahneewin Research Centre (NRC)[2], proceeded with this undertaking, we came to realize that this was also very much about developing the capacity of faculty to teach and evaluate such skills. It was equally about faculty capacity to present Indigenous knowledge and, more generally, faculty capacity to deliver any ILO-related content. Not surprisingly, this is a complex and multifaceted undertaking, as will be seen from our challenges and lessons learned.

In phase one of the project, NRC engaged in the initial and necessary research around several topic areas: creating and using rubrics; identifying rubrics focused on critical thinking; defining critical thinking within a western context; and defining what it means to "think well" within an Indigenous context. We produced a rubric based on four Rs found within the literature on Indigenous knowledge (Kirkness & Bernhardt, 1991; Wimmer, 2016).

In phase two, Confederation via NRC continued to pursue the original goals of phase one — to promote critical thinking and global citizenship by measuring the delivery of certain content from the ILO. For phase two, however, the deliverables and objectives were modified to reflect lessons learned in phase one, and became as follows:

- To produce a meta-rubric[3] and related tools for faculty to use in creating assignments

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[2] Formerly the Centre for Policy and Research in Indigenous Learning (CPRIL).
[3] We use the term meta-rubric to refer to some framework or set of criteria that would guide the creation of other rubrics. In our understanding, meta-rubric refers to our entire toolkit, as these collectively produce both assignments and the rubrics to evaluate them.

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and rubrics that incorporate Indigenous Ways of Knowing ("Indigenous critical thinking")

- To deliver capacity-building activities for faculty

- To test the meta-rubric by working with several faculty champions in developing assignments and accompanying rubrics to be piloted in their classroom teaching in winter of 2019

- From the above activities, to create a toolkit document (or documents) that would present the meta-rubric/framework to faculty and direct them in its use

The toolkit NRC developed is called the **Indigenous Knowledge Mobilization Packsack;** it is a collection of documents designed for the use of faculty. These documents are situated in an "Indigenous knowledge environment," a visual framework demonstrating a conceptual setting where Indigenous Ways of Knowing overlap and nurture western critical-thinking skills — a space that also happens to coincide with the classroom. This Knowledge Environment is described by four "modes" of Indigenous knowing/being. We must emphasize that the choice of these four modes is grounded in our review of scholarly literature around Indigenous pedagogy, as well as all the work completed in phase one. Most importantly, these modes are grounded in dialogue amongst NRC's educators some of whom are Indigenous and some of whom are non-Indigenous. Collectively they have over forty years of experience in Indigenous education in a postsecondary setting. This dialogue is further informed by input from our community advisors. Finally, the four modes approach was reviewed and approved by Negahneewin Council. *These modes are not intended to be a comprehensive or monolithic description of Indigenous Ways of Knowing*; rather, they are derived equally from the abovementioned sources and the project's intention to connect Indigenous Ways of Knowing to key skills related to critical thinking and global citizenship.

In the Indigenous Knowledge Environment as sketched in Figure 2, the four modes coincide with four tools/items/icons that would be found in a real-life packsack, and that would help the person carrying the Packsack to thrive in their environment: 1) Four assessment and rubric creation tools, one for each of the four modes of Indigenous knowing represented in the knowledge environment (see Appendices C to F); and 2) A flowchart to demonstrate the process to be followed in using the Packsack (Appendix B).

Before proceeding with a detailed outline of the Packsack, we propose to explore in some depth the intellectual and methodological challenges involved in creating these tools. This is also an explanation of how and why we arrived in an Indigenous Knowledge Environment with the four modes, and how these tools can be used to develop faculty capacity with respect to the ILO. Indeed, this toolkit is geared for use by individual faculty members *in their classrooms*. Rather than being a tool for mapping ILO at the program level, the Packsack can connect Indigenous ways of learning and knowing to a faculty member's areas of expertise, and will help them to begin to view themselves as competent within the Indigenous Knowledge Environment.

Methodological Challenges and Solutions

In working to create a framework that evaluates progress on a set of culturally informed learning outcomes without necessarily connecting to any specific course content, while also attempting to approach a universalist concept of "good thinking/good knowing," we have tried to create an epistemological bridge between Indigenous and western thought. Much of what we have

learned has to do with building and navigating that bridge. The following is a discussion of the challenges we faced along the way and how we attempted to solve them.

Methodological Challenge Number 1: How to Define and Measure Indigenous Critical Thinking

On the face of it, the difference between a "critical-thinking rubric" and an "Indigenous critical-thinking rubric" might appear merely semantic, since both appear to refer to an intellectual skill set along with a set of global values, and both could have general application across a range of postsecondary subjects. However, there are significant obstacles to be overcome. For a start, one can confidently create a set of western critical-thinking standards knowing that there are certain expectations in relation to this topic; although there are differences of opinion as to the best definition, and different schools of thought as to how to achieve it, "critical thinking" is a familiar object of discourse. When we turn to the notion of "Indigenous critical thinking," we can immediately become mired in difficulty. This is absolutely not to say that Indigenous culture is devoid of the ability to think, but rather that the term "critical thinking" is not strongly represented in the discourse. If we are comparing two cultural systems for organizing a world of sensation, information and experience, then, broadly speaking, western systems of knowledge rely on categorization; that is, separating "thinking" from "feeling" and "being," whereas Indigenous systems are holistic (Cajete, 1995; Little Bear, 2009). In other words, to speak of critical thinking at all is to engage in something fundamentally western. The task is complicated by the fact that the subject matter at hand is how to construct knowledge; to define critical thinking, as it is usually taught and understood in postsecondary education, is to invoke the western system for construction of knowledge and, paradoxically, this is precisely what we are trying not to do.

Put another way, discovering an approach to measuring critical thinking that remains true to Indigenous principles is a bit of a contradiction. There is an expression: "To a hammer, everything looks like a nail." It is easy enough to say that we might establish a rubric to measure how much Indigenous knowledge we have taught, but the very concept of measurement is based on habits of mind that are deeply western. Indigenous scholarship emphasizes that Indigenous epistemologies (ways of knowing) are grounded in holistic, experiential and relational experiences, and also that western epistemologies prize the rational and abstract categorization of ideas (Battiste, 2000; Battiste, 2002; Corbiere, 2000; Kirkness & Barnhardt, 1991, Kovach, 2010). Thus, by the time we have created something that can be measured, it has become far removed from the thing that we wanted to measure in the first place.

Nevertheless, our research and experience has led us to the conclusion that it is completely possible to find some middle space where the two "knowledge engines" might meet. A great deal has been written on the subject of Indigenous Ways of Knowing (or Indigenous Knowledge) and Indigenous ways of teaching and learning (Indigenous pedagogy), comparing them with western systems of thought and knowledge and discussing how to infuse these in the education system (Battiste, 1998). People, nationally and internationally, are attempting to study and even to design knowledge structures that are simultaneously Indigenous and western. Indigenous epistemologies may give priority to relational ways of knowing, but they are not devoid of abstract reasoning. Conversely, while western thought prizes categorization, it is not entirely without some understanding of the value of holistic, fully embodied learning. If we can locate the common ground, we can find a way to describe it.

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Methodological Challenge Number 2: How to Make a (General) Rubric that Can Be Relevant to (Specific) Content

We have reviewed a number of rubrics that are aimed at promoting critical thinking across curriculums. The integration of these broad skill sets in specific courses presents some challenge to be sure because, typically, a teacher creates a rubric to use in evaluating a specific assignment in a given course, either after or at the same time that the assignment criteria has been created. Even so, critical-thinking skills can be integrated into a wide variety of assignments within different disciplines, particularly since skills associated with rational thinking and scientific gathering of evidence are prioritized in postsecondary institutions (Kovach, 2010). For instance, a rubric designed to evaluate a research paper on "Models of Mental Health" might include a category on "Thoroughness of Research" where the best work might demonstrate "accurate references to multiple, credible sources in the field of mental health" and "effective synthesis and analysis of models." The teacher might require a sound argument based on credible sources about the criteria for an effective model; thus, they would be fostering critical thinking without necessarily mentioning it explicitly. In a way, critical-thinking skills are to a greater or lesser extent already embedded in all postsecondary curriculums and are the responsibility of all college faculty.

Although we are trying to make this the case for the ILO at Confederation College, we have found that we cannot use a single rubric to force a connection between the classroom content and the desired skills, because of the gap between the specificity of our courses (which are much more practically oriented in many cases) and the generality of such a rubric; the more generally applicable a standard becomes, the more abstract it becomes. Moreover, simply introducing Indigenous-specific content (such as historical or cultural facts) will not automatically make Indigenous Ways of Knowing part of the assignments in question. The descriptions of expectations with respect to Indigenous Ways of Knowing must be made applicable to any particular course or assignment in our college — aviation, communications, welding, dental hygiene, marketing, culinary, academic upgrading and more.

We have met this challenge in part by developing a two-step process where faculty can choose a relevant "mode" of Indigenous knowledge and apply it to an assignment and rubric, which they would design for their own course. In fact, we have succeeded in developing some sample assignments and rubrics, as stated previously. We are confident that the assignments we have developed do what we wanted them to do, and in a way that makes sense to the faculty who have worked with us. For an example of such an assignment and its accompanying rubric in the practicing humility mode, see Appendices H, I and J. This assignment was developed with the direct participation of the math upgrading team at Confederation.

Methodological Challenge Number 3: How to Make a General Rubric that Works for all Faculty

This challenge is closely related to the one above, as it again emerges from the tension between generality and specificity. Again, our objectives for this project have required us to define and describe a certain set of skills. To be sure, all our learners, in any program, can and should benefit from acquiring these skills, but the challenge has been to make this skill set practicable for all learners. And again, we are confident that we have a way to do this — but it is not enough to make the skill set fit any content.

The skill set must also be teachable by any faculty. We have met with faculty from different schools and sectors to fine-tune the language of our tools, with the intention of making our framework as clear, reliable and applicable as possible, yet it is clear from working with even our champions, that teachers bring their own perspective, philosophy and expertise. We have faculty who focus on preparing learners to work in specific industries, faculty who teach only practical skills and still others who are communications teachers with graduate degrees. By way of example, in our pilot efforts with a math-related assignment (see Appendices H, I and J), we worked with a group of math instructors with excellent skills in abstract reasoning but also a strong bent toward linear and literal thinking, which made an evaluation based partly on holistic interpretation of written answers a struggle. Moreover, math teachers usually have little need for rubrics and thus not much experience with them, let alone one based on Indigenous Ways of Knowing with which they are unfamiliar. In short, we continue to have a capacity problem, one that will require further and deeper investments in faculty learning.

Methodological Challenge Number 4: How to Be Responsive to Faculty Needs and Promote Indigenous Ways of Knowing

One of the ironies of this project has been that our faculty, as college instructors, tend to have an expertise in more practical, hands-on methods of knowing and teaching that would theoretically make them more hospitable to Indigenous pedagogical approaches (i.e., experiential learning is one of the modes of Indigenous Ways of Knowing). Even so, we know that our faculty are generally unfamiliar with Indigenous knowledge(s). While we have successfully offered a workshop on the subject, which was attended by some 50 participants, plus had one-on-one conversations and orientations, we know that many more need to be willing to participate, not only in a single introductory session, but multiple sessions that will increase their confidence and willingness to engage with this material in their classrooms. The barriers that prevent faculty from integrating Indigenous Ways of Knowing in their teaching extend significantly beyond mere unfamiliarity with the content, a fact that has been well understood for some time now by those who do this work.

To some extent, we are repeating the point that developing an Indigenous-specific rubric is a unique undertaking, but we need to make this point again in relation to the challenge of capacity building across our college. For some faculty, the rubric is filled with unfamiliar words and concepts for which they require education. As with any group of learners, not all faculty are amenable to this type of self-directed learning. We need a more sophisticated, multifaceted approach to capacity development. The framework we have developed would work best within a context in which there has been a complete integration of Indigenous Learning Outcomes for several years, where faculty are already well versed in the content of the ILO. At this stage in the life cycle of our ILO, we are embarking on a renewed plan for full integration that includes extensive initiatives for professional development. It is clear that this professional development must include learning under the umbrella of Indigenous Ways of Knowing, ranging from introductory to advanced, and including specific courses or workshops on each of the four modes: experiential learning, interdependent thinking, storytelling and practicing humility. As well, there must be some training in the use of the framework itself. Finally, capacity building efforts must address the other, more social, emotional and political reasons that faculty may have which cause them to struggle with this material.

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The Indigenous Knowledge Mobilization Packsack

The Teacher-in-Relationship

When we turned to the testing and verification phase for this project, we discovered that the phase one rubric (see Appendix A) was extremely difficult to use in relation to specific assignments. One of the challenges had to do with the apparent abstractness of the four constructs we chose as guiding criteria — that is, four R words: responsibility, respect, realization and reflection. While these words may appear straightforward at first glance, they require a fairly sophisticated understanding for their meaning to be applied in any practical context. Furthermore, they must be understood as they would be within an Indigenous framework. Thus, one of our moves in phase two was to step back from the four Rs and search for alternative, more grounded language.

However, there is one key idea to be drawn from the literature of Indigenous knowledge(s) and pedagogy: Underlying these four Rs, there is a single defining R, which is relationships. Relationships are the substance of all the other Rs (Graveline, 1998). They are the foundation for an Indigenous Knowledge Environment and for any approach to critical thinking based in Indigenous Ways of Knowing. Put in western academic terms, the Indigenous Knowledge Environment defines critical-thinking skills in terms of a relational ontological and epistemological system. This has precedent in western scholarship in certain branches of philosophy (existential phenomenology, for instance), feminist theory and environmental theory. An example is the definition of critical thinking that was adopted for phase one of this project, being that of the pragmatist John Dewey. For Dewey, critical thinking is "[a] meaning making process that moves the learner from one experience into the next with a deeper understanding of its relationship and connection to the other experiences and ideas" (Dewey, 1933, cited in Rogers, 2002, p. 845). Moreover, relational approaches have also been explored in some depth in the fields of nursing and social work.

What all these theoretical approaches have in common is an attempt to systematically define ways of being in the world (our sense of who we are and/or what we are) in relation to everything else in the world. These western frameworks articulate that knowledge requires the learner to engage with what is presented to them, and apply a range of skills, attitudes and meanings to generate knowledge. Knowledge is continuous, socially and culturally grounded, acquired via communicative relationships and made relevant by experience.

The concept of a knowledge environment is consistent with this vision. It designates a space where the raw materials of knowledge are encountered and processed. Relationships generate the conditions for generating structures of meaning in response to a variety of needs ranging from the very practical (survival) to the more abstract (intellectual satisfaction). An Indigenous knowledge environment is therefore a synthesis and a stand-in for a cluster of concepts that might, in other contexts, be called critical thinking, but one that is also reflected in Indigenous scholarship on Indigenous Ways of Knowing, Indigenous cultural practices and Indigenous pedagogy. Indigenous scholarship has already gone a long way toward describing and defining Indigenous Ways of Knowing; it provides terms and ideas without which we would be at a loss to attempt any description (Battiste, 2002; Kovach, 2010). Our sources for understanding Indigenous knowledge-making also include childrearing practices, ceremonies, cultural practices, reported experience and customary narratives. Further, we rely upon conversations

with Indigenous faculty, knowledge-holders, elders and community members experienced in the field of education in arriving at our constructs.

As every person is defined by relationships, this is also the case for teachers in the classroom. Hence, the focal point for our toolkit is the "teacher-in-relationship." This teacher is a node in a web of activities that extend beyond straightforward practices of acquiring information, encompassing an entire process of learning, acquiring, comparing, analyzing and ultimately making meaning of facts, opinions, ideas, theories and arguments within a web of interconnected, embodied experiences. This is depicted in our visual framework (see Figure 2), which places the "teacher-in-relationship" at the centre and defines each of the four modes in terms of relationships.

It might be noted that, when faculty were presented with the idea of a relational understanding of what they do as teachers, many of them appeared to grasp it quite readily and willingly. The work of the tools in the Packsack thus needs to allow them to express this intuitive understanding through their teaching practice.

Four Modes of Being/Knowing

To reiterate, the arrival at four modes within the Indigenous Knowledge Environment was informed by NRC's original research and the result of a number of conversations trying out different descriptors and definitional gestures. In the end, we settled on experiential learning, storytelling, interdependent thinking and practicing humility. Again, these are not meant to be a comprehensive and definitive version of what Indigenous Knowledge is. It must also be remembered that our goal was to connect these constructs with major modes of western critical thinking — for example, self-reflection, independent thinking (skepticism), communication and judgement. Our four modes can indeed encompass many of the skills that are identified in the literature of critical-thinking skills. At the same time, they are necessarily describable in terms of relationships, as can be seen in the following table. A similar table which includes some examples of assignments can be found in Appendix G.

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Figure 1: What's in Your Packsack?

EXPERIENTIAL LEARNING
"HELPS YOU SUSTAIN YOURSELF"
(FISHING TACKLE)

STORYTELLING
"HELPS YOU START A FIRE"
(KINDLING)

PRACTICING HUMILITY
"HELPS YOU SEE WHERE YOU ARE"
(COMPASS)

INTERDEPENDENT THINKING
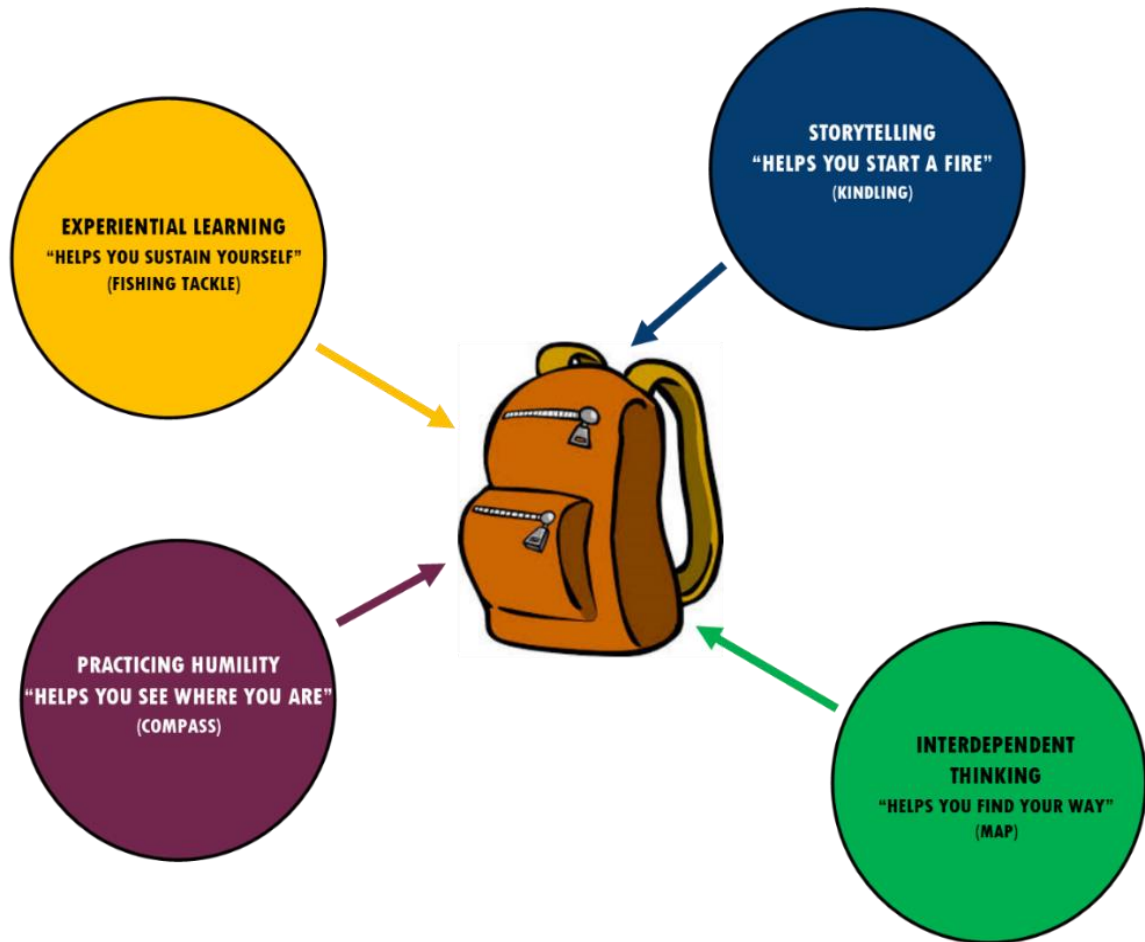"HELPS YOU FIND YOUR WAY"
(MAP)

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Table 1: The Four Modes Related to Critical-thinking Skills

Mode	Relationship-Based Description	Corresponding (Western) Skillset
Experiential Learning	Relationship-based learning	• Appreciating knowledge as an ongoing process • Developing the ability to apply one's learning to new situations • Lifelong, applied and practical learning
Interdependent Thinking	Relationship-based verification	• Maintaining a healthy and self-confident skepticism • Having a critical understanding of how knowledge works • Accomplishing a rational, logical and comprehensive assessment of facts/issues on their own merits
Storytelling	Relationship-based communication	• Practising and developing listening, interpretation, communication and comprehension skills • Maintaining memory and creativity skills (deriving meaning from stories)
Practicing Humility	Relationship-based reflection	• Identifying one's own position in the world • Understanding there is more than one way of knowing • Being aware of one's assumptions, biases and values • Engaging empathically with other perspectives

To be clear, these modes are not watertight compartments. Although they each describe a particular style of Indigenous knowledge-making, they overlap and support each other; this is consistent with a holistic worldview.

The next section describes each of the four modes in terms of relationship in slightly more depth.

Experiential (Relationship-based) Learning

All teaching is founded on relationships, but experiential learning makes the connection between teacher and student the primary means of transmitting knowledge. It is learning by watching and doing, by making mistakes and learning from them. It is the ability to apply one's learning to new situations. It is lifelong, applied and practical learning where one is constantly exploring. Experiential learning activities include learning by observation as opposed to being

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given lectures or abstract instruction, learning by doing, being allowed to make mistakes and having an opportunity to repeat the activity.

Traditionally, such learning would have been land based, in an informal setting. Most importantly, learning in an Indigenous context would be holistic. This means that rather than dividing the knowledge to be learned into separate subjects that would be learned independently and then (hopefully) integrated in the completion of an activity, the learner would be presented with the activity as demonstrated by a knowledge-holder. The different aspects of knowing that relate to the activity would not be compartmentalized but treated as part of a whole — that is, learning to make a necessary thing or perform a necessary task — and the connections between these different aspects would be preserved and strengthened through the experience of mastering the activity. In the end, the learner would hold the knowledge themselves, having gone through a process of trying, repeating and ultimately succeeding in the task.

Interdependent Thinking (Relationship-based Verification)

All thinking is interdependent. That is, it is grounded and informed by the thought of others who have written, spoken and acted in relation to a topic, issue or question. To have a point of view first requires us to find ways to validate its foundations. It means learning to respect the experience, wisdom and acquired know-how of many others. Once we have fully appreciated their knowing and acknowledged our reliance on it, then we can truly take our own position.

Interdependence in knowledge-making is analogous to the notion of being a clear and free thinker. This self-confident intellectual activity does not occur in a vacuum, however. People journey through life in relationships — with family, friends and community. Interdependence in this sense incorporates relation-based verification to effectively determine reality. In other words, we do not make up whatever version of truth that we like based on personal experience, but test our truth through our relationships. It must be emphasized that these relationships do not take place solely with people. The relationships can be with ideas, institutions, group structures — even with books and the conversations, stories and knowledge-sharing that they contain. Indeed, when you study any subject, you enter into a conversation with a group of people already engaged in that conversation, where there are areas of strong agreement, weak agreement, dissent and so on. The sources of information are expanded, but we still have a need to ensure that they are credible, be willing to accept the evidence of one's sensory experience, and put in the work to acquire potential knowledge via reading, watching and other forms of communication.

Practicing Humility (Relationship-based Self-reflection)

The concept of humility refers to acknowledging the contribution others have made to your learning, and the ability to recognize that you are not all-knowing. A learner demonstrates humility when they acknowledge and honour where knowledge has come from and are mindful of what they do not know. The learner demonstrates respect by always giving credit to those whose knowledge they share. To know means to know ourselves and how we are shaped by the web of connections we are a part of. When meeting others with their own, unique set of connections, we are required to truly see ourselves and to accept that our biases, assumptions and values are variable. Then we can see that we can make new choices about our position in the world. We can even forge new connections.

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Humility is a value, a skill and an attitude, and one must commit to its practice. Humility incorporates open-mindedness to the existence of others' values and respect for difference. It also incorporates being open to new things, first by listening (or watching), and then interpreting, reading and ultimately interacting with multiple types of sources. It includes the challenge of accommodating new concepts and information into one's world. It may also mean spending time contemplating the contradictions in the knowledge acquired.

Storytelling (Relationship-based Communication)

Stories are everywhere, not just in the classroom. Stories help us know who we are by connecting the one who shares and the one who receives. They convey knowledge, lessons and frameworks for understanding the world. To know through stories requires us to learn how to listen and comprehend, how to read, interpret and remember.

Knowledge-making is accomplished by sharing knowledge through stories, traditionally via oral transmission. Nowadays one can "listen" to stories by reading them and by hearing them in person. One can also read the unspoken stories behind the images and words that are present. To do all this requires powerful communication — reading, written and aural skills. It also requires a willingness and a capacity to articulate one's thoughts in a reciprocal dialogue.

It needs to be added that sharing stories is also a way of guarding against a loss of clear thinking, for sharing knowledge (via communication) is part of the testing process. It also enables one to demonstrate knowledge and perpetuate it.

Packing our Toolkit

In keeping with our intention to make the tools we developed as relevant and context specific as possible, we chose to envisage the knowledge environment in a way that relates it to classroom delivery, and at the same time to the context of northwestern Ontario. Through brainstorming and discussion, we hit on the idea of a package, which eventually became a packsack. The Packsack references a context where people (those using the packsack) are often familiar with being on the land harvesting and sustaining themselves (in a modern context, this might be camping or hiking) and are also familiar with the tools that are necessary during such adventures.

Similarly, in their new teaching adventures in the Indigenous Knowledge Environment, teachers will need certain tools to navigate it successfully. The different types of tools are reflected in the four modes with their respective icons. When living on the land, you need shelter, warmth, food and a way to situate yourself. Likewise, in a world of constantly expanding information, the four modes are like tools to help you through (by organizing information into knowledge in an Indigenous way). The teacher chooses the tool (mode) that is most useful at that moment, given the topic and what objectives need to be achieved. If they use the specific criteria identified in the tools to create an assignment and rubric, they are advancing good thinking/good knowing via Indigenous ways and, not coincidentally, getting a step closer to full implementation of the Indigenous Learning Outcomes.

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Figure 2: Indigenous Knowledge Mobilization Packsack
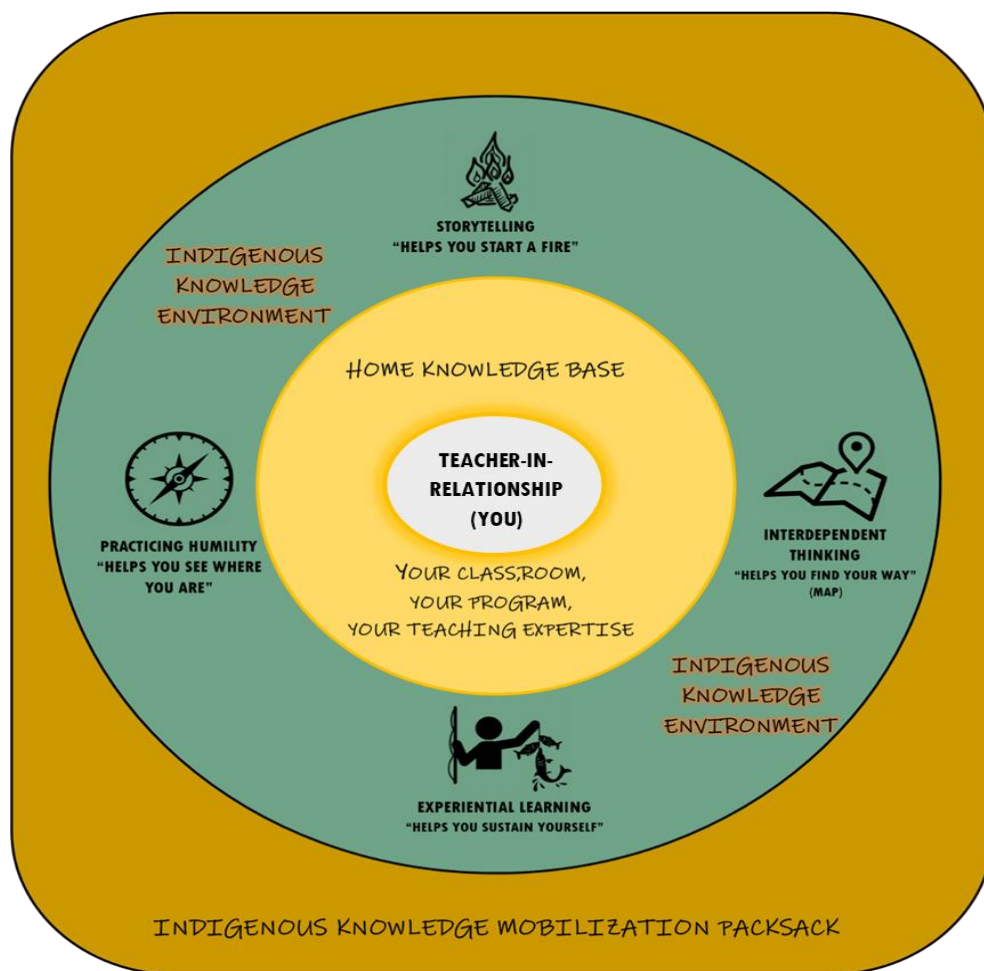
After choosing the appropriate mode, the teacher would then have access to one of the four related assignment and rubric creation tools; one has been created for each mode (see Appendices C to F). The intention is that the instructor will not only have guidance as to what each of the modes means, but also specific standards that will help them to be confident that they have created an assignment and a system of evaluation that, if they meet the criteria identified, are authentically based in a notion of Indigenous "good knowing." The flowchart provided in Appendix B presents an overview of the process a teacher would follow in adopting one of the modes in a classroom assignment.

During the winter of 2019, we were able to engage in an initial and somewhat limited testing process with these tools. In four separate classes and topic areas, teachers chose a mode, developed an assignment and rubric, and delivered them in their classrooms. Based on the feedback we received, we can put forth a number of lessons. As we move forward with the tools inside our institution, we hope to further test both the premises (lessons) and the tools themselves even further.

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New Lessons Learned

Lesson Number 1: The Modes Allow Faculty to Exercise Choice and Creativity

The four modes can be an effective way of encouraging teachers to integrate Indigenous Ways of Knowing in the classroom. Having made several presentations to groups as well as conversing one-on-one with teachers, we can state that the ideas make sense to teachers, although in some cases teachers don't understand as well as they think they do, indicating a need for ongoing professional development. For instance, the concept of storytelling within an Indigenous framework will require some specialized training sessions that explore the possible meanings and functions of storytelling. Nevertheless, it is encouraging to see faculty embracing the modes. Moreover, it appears that giving faculty a choice of modes will help overcome some of the hesitation we have observed. This flexibility inherent in the framework makes it possible for Indigenous Ways of Knowing to relate to any teaching in any classroom.

Lesson Number 2: There is No Substitute for Experience

It is easy sometimes to spend many hours elaborating on the language of an assignment or rubric, relying on the teacher's experience and expertise. Yet no matter how carefully and accurately we choose our words, there is no substitute for trying things out in practice. Teachers may have a vision of what their assignment or rubric needs to be, yet this can change completely once they get in the classroom and try out the learning tools. For this reason, an important piece of the Packsack moving forward should be a bank of sample assignments, including reliable rubrics previously used and fine-tuned.

Lesson Number 3: Different Teachers Really Do Have Different Needs

As much as our tools need to maintain consistent criteria, it appears that teachers of different subjects really do have different needs, much like learners. Working with our faculty in the initial testing of the toolkit, we have come to appreciate that all the capacity-building in the world will not change how certain brains work. For example, in one of our pilot exercises we were working with math teachers who were very invested in the project. They loved the assignment they were giving and felt it was very important learning for their students; nevertheless, some of them will always be "math heads." This is to say that when it came to understanding and applying a rubric, their approach was surprisingly and unexpectedly linear. We were then faced with the challenge of making the words as simple as possible without losing the essence of the skills we wanted to inculcate. Similar dynamics could arise with teachers in other fields, such as in the technical and trades areas. The answer to this problem is not yet clear, although for a start, we will have to think about different types of rubrics.

Lesson Number 4: Capacity Building Needs to Go Deeper

One of the areas where we have observed a significant gap in faculty capacity is, for lack of a less academic term, discourse analysis. Faculty in some schools and departments are very comfortable with this way of analyzing words and media at large, but many are not. For example, one faculty member with whom we were working pushed back against the frequent

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Indigenous critique of Western approaches to understanding the environment; as an environmental scientist who takes seriously her responsibility to incorporate relational and Indigenous perspectives in preparing her students to work in this field, she struggled with an analysis that seemed to contradict or perhaps deny entirely her efforts to infuse Western science with alternative ways of generating knowledge about the natural world, while the analysis reflected a common critique of how Western science, as a system for codifying knowledge, treats the natural world, i.e., as a an object to be interrogated and a commodity to be exploited. She took this analysis of a broad cultural discourse as a direct description of her own work as a scientist and claimed it was simply not true. When handling certain ideas (discourses), teachers need to be able to see how their best efforts are nevertheless participating in systemic power structures embedded in everyday culture, notwithstanding individual differences, beliefs, experiences. Candidly, not all college faculty have been educated to think in this way, yet it is essential to the delivery of the ILO as they were intended to be taught.

Lesson Number 5: Sometimes One-on-One is the Best Approach

In the past, we have held group meetings as a method to draft and revise our tools, but consistently struggled with negotiating differences amongst the attendees. In the past months, we have adopted an approach of speaking one-on-one or in small groups with various stakeholders. While this was in part necessary at this stage of the work, it has revealed the strength of a recursive process in developing the products. In short, the more time spent in individual conversation, the better the relationship and the greater the trust. This is a kind of collaborative creation based on a feedback loop.

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Conclusion

This project originated from a need to develop a process to assess the progress of inclusion of ILO at Confederation but also to provide a model for the teaching and assessment of Indigenous knowledge in postsecondary education. Specifically, this project sought to create an assessment tool that is congruent with Indigenous understandings of critical thinking in order to best determine how the knowledge, skills, and attitudes within the ILO have informed the critical-thinking skills of both Indigenous and non-Indigenous learners in a variety of college programs. In the first phase of the project, we developed a single rubric grounded in four fundamental R words: responsibility, respect, realization and reflection. However, we found that these ideas were difficult to use in specific practical contexts. Thus, one of our moves in phase two was to step back from the four Rs while still considering them the foundation of an Indigenous approach to thinking. We noted that relationships are the substance of all the other Rs and the foundation for any approach to critical thinking based in Indigenous Ways of Knowing. We developed a multistep process using a meta-rubric or "packsack" that could generate other classroom-specific rubrics while achieving the goal of including and measuring Indigenous-specific ways of knowing.

The outcome was the Indigenous Knowledge Mobilization Packsack, which has been tested in four classrooms to date. Our objective at this point is to complete our Packsack materials and release them, college wide. Critical to this next step will be putting in place a means to ensure the collection of data as to how the four modes get implemented, and most of all, to collect examples. We envision a rich array of examples ranging across all schools and content areas in our college. The more examples we collect, the more we will be able to learn.

As a final thought, it can only be reiterated that one of the major lessons of this project has been the important role of capacity development. We must continue with increased and more varied efforts in this regard, and can only infer that the same will be true in other institutions. In particular, we must address the issue of white fragility, which has haunted us throughout the years in which this project was delivered and is an ongoing issue in relation to the implementation process for the ILO as a whole. In our work (not just on this project but any work related to the ILO), we have found that white fragility is a major barrier to success. Certainly, our faculty are under a great deal of pressure to teach certain content within a certain timeframe and don't feel like they have time to engage in research and study. However, they frequently express what J.P. Restoule noted as "benign resistance," taking the form of concern that they will make a mistake or be called out for teaching things they don't have the right to teach. As much as it is true that faculty need support to grow into delivering ILO, their resistance can be a manifestation of privilege. For example, we have found that, on one hand, White teachers welcome being told by another White or non-Indigenous person that they *can*, i.e., are allowed, to teach this material .[4] On the other hand, they often insist that they want an elder or an Indigenous person to deliver the material for them. This puts NRC and the implementation of ILO in a no-win situation while the teachers can maintain their comfort zone, a place where they

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[4] While we appreciate and understand that not every non-Indigenous person is White, the predominant tension in our college is between White teachers and the Indigenous content they have been "commanded" to bring into their classrooms. Historically, Thunder Bay has not had a very diverse population although recently this has somewhat changed. Our student body is roughly one third domestic (predominantly White), one third Indigenous, and one third international.

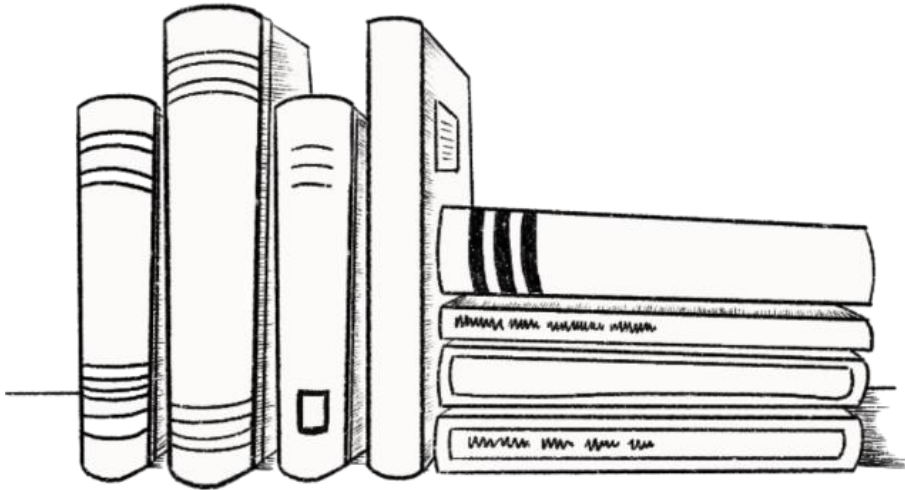Higher Education
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can have it both ways and avoid making any changes at all to their teaching practice.

If nothing else, these tensions give us an opportunity to clarify our own response. We have developed a kind of standard response to teachers who fret about conflict in the classroom and doing the right thing. The response goes something like this: This is truly a question of capacity-building. Teachers do need to engage in some study in order to be confident in presenting the material, but they certainly need not present themselves as experts. Also, there is a difference between teaching Indigenous Knowledge as it is presented by Indigenous scholars and presenting spiritual or ceremonial knowledge (the latter which we do not encourage). We have to consider that teachers may still get some negative reactions from students, and they will need to prepare themselves with some serious reflection. To some extent, this is a classroom management issue.

The alternative is to back down from our vision for Indigenous Learning Outcomes at Confederation College, which is not an option for us. In our work on the ILO, we constantly have to navigate an Indigenous-non-Indigenous interface where the threat of cultural appropriation is repeatedly raised, despite the fact that we are working with the Indigenous community and have always done so. The reality is that there will never be complete consensus among Indigenous people on this issue, but we are inspired by the many Indigenous people working inside colleges and universities who would answer the question of appropriation with a pointed question about moral obligation: "Instead of asking, 'Do I have the right to teach this material?' ally teachers should reframe the question as, 'What is my responsibility'?" (Restoule, 2013, p. 35). We view this ILO work and the development of the Indigenous Knowledge Mobilization Packsack as required for teachers who seek to be accountable for their history as Canadians and thus accountable to their community as citizens with their teaching. Seen in this light, the inclusion of Indigenous Ways of Knowing across postsecondary education is not an option — it is a necessity.

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References

Anuik, J., & Gillies, C. (2015). Indigenous knowledge in post-secondary educators' practices: Nourishing the learning spirit. *Canadian Journal of Higher Education, 42*(1), 63–79. https://journals.sfu.ca/cjhe/index.php/cjhe/article/view/1902/182507

Battiste, M. (1998). Enabling the autumn seed: Toward a decolonized approach to Aboriginal knowledge, language, and education. *Canadian Journal of Native Education, 22*(1), 16–27.

Battiste, M. (Ed.) (2000). *Reclaiming Indigenous voice and vision*. UBC Press.

Battiste, M. (2002). *Indigenous knowledge and pedagogy in First Nations education: A literature review with recommendations*. Apamuwek Institute. http://www.usask.ca/education/documents/profiles/battiste/ikp_e.pdf.

Cajete, G. (1995). *Look to the mountain: An ecology of Indigenous education*. Kivaki Press.

Corbiere, A. I. (2000). Reconciling epistemological orientations: Towards a wholistic Nishnaabe (Ojibwe/Odawa/Potowatami) education. *Canadian Journal of Native Education, 24*(2), 113–120.

Graveline, F. J. (1998). *Circle works: Transforming Eurocentric consciousness*. Fernwood Publishing.

Kirkness, V., & Barnhardt, R. (1991). First Nations and higher education: The four R's = respect, relevance, reciprocity, responsibility. *Journal of American Indian Education 30*(2), 1–15.

Kovach, M. (2010). *Indigenous methodologies: Characteristics, conversations, and contexts*. University of Toronto Press.

Little Bear, L. (2009). *Naturalizing Indigenous knowledge: Synthesis paper*. University of Saskatchewan, Aboriginal Education Research Centre, Saskatoon, Sask. and First Nations and Adult Higher Education Consortium, Calgary, Alberta. www.aerc.usask.ca.

Restoule, J.P. (2013). Everything is alive and everyone is related: Indigenous knowing and inclusive education. In Malinda S. Smith (Ed.), *Transforming the academy: Indigenous education, knowledges and relations* (pp. 32–36). University of Alberta.

Rhodes, T. (2010). *Assessing outcomes and improving achievement: Tips and tools for using rubrics.* Association of American Colleges and Universities.

Rogers, C. (2002). Defining reflection: Another look at John Dewey and reflective thinking. *Teachers College Record 104*(4), 842–866.

Truth and Reconciliation Commission of Canada. (2015). *Truth and Reconciliation Commission of Canada: Calls to Action*. http://www.trc.ca/assets/pdf/Calls_to_Action_English2.pdf

Wimmer, R. J. (2016). The 4 Rs revisited, again: Aboriginal education in Canada and implications for leadership in higher education. In L. Schulz & M. Viczko (Eds.), *Assembling and governing the higher education institution* (pp. 257–270). Palgrave MacMillan.

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