

# Examining the Braiding and Weaving of Indigenous Ways of Knowing, Being, and Doing in Alberta Teacher Education

Patricia Danyluk<sup>1</sup>, Amy Burns<sup>1</sup>, Yvonne Poitras Pratt<sup>1</sup>, Astrid Kendrick<sup>1</sup>, Maureen Plante<sup>1</sup>, Samara Wessel<sup>1</sup>, Kathryn L. Crawford<sup>2</sup>, Eva Lemaire<sup>3</sup>, Joshua Hill<sup>4</sup>, Robin Bright<sup>5</sup>, Dawn Burleigh<sup>5</sup>, Chloe D. Weir<sup>6</sup>, S. Laurie Hill<sup>7</sup>, Lorelei Boschman<sup>8</sup>

<sup>1</sup> University of Calgary, <sup>2</sup> Ambrose University, <sup>3</sup> University of Alberta, <sup>4</sup> Mount Royal University, <sup>5</sup> University of Lethbridge, <sup>6</sup> Burman University, <sup>7</sup> St. Mary's University, <sup>8</sup> Medicine Hat College

*Alberta's Teaching Quality Standard requires that all teachers possess and apply a foundational knowledge of Indigenous Peoples to their teaching. In 2020, representatives from ten Alberta teacher education programs came together to examine how they were braiding and weaving Indigenous ways of knowing, being, and doing into their programs. They also considered the challenges and successes encountered and the ways programs might work together to improve and combat anti-Indigenous racism. Drawing upon a collective case study methodology, representatives responsible for the design and delivery of Indigenous education within each of the programs completed an 18-question survey. Results demonstrate the Teaching Quality Standard (Alberta Education, 2018) served as a catalyst for deepening Indigenous ways of knowing, being and doing in preservice teacher training. The levels of integration are examined through the concept of differentiation (Tomlinson & Imbeau, 2010) and Kanu's (2011) five levels of integration.*

*La norme de qualité pour l'enseignement de l'Alberta exige que tous les enseignants possèdent et appliquent une connaissance fondamentale des peuples autochtones dans leur enseignement. En 2020, des représentants de dix programmes de formation des enseignants de l'Alberta se sont réunis pour examiner la façon dont ils intègrent à leurs programmes les façons autochtones de savoir, d'être et de faire. Ils se sont également penchés sur les défis et les réussites rencontrés et sur les façons dont les programmes pourraient collaborer pour améliorer et combattre le racisme anti-autochtone. En s'appuyant sur une méthodologie d'étude de cas collective, les représentants responsables de la conception et de la prestation de l'éducation portant sur les autochtones dans chacun des programmes ont répondu à un sondage de 18 questions. Les résultats démontrent que la norme de qualité de l'enseignement (Alberta Education, 2018) a servi de catalyseur pour approfondir les façons autochtones de savoir, d'être et de faire dans la formation initiale des enseignants. Les niveaux d'intégration sont examinés à travers le concept de différenciation (Tomlinson et Imbeau, 2010) et les cinq niveaux d'intégration de Kanu (2011).*

This article explores how ten teacher education programs in Alberta came together to examine how their programs were braiding and weaving Indigenous ways of knowing, being, and doing into their programs and how they might deepen this integration. The braiding and weaving of Indigenous ways of knowing, being, and doing into teacher education is one strategy aimed at increasing awareness and combating anti-Indigenous racism. This article examines how teacher education might deepen integration by moving beyond content and towards engagement with processes, products, and learning environments.

As anti-racism theory fails to acknowledge racism towards Indigenous people in Canada (Lawrence & Dua, 2005), this research adopts a critical race theory theoretical framework which includes the examination of social justice issues as key aspects to decolonization (Lund, 2018).

Drawing on a collective case study methodology, representatives from each of the ten teacher education programs completed an 18-question, co-designed survey in the summer of 2022. The results of the surveys were analyzed through the lens of differentiation (Tomlinson & Imbeau, 2010) and Kanu's (2005) five levels of integration (2011).

This article begins with an explanation of the impetus for the research followed by a literature review. The survey results are shared in the findings and in the discussion section, the authors consider how teacher education programs might deepen their practices. In the final part of the article, the authors outline the next steps in their research.

### **Impetus for the Research**

The *Teaching Quality Standard (TQS)* updated in 2018 by Alberta Education sets out teacher professional competencies, notably for this study, the addition of *TQS5* required that foundational knowledge of Indigenous ways of knowing, being and doing be acquired and applied in the classroom. Between 2018 and 2020, representatives of ten teacher education programs in the province of Alberta came together for six meetings to examine field experience and assessment in the context of the new *TQS*. The field experience research pointed to the need for further examination of how Indigenous ways of knowing, being, and doing were being taken up by teacher education programs in Alberta. Papaschase Cree scholar Dwayne Donald (2012a) suggested that the term integration may serve to reinforce colonial relations of power and in response to this critique, we have drawn upon Indigenous concepts of braiding and weaving (Dion, 2009; Donald, 2012b; Kimmerer, 2013) to be respectful of Indigenous ways of knowing, being, and doing.

In the field experience study, we noted faculty, mentor teachers, and field experience supervisors were endeavouring to bring Indigenous ways of knowing, being, and doing into their teaching, and they had access to an abundance of new resources; however, the fear of doing the wrong thing and of accidentally being disrespectful was also very present (Burns et al., 2022). Despite many professional development opportunities and an abundance of resources, there continues to be a disconnect between training about Indigenous knowledges and actual integration in the classroom. Preservice teachers have been introduced to Indigenous ways of knowing, being, and doing in their teacher training programs (Siemans & Neufeld, 2022) and are thus seen as having some competency in this area (Burns et al., 2022). In a 2020 study of Alberta teachers' perspectives on moving reconciliation forward, teachers described not having time to digest the resources, fear of making mistakes, and limited support from administration as reasons why they were not moving ahead with this work (Evans et al., 2020). Together, these studies point to the challenges inherent in transitioning Indigenous ways of knowing, being, and doing into classrooms.

To consider how these efforts could be mobilized, we begin by examining literature on anti-Indigenous racism, its impacts in Alberta, and the role of teacher education in addressing this longstanding societal issue.

### **Literature Review**

The findings from the Truth and Reconciliation Commission of Canada (2015) have reinforced what Indigenous peoples have been saying for decades, if not centuries. Racism towards Indigenous Peoples in Canada is deeply embedded in the country's colonial history, structures, system, and attitudes (Leyland et al., 2016; Lorenz, 2017; Tinglin & Joyette, 2020). Anti-Indigenous racism takes many forms including negative stereotypes, the dominance of Western knowledge systems, overt aggressions, subtle discrimination, structural inequities, and social exclusion (Reading, 2014).

Racialization reinforces concepts of racial difference and furthers stereotypes by assigning characteristics to racialized groups (Ontario Human Rights Commission, n.d.). Inherent in this concept are false ideas of superiority and inferiority that are used to justify oppression, prejudice, and discrimination (Lorenz; 2017) and disadvantage Indigenous Peoples while providing advantages to non-Indigenous peoples (St. Denis & Schick, 2003). Early colonizers and settlers drew upon the concept of race to portray themselves as superior to Indigenous Peoples and to position themselves as the rightful inhabitants of the land (Lorenz, 2017).

According to Senator Murray Sinclair (2014), the commissioner of the Truth and Reconciliation Commission, Canadians lack basic information about Indigenous Peoples, including their histories. Many Canadians are unaware of Canada's colonial past, the colonial strategies that reinforced inequities, and the sustained manner in which these policies continue to advantage some and disadvantage others (Poitras Pratt, 2021). Lacking this information, Canadians are unable to understand why change needs to happen or envision their role in making change happen. Sinclair further contended that this gap in knowledge results in a lack of respect for Indigenous Peoples which in turn allows anti-Indigenous racism to persist. Racism of any kind has consequences for all Canadians as it erodes social cohesion and weakens social bonds; however, the strained relations between Indigenous and non-Indigenous peoples is particularly concerning as it involves the original occupants of these lands (Lashta et al., 2015).

The Prairie Regions are home to a significant number of Indigenous Peoples and given that the Indigenous population in Alberta is the fastest growing in Canada (Alberta Health Services, n.d.), and growing twice as fast as the province's non-Indigenous population (Lorenz, 2017), the commitment to the integration of Indigenous ways of knowing, being and doing in education is imperative. There are approximately 258,640 self-identifying Indigenous people residing in Alberta (Government of Canada, 2022). Jurisdictionally, there are 45 First Nations and 140 reserves across Treaty 6, 7, and 8 territories (Alberta Health Services, n.d.), representing eight First Nations cultural and language groups, including Dene; Dunne-za; Dene Tha; Plains and Woodland Cree; Nakoda; Tsuut'ina; and the Blackfoot Confederacy, which consists of the Kainai, Piikani, and Siksika peoples (Alberta Health Services, 2020). The province is home to one of the largest Métis populations in Canada, with more than 127,470 people identifying as Métis (Statistics Canada, 2021). The Inuit population in Alberta is much smaller, with 1% of Indigenous people in the province identifying as Inuit (Government of Canada, 2022).

A recent Alberta study on anti-Indigenous racism in the emergency care department of a hospital found that racism and stereotypes impacted care, leading to Indigenous patients being

ignored, perceived as substance abusers, and viewed as less deserving of care than others (McLane et al., 2022). In a survey of 2,501 non-Indigenous urban Canadians conducted by Environics Institute (2010), Albertans reported the most negative views of their current relations with Indigenous peoples; 62% of respondents from Edmonton, and 55% from Calgary reported negative views. Respondents from Calgary held the most negative views of Indigenous Peoples' intelligence and education. Both urban centres are home to substantial Indigenous populations where problematic interactions are likely to take place if stereotypes and misunderstandings are not addressed.

Formal education systems play a pivotal role in determining what counts as official knowledge (Ho, 2019; Kanu, 2011, Poitras Pratt et al., 2021). The braiding and weaving of Indigenous knowledges into teacher education programs benefits not just preservice teachers, but the mentor teachers that host them during their practica, children and youth in their classrooms, and the families of children and youth (when students share what they have learned at home). Any braiding and weaving of Indigenous knowledges must be premised on decolonization, beginning with the recognition of Canada as a colonial nation (Louie et al., 2017; Poitras Pratt & Danyluk, 2017, 2018, 2019). Indigenous scholars working within Alberta have pointed out that decolonizing extends beyond revealing and dismantling colonial impacts to also include adopting a critical anti-oppressive, anti-racist approach that values and incorporates Indigenous knowledges, and supports Indigenous moves towards self-determination (Poitras Pratt, et al., 2018). Reflecting a similar stance, Howell and Ng-A-Fook (2022) maintained that teacher education programs must create spaces for non-Indigenous students to unlearn settler colonialism and relearn the ways in which people are complicit in settler colonialism. Curriculum studies scholar Dwayne Donald (2012a) asserted that colonialism is an ideology that denies people healthy and positive relationships. Alternatively, a form of ethical relationality allows individuals to recognize and acknowledge one another's "historical, cultural and social contexts" (Donald, 2012b, p. 536).

In seeking ways forward, several Indigenous education scholars, including Cochran-Smith (2003), Dion (2007), Poitras Pratt et al., (2018), and St. Denis (2011), pointed to the significance of making decolonization personal by examining learner positioning and relationships with Indigenous Peoples. In an examination of anti-Indigenous racism in schools on the prairies, Gebhard (2020) found that teachers who claim they are colourblind, innocent, and apolitical are better able to see racism when they begin to examine their own classroom practices. Knowing that education is a critical response to the societal crisis of anti-Indigenous racism, many provincial ministries of education have stepped up in response.

The *TQS*, updated by Alberta Education in 2018, acts as a "framework for the preparation, professional growth, supervision and evaluation of all teachers" (p. 2). It lists six competencies that all Alberta teachers must meet under the professional standard: (a) fostering effective relationships; (b) engaging in career-long learning; (c) demonstrating a professional body of knowledge; (d) establishing inclusive learning environments; (e) applying foundational knowledge about First Nations, Métis, and Inuit; and (f) adhering to legal frameworks and policies. Many Alberta teachers have been working to include Indigenous ways into their teaching over the years (Louie et al., 2017; Hanson & Danyluk, 2022; Poitras Pratt & Danyluk, 2018; Poitras Pratt & Hanson, 2020; Scott & Gani, 2018; Vandenborn et al., 2022); however, the addition of the fifth competency in the Alberta *TQS* means that teachers who have been reluctant in the past to take up this challenging, but necessary work, are now mandated to do so.

For many educators, the fear of making mistakes prevents them from engaging with Indigenous epistemologies, histories, pedagogies, and protocols (Dei & McDermott, 2019;

MacDonald & Markides, 2018; McDermott et al., 2021). Scholars have consistently found that Canadian teachers feel a sense of uncertainty about how to bring Indigenous ways of knowing, being and doing into the classroom (Kanu, 2005, 2011; Milne, 2017; Tupper & Cappello, 2008). In their analysis of why teachers demonstrate ambivalence about incorporating Indigenous knowledges into the classroom, Scott and Gani (2018) identified three teacher beliefs that acted as impediments: (a) the highly diverse nature of Indigenous Peoples and communities makes it difficult to determine one perspective; (b) only Indigenous educators can authentically teach Indigenous ways of knowing, being and doing; and (c) as Canada is a multicultural society, no one perspective should be privileged (pp. 172–174). In their work on supporting educational leaders as they integrate Indigenous knowledges into their schools, McDermott et al. (2021) asserted that integrating Indigenous knowledges requires educators to slow down, to listen deeply, and to understand the real tensions between Eurocentric viewpoints and Indigenous knowledges. In setting out what has worked in the past and what will support future efforts, Kanu (2005) found that a teacher’s sense of efficacy in integrating Indigenous knowledges is heightened through preservice training and in-service professional development.

Despite the Truth and Reconciliation Commission of Canada’s (2015) calls to action for universities and all levels of government to increase Indigenous faculty and staff, Indigenous academics continue to be underrepresented, especially in senior positions (Povey et al., 2022). A 2019 survey of postsecondary faculty and researchers reported that Indigenous faculty and researchers accounted for 1.9% of academic community respondents, and only 21% of Indigenous faculty were tenured compared to 37% of non-Indigenous faculty (Statistics Canada, 2020). In their examination of racialized and Indigenous faculty in Canadian universities, Mohamed and Beagan (2019) pointed to the extra burden placed on Indigenous faculty who act as “cultural translators within academic whiteness” (p. 344) and are continually called upon to explain or advocate for Indigenous knowledges. Indigenous faculty play important roles in education as they are able to familiarize students with Indigenous ways of knowing, being, and doing and share personal experiences.

Political environments hostile to social justice approaches as well as severe budget cuts to postsecondary institutions have led to further frustrations. Since 2018, Alberta’s postsecondary sector has seen a budget reduction of 18.8% (Adkin, 2022) resulting in total funding cuts by the provincial government of up to \$450 million (Kennedy, 2022). Budget cuts have forced universities, colleges, and technical institutes across the province to lay off thousands of employees, increasing the workloads of remaining staff and resulting in the discontinuation of teaching contracts and academic programs (Adkin, 2022). Together, these factors represent significant barriers to the implementation of *TQS5* and risks the continuation of a status quo that privileges some and disadvantages other. In seeking further understanding and a way forward, we now set out the theoretical framework for the study and the method.

### **Theoretical Framework**

Anti-racist theory has been criticized as not acknowledging racism towards Indigenous people in Canada (Lawrence & Dua, 2005). In its current form, racism studies tend to focus on people of colour, failing to recognize that people of colour live as settlers on land that has been appropriated from Indigenous Peoples (Lawrence & Dua, 2005). The portrayal of Canada as a multicultural mosaic is also problematic as the history of Indigenous Peoples is either minimized or homogenized in this popularized rendering of diversity (St. Denis, 2011). Recognizing that anti-

Indigenous racism has unique factors to consider, this research adopted critical race theory (Ladson-Billings 1998, 2005) as a theoretical framework. Critical race theory recognizes racism as wide-ranging and present in all levels of society (Gillborn, 2006). Importantly, critical race theory relies on storytelling and experiential knowledge as effective ways to confront racism and critique liberalism (Ladson-Billings, 1998). Critical race theory also allows for the examining of social justice issues such as privilege and power, equity versus equality, and intergenerational trauma as key aspects to decolonization (Lund, 2018). As the broad theoretical framework for this study, critical race theory informs how we look at teacher practices. In this study, we consider levels of integration (Kanu, 2011) and differentiation (Tomlinson & Imbeau, 2010) as means of understanding the braiding, and weaving of Indigenous ways of knowing, being and doing.

Yetta Kanu (2011) examined the integration of Indigenous perspectives into school curriculum from a Canadian perspective where five levels of integration were apparent in classroom teaching: “(a) student learning outcomes; (b) instructional methods/strategies; (c) curriculum content and learning resources/materials; (d) assessment of student learning; and (e) as a philosophical underpinning of the curriculum” (p. 115). Ideally, “when the integration of Aboriginal perspectives is believed to be a philosophical underpinning of the curriculum, it ceases to be an occasional add-on activity in the classroom and becomes an integral part of daily curriculum implementation” (p. 100). The integration, braiding, and weaving of Indigenous ways of knowing, being and doing can also be examined through the lens of differentiation. According to Tomlinson and Imbeau (2010), “differentiation can be accurately described as classroom practice with a balanced emphasis on individual students and course content” (p. 14). The concept of differentiation provides multiple approaches to content, process, product, and learning environments, and sheds a light on the how of teaching Indigenous ways of knowing, being, and doing. For the purposes of this study, *learning environment* refers to the environment outside of the classroom, meaning land-based learning (Bowra et al., 2020).

## **Method**

This research drew upon a collective case study methodology whereby each teacher education institution was considered a separate but related case. In a collective case study, multiple cases are described and then compared to provide insights into an issue (Merriam, 1998, 2009; Stake, 1995, 2006). Findings from an earlier study on field experience and assessment in the context of the new *Teaching Quality Standard* (Alberta Education, 2018) pointed to a lack of efficacy among faculty, mentor teachers, and field experience supervisors with regards to the integration, braiding, and weaving of Indigenous knowledges in kindergarten to Grade 12 classrooms (Burns et al., 2022) and provided the impetus for this study. Research ethics approvals were received from each of the teacher education programs between April and July 2021. The research team met to collaboratively design the survey and to determine the types of questions that would provide insight on how programs were braiding and weaving Indigenous ways of knowing, being, and doing. The survey consisted of 18 questions and utilized both closed and open-ended questions to permit participants to select responses to some questions and provide narrative responses to others. Questions focused on how teacher education programs were braiding and weaving Indigenous ways of knowing, being, and doing into their programming and inquired into mandatory courses and other methods.

One question drew upon Tomlinson and Imbeau’s (2010) differentiation by content, process, and product; two others examined learning environments by inquiring into land-based learning.

Two questions sought to determine how social justice concepts were connected to Indigenous ways of knowing, being, and doing in programming. Several questions queried whether Elders, knowledge keepers, community members, and Indigenous faculty were involved in program design and delivery. The final set of questions focused on the challenges and successes of the integration, braiding, and weaving and how teacher education programs might deepen this integration and combat anti-Indigenous racism.

The survey was completed by members of the research team in collaboration with colleagues from their teacher education program responsible for the design and delivery of Indigenous education. This included Indigenous and non-Indigenous faculty as well as senior leadership and field experience personnel. After survey completion by each of the ten teacher education programs, the research team met to discuss the findings from their specific programs and from the ten institutions as a whole.

To avoid the possibility of looking at integration as solely adding content, two separate analysis processes, Kanu's (2011) five levels of integration and Tomlinson and Imbeau's (2010) differentiation by content, process, product, and learning environment, were used to analyze the survey results and provide a more nuanced understanding of the ways teacher education programs are taking up Indigenous knowledges. Kanu's (2011) five levels of integration allowed us to consider the ways in which classroom activities might be examined through a series of deepening layers of integration with centering of Indigenous philosophy in curriculum as the ideal approach.

The researchers met to engage in collaborative data analysis in August 2021. The process began with a presentation of the survey findings structured around the research questions (Richards & Hemphill, 2017). Following this, the researchers broke into pairs to further discuss the data in its entirety as well as the specific data from their teacher education program. Pairs engaged in split coding during which each member of the research team examined the data separately, discussed potential themes as a pair, and then came together with the larger group to share what they had discussed. Researchers then entered into a final group discussion where they came to agreement on the themes of the survey data.

The findings from the collective data analysis reflected the survey findings. Participants expressed concern about the potential burnout of Indigenous faculty and Elders, yet at the same time recognized the need to have more Elder and Knowledge Keeper involvement in their programs. The reliance on grant funding to initiate and maintain further integration was a shared frustration among institutions and was recognized as a barrier to integration. The next section provides a detailed look at the findings from the survey.

## **Findings**

### **The TQS and Its Impact on Preservice Teacher Experience—A 2022 Study**

An earlier research project by Burns et al. (2022) in which ten Alberta teacher education programs examined the *TQS* and its impact on the assessment of preservice teacher practica was the impetus for this study. The results of that study highlighted a lack of efficacy surrounding the integration of the fifth *TQS* competency, which requires all Alberta teachers to apply a foundational knowledge about Indigenous Peoples. This lack of efficacy was expressed by mentor teachers through comments such as “We don’t really know what we need to do” (Burns et al., 2022, p. 118), and by representatives of teacher education institutions in comments such as “[We are] trying to

figure it out as a school” (p. 120). There was a fear “that teachers may be doing the wrong thing, or may be disrespectful, which is totally not their intent” (p. 120). This self-reported lack of efficacy was found to generate additional pressure on preservice teachers, many of whom have been introduced to Indigenous ways of knowing, being, and doing in their teacher education programs. Because of this training, many are seen by in-service teachers as having some degree of competency in this area. In the survey results that follow, we discuss challenges, successes, differentiation, plans for the future, TQS impact, and working with schools.

## **The Survey Results**

Ten teacher education programs responded to the survey, with multiple representatives from each program working together to provide responses. Of the ten, seven programs had a mandatory Indigenous education course. All teacher education programs reported the braiding and weaving of Indigenous knowledges, ranging from 10% of courses to 100% percent of courses. Drawing from the concept of differentiation (Tomlinson & Imbeau, 2010), we asked respondents to indicate the degree to which Indigenous knowledges were brought into these courses through content, process, products, and learning environment. *Content* refers to the knowledge, understanding, and skills that preservice teachers need to learn. The term *process* indicates the activities or teaching methods that help preservice teachers understand the content. *Products* are the ways in which preservice teachers demonstrate what they have learned through assignments. *Learning environments* in the context of this study refers to either learning in the classroom or learning on the land.

All programs relied on content for the braiding and weaving of Indigenous ways and eight of the ten programs indicated that processes, including Indigenous pedagogies, were taken up. Seven of the ten teacher education programs reported that preservice teachers were asked to create products to demonstrate their learning. Four programs reported that learning took place through other methods, including workshops and conferences. Although respondents provided over 40 different examples of braiding and weaving through content, the most consistent responses included content on history, policies, treaties, colonization, and residential schools. The most consistent processes and pedagogies used to convey Indigenous ways of knowing, being, and doing included storytelling, circles, field trips, and guest speakers, including Indigenous Elders and Knowledge Keepers. Examples of student products or assignments included lesson plans, presentations, papers, artefacts, and videos to demonstrate learning. Eight programs reported using workshops to convey Indigenous ways of knowing, being and doing, and three programs reported they drew upon conferences. Workshops and conferences were used to convey content, provide experiential learning opportunities, and engage with Elders. Conferences included those at the university as well as those hosted by provincial and national organizations. Several programs mentioned a focus on Indigenous ways of knowing, being, and doing during Truth and Reconciliation Day; these events ranged from three to six hours. Table 1 provides examples of how Indigenous ways of knowing, being, and doing were conveyed through content, process, products, land-based activities, and other methods.

The literature on critical race theory points to the necessity of including decolonizing and social justice concepts within teacher education programs. Respondents were asked to indicate if social justice concepts were part of their programming and which concepts were taken up. All ten programs indicated they adopted a social justice lens when braiding and weaving Indigenous ways of knowing, being, and doing; these concepts included power and privilege and equity versus



Table 1

*Ways in Which Alberta Teacher Education Programs Braid and Weave Indigenous Ways of Knowing, Being and Doing*

Content	Process/pedagogies	Products	Learning Environment/Land-based learning
History of Canada's treatment of Indigenous Peoples	Elders (learning from)	Lesson plans	Visiting sacred sites with Elders
Policies impacting Indigenous Peoples (e.g., <i>Indian Act</i> )	Knowledge Keepers (learning from)	Presentations	Outdoor education
Treaties	Land-based experiences	Papers	Land-based day
Protocols	Literature	Learning artefacts	Hikes/Nature walks
Residential schools	Storytelling	Videos	Sharing circles
Curriculum	Indigenous games	Electronic portfolios	Teepee teachings
Colonization	Circles	Resource evaluation	Pond adoption
Indigenous literature	Field trips to Indigenous schools	Sharing circles	Learning about medicinal plants
Racism	Trauma-informed teaching	Research projects	Sit spots
Land acknowledgements	Blanket exercise	Resource creation	Conservation areas
Truth and Reconciliation Commission	Critical examination of teaching resources	Self-reflection on learning	Learning with Elders on the land
Medicine wheels	Witnessing	Resource evaluation	Reading the constellations with Elders/knowledge keepers
<i>United Nations Declaration on the Rights of Indigenous Peoples</i>	Videos	Visual essays	Spending time outdoors during the four seasons
Indigenous approaches to subject areas	Case studies	Self-identity	Visiting medicine wheels with Elders/ knowledge keepers

equality as part of the learning. Nine of the ten programs included the concept of intergenerational trauma in their programming, and seven included concepts such as poverty, racism, and prejudice.

Land-based learning from an Indigenous perspective—which demonstrates physical, mental, and spiritual connections to the land and conveys concepts such as relationality, holism, and intergenerational knowledge—was mentioned as part of their programming by eight programs. The time allocated to land-based learning ranged from six hours to a full three days, with the average amount of time spent on land-based learning being 20 hours. Land-based experiences included field trips to historically significant sites such as Writing-on-Stone Provincial Park, a site sacred to the Blackfoot people that includes ancient petroglyphs; Cypress Hills, where Plains Peoples wintered for thousands of years; and Blackfoot Crossing, a gathering place for the

Blackfoot Confederacy. Other land-based activities mentioned included learning on the land with Elders, examining the constellations from Indigenous ways of knowing, being, and doing, and learning how plants have traditionally been used for their medicinal qualities.

The next three survey questions were designed to determine the foundations for the Indigenous ways of knowing, being, and doing that were being woven into teacher education programs. Each program relied on the provincial curriculum to determine content; yet we wanted to learn more about how each program came to the Indigenous ways knowing, being, and doing highlighted in their programs. All programs indicated that Indigenous faculty were involved in the design and delivery of their programming and the number of Indigenous faculty in each program ranged from one sessional instructor to five Indigenous faculty members. Nine of the programs relied on the involvement of Elders and Knowledge Keepers to help inform their programming. All programs utilized community connections such as Indigenous community members. Three of the programs reported drawing upon additional resources such as Indigenous staff, family members of Indigenous staff, and Indigenous expertise from the Alberta Teachers' Association. All ten programs indicated that the Indigenous knowledges integrated into their programs originated from their specific treaty area. Provincial, national, and global content were also utilized by teacher education programs.

Despite this promising reporting, survey results also indicated that all programs had encountered challenges. The most frequently mentioned challenge was a lack of sustained funding, which five institutions identified as a barrier. Responses indicated that Indigenous initiatives were funded primarily by grants and as a result were dependent on individual efforts to secure funding, which is not consistent or sustainable. The survey results pointed to a lack of dedicated funding to support the honouring of Indigenous ways of knowing, being, and doing at the postsecondary level, with one participant describing it as follows: "Despite the fact that this a fundamental aspect of the TQS, it is not funded in the ways the other competencies are. This is grant based which affects the quality of the programming." Another response suggested the quality of the integration was dependent on faculty who had a specific interest and willingness to add additional work to their list of responsibilities. This resulted in some students receiving more in-depth integration of Indigenous ways of knowing, being, and doing, and others receiving less. The participant noted, "Students tend to notice a gap between how often and how well Indigenous perspectives are integrated depending on the professor."

Maintaining and developing connections with Indigenous Peoples and groups was mentioned by four of the institutions as a challenge that was further complicated by the COVID-19 pandemic. One program mentioned a lack of funding to pay honoraria for Indigenous involvement. Building faculty capacity among full-time and contract faculty was identified as a challenge by three programs. Responses pointed to a wide variety of knowledge about Indigenous ways of knowing, being and doing among full-time and contract faculty, with some faculty feeling completely comfortable and others unable to see a connection to their discipline. A lack of time was identified by three programs, referring to a lack of time within teacher education programming to address "the subject in-depth." Learning about Indigenous knowledge systems in depth, developing sustainable relationships with communities, and finding time to apply for funding to support the integration of Indigenous knowledges was mentioned as a challenge by three programs.

In the survey results, nine of the programs reported they had experienced some level of success with the braiding and weaving of Indigenous ways of knowing, being, and doing into programming (one program did not respond to this question). Of the nine programs, three identified building relationships with Indigenous Peoples and communities as an indicator of

success. Two programs reported successful integration occurred through the practicum and through the integration of Indigenous ways of knowing, being, and doing into lesson planning. Two programs pointed to a mandatory Indigenous education course as being a source of success, and another mentioned the weaving of Indigenous ways of knowing, being, and doing into each course. Positive feedback from mentor teachers and administrators was identified by one of the institutions as an indicator of success.

The survey results indicated nine of the programs planned to deepen the level of braiding and weaving of Indigenous ways of knowing, being, and doing in their programs (one program did not respond to this question). Plans to extend the level of integration, braiding, and weaving fell into three areas: those that were programmatic, those that focused on increasing resources, and those that sought to build better connections with Indigenous communities and schools. At the programmatic level, plans to make changes to programming included adding a mandatory Indigenous education course, creating an Indigenous Advisory Council to advise on programming, conducting a program review, and creating a contract position for an Indigenous advisor. Two programs mentioned plans to create hubs for Indigenous resources, including a curriculum lab and an Indigenous education lodge, thus increasing awareness of Indigenous resources on campus. Similarly, two other programs mentioned plans to increase the number of Indigenous resources available to students.

Competency 5 of the *TQS* requires all Alberta teachers to hold a foundational understanding of Indigenous Peoples and apply it in their classroom. To better understand the impact of the new competency, programs were asked to what degree it had impacted the braiding and weaving of Indigenous ways of knowing, being, and doing in their program. In the survey results, seven programs indicated the competency definitely had an impact on how they viewed the necessity for the braiding and weaving, two indicated it probably had an impact, and one indicated it might or might not have had an impact.

The next question asked how teacher education programs defined successful braiding and weaving of Indigenous ways of knowing, being, and doing. Four programs indicated success would include faculty and preservice teachers feeling confident in how they are braiding and weaving Indigenous ways of knowing, being, and doing into their own teaching. Two programs indicated success would include braiding and weaving in lesson planning and in the practicum. Two other programs noted that success would be evident when there was greater Indigenous presence on campus, including students, faculty, Knowledge Keepers, and Elders. One program indicated success would include having students understand colonization, and another suggested that success is found in continuing the journey towards decolonization and reconciliation.

To understand how teacher education programs and schools could work together to further the braiding and weaving of Indigenous ways of knowing, being and doing in Alberta, programs were asked if they had worked with schools to braid and weave Indigenous knowledges in the past. In the survey results, all ten programs indicated that teacher education programs and schools should work together, although only seven programs indicated they had done so. Of the programs that indicated they had worked with schools to further the braiding and weaving of Indigenous ways of knowing, being, and doing, four mentioned the importance of the preservice teacher practicum in this integration. Four responses mentioned sharing professional development or research as a means for teacher education programs and schools to work together on the braiding and weaving of Indigenous ways of knowing, being, and doing. Two programs suggested connecting with Indigenous scholars, Elders, and Knowledge Keepers to further the braiding and weaving.

The final survey question was designed to generate ideas about how teacher education programs and schools should work together to combat anti-Indigenous racism. Responses to this question included building relationships with Indigenous communities; mandatory workshops on Indigenous ways of knowing, being and doing for students, staff, and faculty; and sustained funding for anti-Indigenous racism initiatives. Of note is the emphasis on Indigenous-led professional development, including “presentations by Indigenous people telling their stories” and “first-person stories and engagement and invested scholars who are primarily Indigenous with ally support.”

### **Limitations**

As part of a larger research project, this study focused on survey results and did not consider other forms of qualitative data such as documents or interviews. The results are not generalizable to all teacher education programs in Alberta as they are impacted by the perspectives of those who completed the survey.

### **Discussion**

The purpose of this research study was to identify how ten teacher education programs in Alberta are braiding and weaving Indigenous ways of knowing, being, and doing into their programming; the challenges and successes of the programs; and how the programs might work more closely with schools to further this braiding and weaving. We see these efforts as one way to combat anti-Indigenous racism as education can be pivotal in how people think about the world and their place in it in relation to others.

In examining the survey results through the lens of Kanu’s (2011) levels of integration—student learning outcomes, instructional methods/strategies, curriculum content and learning resources/materials, assessment of student learning, and a philosophical underpinning of the curriculum—it is evident that teacher education programs in Alberta have braided and woven Indigenous ways of knowing, being, and doing into their programming with varying levels of depth. Table 2 uses examples from the survey to connect with Kanu’s (2011) five levels of integration of Indigenous perspectives, which we refer to Indigenous ways of knowing, being and doing.

Table 2

#### *Levels of Integration of Indigenous Ways of Knowing, Being, and Doing*

Kanu’s (2011) five levels of integration	Examples from the survey
student learning outcomes	usually found in course outlines (not part of the data); more evident in mandatory courses
instructional methods/strategies	processes and pedagogies: guest speakers (Indigenous Elders, Knowledge Keepers), land-based learning
curriculum content and learning resources/materials	content: treaties, residential schools, etc.
assessment of student learning	products: lesson plans, artefacts, videos, etc.
philosophical underpinning of the curriculum	mandatory course

The presence of a mandatory Indigenous education course in a teacher education program demonstrates these programs see this mandatory aspect of teacher training as a philosophical underpinning. These mandatory courses provide preservice teachers with the opportunity to consider Indigenous knowledges in a focused, multi-faceted way and create the time and space to engage with non-Western forms of knowledge and perspectives. Yet, a single mandatory course is only the beginning. As Siemens and Neufeld (2022) emphasized, the inclusion of mandatory courses on Indigenous Peoples in university programs is critical as a first step; yet, Indigenous ways of knowing, being, and doing must also be woven into other courses to continue and further that learning. Having a course focused on the braiding and weaving of Indigenous ways of knowing, being, and doing into teaching provides preservice teachers with learning opportunities and more time to deepen the integration. For some students, this specialized learning can be transformative in ways that affect their professional and personal lives (Vandenborn, et al., 2022).

The teacher education programs provided examples of assessment of student outcomes through the design of lesson plans, presentations, papers, artefacts, and videos to convey learning. These responses indicate different levels of integration as some programs drew on standard assessment practices (papers, lesson plans, presentations) while other assessment practices indicate a deeper integration of understanding Indigenous pedagogies (Louie et al., 2017). As post-secondary teacher educators, it is vital that we are modelling best practices for our future teachers to practice and emulate in their own learning environments. The three universities without a mandatory course reported Indigenous ways of knowing, being, and doing were brought into other courses, albeit this inclusion ranged widely: from 10% to 100% of courses. Integration, braiding, and weaving across courses can provide students with an understanding of Indigenous ways; however, a mandatory and dedicated course provides students with the opportunity to focus on Indigenous ways over a longer period, thereby extending understanding and improving their future teaching. It is interesting to note that one of the three education programs without a mandatory Indigenous course indicated they had future plans for such a course.

It is perhaps not surprising that all programs indicated the braiding and weaving of Indigenous ways occurred through content largely focused on historical issues, including treaties, colonial policies, and residential schools. This type of content provides basic foundational knowledge of the history of Indigenous Peoples in Canada and sets the stage for decolonization by bringing awareness of historical injustices against Indigenous peoples. However, without consideration of social justice issues, including power and privilege and a critical examination of positionality and intersectionality, the presentation of this content alone and from a strictly historical perspective fails to deeply engage learners. For instance, a solely historical focus distances learners from the ongoing and contemporary outcomes of a colonial past and fails to appreciate the contemporary existence and renaissance of Indigenous peoples and their contributions. The reliance on Indigenous Elders or Knowledge Keepers as the primary mode of responding to this area may ultimately increase the burden on Indigenous people to teach non-Indigenous people.

Three examples of Indigenous pedagogies that are accessible to faculty are storytelling, talking circles (Hanson & Danyluk, 2022; Poitras Pratt, 2021), and land-based learning (MacDonald & Markides, 2018). Although eight programs indicated using land-based learning to further the braiding and weaving of Indigenous ways of knowing, being, and doing, the time spent on land-based learning ranged from six hours to three days. Many of the examples of land-based learning provided by teacher education programs were field trips to locations significant to Indigenous Peoples of the area. This is a natural tendency; yet Bowra et al. (2021) pointed to the

misconception that land-based learning must entail being in the “bush” away from urban settings. Land-based learning in urban settings can demonstrate the presence of nature all around while recognizing the history of a specific place and its significance, or the significance of its loss, to Indigenous Peoples.

Although all teacher education programs reported Indigenous faculty were involved in the design of courses, the number of these faculty at each institution was relatively low as compared to the size of the overall faculty. In one case, the Indigenous instructor cited was a part-time contract instructor who would have limited involvement with faculty planning and strategic priorities. This, combined with the fact that three programs drew upon Indigenous staff employed by the institution and their family members to inform programming, underscores a lack of permanent Indigenous faculty to address the *TQS5*. In programs where Indigenous faculty are the sole voice on Indigenous programming and knowledges, there is a risk that this emotionally demanding work can create feelings of loneliness and isolation (Mohamed & Beagan, 2019). Further, the burden placed on Indigenous faculty for service on a variety of committees beyond faculty norms creates additional stress, in many cases leading to exhaustion and burnout (Mohamed & Beagan, 2019). It makes sense to draw upon the expertise of Indigenous faculty, Elders, Knowledge Keepers, and relevant staff at the Alberta Teachers’ Association, but it may be a way of relinquishing responsibility. By inviting in a guest speaker, faculty are able to shift some of the responsibility for learning and teaching Indigenous ways of knowing, being, and doing onto others.

It should be noted that several teacher education programs in Alberta were including Indigenous ways of knowing, being, and doing into their programming prior to the establishment of the fifth *TQS* competency (Poitras Pratt & Danyluk, 2018; Poitras Pratt & Hanson, 2020; Scott & Gani, 2018). Still, the competency appears to have been a catalyst for at least seven of the ten programs to deepen their level of integration, braiding, and weaving. Two programs indicated that the *TQS5* may have furthered their efforts while one program was uncertain if the competency had any impact. While the mixed responses are largely indicative of a time of transition, it seems clear that the introduction of the *TQS5* moved the landscape in a forward and positive direction as the inclusion of Indigenous ways of knowing, being, and doing into their programming shifted from the discretion of the teacher to a professional expectation for all teachers in Alberta.

The number one challenge identified in the braiding and weaving of Indigenous ways of knowing, being, and doing in teacher education programs was that of appropriate funding. Survey responses pointed to the risks of grants-based funding: its reliance on faculty who have a specific interest, willingness, and time to add this work to their list of responsibilities, along with the additional work of grant writing and reporting. In some programs, bringing Indigenous ways into a course depended on whether the person teaching the course was inclined to spend the time and effort to apply for grant funding and whether or not they were successful in securing funds. The level of braiding and weaving that preservice teachers received through their education programs also depended on individual faculty members and their ability or willingness to connect with guest speakers and arrange for land-based experiences. The amount of time that is required to engage in this work in a meaningful way and to secure requisite funds to take up this work are at odds. This observation echoes Evans et al.’s (2020) finding that teachers report not having enough time to digest new learning resources. Of the ten programs reporting challenges with the braiding and weaving of Indigenous ways of knowing, being, and doing, one-half (five) identified sustained funding as their biggest challenge. This lack of funding is likely connected to the provincial government cuts to postsecondary institutions in Alberta and is further reflective of its low

prioritization. As Adkin (2022) noted, successive years of funding cuts of 16–18% to post-secondaries have resulted in job losses, tuition increases, and programs scrambling to find ways to rein in their spending to prevent further job losses.

Although the pandemic presented many challenges and was a setback for teacher education programs working to build and maintain connections with Indigenous communities, nine of the ten programs reported success in their overall efforts. Survey findings revealed positive feedback from schools in terms of practicum students' ability to braid and weave Indigenous knowledges into their teaching was viewed as one of the strongest indicators of success. The practicum remains the most powerful connection between teacher education programs and schools. It was also evident that those involved in this work saw future possibilities for collaborations as they shared ideas for collaborative professional development, collaborative research, and a dedicated symposium or conference.

The ambivalence that preservice and in-service teachers, as well as teacher educators, once expressed about their role in braiding and weaving Indigenous ways of knowing, being, and doing into their classrooms is no longer acceptable. The three teacher concerns identified by Scott and Gani (2018) have been addressed as evidenced by this study. First, teachers do not need to concern themselves with sharing perspectives from all Indigenous Peoples; instead, they should focus on the perspectives of the peoples on whose lands they reside. Second, though it is appropriate and important to learn from Indigenous Elders and Knowledge Keepers, this is most certainly the case when engaging in ceremonies or other sacred practices, teachers can teach content, processes, and pedagogies, and some aspects of land-based learning (Louie et al., 2017). Assessment practices that move beyond the typical essay or classroom presentation require students to apply and demonstrate their learning in creative and impactful ways, which can deepen the understanding. Certainly, as the original inhabitants of this land, Indigenous Peoples and their ways of knowing, being, and doing must be granted adequate time, funding, and attention in teacher education programs so that the issue of anti-Indigenous racism, founded in misinformation and lack of knowing, can be adequately addressed.

## **Conclusion**

We have heard time and again that education has been the source of much pain and hurt in Indigenous communities yet, as educators, we believe in the powerful good of education. When preservice teachers acquire a requisite understanding of Indigenous ways of knowing, being, and doing in their teacher education programs, this knowledge is very likely to be passed onto their future students and shared in family settings. This type of rippling out of positive learning around Indigenous Peoples and their ways of ways of knowing, being, and doing holds the potential to positively impact society at a broader level and ultimately serve as an impediment to anti-Indigenous racism.

The introduction of the fifth competency in Alberta Education's (2018) *TQS* signifies that the braiding and weaving of Indigenous ways of ways of knowing, being, and doing needs to be a philosophical underpinning of teacher education programs in Alberta. All teachers must possess and apply a foundational level of knowledge about Indigenous Peoples. Yet provincial funding cuts to postsecondary institutions have forced faculty to rely on temporary grant funding to support the braiding and weaving of Indigenous ways of knowing, being, and doing.

Preservice teachers must be equipped with time to engage in decolonization, including an examination of their positioning and relationality to Indigenous Peoples (Donald, 2012a; St.

Denis, 2011). The decolonization process must precede the braiding and weaving of Indigenous perspectives in classrooms (Poitras Pratt et al., 2018). A strong foundation is a social justice approach that includes examination of issues such as power and privilege, equity versus equality, and intergenerational trauma set the stage for an examination of how racism continues to impact Indigenous people.

Teacher education programs must provide preservice teachers with opportunities to engage in Indigenous pedagogies, including land-based learning, talking circles, and storytelling, to deepen their understanding of Indigenous ways. Content provides a foundational level of knowledge, whereas braiding and weaving Indigenous ways of ways of knowing, being, and doing through products, processes, and pedagogies extends the learning beyond the foundational level and provides greater opportunities to consider modern interpretations of Indigenous cultures. Braiding and weaving Indigenous knowledges through a mandatory course while weaving them into other courses demonstrates that Indigenous ways of knowing, being, and doing are a foundational underpinning of the program. Teacher education programs have a moral responsibility to provide a space where preservice teachers can decolonize their thought processes and begin to reverse some of the colonial injustices that have occurred in the name of education.

A consistent theme running through the survey responses and the collaborative data analysis was the reliance on Indigenous people to lead this work. Though it makes sense to have Elders and Knowledge Keepers lead cultural teachings and ceremony, non-Indigenous educators' continued fear of making a mistake and accidentally saying the wrong thing, places a burden on Indigenous faculty and Elders to take responsibility for this work. In the spirit of reconciliation, this burden is one that requires teacher educators to go beyond a foundational understanding of Indigenous Peoples and to offer deeper levels of braiding and weaving including pedagogies and demonstrations of learning through assessment.

The next stage of this research examines how Alberta teachers are braiding and weaving Indigenous ways of knowing, being, and doing into their teaching. We are currently working with schools to learn how teachers are braiding and weaving Indigenous ways of knowing, being, and doing into their classrooms and how teacher educator programs and schools can better work together.

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### **References**

- Adkin, L. (2022). *Higher education—Corporate or public? How the UCP is restructuring post-secondary education in Alberta*. Parkland Institute. <https://policycommons.net/artifacts/2461093/higher-education/3482869/>
- Alberta Education. (2018). *Teaching Quality Standard*. Alberta Government. <https://open.alberta.ca/dataset/4596e0e5-bcad-4e93-a1fb-dad8e2b800d6/resource/75e96af5-8fad-4807-b99a-f12e26d15d9f/download/edc-alberta-education-teaching-quality-standard-2018-01-17.pdf>
- Alberta Health Services. (n.d.). *Indigenous Peoples in Canada: Indigenous health*. <https://www.albertahealthservices.ca/info/page7634.aspx#:~:text=With%2022%2C700%20Alberta ns%20self%2Didentifying,and%2033%2C375%20Indigenous%20peoples%20respectively>



- Alberta Health Services. (2020). *Indigenous Peoples and communities in Alberta*.  
<https://together4health.albertahealthservices.ca/14632/widgets/56737/documents/34245>
- Bowra, A., Mashford-Pringle, A., & Poland, B. (2021). Indigenous learning on Turtle Island: A review of the literature on land-based learning. *The Canadian Geographer / Le Géographe canadien*, 65(2), 132–140. <https://doi.org/10.1111/cag.12659>
- Burns, A., Danyluk, P., Nickel, J., Kendrick, A., Kapoyannis, T., & McNeilly, E. (2022). Aligning goals for certification and professional growth: Building cooperation among bachelor of education programs in Alberta. *Alberta Journal of Educational Research*, 68(1), 103–118.  
<https://doi.org/10.11575/ajer.v68i1.70703>
- Cochran-Smith, M. (2003). Learning and unlearning: The education of teacher educators. *Teaching and Teacher Education*, 19(1), 5–28. [https://doi.org/10.1016/S0742-051X\(02\)00091-4](https://doi.org/10.1016/S0742-051X(02)00091-4)
- Dei, G. J. S., & McDermott, M. (Eds.). (2019). *Centering African proverbs, Indigenous folktales, and cultural stories in curriculum: Units and lesson plans for inclusive education*. Canadian Scholars.
- Dion, S. (2007). Disrupting molded images: Identities, responsibilities and relationships—teachers and indigenous subject material. *Teaching Education*, 18(4), 329–342.  
<https://doi.org/10.1080/10476210701687625>
- Dion, S. D. (2009). *Braiding histories: Learning from Aboriginal peoples' experiences and perspectives*. University of British Columbia Press.
- Donald, D. (2012a). Forts, colonial frontier logics, and Aboriginal-Canadian relations: Imagining decolonizing educational philosophies in Canadian contexts. In A. A. Abdi (Ed.), *Decolonizing philosophies of education* (pp. 91–111). Brill.
- Donald, D. (2012b). Indigenous Métissage: A decolonizing research sensibility. *International Journal of Qualitative Studies in Education*, 25(5), 533–555. <https://doi.org/10.1080/09518398.2011.554449>
- Environics Institute. (2010). *Urban Aboriginal Peoples Study*. <https://www.uaps.ca/wp-content/uploads/2010/04/UAPS-FULL-REPORT.pdf>
- Evans, C., Charlebois, S., Danyluk, P., & Poitras Pratt, Y. (2020, Spring). How do we move reconciliation in schools forward? *Education Canada*. <https://www.edcan.ca/articles/move-reconciliation-in-schools/>
- Gebhard, A. (2020). Power relations, knowledge productions, and teaching against oppression in an elementary classroom on the Canadian prairies: A self-study. *Studying Teacher Education*, 16(2), 204–221. <https://doi.org/10.1080/17425964.2020.1742105>
- Gillborn, D. (2006). Critical race theory and education: Racism and anti-racism in educational theory and praxis. *Studies in the Cultural Politics of Education*, 27(1), 11–32.  
<https://doi.org/10.1080/01596300500510229>
- Government of Canada. (2022). Indigenous peoples in Alberta. <https://www.sac-isc.gc.ca/eng/1647614714525/1647614742912>
- Hanson, A., & Danyluk, P. (2022). Talking circles as Indigenous pedagogy in online learning. *Teaching and Teacher Education*, 115, 1–9. <https://doi.org/10.1016/j.tate.2022.103715>
- Ho, S. (2019, September 19). *Interview: Sen. Murray Sinclair speaks with Lisa LaFlamme about racism in Canada*. CTV News. [https://beta.ctvnews.ca/national/2019/9/19/1\\_4601932.html](https://beta.ctvnews.ca/national/2019/9/19/1_4601932.html)
- Howell, L., & Ng-A-Fook, N. (2022). A case of senator Lynn Beyak and anti-Indigenous racism in Canada. *Canadian Journal of Education*, 45(1), 1–35. <https://doi.org/10.53967/cje-rce.v45i1.4787>
- Kanu, Y. (2005). Teachers' perceptions of the integration of Aboriginal culture into the high school curriculum. *Alberta Journal of Educational Research*, 51(1), 50–68.  
<https://doi.org/10.11575/ajer.v51i1.55100>
- Kanu, Y. (2011). *Integrating Aboriginal perspectives into the school curriculum: Purposes, possibilities, and challenges*. University of Toronto Press.
- Kennedy, A. S. (2022, April 8). *Postsecondary students grapple with increased tuitions as a result of provincial funding cuts to education*. The Globe and Mail.

- <https://www.theglobeandmail.com/canada/alberta/article-postsecondary-students-grapple-with-increased-tuitions-as-a-result-of/>
- Kimmerer, R. W. (2013). *Braiding sweetgrass: Indigenous wisdom, scientific knowledge and the teachings of plants*. Milkweed Editions.
- Ladson-Billings, G. (1998). Just what is critical race theory and what's it doing in a nice field like education? *International Journal of Qualitative Studies in Education*, 11(1), 7–24.  
<https://doi.org/10.1080/095183998236863>
- Ladson-Billings, G. (2005). The evolving role of critical race theory in educational scholarship. *Race, Ethnicity and Education*, 8(1), 115–119. <https://doi.org/10.1080/136133052000341024>
- Lashta, E., Berdahl, L., & Walker, R. (2015). Interpersonal contact and attitudes towards Indigenous Peoples in Canada's prairie cities. *Ethnic and Racial Studies*, 39(7), 1–19.  
<https://doi.org/10.1080/01419870.2015.1105989>
- Lawrence, B., & Dua, L. (2005). Decolonizing antiracism. *Social Justice*, 32(4), 102–143.
- Leyland, A., Smylie, J., Cole, M., Kitty, D., Crowshoe, L., McKinney, V., Green, M., Funnel, S., Brascoupé, S., Dallaire, J., & Safarov, A. (2016). *Health and health care implications of systemic racism on Indigenous peoples in Canada*. The College of Family Physicians of Canada.
- Lorenz, D. (2017). Reversing racism in the time of reconciliation? Settler colonialism, race, and Alberta teachers. *Canadian Journal for New Scholars in Education*, 8(1), 80–97.  
<https://journalhosting.ucalgary.ca/index.php/cjnse/article/view/30804>
- Louie, D., Poitras Pratt, Y., Hanson, A., & Ottmann, J. (2017). Applying Indigenizing principles of decolonizing methodologies in university classrooms. *Canadian Journal of Higher Education*, 47(3), 16–33. <http://journals.sfu.ca/cjhe/index.php/cjhe/issue/view/182767>
- Lund, D. (Ed.). (2018). *Wiley international handbook of service-learning for social justice*. Wiley.
- MacDonald, J., & Markides, J. (2018). Called to action: Dialogue around praxis for reconciliation. *McGill Journal of Education / Revue des sciences de l'éducation de McGill*, 53(2).  
<https://doi.org/10.7202/1058395ar>
- McDermott, M., Brown, B., Friesen, S., Markides, J., MacDonald, J., & Holden, M. (2020). *Leading for Indigenous learning: Research brief*. Werklund School of Education, University of Calgary.  
<http://hdl.handle.net/1880/112714>
- McDermott, M., MacDonald, J., Markides, J., & Holden, M. (2021). Uncovering the experiences of engaging Indigenous knowledges in colonial structures of schooling and research. *Engaged Scholar Journal*, 7(1), 25–44. <https://doi.org/10.15402/esj.v7i1.69957>
- McLane, P., Mackey, L., Holroyd, B. R., Fitzpatrick, K., Healy, C., Rittenbach, K., Big Plume, T., Bill, L., Bird, A., Healy, B., Janvier, K., Louis, E., & Barnabe, C. (2022). Impacts of racism on First Nations patients' emergency care: Results of a thematic analysis of healthcare provider interviews in Alberta, Canada. *BMC Health Services Research*, 22(804), 1–18. <https://doi.org/10.1186/s12913-022-08129-5>
- Merriam, S. (1998). *Qualitative research and case study applications in education*. Jossey-Bass.
- Merriam, S. (2009). *Qualitative research: A guide to design and implementation*. Jossey-Bass.
- Milne, E. (2017). Implementing Indigenous education policy directives in Ontario public schools: Experiences, challenges and successful practices. *The International Indigenous Policy Journal*, 8(3), 1–20. <https://doi.org/10.18584/iipj.2017.8.3.22>
- Mohamed, T., & Beagan, B. L. (2019). 'Strange faces' in the academy: Experiences of racialized and Indigenous faculty in Canadian universities. *Race, Ethnicity and Education*, 22(3), 338–354.  
<https://doi.org/10.1080/13613324.2018.1511532>
- Morcom, L., & Freeman, K. (2018). Niinwi - kiinwa - kiinwi: Building non-Indigenous allies in education through Indigenous pedagogy. *Canadian Journal of Education*, 41(3), 808–833.
- Poitras Pratt, Y. (2021). Resisting symbolic violence: Métis community engagement in lifelong learning. *International Journal of Lifelong Education*. <https://doi.org/10.1080/02601370.2021.1958017>
- Poitras Pratt, Y., & Danyluk, P. (2017). Learning what schooling left out: Making an Indigenous case for

- critical-service learning and critical pedagogy in teacher education. *The Canadian Journal of Education*, 40(1), 1–24. <http://journals.sfu.ca/cje/index.php/cje-rce/article/view/2349/2379>
- Poitras Pratt, Y., & Danyluk, P. (2018). Transforming pre-service teacher practices and beliefs through First Nations, Métis and Inuit critical service-learning experiences. In D. Lund (Eds.), *Wiley international handbook of service-learning for social justice* (pp. 171–190). Wiley.
- Poitras Pratt, Y., & Danyluk, P. J. (2019). Exploring reconciliatory pedagogy and its possibilities through educator-led praxis. *The Canadian Journal for the Scholarship of Teaching and Learning*, 10(3), 1–16. <https://doi.org/10.5206/cjsotl-rcacea.2019.3.9479>
- Poitras Pratt, Y., Grant, B.-J. & Markides, J. (2021). Promises made, promises broken – how the draft K-6 curriculum recolonizes the Métis in Alberta. *Alberta Curriculum Analysis*. <https://alberta-curriculum-analysis.ca/promises-made-promises-broken-how-the-draft-k-6-curriculum-recolonizes-the-metis-in-alberta-2/>
- Poitras Pratt, Y., & Hanson, A. J. (2020). Indigenous instructors’ perspectives on pre-service teacher education: Poetic responses to difficult learning and teaching. *Race, Ethnicity and Education*, 25(6), 855–873. <https://doi.org/10.1080/13613324.2020.1718085>
- Poitras Pratt, Y., Louie, D. W., Hanson, A. J., & Ottmann, J. (2018). Indigenous education and decolonization. In *Oxford research encyclopedia of education*. <https://doi.org/10.1093/acrefore/9780190264093.013.240>
- Povey, M. T., Page, S., & Coates, S. K. (2022). Where we’re going, not where we’ve been: Indigenous leadership in Canadian higher education, *Race Ethnicity and Education*, 25(1), 38–54. <https://doi.org/10.1080/13613324.2021.1942820>
- Reading, C. (2014). Polices, programs and strategies to address anti-Indigenous racism: A Canadian perspective. *National Collaborating Centre for Indigenous Health*. [https://www.nccih.ca/495/Policies,\\_programs\\_and\\_strategies\\_to\\_address\\_anti-Indigenous\\_racism\\_\\_A\\_Canadian\\_perspective.ncci](https://www.nccih.ca/495/Policies,_programs_and_strategies_to_address_anti-Indigenous_racism__A_Canadian_perspective.ncci)
- Richards, A. R., & Hemphill, M. A. (2017). A practical guide to collaborative qualitative data analysis. *Journal of Teaching in Physical Education*, 34(2), 225–231. <https://doi.org/10.1123/jtpe.2017-0084>
- Scott, D., & Gani, R. (2018). Examining social studies teachers’ resistances towards teaching Aboriginal perspectives: The case of Alberta. *Diaspora, Indigenous, and Minority Education*, 12(4), 167–181. <https://doi.org/10.1080/15595692.2018.1497969>
- Siemens, J., & Neufeld, K. H. S. (2022). Disruptive knowledge in education for reconciliation: The effects of Indigenous course requirements on non-Indigenous students’ attitudes. *Canadian Journal of Education/Revue Canadienne de l’éducation*, 45(2), 375–399. <https://doi.org/10.53967/cje-rce.v45i2.4867>
- Sinclair, M., (2014). Education: Cause and solution. *The Manitoba Teacher*, 93(3), 6–10. [http://www.mbteach.org/pdfs/mbt/2014/Dec14\\_MBT.pdf](http://www.mbteach.org/pdfs/mbt/2014/Dec14_MBT.pdf)
- Stake, R. (1995). *The art of case study research*. Sage.
- Stake, R. (2006). *Multiple case study analysis*. Guilford Press.
- Statistics Canada. (2020). *Survey of postsecondary faculty and researchers, 2019*. [www150.statcan.gc.ca/n1/daily-quotidien/200922/dq200922a-eng.htm](http://www150.statcan.gc.ca/n1/daily-quotidien/200922/dq200922a-eng.htm)
- Statistics Canada (2021). *Membership in a Métis organization or settlement: Findings from the 2021 census of the population*. <https://www12.statcan.gc.ca/census-recensement/2021/as-sa/98-200-X/2021006/98-200-X2021006-eng.cfm>
- St. Denis, V. (2011). Silencing Aboriginal curricular content and perspectives through multiculturalism: ‘There are other children here. *The Review of Education/Pedagogy/Cultural Studies*, 33(4), 306–317. <https://doi.org/10.1080/10714413.2011.597638>
- St. Denis, V., & Schick, C. (2003). What makes anti-racist pedagogy in teacher education difficult? Three popular ideological assumptions. *Alberta Journal of Educational Research*, 49(1), 55–69. <https://doi.org/10.11575/ajer.v49i1.54959>

- Tinglin, W., & Joyette, D. (2020). *Community engagement in a changing social landscape*. Friesen.
- Tomlinson, C. A., & Imbeau, M. B. (2010). *Leading and managing a differentiated classroom*. ASCD.
- Truth and Reconciliation Commission of Canada. (2015). *Truth and Reconciliation Commission of Canada: Calls to Action*. [https://ehprnh2mwo3.exactdn.com/wp-content/uploads/2021/01/Calls\\_to\\_Action\\_English2.pdf](https://ehprnh2mwo3.exactdn.com/wp-content/uploads/2021/01/Calls_to_Action_English2.pdf)
- Tupper, J. A., & Cappello, M. (2008). Teaching treaties as (un)usual narratives: Disrupting the curricular common sense. *Curriculum Inquiry*, 38(5), 559–578. <https://doi.org/10.1111/j.1467-873X.2008.00436.x>
- Vandenborn, E., Markides, J., Fowler, T. A., Hanson, A. J., Macdonald, J., Poitras Pratt, Y., & Danyluk, P. (2022). Tensions in adapting a mandatory Indigenous education course to an online environment. In X. M. Woodley & M. F. Rice (Eds.) *Designing intersectional online education* (pp. 177–196). Routledge.

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*Patricia Danyluk* (PhD) grew up in northern Manitoba where she spent many years working with remote First Nations and Métis communities. Although Patricia was born in Mohkinstsis, she has spent most of her life in Manitoba and Ontario. She is grateful to be back in Alberta where she enjoys hiking in the mountains.

Patricia is a K–12 teacher and has been at the Werklund School of Education (University of Calgary) for nine years, where she is currently the Chair of the Adult Learning Studies Area and the principal investigator for this study. Patricia is a settler of Scottish/Irish ancestry. Patricia views reconciliation as an ongoing journey in which she continues to learn each day.

*Amy Burns* is a former K–12 teacher and is an Associate Professor in leadership, policy, and governance and Associate Dean of undergraduate programs in education with the Werklund School of Education at the University of Calgary. She is a leader and researcher committed to learning and listening and is proud to be a part of this research project as it aims to encourage the meaningful exploration and integration of Indigenous ways of knowing in K–12 classrooms.

*Yvonne Poitras Pratt* (Métis), Associate Professor, traces family roots to historic Red River and Fishing Lake Métis Settlement in Alberta. She publishes on Indigenous and reconciliatory education, digital storytelling with Métis, and arts education. She has earned multiple awards since her recruitment to the Werklund School of Education in 2013.

Before taking on her current role of Director, Field Experience (Community-Based Pathway), at the Werklund School of Education, *Dr. Astrid Kendrick* was a K–12 classroom teacher for nineteen years specializing in Physical Education and English/Language Arts. Dr. Kendrick has two main research foci: firstly, on compassion fatigue, burnout, and emotional labour in Alberta educational workers; and secondly, on building the instructional capacity of preservice teachers in online and virtual learning environments. She is the primary investigator on a SSHRC-funded Partnership Development Grant with the Alberta Teachers Association, ASEBP, and Northwest Territories Teachers Association; a co-investigator on a health promotion grant through Alberta Education; and a co-investigator on an SSHRC Insight grant into improving teacher integration of Indigenous knowledge.

*Maureen Plante* (MSc) was born and raised in a small community north of Edmonton on Treaty 6. She is Iroquois Cree/Métis and has German ancestry. Maureen is currently working as a therapist and research assistant. Her master's research focused on understanding disrupted eating patterns from an Indigenous

Oriented Therapy lens. She has been a research assistant on this project since it began and is very thankful to be part of it.

*Samara Wessel* (MSc Student) grew up in the Okanagan region in British Columbia, the unceded territories the Syilx Peoples of the Okanagan Nation. Before coming to Calgary in 2021, Samara spent the prior 12 years living in Vancouver, BC. Samara moved to Calgary to attend the Counselling Psychology Master's program. Her master's thesis explores the apprehensions non-Indigenous clinicians have towards working with Indigenous clients to conceptualize a framework to provide culturally safe care to Indigenous clients. Samara believes that becoming a decolonial ally requires constant acknowledgement of privilege and who is benefiting from colonialism. This is a lifelong process of (un)learning.

*Kathryn Crawford* (EdD) is an Assistant Professor at Ambrose University, teaching learning theory and application, and a Faculty Lead at Yorkville University in Curriculum and Pedagogy and Indigenous Education. Her experiences as an educator with students in First Nation communities, special education programs, inclusive classrooms, and with preservice teacher/partner teacher partnerships has been integral in affirming the importance of first-person stories in teacher preparation and in the teaching profession. She is interested in the taken-for-granted socialization and evaluation of preservice teachers, identity development of preservice and early-career teachers, the role of communication in the authorization of the idealized teacher through field experience, and in organizational storytelling.

Originally from France, *Eva Lemaire* is a Professor of Education at the University of Alberta, on Treaty 6 territory. She is Associate Professor at Faculté Saint-Jean and Adjunct Professor at the Faculty of Education (Department of Educational Policy Studies). Her areas of expertise are intercultural education, multilingual education, as well as language awareness/cross linguistic awareness. Eva Lemaire is interested in the integration of Indigenous perspectives in school settings, especially in the French immersion and French immersion minority contexts; with language revitalization and language awareness being conceptualized as a pathway to reconciliation. [www.eveilmichif.csj.ualberta.ca](http://www.eveilmichif.csj.ualberta.ca)  
<https://apps.ualberta.ca/directory/person/lemaire>

Through his teaching, service, and scholarship, *Dr. Joshua Hill* seeks to create the conditions to (re)story education as a journey towards agency, wonder, and expansive awareness of oneself-in-the-world. He is a citizen of the Métis Nation of Alberta, and his ancestors trace back to Métis, Eastern European, and English communities. Josh is an Assistant Professor in the Department of Education at Mount Royal University. He is currently exploring storytelling, Indigenous land-based learning, and heterarchy in the contexts of learning, teaching, and leadership in K–12 and post-secondary education. Prior to his professorship, Josh worked for many years at Rocky View Schools as a teacher and system leader.

*Robin Bright* (PhD) is a Professor and Interim Dean in the Faculty of Education at the University of Lethbridge, living and benefitting from Blackfoot Confederacy traditional territory. After enjoying a ten-year career teaching elementary school, Robin pursued her commitment to lifelong learning as a researcher, writer, and teacher educator working with preservice teachers, practicing teachers, parents, children, and colleagues in the areas of language and literacy. She continues that commitment to learning through understanding Indigenous ways of knowing to support rich experiences for students and teachers in classrooms.

*Dawn Burleigh* (PhD) is a former high school teacher in an isolated First Nation community and an Associate Professor in the Faculty of Education at the University of Lethbridge who studies the intersections of policy and curriculum in Indigenous education.

*Chloe Weir* (PhD) traces her passion for teaching and education to her second-grade teacher who had a profound influence on her life. She currently serves as the Chair of the School of Education at Burman University. She is devoted to teaching and enjoys learning new ways of engaging preservice teachers. She is a strong proponent of the view that there is a space for understanding how Indigenous ways of knowing and doing can contribute significantly to human development.

*Laurie Hill* (PhD) was born and grew up in southwestern Ontario, near Lake Huron, the territory of the Anishinabek Nation and the Saugeen Ojibway Nation. She now lives in Calgary and works at St. Mary's University where she is currently an Associate Professor in the faculty of Education. Laurie is a settler with Scottish, Irish, and British heritage.

*Lorelei Boschman* (MEd) has been an educator for thirty-four years as an elementary teacher, high school mathematics teacher, and currently Chair of Education and Instructor at Medicine Hat College, Alberta, in the Bachelor of Education degree collaboration with Mount Royal University in Calgary, Alberta. An important aspect of this role is to collaborate in Indigenous education with faculty, local teachers, and preservice teachers. Lorelei's scholarly work has been focused on mathematics education, leadership, experiential learning, and high-impact educational strategies. Educating preservice teachers and creating truly meaningful and thorough learning experiences to prepare them for teaching is paramount to her. She also enjoys adventuring in the outdoors and is a firm believer in place-based experiential learning, appreciation, and personal growth.