

Explain the importance of indigenizing Ontario's high school biology curriculum

Instructor's Guide

Prepared by Megan Clare

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Summary of the Design Plan

Title	Explain the importance of indigenizing Ontario's high school biology curriculum
Description	The Ministry of Education in Ontario has asked the Ontario Institute of Studies in Education (OISE) to create a mandatory two-day training on indigenizing the curriculum for Ontario high school teachers. Indigenizing the curriculum refers to incorporating the communities' ways of knowing, being, doing, and relating into the educational, organizational, cultural, and social structures of schools (adopted from Camosun College, n.d). To begin the training, a 30-minute module will cover the importance of indigenizing the high curriculum. The module is intended to introduce teachers to the topics of the two-day training. Teachers' pre-conceived notions and attitudes towards Indigenous knowledge will be addressed in the design through the instructional strategy and activities.
Format	Live
Medium	Face-to-face
Instructional strategy	The course will follow a discovery learning instructional strategy. The classical approach is best suited for courses where learners need to make an adjustment - such as an adjustment in their beliefs (Carliner, 2015).
Structure Unit front matter includes a title slide and an introduction slide with objective(s). Unit back matter includes a summary slide.	<ul style="list-style-type: none"> • Course front matter (title slide, purpose, agenda, objectives, prerequisites, administritivia) <ul style="list-style-type: none"> ○ Unit 1: Knowledge systems <ul style="list-style-type: none"> ▪ Explain what scientific knowledge is ▪ Explain what indigenous knowledge is ▪ Compare scientific and indigenous knowledge ○ Unit 2: Historical context <ul style="list-style-type: none"> ▪ Provide at least four examples of ways that indigenous knowledge has been stunted in Canada ○ Unit 3: Benefits to Canadian science <ul style="list-style-type: none"> ▪ Given an example, describe how indigenous knowledge has benefited Canadian science ○ Unit 4: Benefits for the students <ul style="list-style-type: none"> ▪ Explain the benefit of indigenizing the curriculum • Course back matter (summary, level 2 learning evaluation, level 1 reaction evaluation, additional resources)

The most recent version of the design plan for this course can be obtained by emailing <name> at <email>. The plan has been approved by the Director on <date>.

Setup Instructions

Materials

To be picked up as a package from the coordinator upon arrival

(N = number of learners – maximum of 24)

- ☐ N + 4 copies of the scientific knowledge handout
- ☐ N + 4 copies of the indigenous knowledge template handout
- ☐ N + 4 copies of the Indian Act handout
- ☐ N + 4 copies of the Residential Schools handout
- ☐ Historical medicine case studies binder
- ☐ Aspirin case studies binder
- ☐ Diabetes case studies binder
- ☐ Climate case studies binder
- ☐ Wildlife management (caribou and moose) case studies binder
- ☐ Wildlife management (bears and birds) case studies binder
- ☐ Wildlife management (wolves and fish) case studies binder
- ☐ Wildlife management (clams) case studies binder
- ☐ N + 4 copies of the benefits for students handout
- ☐ N + 4 copies of the level 1&2 evaluation
- ☐ A large envelope for the evaluations
- ☐ N + 4 copies of the additional resources handout
- ☐ N + 4 poster boards
- ☐ 30 pens
- ☐ Assorted coloured markers
- ☐ 6 scissors
- ☐ 6 glue sticks

To be provided by you

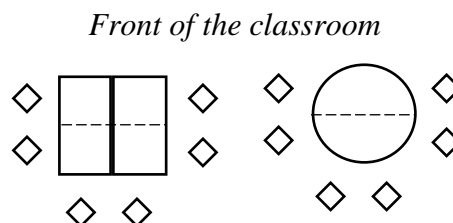
- ☐ Smartphone or digital camera to take photos of the poster boards created in unit 4
- ☐ Laptop and any adaptors needed (HDMI and VGA provided)
- ☐ USB with the presentation as a back-up

Room

The training will be held at local high schools for each region. The classrooms will be approximately the same size with a capacity of 30 learners, but with different layouts. The maximum number of learners for each section is 24.

Set up the room to the best of your ability with the following configuration.

- ☐ Put 4-6 learners at each table or cluster of tables, so that everyone faces the front of the classroom – each diamond represents a learner
- ☐ Put any unused tables at the back of the classroom
- ☐ Stack any unused chairs at the back of the classroom



Audiovisual

1. Use the HDMI or VGA connectors to connect your laptop in the classroom
2. Project the slides from your laptop
3. Contact the coordinator at <phone number> or locate them at the sign-in table if you have any issues

Instructor Materials

Visuals

Slides with the instructor's notes are included on the following pages.

Only unit 4 is included at this time.

Activities

The instructor's notes contain detailed information for facilitating the activity in each unit.

- Unit 1
 - Slide #: scientific knowledge handout (individual activity)
 - Slide #: indigenous knowledge template handout (individual activity)
- Unit 2
 - Slide #: Indian Act handout (group activity)
 - Slide #: Residential Schools handout (group activity)
- Unit 3
- Unit 4
 - Slide #: Indigenizing the science curriculum, benefits for my students (individual activity)
- Back matter
 - Slide #: Level 1 evaluations
 - Slide #: Level 2 evaluations
 - Slide #: additional resources handout

Handouts

- Scientific knowledge handout
- Indigenous knowledge template handout
- Indian Act handout
- Residential Schools handout
- Benefits for students handout
- Level 2 evaluation
- Level 1 evaluation
- Additional resources handout

Handouts are included on the following pages.

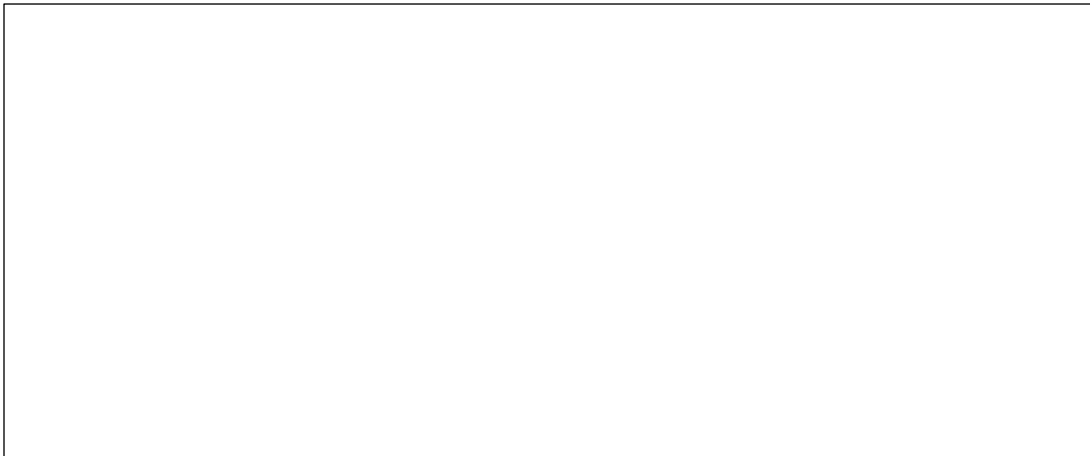
Only unit 4 and evaluation handouts are included at this time.

Name: _____


1. Read the scenario below then answer the following two questions:

A person wants to know more about black bears. They travel to a remote location that a community of black bears inhabits. To fully understand the community, the person observes the black bears for 2 years. Through this experience, they collect new information about how black bears behave and interact with each other and the environment.

- a. What information is needed to determine whether the knowledge gained would be considered scientific?




- b. What information is needed to determine whether the knowledge gained would be considered indigenous?



2. Which one of the following differentiates scientific and indigenous knowledge?
 - a. Indigenous knowledge is historic
 - b. Indigenous knowledge is holistic
 - c. Scientific knowledge is robust
 - d. Scientific knowledge is written

3. Describe 4 ways in which indigenous knowledge has been stunted in Canada.



4. Read the conclusion from a 2007 study below then answer the following question.

“This paper documents a meeting of scientists and representatives of an aboriginal community for the purpose of direct information exchange and communication. Traditional knowledge as a source of local-scale expertise about the regional landscape and climate systems is especially valuable. The elders of the community have in-depth knowledge of the lake and land resources and the way these are linked to climatic phenomena. A number of interesting points raised in these discussions suggest research hypotheses that could be investigated jointly, using both scientific techniques and traditional knowledge.

A major goal of the meeting was to communicate the principal MAGS research findings of interest to the community, those concerning climate and water resource phenomena. Scientific knowledge was not generally seen as supplanting traditional knowledge, but rather as a useful source of additional information that complements traditional empirical information and can be applied within a traditional moral and ethical framework. During the meeting, a participant expressed the view that the community knowledge system continuously incorporates new information from scientific and other sources to build upon its traditional foundations. This underscores the importance of making research results accessible through appropriate publication and direct dialogue between scientific and traditional knowledge keepers.

Discussions about the physical environment proved to be an effective vehicle through which to conduct knowledge exchange. Both parties acknowledged an initial lack of familiarity with each other's knowledge base. The meeting demonstrated the value of direct dialogue in providing scientists with an appreciation of the richness and importance of traditional knowledge and in providing community members with an understanding of the scope, relevance, and reliability of scientific studies. All participants were pleased with the cordial and open nature of the information exchange. The consensus was that the Deline meeting had enhanced the potential for traditional knowledge to help direct and validate scientific investigations and for scientific knowledge to be used in conjunction with traditional knowledge to guide community decision making. The outcome of this direct dialogue leads us to recommend strongly that such opportunities continue to be pursued.”

Woo, M. K., Modeste, P., Martz, L., Blondin, J., Kotchtubajda, B., Tutcho, D., Gyakum, J., Takazo, A., Spence, C., Tutcho, J., Di Cenzo, P., Kenny, G., Stone, J., Neyelle, I., Baptiste, G., Modeste, M., Kenny, B., & Modeste, W. (2007). Science meets traditional knowledge: water and climate in the Sahtu (Great Bear Lake) region, Northwest Territories, Canada. *Arctic*, 60(1), 37-46.

Describe how indigenous knowledge benefited the researchers.

5. Reflect on how incorporating indigenous knowledge into the curriculum will benefit your current and future students. Please incorporate at least 6 benefits into your answer.

In a word, how would you describe this course? _____

Using a number, how would you describe this course?

1	2	3	4	5
Horrible		Average		Superb

How comfortable did you feel explaining the importance of indigenizing the high school biology curriculum before this course?

1	2	3	4	5
Not Comfortable		Somewhat Comfortable		Extremely Comfortable

How about after?

1	2	3	4	5
Not Comfortable		Somewhat Comfortable		Extremely Comfortable

Would you take this course if it were not mandatory?

1	2	3	4	5
Definitely Not		Maybe		Absolutely

The best part of this course was ...

--

The one thing that could improve this course the most is ...

--

Adapted from Carliner (2015) *Training Design Basics*.

Building cultural bridges with Aboriginal learners and their ‘classmates’ for transformative environmental education

Annamarie Hatcher

Published online: 7 August 2012

If our collective future is to be one of harmony and wholeness, or if we are to even have a viable future to pass to our children’s children, it is imperative that we actively envision and implement new ways of educating for ecological thinking and sustainability.” (Cajete 2009) It is time to honour Indigenous knowledge which is unfiltered through the Western lens. By doing this, we can leave a significant legacy for all of our children in our relationship with Mother Earth as well as make a step towards addressing the educational power imbalance of the past between the settlers with white privilege and those who are part of the land that the settlers colonized...

The cultural underpinnings of modern science

...[some of the challenges in bringing Indigenous Sciences into the classroom] include the legacy of consistent attempted assimilation of Indigenous culture by colonizing cultures. This legacy has made Indigenous peoples the subjects of study rather than active generators of knowledge and has perpetuated a climate dominated by racist attitudes. For transformative environmental education for all learners, we need to bring the Indigenous education model into the classroom with Western models using the principle of ‘Two-Eyed Seeing’, a form of cultural humility that will give us some tools for cultural border crossing.

Education models and the Two-Eyed Seeing classroom

In the Indigenous education model, knowledge is passed to another only when a relationship between the giver and receiver is formed and when the knowledge receiver is ready. This basic concept comes into play in the classroom where the development of relationships among participants must precede any effective learning. In the Aboriginal way of knowing, children learn by close observation and not by being verbally taught. They have to learn to be close observers of nature. Advice is given indirectly in the form of Legends and stories because there is a trust in the human consciousness and the ability of people to draw the conclusions that are best for them. Learners are allowed to make mistakes in order to learn, which can be a very effective education model. Learners who are able to make connections between new knowledge and previous understandings retain and understand information better than those who learn by rote (Novak 2002 as cited by Kavanagh et. al., 2006). The main ethical educational rule in Indigenous Science is not to give direct advice or criticism...

Inclusive education does not mean replacing one worldview (Eurocentric) with another (Aboriginal). This is the underpinning of the concept called Two-Eyed Seeing, brought forward by Mi’kmaw Elder Albert Marshall (Hatcher et al 2009a; Bartlett et al. in press)...

Two-Eyed Seeing is a form of cultural humility, a prerequisite for successful cultural border-crossing. Flexibility is the key to successful cultural border crossing (Aikenhead and Jegede

1999). To successfully cross cultural borders is to shift from being one person in one context to being another person in a different context without losing self-identity. The cultural borders could be from the world of white middle class to that of an Aboriginal student who lives on a reserve or the world of an Afro-Canadian woman in a white male-dominated workplace...

Intuitive education

Holistic curriculum needs to connect intuition and linear thinking (Miller 2007). Intuition is direct knowing, which is linked to creativity, while linear thinking progresses through sequential steps... Intuition can be incorporated into the classroom through the use of visualization. For example, visualizing yourself as a white blood cell can be part of a science and a creative writing class. Metaphors, or making a connection between words that are not normally connected, are also a useful way to bring intuition into the classroom. The use of metaphors forces students to imagine connections and see patterns among ideas and subjects (Miller 2007). The recognition and processing of patterns is the basis of scientific inquiry within all world views....

Theme-based inquiry and instruction: lifeways

Within the Indigenous worldview, education mirrors 'theme based' curriculum in the Eurocentric world view... Learning in the Aboriginal context is "as much a spiritual, social and cultural process as it is a cognitive one" which can't be separated from the "larger cultural and social matrix from which it is defined" (Michell et al 2008). Modern theme-based curriculum is multidisciplinary and well-integrated across disciplinary boundaries. Themes weave together subjects and experiences that are found in the students' lives and provide opportunities to develop instruction using many of the students' multiple intelligences (Armstrong 2000)...

Inquiry-based learning within themes

Inquiry or problem-based learning can be imbedded in a theme-based curriculum... This approach is one that can span both Western and Indigenous Sciences, based on the principles of 'learn by doing' and 'learning in meaningful contexts'... The problem-solving approach to learning develops attitudes in learners which resonate with the philosophy of Indigenous Sciences. Specifically, learners become successful collaborative learners, knowledge is relevant and applied and connected to prior learning, and learners become self-directed, assuming responsibility for their own learning...

Holistic sciences curriculum

Holistic curriculum is based on the principles of connection, balance and inclusion and it attempts to align science education with the fundamental processes of nature. In the classroom, a healthy balance must be reached between individual and group learning, content and process, knowledge and imagination, reason and intuition, quantitative and qualitative assessment. Balance is achieved through lessons which use several of the multiple intelligences. Linear thinking can be balanced with intuition, using metaphors, visualization techniques and Indigenous Sciences pedagogy such as the Medicine Wheel (Lane et al 1984).

Transformational learning pedagogy

...Perspective transformation is the process of becoming aware of how existing assumptions affect the way we perceive and understand the world, how these assumptions can be altered to allow for a change in perspective, and how this change can lead to new understandings. In transformational learning, individuals create meaning structures for their experiences through the frames of reference created by their values, beliefs, and assumptions. In this way, the learner can learn to see through the other's eye without subsuming his/her cultural identity.

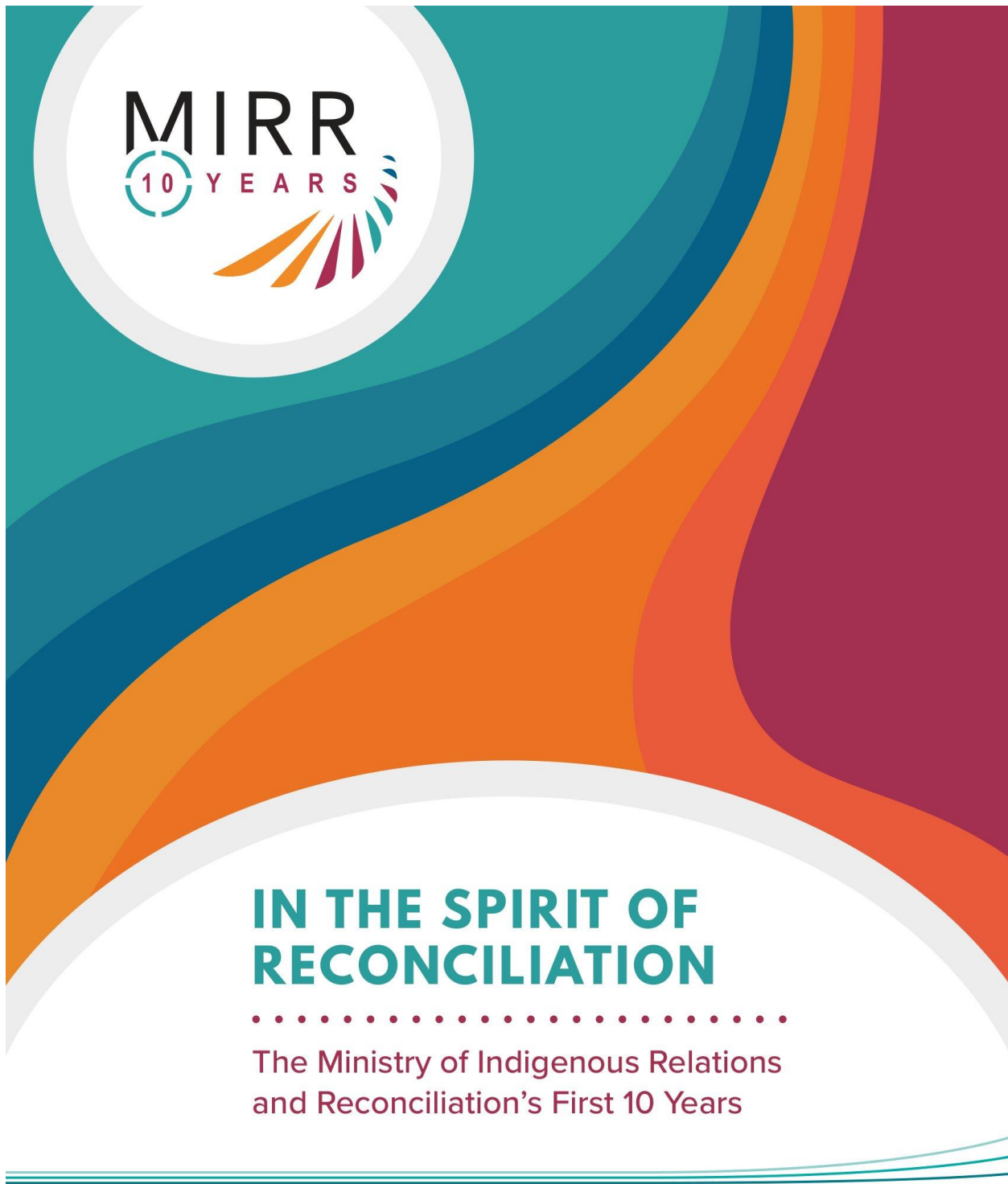
Montessori philosophy of teaching and the Two-Eyed Seeing guiding principle

Montessori education is a good example of a holistic model, a balance of teaching and assessment strategies and a vision of the learner as a whole person (Miller 2007). The Montessori approach to learning is based on the premise that the 'learner' has sensitive periods when he or she is open for a particular type of understanding and that if the understanding is not gained in the particular sensitive period it will be more difficult to gain... This concept of 'sensitive periods' during human development relates to the Indigenous worldview where knowledge is passed to another only when the knowledge receiver is ready. In Mi'kmaq teachings, in the circle of life, gifts from the Creator are given at certain periods during a person's development...

Transformative education and the 'Healing' journey

Transformative environmental education serves a dual purpose. All learners can benefit from the holistic relationship with Mother Earth embodied in the Indigenous worldview. In addition, equal representation of Western and Indigenous Sciences acknowledges that the educational process can be one of unequal power relationships and that learners should be active creators of knowledge rather than passive recipients (Royal Commission on Aboriginal Peoples, 1991). The teacher is a facilitator who can guide the educational process without dominating, as is the case in a Montessori classroom. Transformative education is contextual. It ties the personal experiences of the student into a larger world of learning and understanding. This educational process is participatory and may take various forms such as experiential learning, research projects, and oral histories. Knowledge is shared among all participants and there is no competitive ranking of performance (Royal Commission on Aboriginal Peoples, 1991)...

To achieve an Indigenous context for education, educators must be committed to holistic teaching and learning processes. Cajete (1994) described the transformational nature of Indigenous education which emphasizes the Indigenous understandings that: learning happens of its own accord in prepared students, learners and learning situations are all unique, learning is lifelong and collaborative between learner and teacher (human or otherwise) and effective learning occurs within a context of a greater whole. Similarly, according to Michell et al (2008), these themes describe effective school practices for Indigenous science education: holistic knowledge and spirituality, indigenous knowledge of local populations, student engagement, strong community and parent relationships and effective teacher education and pedagogy. These changes represent a step in the healing journey of Aboriginal communities and culture, recovery from colonization and systematic racism experienced over many generations.



INDIGENOUS PEOPLE IN ONTARIO

DEMOGRAPHICS



Ontario has the **largest Indigenous population** in Canada (374,395)*. The second largest Indigenous population is in British Columbia (270,580).



Ontario has the largest First Nations population in Canada (236,685 or **24** per cent of the total First Nations population in Canada).



There are **120,585** self-identifying Métis people in Ontario, which is a **40** per cent increase from 2011 and an increase of **64** per cent since 2006.



With a population of **3,860**, the Inuit represent **1** per cent of the total Indigenous population in Ontario.



The Indigenous population in Ontario **increased by 54** per cent from 2006 to 2016. There are two explanations for the large growth in the Indigenous population: natural growth and an increase in people voluntarily self-identifying as First Nations, Inuit, or Métis.



Of the **58,100** people living **on reserve** in Ontario, **93** per cent identify as **First Nations**. Approximately 7 per cent identify as **Métis, Inuit, other Indigenous or non-Indigenous**.



23 per cent of First Nations people in Ontario live on reserve.



133 First Nation communities are located in Ontario, the **second-highest** number in Canada after British Columbia (source: Chiefs of Ontario).



78% per cent of First Nation communities in Ontario are located in **Northern Ontario**.



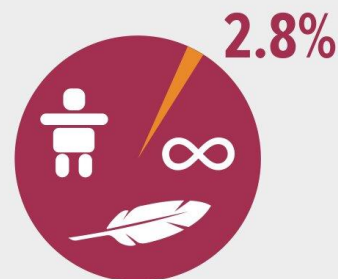
1 in 4 First Nation communities in Ontario is a **remote community**, accessible only by air year-round or by ice road in the winter. Ontario has the **highest number** of remote First Nation communities in Canada.



The average age of the Indigenous population is **33.6** years compared to **40.7** years for the non-Indigenous population in Ontario.



Thunder Bay is the Census Metropolitan Area with the highest proportion of Indigenous people in Canada (**12.7** per cent of the population).



Indigenous people represent **2.8** per cent of the total population of Ontario.

**** While the Census of Population is the most comprehensive data source available, some Indigenous organizations question the cultural appropriateness of the methodology used by Statistics Canada for the Census, resulting in possible over- and under-counting of certain Indigenous populations. Source: Statistics Canada, 2016 Census of Population

SOCIO-ECONOMIC INDICATORS:

INCOME:



The median annual income for Indigenous people in Ontario (aged 25-64) is **\$33,218** (\$30,819 after-tax) compared to **\$42,564** for the non-Indigenous population (\$37,779 after-tax).



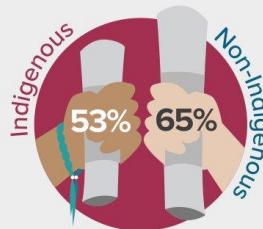
The prevalence of low incomes for the Indigenous population in Ontario (aged 25-64) is **21** per cent, which is higher than the rate for the non-Indigenous population at 13 per cent.

Source: Statistics Canada, 2016 Census of Population

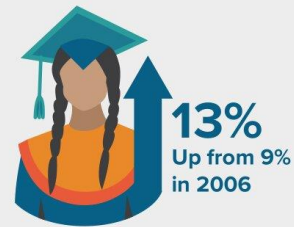
EDUCATION



The high school completion rate of Indigenous people (aged 20-24) is **76** per cent, below the rate of the non-Indigenous population at **93** per cent. For First Nations living on reserve, the rate is 45 per cent.



53 per cent of the Indigenous population vs. **65** per cent of the non-Indigenous population in Ontario (aged 25-64) has attained some form of post-secondary education (apprenticeship, trades certificate, diploma, college or university).



13 per cent of Indigenous people in Ontario hold a university degree (aged 25-64), up from 9 per cent in 2006.

Source: Statistics Canada, 2016 Census of Population

LIFE EXPECTANCY:



Life expectancy for Indigenous people remained about **10 years lower** than for the non-Indigenous population (71 years compared to 81 years).

Source: Statistics Canada, Vital Statistics custom tabulation

JUSTICE SYSTEM INVOLVEMENT:



The 2017 Independent Review of Ontario Corrections found that “Indigenous peoples account for approximately 2 per cent of Ontario's population and yet in 2016 represented **13** per cent of those in provincial custody. One in three Indigenous people admitted to Ontario's correctional institutions last year, and over half of the Indigenous people admitted to segregation, were flagged with a suicide risk alert. Both of these rates are higher than in the non-Indigenous population.”

Source: Statistics Canada, Adult correctional services

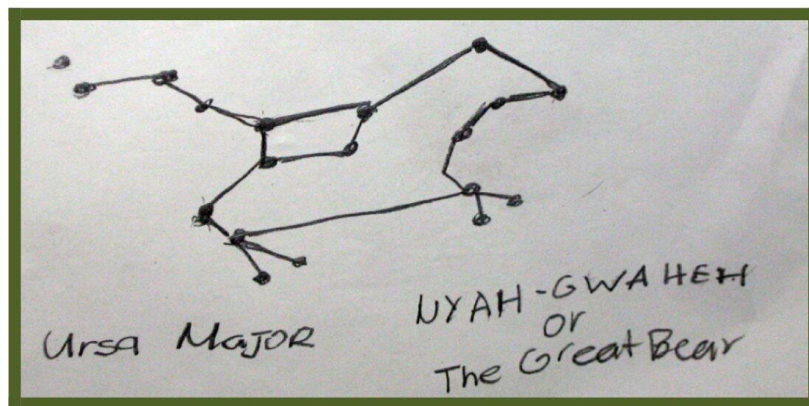


Rates of Indigenous incarceration appear to be especially high in northern Ontario. Renu Mandhane, Chief Commissioner of the Ontario Human Rights Commission, speaking with CBC News in February 2017, claimed that **90** per cent of inmates in the provincial correctional centre in Kenora were Indigenous.

Decolonizing Our Schools

Aboriginal Education In The Toronto District School Board

A REPORT ON THE
URBAN ABORIGINAL EDUCATION PILOT PROJECT



Decolonizing Our Schools
Aboriginal Education in the Toronto District School Board

Executive Summary

In this report titled *Decolonizing Our Schools: Aboriginal Education in TDSB* we describe the work of the Urban Aboriginal Education Pilot Project (UAEPP) in the Toronto District School Board (TDSB). Drawing on data gathered between April 2009 and September 2010, we document, evaluate, and provide our analysis of the UAEPP in service of understanding how to accomplish an education worthy of our children and our ancestors in a large, diverse urban context. The report is based on the research findings of the *Talking Stick Project: Aboriginal Education in the TDSB Gathering Stories of Teaching and Learning*.ⁱ It is intended to inform both the UAE Steering Committee and the TDSB about the successes and challenges the Pilot Project faced in accomplishing its goals.

Our research confirms what Aboriginal parents, educators, and students already knew: institutions of formal schooling, including the TDSB, are failing to provide Aboriginal students with the educational environment and experiences they require to achieve success.

Students in urban settings confront particular problems since they may not be recognized as Aboriginal or, if recognized at all, may be expected to have access to and be willing to share cultural knowledge. Furthermore, they may not see themselves represented in the curriculum or the teaching population and are encouraged to attend school in spite of a long, negative, and hurtful relationship between Aboriginal people and schooling.

School Board administrators, teachers, and other Board employees in urban settings also confront particular challenges, such as recognizing Aboriginal student populations, delivering programs when students are frequently dispersed across a range of schools, lacking the requisite knowledge for teaching Aboriginal subject material, and engaging families and communities who may be understandably resistant to formal educational institutions.

ⁱ This report addresses the Implementation Phase of the UAE Pilot Project in the TDSB. Activity that occurred during the planning phase of the project is not included. The staff chart on page 3 of the report includes the names of TDSB staff that were not pilot project staff. The Pilot Project staff and the TDSB Aboriginal Education staff worked in close collaboration to accomplish the goals of the Pilot Project as such it was difficult for the research team to differentiate. Two names are missing from the chart, Jeffery McDonald and Eddy Robinson worked as Consultants on the Pilot Project. In addition Lloyd Mckell Executive Officer, Student and Community Equity, played an integral role in supporting the project.

In what follows, we outline general and specific recommendations arising from this research.

Overarching Recommendations:

- Aboriginal Education must be recognized as a priority by the Board and must be actively supported at all levels.
- Sustained funding is necessary to build the work accomplished by the UAEPP.
- Attention to Aboriginal students' well-being and the meaningful and appropriate incorporation of Aboriginal subject material across the curriculum must be made a priority.
- A comprehensive staff development plan, including the recruitment of Aboriginal educators and staff, is needed for decolonizing and indigenizing teaching practice and content delivery.
- Establishing and maintaining respectful and reciprocal relationships between the TDSB and community organizations are essential for creating a safe teaching, learning, and work environment for Aboriginal staff and community members.

Specific Recommendations***Supporting Aboriginal Student Well-being***

- TDSB must adopt an approach to Aboriginal Education that puts Aboriginal student well-being in the center.
- Classroom teachers and school support staff should actively take responsibility for all students' learning rather than waiting for or expecting students to come forward and identify as Aboriginal before receiving support.
- School and Board staff must provide opportunities for Aboriginal students to become leaders and advisors in the education of non-Aboriginal students and the whole school.
- School and Board staff must create multiple opportunities for Aboriginal students to have lessons that include traditional teachings, language instruction, examination of the history of colonialism, and historical and contemporary Aboriginal culture.

Benefits

- Rather than experiencing alienation and marginalization within the school community, Aboriginal students could begin to experience schools as offering a place of belonging for them.
- Students who have access to Aboriginal perspectives and experiences in their out of school lives would then be put in the position of being able to draw from and build on that knowledge.
- Aboriginal students would have opportunities to know themselves as Aboriginal beings and to develop their own ways of expressing their Aboriginality.

Decolonizing and Indigenizing: Teacher Roles and Responsibilities

The TDSB in collaboration with the Ministry of Education as well as other educational institutions and professional bodies must provide teachers with ongoing professional development opportunities that include meaningful discussions about colonization.

respond to the questions that they will be asked. Importantly, not talking about their identity does not mean they are not thinking about it or feeling alienated by a school curriculum and environment that offers them little in the way of working through the complex questions of self-understanding.

1.5C The TDSB and Aboriginal Student Achievement

According to a TDSB preliminary report based on limited data collected in 2006-2007 Student Census, Grade 9 Aboriginal student achievement was noticeably lower than achievement for the full cohort:

- Using credit accumulation indicators (that is, accumulation of fewer than 7 credits by the end of their first year in secondary school) 32% of Aboriginal students were “highly at-risk” of not completing secondary school, compared to 14% of the full cohort of students.
- Only 17% had achieved the provincial standard in mathematics compared to 47% of the full cohort.
- 45% of Aboriginal students were taking a majority of their Grade 9 course in the academic program of study, compared to 72% of the full cohort. This is significant because taking a majority of Grade 9 courses in the academic program of study has been identified through previous research as a powerful prediction of on-time graduation, and post-secondary attainment.

In addition, the post-secondary attainment of 17 and 18 year old Aboriginal students in the TDSB in the 2007 application cycle was much lower than the full TDSB population.

Amongst the 17 and 18-year-old Aboriginal students,

- 20% confirmed an offer of admission from an Ontario post-secondary institution,
- 11% applied but did not confirm an offer, while
- 71% did not apply at all in the 2007 application cycle.

In contrast, of the full 17 and 18-year-old population,

- 40% confirmed an offer of admission from an Ontario post-secondary institution,
- 10% applied but did not confirm an offer, while
- 49% did not apply at all in the 2007 application cycle.

This limited statistical data confirms what Aboriginal parents, educators, and students know from lived experience: institutions of formal schooling including the TDSB are failing to provide Aboriginal students with the educational environment and experiences they require to be in a position to pursue post-secondary education.

In the following chapters we report on and evaluate the work of the UAEPP in the TDSB with a focus on students, schools, and the Board.

2 Aboriginal Student Well-Being

The primary focus of the UAEPP in the TDSB was on Aboriginal students. With students' permission, we begin with three profiles describing their past and present relationships with schooling. In each case the student was actively involved with the Pilot Project for two years.¹

2.1 Student Profiles

LUCAS' STORY

I came from a reserve in the north, it has no name.
Would it make a difference to you, as we play the Indian Act game?
Me and my buddies we have our own way.
We tell our stories in comic books and hip hop.
So that you can hear what we have to say.
I wrote a song, I need to forgive to cleanse our souls,
It seems to me they ain't sorry for playing their role.

I am from a northern Ontario reserve and I went to school up there. In 2008 I came to Toronto and started grade 11. My first year was difficult, I had no friends, I had no connection to any community here. Fitting in to a new high school is never easy, being singled out as the only Native student did not help. There was a big communication problem between me and the teachers, and just because I couldn't understand most of what they were saying they were like, "Oh you're a bad kid."

Then in November, a transformation happened. A teacher heard about an event that was happening at the AEC and I was the only identified Native kid in the school, so he took me out of class and brought me to the assembly. There was drumming and kids dancing. I no longer felt alone in the city, I was like whoa, I want to be a part of this.

So with the help of Mr. Russell I organized a powwow at my school with dancers, singers and an activist who gave an interesting talk. This event at the school turned things around. Now they have Aboriginal art on the walls, the principals and teachers are giving me handshakes and saying, "Wow, you're a pretty bright kid."

This was the jumping off point for me. I met some staff at the AEC. I began to get involved with the community. I got involved with the youth mentorship, doing the Debwewin, helping with the camp on the Island. The Pilot Project got me involved and pushed me, it transformed a rez kid into an active leader.

Then came my second year and I was introduced to the Native Learning Centre, the Riverdale Course, and the Drama Co-op. In these programs I spent a lot of time on social interaction and learning the teachings. I was told, "I came out of my shell" whatever that means, I became a people person. "I'm just myself right now" and it is the Pilot Project that enabled me to believe I am capable of big things.

I've got to take back all these things I got here now, and take that to the reserve so that the students there can have the option. They deserve much more than what they are working with now. The government needs to help us out, we are not getting that much attention. In my Riverdale course I learned that I could speak out in class, I learned that Aboriginality was something special that everybody needs and everybody needs to find that out for them selves.

¹ An Aboriginal Creative Writing Consultant Michael Dion wrote these profiles. The stories are based on transcripts of the students' interviews as well as students' own written and creative work. Students approved the profiles prior to their inclusion in the report.

BRIANNA'S POINT OF VIEW

I wanted school, but school did not want me.
Drop out, drop in, being out was easier.
Higher education, I did not think was an option for me
I did not come from a wealthy family.
The story is oh so familiar.
I felt, they let me fall through the cracks.
But now they have extended their hand
A gateway is here, for me to pass through.
My thoughts are always welcome,
Finally, the world can get "my point of view."

Growing up I imagined myself having a good job and being able to take care of myself and having a future that I wanted to live. As I got older, it kind of faded, and I stopped dreaming, my dreams were unreasonable because of what was going on in my life. The road I was going down was not good, school didn't fit me, and then I didn't fit school. No matter what, I always tried going back, even tried the alternative schools. I always wanted to finish, I'd go for a month or maybe two, and then I would leave again. I didn't really have any hope that school would ever have a program that would fit me.

When I first heard about the AEC, I was enrolled in an Alternative School and still it was not working. Freya the counselor from the AEC was the one who found me. She suggested I check out the AEC and I came, and here I found the hope of finishing school. Freya believed in me and took the time to show me all the programs and resources, she took the time and that inspired me. Over the past two years I've noticed that I'm happier and more hopeful.

Growing up I knew that I was native, but I didn't know that there were resources out there for me. When I first came to help in the office I knew almost nothing about my culture and it really opened doors for me, it has taught me so many things about my background, and allowed me to explore that side of myself. The projects going on at the Centre interest me, get me involved in the community and now I want to give back to Aboriginal Education, and the Aboriginal community in the city.

The Center keeps me doing positive things and keeps me motivated to stay in school. Working with people here has kind of given me insight into what can go on within the TDSB. I'm working on a project locating and mapping all the Aboriginal agencies and organizations in Toronto. It will be a resource for teachers, there will be an historical aspect to it because archaeological sites will be included.

The Centre has given me the opportunity to work different sorts of jobs, with different people in various organizations. I can see what I might want to do with my life. It taught me a lot of interpersonal skills, communication skills, self-motivation, and a good work ethic too. For a long time I felt like I was stuck in a rut. Now I feel like I'm doing something worthwhile, something productive. It makes me feel as if I'm moving forward and I am.

AND ERIN SAID: "LET ME SHOW YOU A PICTURE AND TELL YOU A STORY"

I am part Mohawk. I decided to come forth because I lost my culture, because my grandpa was adopted. So I didn't really inherit the Aboriginal culture from my family. I just really wanted to get to know my culture better and get submerged. One day teachers from the AEC came to my school and there was a presentation about Native history and they were talking about the medicine wheel. I walked up afterwards and said, "listen, I'm part Mohawk and I know nothing about that." And they said to me "you know what, we're going to help you." And thus began 'the painting of a new self portrait.' My new vision on life includes the complexity of duality, walking between the Native and non-Native ways of life. I was introduced to Debwewin, and then Ms. Evans got me a summer job with some people called POR AMOR and it is there that I started painting murals. Next came Native Child where I met Kevin a youth mentor who teaches me so many things.

Erin's interest and curiosity about her often-stymied need to connect to her fractured Aboriginal roots peaked following a controversy at her school over the school's logo. The logo, a "Red Indian Head adorned with a feathered headband," was considered by some to be racist. Initially Erin liked the logo but the more she learned the more she became convinced the logo was indeed racist and had to change. The UAEPP guided Erin and provided courses, workshops, and a myriad of experiences that enabled her freedom of choice in terms of discovering her heritage, something that she had not been encouraged to do before. In one of her Riverdale Course assignments Erin was able to share some pictures, "Because I always find that everyone loves old pictures." In her story telling with the pictures as a backdrop, Erin was able to describe to her class the discoveries she was making about her biological family and her adopted family and she was finally able to create a family tree that was connected at it's roots by familiarity and necessity.

Erin's poetry helps explain her growth, and who she is, "so far."

I am Erin Elizabeth Hayward Hill,
I am Peaceful Watching Sacred Water Woman
I am passionate and loving, independent and stubborn (in a good way)
I am a Haudenosaunee woman born and raised in Scarborough,
Traditionally from Six Nations Ontario
I am turtle clan.
I stand for preserving the earth for six future generations
Just in the same way my ancestors did before me.
I stand for researching ancestral roots
in order to discover who you are as a person.



WHAT MATTERS IN INDIGENOUS EDUCATION:

Implementing a Vision Committed
to Holism, Diversity and Engagement

PAMELA ROSE TOULOUSE Ph.D

RESEARCHER, INDIGENOUS PEDAGOGY
& LIFELONG LEARNING

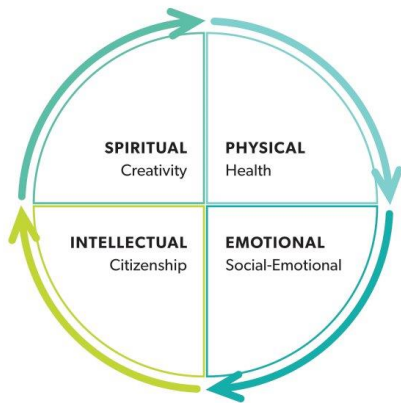


A PEOPLE FOR EDUCATION PROJECT

MARCH 2016

WHAT MATTERS IN INDIGENOUS EDUCATION

FIGURE 2.0
Holistic Model of Domains Found in
Quality Learning Environments



Note: This model incorporates the four domains (health, social/emotional, citizenship, creativity) from the *Measuring What Matters* papers into a broader Indigenous worldview.

THE MEDICINE WHEEL

The medicine wheel is also known as the living teachings. It is a circle of life that is continuous and never-ending. It demonstrates that everything is connected and everything is sacred. All of life is equal. All of life is deserving of respect, care and love. The entry point for discussion is the physical domain. This is where birth of children is located. It is also symbolic of spring, the rising of the sun and the direction of the east. The emotional domain is where adolescence is located. It is also where summer resides, where the sun is at its highest and the direction of south is represented. The intellectual domain is where adulthood makes its home. It is where the season of fall arises, where the sun sets and the direction of the west sits. The spiritual domain is where our Elders/Elderly journey to, it is where winter is steadfast, where the moon makes her appearance and the direction of the north is situated. Each domain reflects aspects of a human being that makes them whole; the east is the physical, the south is the emotional, the west is the intellectual and the north is the spiritual. Balance in each is key. Disrupt the balance and each area of life is affected.

The medicine wheel has a direct relationship to quality learning environments that extend beyond literacy, numeracy and standardized curriculum. It is based in holistic learning environments that are inclusive of the preceding, but, also value the physical (health), the emotional (social-emotional), the intellectual (citizenship) and the spiritual (creativity). Figure 2.0 provides a symbolic model of how the discussion surrounding the four *Measuring What Matters* papers will proceed. As reflected in the living teachings, this next section will be organized with the physical as the beginning and the spiritual as the concluding piece. The emotional and intellectual take their respective (and equally important) places in between.

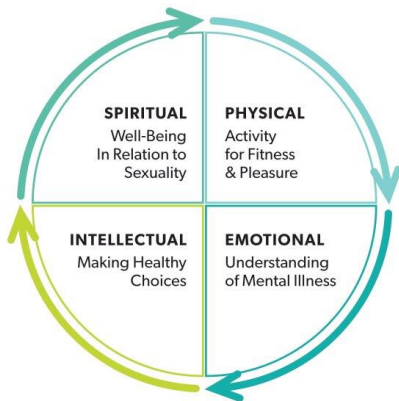
The Physical Aspect and Health Competencies/Skills

Ferguson and Power (2014) in *Broader Measures of Success: Physical and Mental Health in Schools* state that,

Both physical and mental health promotion are important from individual, social, and economic perspectives. Because of their centrality in the lives of children and youth, schools have been widely regarded as places for effective promotion and interventions in physical and mental health (p. 3).

These words resonate with Indigenous conceptions of what counts by focusing on the whole learner. Physical and mental health are integral aspects of the medicine wheel (Figure 2.0.) and cannot be separated. The health of a human being is directly interrelated to their wellness and their capacity to develop in all areas of life (Anderson et al., 2011). As children and youth spend large amounts of time in school, it makes sense that physical and mental health should be a valid measure of school success. With this in mind, the Comprehensive School Health model (i.e. teaching/learning, environments, policies, community partnerships), which includes mental health literacy, sexuality education and resiliency programs, aligns with the holistic teachings of Indigenous peoples (National Collaborating Centre for Aboriginal Health et al., 2009). So, what does this look like in the day-to-day lives of our children and youth? How do children/youth show competency in these areas of health? Figure 2.1. offers a view that integrates the teachings of the medicine wheel with the work of People for Education in their *Draft Competencies and Skills* paper.

WHAT MATTERS IN INDIGENOUS EDUCATION

FIGURE 2.1: The Physical Aspect and Health Competencies/Skills

Note: This model has been adapted from the content in the *Measuring What Matters* Health domain (competencies/skills) into a broader Indigenous worldview.

While all of the health competencies and skills identified in People for Education's paper are critical, there are certain ones that are foundational in Indigenous worldviews. Therefore, each area from Figure 2.1 will be concisely presented with the key competency/ skill listed and/or edited to ensure that it is inclusive of Indigenous communities. It is important to note that this is being done at a macro level and needs to be vetted by individual Indigenous Nations in Canada as part of their right to self-determination in education (Knowles, 2012).

The Physical - Activity For Fitness And Pleasure

- Students develop physical fitness and movement skills needed to participate in diverse activities; fully understanding that the body is a sacred entity.

The Emotional - Understanding of Mental Illness

- Students are informed and understand that mental health issues are a collective concern and that cultural knowledge is a critical support.

The Intellectual - Making Healthy Choices

- Students have a sense of personal responsibility for their own wellness (activity, eating, sleeping, assessing risks) and humbly share these strategies with others.

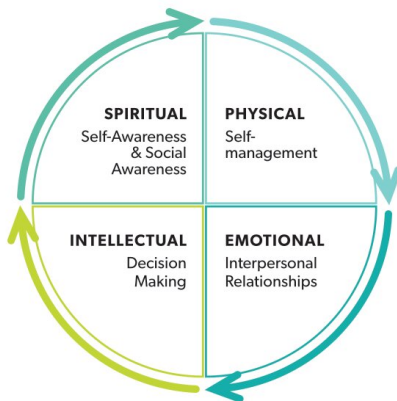
The Spiritual - Well-Being in Relation to Sexuality

- Students develop and appreciate their own and others sexual identities; knowing that sexuality is a healthy part of being a human and is to be expressed respectfully.

The Emotional Aspect and Social-Emotional Competencies/Skills

Shanker (2014) in *Broader Measures of Success: Social/Emotional Learning* states that, "Instead of seeing reason and emotion as belonging to separate and independent faculties (the former controlling the latter), they [a multitude of researchers] argued that social, emotional and cognitive processes are all bound together in a seamless web" (p. 1). This recognition of interconnectedness as a primary concept in learning and emotional development runs parallel to Indigenous worldviews (Carriere, 2010; Iseke, 2010). Elders, Metis Senators and knowledge keepers in First Nations, Metis and Inuit communities have been relaying these teachings since time immemorial. Traditional education in Indigenous communities valued holism in learning; embedded in this approach is the equity between applied scholarship and emotional intelligence (Lee, 2015; Wildcat et al., 2014). Children, youth, adults and our elderly engaged in a form of schooling that was cooperative, collective and conscientious. Shanker (2014) reflects these Indigenous concepts through exploring the components and impacts of the American-based Child Development Project (i.e. community building activities, engaging curriculum, cooperative learning, literacy development). This preceding endeavour, combined with the Promoting Alternative Thinking Strategies (PATHS) and the Positive Action Program (PAP), build upon Indigenous conceptions of what matters in social-emotional schooling for students.

WHAT MATTERS IN INDIGENOUS EDUCATION

FIGURE 2.2: The Emotional Aspect and Social-Emotional Competencies/Skills

Note: This model has been adapted from the content in the *Measuring What Matters* Social-Emotional domain (competencies/skills) into a broader Indigenous worldview.

With these thoughts in our minds, we turn to Figure 2.2, which captures the complex competencies/skills that Indigenous learners exhibit in expanded notions of student achievement. Once again, the social-emotional competencies and skills identified in the People for Education paper are all critical; however there are particular ones that best reflect Indigenous worldviews. These will be identified and edited to be respectful of cultural teachings and the research emerging from People for Education.

The Physical – Self-Management

- Students develop skills for managing their own learning, emotions and behaviours; firmly rooted in the understanding that their actions affect their growth and others.

The Emotional – Interpersonal Relationships

- Students cultivate and maintain healthy relationships with the self, others and the earth; acknowledging the sacredness of all these beings that surround them.

The Intellectual – Decision Making

- Students internalize and implement appropriate strategies to solve a multitude of issues/problems, with personal humility and collective integrity at the heart of it.

The Spiritual – Self-Awareness & Social Awareness

- Students grow in their cultural/personal identities and their ability to reflect on their communities' teachings as critical to being a respectful member of the world.

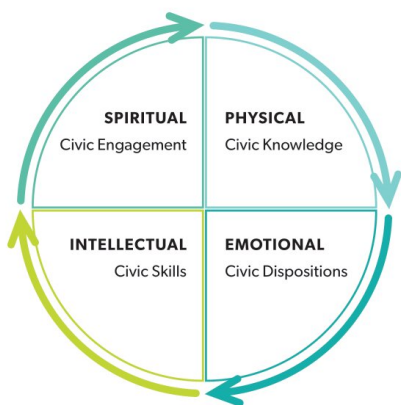
The Intellectual Aspect and Citizenship Competencies/Skills

Sears (2014) in *Measuring What Matters: Citizenship Domain* states that,

Civic education begins at home and continues out into the community. Again, evidence indicates civil society involvements of various kinds, both those connected to schooling and those not, profoundly shape young people's civic knowledge, values, and sense of efficacy (p. 4).

Understanding how history shaped our societies and having a commitment to service learning are also an integral part of being an active citizen. This is consistent with traditional Indigenous perspectives on citizenship, where each individual is nurtured and positioned to develop their gifts as a human being (Lee, 2015; Nadeau & Young, 2006). This approach was/is supported through cultural teachings and guided by various knowledge keepers in the community (John, 2009). Each person was/is taught about traditions and their familial role as part of a greater collective. Fundamental to this type of citizenship education was/is understanding the history and impacts of Indigenous and settler governments on all peoples. I use past and present tense here intentionally. Traditional forms of Indigenous government and their teachings were directly affected by colonialism and the imposition of oppressive policies. Although there is a resurgence and return to culture/language for Indigenous peoples, it is happening to various degrees across the country (Overmars, 2010; Wyatt, 2009).

The concept of a civic profile is familiar to First Nations, Metis and Inuit Nations, and focuses on what a good citizen does as a contributing member to

FIGURE 2.3: The Intellectual Aspect and Citizenship Competencies/Skills

Note: This model has been adapted from the content in the *Measuring What Matters* Citizenship domain (competencies/skills) into a broader Indigenous worldview.

that society. Sears (2014) takes this notion further by stating that voting is not a primary indicator of civic duty. In fact he emphasizes that, “a well-balanced democratic society requires a range of civic engagement, and since citizens simply cannot spend the requisite time to engage in all areas...they would be better to focus their participation in areas where they have interest and ability to make the most significant contribution” (p. 18). This thought, based in evidence, aligns with the activities of an Indigenous citizen.

With this, we turn our attention to Figure 2.3, which concisely summarizes the draft competencies and skills identified in the citizenship section of the People for Education paper. What follows this model are critical statements that reflect Indigenous conceptions of citizenship.

The Physical – Civic Knowledge

- Students learn about their own traditional forms of government and further understand settler governments and their associative rights/responsibilities.

The Emotional – Civic Dispositions

- Students exemplify the values of their respective Nations and utilize these to become effective citizens in two worlds (Indigenous and non-Indigenous).

The Intellectual – Civic Skills

- Students acquire culturally-based mediation and problem solving skills as a means to appreciate diverse points of view; knowing when to act (and when not to act).

The Spiritual – Civic Engagement

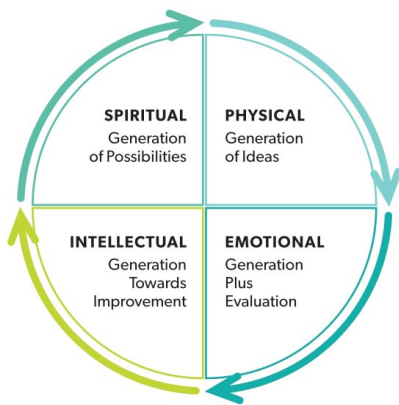
- Students engage in human rights and social justice movements that reflect the integrity of all beings and are consistent with their distinct cultural beliefs.

The Spiritual Aspect and Creativity Competencies/Skills

Uptis (2014) in *Creativity: The State Of The Domain* reveals that,

New ways of thinking and acting are needed to alleviate the impact of human life on our planet, approaches that will call for creativity and innovation from all disciplines. Over the next few decades, schools will have a crucial role to play. In schools where creativity is fostered, students will develop the intellectual tools to innovate, and also, the passion to direct their skills to problems of global concern (p. 6).

Stewardship of the earth and recognition that all of life (and the universe) is interrelated is a key underpinning of Indigenous worldview (Marin & Bang, 2015). Invention and learning are also factors in the resiliency of Indigenous peoples across the Nation (Marule, 2012). The concept that creativity, the sacred, and personal responsibility are interrelated is not a new idea to First Nations, Metis and Inuit peoples (Martin & Garrett, 2010). Therefore, it makes sense that an expanded definition of creativity be included as a measure of success in schools. Student achievement would be amiss if it did not count the range of creative thoughts/practices as essential learning outcomes.

FIGURE 2.4: The Spiritual Aspect and Creativity Competencies/Skills

Note: This model has been adapted from the content in the *Measuring What Matters* Creativity domain (competencies/skills) into a broader Indigenous worldview.

Schools that are resourced to provide opportunities in critical thinking, student-directed learning, integrated curriculum, and community partnerships are steps towards being inclusive of creativity. However, a focused program on the multiple levels, processes and outcomes of creative thought is needed to “contribute to [all] lives that are joyful, productive, meaningful, and prosperous” (p. 3). So, what does this look like? How do students demonstrate creativity? Figure 2.4 provides this view with a concise summary of the draft competencies and skills identified in the creativity section of the People for Education paper. Following this model are critical statements that reflect Indigenous concepts of creativity.

The Physical – Generation of Ideas

- Students welcome and discover thoughts, impressions and information from a multitude of senses and teachers (the secular, the sacred, the formal, the informal).

The Emotional – Generation plus Evaluation

- Students explore their natural curiosity about the world and universe through the selective integration of this knowledge into their life journeys.

The Intellectual – Generation towards Improvement

- Students assess their cultural gifts, creative ideas, artistic work and relative interactions/outputs with a focus on growth and potential change.

The Spiritual – Generation of Possibilities

- Students engage in many opportunities to dream and visualize with the intent of realizing and actualizing what is in their mind, heart and spirit.

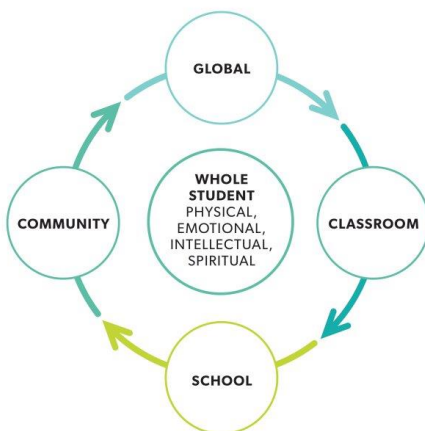
In conclusion, the four papers describing the domains (physical and mental health, social-emotional, citizenship, creativity) have particular focuses that compliment Indigenous worldviews. The notions of holism, engagement, diversity, action and respect are reflected throughout. The proposed competencies and skills are also Indigenous compatible in terms of expanding current measurable outcomes beyond literacy, numeracy and standardized curriculum. The idea that schooling, pedagogy and assessment can honour the whole child is certainly a welcome change in our complex world.

SECTION THREE: EMBRACING INDIGENOUS WORLDVIEW AND QUALITY LEARNING ENVIRONMENTS

What is a quality learning environment? How do Indigenous worldviews reflect this concept? Are there particular components that make up this type of teaching/learning setting? The final section of this paper will address these questions through the integration of Indigenous perspectives and select research from People for Education.

In the inaugural paper of the *Measuring What Matters* (2013) initiative, this statement captures the immediacy and necessity of reframing what counts as student achievement in schools,

FIGURE 3.0: Holistic Model of an Indigenous Quality Learning Environment



Note: This model is an example of the considerations that promote balanced conditions in student learning.

Although current approaches to measuring and reporting on educational quality are useful both locally and internationally, they are, for the most part, limited to literacy and numeracy achievement. These measures are necessary but not sufficient. A growing chorus of voices is asking, "Isn't education about more than that? Don't we need healthy kids who can think; who are innovative and will grow up to be engaged citizens?"
(People for Education, p. 8)

Indigenous communities across Canada have been asking these same questions and confronting these same issues since non-Indigenous forms of schooling came to dominate the K to 12 continuum (Iseke-Barnes, 2008). Educational quality for First Nations, Metis and Inuit learners is centred on a holistic method that considers the entirety of a being (Matilpi, 2012). This approach is best represented in Figure 3.0, which posits the student in the middle; interacting with/being affected by four key conditions that are critical to learning (i.e. classroom, school, community, globe).

The needs of the whole student is the base consideration in Indigenous descriptions of education, and the guiding principle in Indigenous conceptions of student achievement. What matters to Indigenous peoples is that each member of the community is nurtured and challenged in respectful ways. This form of teaching/learning is done through the honouring of the culture, the teachings, the languages, and the gifts of each Nation (Hinton, 2011; Zitzer-Comfort, 2008). It is critical to understand that in our current school system, this vision is affected by particular interconnecting forces: the classroom environment, the school itself, the community (Indigenous & non-Indigenous) and the state of the earth (the globe). Each of these areas will be further explored with the intent that aspects of Indigenous worldview are aligned with inclusive definitions of quality learning environments.

THE CLASSROOM

What is a classroom? It is the space where an exchange of knowledge takes place. It can happen inside a building. It can happen outside of a building. It has students and teachers that are involved in a variety of learning relationships. It is also a place where the curriculum (mandated and hidden) provides a structure (flexible and inflexible at the same time). It is also where pedagogy can empower or disempower students (Malott, 2007). The classroom is a microcosm of society that has real outcomes (positive and negative) for multiple groups of people (King, 2002).

The conditions in the classroom that foster Indigenous learners are varied. However, these particular edited statements from the *Draft Competencies and Skills* (n.d.) capture the critical factors necessary for Indigenous inclusive spaces:

- The classroom is welcoming and student voice/experiences are recognized as integral to the construction of active knowledge.
- Expectations for students are high, realistic, flexible, and supported by teacher/s, peers and other critical friends.
- Classroom activities are culturally relevant, differentiated, and promote exploration, imagination, and creative action.
- Student learning is expressed in a variety of forms that honour diversity and challenge students to try a multiplicity of methods.

WHAT MATTERS IN INDIGENOUS EDUCATION

The needs of the whole student is the base consideration in Indigenous descriptions of education, and the guiding principle in Indigenous conceptions of student achievement.

THE SCHOOL

There are approximately 15,500 schools in Canada; of which 10,100 are elementary, 3400 are secondary and 2000 are mixed (Council of Ministers of Education Canada, 2015). In Ontario, there are 3974 elementary schools and 919 secondary (Ontario Ministry of Education, 2015). Every school board in Ontario has at least some Indigenous students attending Kindergarten to Grade 12 (People for Education, 2013). The conditions that facilitate Indigenous inclusion in school are as follows (adapted from the *Draft Competencies and Skills*, n.d.):

- School leadership is shared with the teachers, students, the community, and education advocates, with trust and collaboration at the core.
- The school is an open learning space where community members with diverse expertise work with students and staff.
- School based structures are in place to provide support for students (and their families) with a variety of challenges/issues.
- Professional learning for teachers and staff is valued and integrated in evidence-based practices focused on access/equity.

THE COMMUNITY

Standardized definitions of community relegate this term to being a noun and describe it as “people living in one particular area because of their common interests, social group or nationality” (Cambridge English Dictionary Online, 2015). Indigenous definitions of community identify particular participants/conditions, and these are often verb-based (Carriere, 2010). These descriptions take on a more holistic approach, and are inclusive of all beings (humans, plants, animals, seen, unseen) and the interconnections that exist amongst them. The latter definition is more relevant for a cross-cultural understanding of the community factors affecting expanded notions of student achievement.

The competencies that are fundamental to community and student success are (adapted from *Draft Competencies and Skills*, n.d.):

- Meaningful school-community partnerships and agreements are based in time, reciprocity, trust, respect, relevance, and actualized plans.
- Programs that de-stigmatize mental illness, prevent bullying, and prevent substance abuse are implemented with culturally relevant tools/resources.
- Students develop enriched definitions of community and commit to volunteering in action-oriented projects that reflect those expanded descriptions.
- Monitoring and reviewing of domain competencies in relation to student learning and school practices involve Elders, Metis Senators and knowledge keepers.

THE GLOBE

Global education with a decolonization focus is best described as, “asking new and difficult questions concerning the erasures, negations, and omissions of histories, identities, representations, cultures, and practices [in schools]” (Sefa Dei, 2014, p. 10). This definition aligns with aspects of Indigenous conceptions of global

WHAT MATTERS IN INDIGENOUS EDUCATION

education; however, the addition of recognizing and living with the earth as our mother will be added here (Overmars, 2010). A quality learning environment that honours global perspectives has these competencies reflected within it:

- Students understand and “confront the conditions and unequal power relations that have created unequal advantage and privilege among nations” (Sefa Dei, 2014, p. 10).
- Promotion of Indigenous earth knowledge and sacred connections to land as fundamental to “developing a sense of purpose...[life meaning]...and social existence” (Sefa Dei, 2014, p. 10).
- Integrating the “idea of pursuing schooling and education as a communal resource intended for the good of humanity” (Sefa Dei, 2014, p. 10).
- Connections with learners across the globe to share experiences and discuss the challenges that these generations face; with creative action as an outcome.

In conclusion, student achievement needs to be reconceptualized to include the physical, emotional, intellectual and spiritual aspects of the whole being. This view is supported through examining respectful conditions/competencies that fully consider the impacts of the classroom, the school, the community and the globe. Indigenous epistemologies and Elder/Metis Senator knowledge can facilitate this much-needed educational change (Lavoie et al., 2012).

CLOSING WORDS

The questions,

- What is inclusion?
- Who are Indigenous peoples?
- What are the issues that face Indigenous peoples?
- How can education be reconceptualized to include Indigenous ways of knowing? And,
- Why should we care?

began this paper and close this textual/symbolic journey together. *What Matters In Indigenous Education: Implementing A Vision Committed To Holism, Diversity And Engagement* is quite simply, the students. This paper is for those young spirits that walk to school, get on a bus, ride the subway, commute and/or reside in educational places that currently (or need to) honour them further. Meaning that we need to move beyond just considering achievement in schooling and look at the real implications and lived outcomes (King, 2008). Indigenous peoples have known and have been experiencing this since time immemorial.

Meegwetch and thank you for listening.

Close Out List

- ☐ Take a photo of each learner's poster created in unit 4 before they leave (learners get to keep their posters)
- ☐ Collect the level 1 evaluation forms in the envelop provided and return it to the coordinator
- ☐ Reconfigure the classroom to its previous state
- ☐ Send the photos of the posters to the coordinator at <email> by the end of the day

Anticipated Learner Questions/Pushback

Please find the answers to possible questions or pushback from the learners. If something is not covered here and you are unsure of how to answer it, please record their question/pushback on a scrap piece of paper and hand it to the coordinator at your location. The coordinator will find the appropriate person to respond to these and email all learners a list of answers following the training. If the learner is persistent, please consult with the coordinator to resolve the situation.

How to incorporate Indigenous Knowledge

Reassure we will focus on how to incorporate Indigenous Knowledge during Day 2. You may also refer them to the additional resources in the portal. Clarify that today is focused on why we need to incorporate Indigenous Knowledge.

Opening the door to incorporating religion

Clarify that "...Indigenous spirituality is a manifestation of deep connections to the land. It is not equivalent to Western religion (Cajete 2000). In all Indigenous cultures, beliefs and practices about spirituality are passed down by the teachings of the Elders. In all cultures spirituality is practiced through rituals and ceremonies that show respect for and gratitude to a higher power. The Mi'kmaq believe that the Creator (Kisu'lk) made the universe. Because all things hold part of the Creator's spirit they must be respected. Because all things on Mother Earth are connected, nothing should be abused or exploited so that all creation can continue to work in harmony (CMM 2007). Mother Earth provides food and materials for clothes and shelter and proper respect and gratitude must be shown for these gifts. In the classroom, this respect and gratitude can be emphasized when working outside by showing students how to minimize their impact on plants and animals, a solid foundation for sustainability."

Hatcher, A. (2012). Building cultural bridges with Aboriginal learners and their 'classmates' for transformative environmental education. *Journal of Environmental Studies and Science*, 2(4), 346-356. DOI 10.1007/s13412-012-0088-6

Science is objective or subjective

State that whether or not science is truly objective is out of the scope of this course but that resources have been provided in their portal that address it.

Bezbaruah, D. (2018, November 11). Is science objective or subjective? Message posted to https://www.researchgate.net/post/is_science_objective_or_subjective

Kuhn, T. S. (1962). The structure of scientific revolutions. *Chicago and London*.

Reiss, J. and Sprenger, J. (2014, August 25). Scientific Objectivity. In *Stanford Encyclopaedia of Philosophy*. Retrieved from <https://plato.stanford.edu/entries/scientific-objectivity/#InsRes>

Resnik, D. B. (1998). *The ethics of science: An introduction*. New York, NY: Routledge.

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