Advancing Indigenous Pedagogy on Childhood:
Identifying priorities for professional education

Social Sciences and Humanities Research Council (SSHRC)
Imagining Canada's Future Knowledge Synthesis Grant

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Background
Some Canadian policies regarding Indigenous children have resulted in serious harms. The Truth and Reconciliation Commission of Canada (TRC) has highlighted such harms and proposed priority Calls to Action for their reconciliation. Some Calls to Action concentrate on needed improvements in post-secondary education for the child-focused professions. Using an innovative childhood-centered framework, a scoping review was conducted to identify the state of knowledge on child-focused professions education related to the TRC Calls to Action as well as the impact of this education on the lives of Indigenous children.

Key Findings
The current evidence highlights:
(a) The need to recognize substantive foundational content rooted in Indigenous outlooks;
(b) A diversity of teaching and learning approaches for preparing professionals in Indigenous pedagogy;
(c) The importance of supporting faculty development;
(d) A call for community engagement in curricular development as well as necessary systemic changes; and
(e) A small body of “child focused” evidence on Indigenous pedagogy for working with children.

Knowledge Gaps
This review has also identified significant gaps in the available evidence, including:
(a) A lack of cohesion in pedagogical outlooks, aims, or approaches;
(b) Fragmentation of current outcomes evidence, lacking agreed-upon outcomes and methods to orient such research;
(c) Few rigorously-structured empirical research studies;
(d) Virtual absence of evidence on the impact of education on practice changes or favorable impacts for Indigenous peoples as service recipients; and
(e) A major lack of evidence describing advancements in our understanding of the experiences of Indigenous children and pedagogical innovations oriented for the child-focused professions.

Implications
This knowledge synthesis will inform Phase II of this project to: (a) identify priorities for future research; and (b) highlight Knowledge Mobilization priorities for child-focused professions education. These contributions will advance research and actions that address the TRC Calls to Action and promote the development of Indigenous Pedagogies on Childhood as a specialized field that bridges Indigenous studies and Childhood studies. This will inform urgently-needed practice improvements with Indigenous children, families and their communities.
Executive Summary (3 pages)

Advancing Indigenous Pedagogy on Childhood:
Identifying priorities for professional education

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Introduction
Some Canadian policies regarding Indigenous children have resulted in serious harms. The residential school system is a salient example; its legacy continues to be associated with severe and ongoing adverse physical and mental health, social, and cultural consequences. The Truth and Reconciliation Commission of Canada (TRC) has highlighted such harms and proposed priority recommendations for their reconciliation. Some recommendations concentrate on needed improvements in post-secondary education for the child-focused professions. Education programs must be enriched to ensure that professionals develop the knowledge, skills, attitudes, and practices required to work respectfully with Indigenous and non-Indigenous peoples, including children. But, little is known about how these education improvements can be achieved.

Aims
Using an innovative childhood-centered framework, the aim of this project was to identify the state of knowledge on i) child-focused professions education related to the TRC Calls to Action and ii) the impact of this education on the lives of Indigenous children. This Report presents the results of a scoping review that was conducted to map this knowledge.

Approach & Methodology
The project drew on three interrelated frameworks: normative (TRC Calls to Action), pedagogical (Indigenous Pedagogy), and childhood (Childhood Ethics). This three-fold framework provided a foundation for advancing Indigenous Pedagogy on Childhood, rooted in a (TRC) reconciliation normative framework.

What do we know?: A scoping review of the academic and grey literature was conducted. The research question for the review was: What is known about educational approaches to prepare child-focused professionals to work with Indigenous peoples? We searched relevant databases and conducted additional searches by scanning reference lists and grey literature such as academic curricula.

Four work teams were created to conduct this review in four parallel streams: social professions (i.e., preservice teacher education, psychology, social work, law); health professions (excluding mental health); mental health professions (i.e., health professions focused on mental health); and grey literature.

Results
A total of 283 publications were retained as relevant for this review. The breakdown by stream was: social professions (n=171); health professions (n=66); mental health professions
The largest proportion of this evidence is based in the social professions. The largest proportions of the 283 sources that were identified were (a) empirical or evaluation studies (n=113) and (b) “show and tell” reports describing specific pedagogical/instructional initiatives without reporting any evaluative data (n=66). The remaining sources included a diversity of publications: commentaries/editorials (n=32), curriculum webpages (n=18), descriptions of pedagogical development (n=15), reviews (n=12), stakeholder consultations (n=11), grey literature reports (n=9), theoretical papers (n=5), and news articles (=2).

Particularly impressive at this time in the history of this body of scholarship is the publication of two seminal normative statements that are widely recognized by Indigenous and non-Indigenous peoples and bodies: (a) United Nations Declaration on the Rights of Indigenous Peoples which is internationally-recognized and (b) The Final Report of The Truth and Reconciliation Commission of Canada which addresses the specificities of the Canadian context, while also recognizing the UNDRIP. These normative sources articulate standards that help define how the child-focused professions should practice with Indigenous peoples. However, these contain very few considerations particularly focused on Indigenous children, which could provide more specific standards for professional practice.

The published evidence describes several important considerations in developing and implementing pedagogical improvements in the preparation of child-focused professionals. It has been reported that pedagogical improvements need to recognize substantive foundational content that is rooted in Indigenous outlooks, most commonly referred to as Indigenous Knowledge. This includes the broader ideas within Indigenous knowledge systems, as well as the specific yet connected notions of holism, narration, and spirituality. Moreover, the evidence emphasizes the importance of grounding Indigenous pedagogies within a specific cultural framework such as cultural safety, cultural competency, cultural respect, cultural humility, or cultural sensitivity. Cultural safety stands out as the most strongly endorsed cultural framework for the preparation of professionals in Indigenous pedagogy.

A large body of evidence describes a rich diversity of teaching and learning approaches for preparing professionals in Indigenous pedagogy. These strongly emphasize “experiential learning” through practice placements, immersion experiences, and service-learning. Specific teaching strategies that have been reported and recommended include experience-sharing, critical reflection and/or self-reflection exercises as well as more conventional (but adapted) workshops and courses.

Authors have underscored the importance of supporting faculty development; curricular reform on its own is insufficient. Faculty require preparation and support in Indigenous pedagogy as well as access to Indigenous-focused teaching materials, guidelines, and policies. Non-Indigenous faculty and staff need to be engaged in curricular and program reform, integrating Indigenous content throughout the entire curriculum, rather than developing such curricula “to the side of” the dominant curriculum.

The evidence strongly emphasizes the importance of community engagement in the development of Indigenous pedagogy. Curricular reform should not be conducted solely by educators, detached from the experiences of Indigenous communities. Community engagement should involve building relationships with Indigenous communities, conducting stakeholder consultations with community members, and promoting the participation of Indigenous community members.
Moreover, advancing Indigenous pedagogy for the professions requires systemic changes. Support and funding for participating communities is required and Indigenous professionals and academics need to be hired as educators for professional education.

A very small body of “child focused” evidence exists on Indigenous pedagogy for working with children. This evidence resides almost exclusively within the social professions literature; predominantly in preservice teacher education. This literature highlights the paucity of knowledge among the child-focused professions about Indigenous communities, their histories, and their cultural knowledge. Educational initiatives have included the use of core units or courses in Indigenous education and teaching approaches grounded in critical theory. Specific approaches used in education with children included: reciprocal teaching/learning (i.e., repositioning teachers as learners), modifying teachers’ approaches to reject deficit thinking, teachers as cultural brokers (i.e., bridging cultures), and incorporating Indigenous peoples’ beliefs, practice, models, and methods into education.

Despite this rich body of evidence that illustrates numerous innovative approaches in Indigenous pedagogy, there are a number of significant gaps in this evidence. There is a lack of cohesion in pedagogical outlooks, aims, or approaches; making it difficult to infer which directions for curricular improvements should be preferred. Although the “outcomes evidence” is generally quite positive, highlighting favorable learner impacts (e.g., improved knowledge, perceptions, attitudes, sensitivity, competencies), this outcomes evidence is quite fragmented and lacking in the use of any widely agreed-upon outcomes and methods. This evidence consists predominantly of diverse forms of learning evaluations; with very few rigorously-structured empirical research studies per se. Moreover, little evidence has been documented regarding the impact of education on practice changes or favorable impact for Indigenous peoples as service recipients. Finally, despite the tremendous growth of childhood studies research and practice improvements in other realms, there is virtually no evidence describing advancements in our understanding of the experiences of Indigenous children and pedagogical innovations oriented for the child-focused professions. The child-focused professions are left to infer child-relevant implications from non-specific adult-centered evidence. This is known to be highly problematic in other childhood domains.

**Conclusions**

This knowledge synthesis will inform Phase II of this project to: (a) identify priorities for future research; and (b) highlight Knowledge Mobilization priorities for child-focused professions education. These contributions will advance research and actions that address the TRC Calls to Action and promote the development of Indigenous Pedagogies on Childhood as a specialized field that bridges Indigenous studies and Childhood studies. This will inform urgently-needed practice improvements with Indigenous children, families and their communities.
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Context & Implications

Definitions (for the purposes of this Report)
- Indigenous: First Nations, Inuit & Métis peoples in Canada & all First Peoples globally
- Childhood/children: legal minors
- Child-focused professions include but is not limited to: education, guidance counselling, school psychology, law, social work, and health professions

Introduction
Some Canadian policies regarding Indigenous children have resulted in serious harms. The residential school system is a salient example; its legacy continues to be associated with severe and ongoing adverse physical and mental health, social, and cultural consequences. While these schools are now closed, ongoing systemic inequities and oppression continue to be experienced by Indigenous children: e.g., over-representation of Indigenous young people in foster care and the justice system; use of courts to oppose parent and child preferences for traditional healing over chemotherapy (e.g., J.J. and Makayla Sault cases); substandard community services for medically-complex children (Jordan’s Principle); among others.

The Truth and Reconciliation Commission of Canada (TRC) has highlighted such harms and proposed priority recommendations for their reconciliation. Some recommendations concentrate on needed improvements in post-secondary education for the child-focused professions. Education programs must be enriched to ensure that professionals develop the knowledge, skills, attitudes, and practices required to work respectfully with Indigenous and non-Indigenous peoples, including children. But, little is known about how these education improvements can be achieved.

Aims
Using an innovative childhood-centered framework, the aims of this project are to (a) identify the state of knowledge on i) child-focused professions education related to the TRC Calls to Action and ii) the impact of this education on the lives of Indigenous children. Together, these activities will inform the development of a framework for Indigenous Pedagogy on Childhood as well as priorities for research, policy and practice that can promote the wellbeing of Indigenous children. The project addresses three foundational questions regarding Indigenous Pedagogy on Childhood: (a) What do we know? (map existing knowledge on educational approaches and their impact); (b) What do we need to know? (identify priorities for future research); (c) What do we need to do? (specify needed knowledge mobilization in professional education).

This Report presents a scoping review that was conducted during Phase I of the project to answer “What do we know?”. Phase II is ongoing, addressing the subsequent two questions.
Background

The Residential School Legacy: The TRC has characterized Canada’s Indigenous policies as “cultural genocide”. The operation of residential schools for over a century was a central element of this “genocide”. Children were separated from their parents and communities to forcibly assimilate them into mainstream Canada. They were often lonely, poorly fed, harshly disciplined, and subjected to sexual and physical abuse. Their Indigenous languages and cultural practices were repressed. Despite the significant damage caused, survivors retained their Indigenous identities. Many contributed to negotiating the Indian Residential Schools Settlement Agreement that mandated the creation of the TRC. The TRC calls for a reconciliation process through mutually respectful relationships between Indigenous and non-Indigenous peoples. This requires the recognition and reparation of the harm that has been inflicted, oriented by the United Nations Declaration on the Rights of Indigenous Peoples (UN-DRIP).

TRC Calls to Action for post-secondary education: The TRC Calls to Action outline requirements for education in the child-focused professions. These include specific courses that focus on the history and legacy of residential schools, the UN-DRIP, Treaties and Indigenous rights, and Indigenous teachings, practices and their contributions to the nation of Canada. Also included is skills-based training in intercultural competency, conflict resolution, human rights, and anti-racism. Post-secondary institutions must create programs in Indigenous languages and increase the number of Indigenous professionals prepared to work in healthcare. Some initiatives have been documented that address some of the concerns described above. For example, some examine recruitment and retention of Indigenous peoples in post-secondary education. Some programs have drawn on cross-cultural instructional models (e.g., cultural competency/safety/humility) to improve preparation for working with Indigenous populations. This must involve more than learning to work with diverse cultures; as some authors articulate “Indigenous pedagogies” and “Indigenous epistemologies” rooted in Indigenous outlooks. Several Australian and New Zealand initiatives have embedded “Indigenous knowledges” in the preparation of teachers. Further, critical approaches have focused explicitly on political dimensions through “Decolonising Pedagogy” and other “post-colonial” adaptations. Little of this work has focused specifically on Indigenous children.

Indigenous Pedagogy on Childhood: Childhood studies is an interdisciplinary field working to advance knowledge and practices regarding children. Little research has related this work to “Indigenous Pedagogy”. This project bridges childhood studies with Indigenous studies to inform pedagogical research and practice in the child-focused professions; which we refer to as Indigenous Pedagogy on Childhood. No synthesis has been published to date that maps existing knowledge on practices and impact in child-focused professions education regarding Indigenous peoples. This knowledge gap impedes the development of strategies that address the education-related TRC Calls to Action.

The research team

(PI: Principal Investigator; CoI: Co-Investigator; Collab: Collaborator)

The analysis presented in this Report has been conducted by leading interdisciplinary researchers, educators, and knowledge users with expertise in Indigenous studies, childhood studies, post-secondary pedagogy, scoping reviews, and knowledge mobilization (KMb). Team cohesion was already developed through prior collaborations on childhood ethics research. This team bridged key research and practice partnerships and networks that provided essential advisory and infrastructural support for the project.

Carnevale (PI) is an internationally-recognized childhood ethicist with university appointments in bioethics, education, nursing, and psychology. He leads VOICE, a SSHRC-funded Childhood Ethics research program (www.mcgill.ca/voice). He brings significant experience in: leading interdisciplinary research; childhood research and practice; and the methods used in this project (e.g., scoping reviews, pedagogical development, KMb). He has extensive clinical and research experience with Indigenous populations. Carnevale’s strengths are complemented by the CoIs’ and Collabs’ advanced expertise in: (a) diverse research & education disciplines (leading Indigenous-focused curriculum development in their disciplines): law (Van Praagh CoI), social work (Collin-Vézina CoI), anthropology (Macdonald CoI),
childhood education (Talwar CoI), psychology (Talwar CoI), health/Indigenous librarianship (Morris CoI), health sciences (Macdonald CoI); (b) scoping reviews (Morris CoI, Macdonald CoI, Noronha Collab); and (c) Indigenous perspectives, e.g., McGill First People’s House (Isaac Collab; Mi’gmaq from Listuguj, Quebec), McGill Indigenous Health Professional Training (Barudin Collab; Kwakwaka’wakw from Alert Bay, BC.).

For Phase II, additional Indigenous perspectives will be drawn from (a) VOICE community partners (e.g., Northern Quebec Module - liaison for Nunavik communities; Native Friendship Centre/Inter-tribal Youth Centre); (b) McGill-based Indigenous experts (e.g., Dr. Cindy Blackstock); and (c) other advisors identified through “snowballing” processes. Further pedagogical expertise at McGill will be drawn from: (a) Task Force on Indigenous Studies and Indigenous Education, (b) Indigenous Studies Program; (c) Office of First Nations and Inuit Education (d) Indigenous Health Curriculum Committee, (e) Centre for Medical Education; among others. Barudin (Collab) and Macdonald (CoI) are highly active in pedagogical development and research. Additional research expertise has been drawn from investigators’ McGill networks; e.g., Centre for Research on Children and Families (CRCF) (child welfare); Institute for Health and Social Policy (policy); VOICE Childhood Ethics; among others. The project was also endorsed by McGill’s Provost’s office.

Approach & Methodology

Theoretical Framework: The project has drawn on three interrelated frameworks: normative (TRC Calls to Action), pedagogical (Indigenous Pedagogy), and childhood (Childhood Ethics).

TRC Calls to Action: Given the legitimacy accorded to the TRC Calls to Action by Indigenous bodies, this has served as a normative framework rooted in reconciliation, defining which outcomes should be achieved (see Calls to Action above).

Indigenous Pedagogy (IP): For this project, IP refers to substantive (what is taught/learned) and methodological (how it is taught/learned) approaches to education that are attuned to Indigenous knowledges and practices; bridging terms such as Indigenous knowledges, decolonizing pedagogy, among others. Working conceptions of IP have been developed throughout the course of this project, through consultations with Indigenous “Advisors”.

Childhood Ethics (CE): CE (a sub-specialization of childhood studies) is a framework developed by the investigators to investigate and address ethical concerns that affect young people, including inequities. This work bridges emerging conceptions of: childhood; social/human sciences research; ethics research & practice; and interdisciplinary collaboration. CE strives to advance our understanding of children’s best interests, moral experience, and agency, and how these relate to local socio-political contexts.

This three-fold framework provided a foundation for advancing Indigenous Pedagogy on Childhood, rooted in a (TRC) reconciliation normative framework.

Design: The project addresses three questions regarding the TRC Calls to Action that relate to child-focused professions education.

Phase I: What do we know? (results are presented in this Report)

We conducted a scoping review of the academic and grey literature (including curricula and relevant features of targeted programs) to map existing knowledge on (a) Indigenous-related educational approaches to prepare professionals who work with children (Indigenous and non-Indigenous), and (b) the impact of these approaches. Work that related to the TRC Calls to Action was prioritized. This review helps identify (a) knowledge gaps requiring further research and (b) existing knowledge that can inform Knowledge Mobilization (KMb) strategies in education. Both will be developed in Phase II.

The scoping review method was selected as the optimal knowledge synthesis method for this project because it is particularly suited for exploratory research questions, seeking to map the literature and identify the types and extent of evidence available; which can then be applied to policy and practice. We
used Arksey and O’Malley’s method, which consists of 6 stages:\footnote{51}{Identify research question; identify relevant studies; study selection; charting data; collate and summarize results; and consultation exercise. A research question and plan was developed (outlined below), which was continually adapted during the project through consultations among researchers and Advisors. “Advisors” refers to collaborators and community partners, including Indigenous experts as well as experts in professional education (see Research Team description). Advisors guided the review by recommending text sources, search strategies, key texts, and assisting with interpretation of text analyses.}

The research question for this review was: What is known about educational approaches to prepare child-focused professionals to work with Indigenous peoples? We searched relevant databases and conducted additional searches by scanning reference lists and grey literature such as academic curricula. The latter sampled curricula available online in Canada as well as curricula for child-focused professional programs at McGill University. The librarian on the team (Morris CoI) helped (a) identify relevant databases, (b) design effective search strategies to maximise sensitivity and specificity of text searches and (c) assist with information management during the project. Appendix 2 demonstrates the design of the database search strategies used for this analysis.

Text selection involved an iterative process with two reviewers who scanned all titles and abstracts (for articles), selecting full articles/texts for inclusion. Data were extracted with a charting form adapted from other reviews conducted by this team. Data were collated and summarized using numerical summaries and interpretive analyses. Data extraction and analysis was oriented by Guiding Questions, that were developed and continually adapted through Advisor consultations. Analyses examined descriptive and evaluative (i.e., impact) literature on educational approaches; overseen by the six investigators (led by the PI). Identification, retrieval and preliminary analyses of texts, coordination of consultations with advisors were performed by seven research assistants (RAs).

The Phase I Report presented in this document outlines the findings of this scoping review. This will (a) inform Phase II and (b) be adapted for publication.

Results

Funding for this project was supported principally by a SSHRC Knowledge Synthesis Grant. This funding helped leverage additional funding from:

- McGill University Provost’s Office
- McGill University Dr. Clarke K. McLeod Memorial Scholarship (a bursary to support funding for medical students to participate in research)
- Quebec Network on Suicide, Mood Disorders and Related Disorders (RQSHA)

This supplemental funding helped support the hiring of additional research assistants (RAs). Given the large team of RAs enabled by this funding, the scope and depth of this scoping review was significantly expanded. Four work teams were created to conduct this review in four parallel streams:

(a) “social professions” (i.e., preservice teacher education, psychology, social work, law);
(b) health professions (excluding mental health);
(c) mental health professions (i.e., health professions focused on mental health; supported by the RQSHA funding); and
(d) grey literature.

The presentation of results is therefore structured according to these four streams in some sections of this report.
Description of evidence
A total of 283 publications were retained as relevant for this review. The breakdown by stream was:
- social professions (n=171)
- health professions (n=66)
- mental health professions (n=17)
- grey literature (n=29).
See Appendix 3 for a PRISMA Flow Diagram of the selection of publications for this analysis.

It is clear that there is a growing body of evidence related to Indigenous Pedagogy on Childhood. The largest proportion of this evidence is based in the social professions. The largest proportions of the 283 sources that were identified were (a) empirical or evaluation studies (n=113) and (b) “show and tell” reports describing specific pedagogical/instructional initiatives without reporting any evaluative data (n=66). The remaining sources included a diversity of publications: commentaries/editorials (n=32), curriculum webpages (n=18), descriptions of pedagogical development (n=15), reviews (n=12), stakeholder consultations (n=11), grey literature reports (n=9), theoretical papers (n=5), and news articles (n=2).

Synthesis of evidence – State of Knowledge
Particularly impressive at this time in the history of this body of scholarship is the publication of two seminal normative statements that are widely recognized by Indigenous and non-Indigenous peoples and bodies: (a) United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP; 2007) that is internationally-recognized and (b) The Final Report of The Truth and Reconciliation Commission of Canada (TRC; 2015) which addresses the specificities of the Canadian context, while also recognizing the UNDRIP. These normative sources articulate standards that help define how the child-focused professions should practice with Indigenous peoples. However, these contain very few considerations particularly focused on Indigenous children, which could provide more specific standards for professional practice.

The published evidence describes several important considerations in developing and implementing pedagogical improvements in the preparation of child-focused professionals.

It has been reported that pedagogical improvements need to recognize substantive foundational content that is rooted in Indigenous outlooks, most commonly referred to as Indigenous Knowledge. This includes the broader ideas within Indigenous knowledge systems, as well as the specific yet connected notions of holism, narration, and spirituality. Moreover, the evidence emphasizes the importance of grounding Indigenous pedagogies within a specific cultural framework such as cultural safety, cultural competency, cultural respect, cultural humility, or cultural sensitivity. Cultural safety stands out as the most strongly endorsed cultural framework for the preparation of professionals in Indigenous pedagogy.

A large body of evidence describes a rich diversity of teaching and learning approaches for preparing professionals in Indigenous pedagogy. These strongly emphasized “experiential learning” through practice placements, immersion experiences, and service-learning. Specific teaching strategies that have been reported and recommended include experience-sharing, critical reflection and/or self-reflection exercises as well as more conventional (but adapted) workshops and courses.

Authors have underscored the importance of supporting faculty development; curricular reform on its own is insufficient. Faculty require preparation and support in Indigenous pedagogy as well as access to Indigenous-focused teaching materials, guidelines, and policies. Non-Indigenous faculty and staff need to be engaged in curricular and program reform, integrating Indigenous content throughout the entire curriculum, rather than developing such curricula “to the side of” the dominant curriculum.

The evidence strongly emphasizes the importance of community engagement in the development of Indigenous pedagogy. Curricular reform should not be conducted solely by educators, detached from the experiences of Indigenous communities. Community engagement should involve building relationships with Indigenous communities, conducting stakeholder consultations with community members, and promoting the participation of Indigenous community members.
Moreover, advancing Indigenous pedagogy for the professions requires systemic changes. Support and funding for participating communities is required and Indigenous professionals and academics need to be hired as educators for professional education.

A very small body of “child focused” evidence exists on Indigenous pedagogy for working with children. This evidence resides almost exclusively within the social professions literature; predominantly in preservice teacher education. This literature highlights the paucity of knowledge among the child-focused professions about Indigenous communities, their histories, and their cultural knowledge. Educational initiatives have included the use of core units or courses in Indigenous education and teaching approaches grounded in critical theory. Specific approaches used in education with children included: reciprocal teaching/learning (i.e., repositioning teachers as learners), modifying teachers’ approaches to reject deficit thinking, teachers as cultural brokers (i.e., bridging cultures), and incorporating Indigenous peoples’ beliefs, practice, models, and methods into education.

Despite this rich body of evidence that illustrates numerous innovative approaches in Indigenous pedagogy, there are a number of significant gaps in this evidence. There is a lack of cohesion in pedagogical outlooks, aims, or approaches; making it difficult to infer which directions for curricular improvements should be preferred. Although the “outcomes evidence” is generally quite positive, highlighting favorable learner impacts (e.g., improved knowledge, perceptions, attitudes, sensitivity, competencies), this outcomes evidence is quite fragmented and lacking in the use of any widely agreed-upon outcomes and methods. This evidence consists predominantly of diverse forms of learning evaluations; with very few rigorously structured empirical research studies. Moreover, little evidence has been documented regarding the impact of education on practice changes or favorable impact for Indigenous peoples as service recipients. Finally, despite the tremendous growth of childhood studies research and practice improvements in other realms, there is virtually no evidence describing advancements in our understanding of the experiences of Indigenous children and pedagogical innovations oriented for the child-focused professions. The child-focused professions are left to infer child-relevant implications from non-specific adult-centered evidence. This is known to be highly problematic in other childhood domains.
Detailed Results

Detailed results are presented below for each of the four streams of the evidence synthesis; i.e.,:
(a) “social professions” (i.e., preservice teacher education, psychology, social work, law); (b) health professions (excluding mental health); (c) mental health professions (i.e., health professions focused on mental health); and (d) grey literature.

Evidence synthesis: social professions (i.e., teacher education, psychology, social work, law)

All 171 articles in this study were published between 2007 and 2017. Various groups of Indigenous peoples were represented within the articles, including: Aboriginal and Torres Strait Islander peoples/Indigenous peoples of Australia (largest proportion of articles); Maori/Indigenous Peoples of New Zealand including Cook Islanders; Indigenous peoples of the United States including Native Hawaiians, Obijwe, Navajo and Mohawk; First Nations, Metis, and Inuit peoples/Indigenous peoples of Canada; Tzotzil peoples of Mexico; and some articles that included multiple groups of Indigenous peoples from different countries or did not indicate a specific Indigenous group of peoples. Several types of pedagogical approaches were discussed, which included but are not limited to: classroom education, professional development, summits, theatre play, process drama, projects/assignments, curriculum development, field experiences, collaborative learning, workshops, adventure learning, traineeships, mentoring programs, course-bade, cultural mapping, and frameworks.

Indigenous Knowledge

Many authors discussed ideas of Indigenous knowledge, including the broader ideas contained within Indigenous knowledge systems, and the separate but connected notions of holism, narration, and spirituality.

Indigenous Knowledge Systems: Many articles touched on the centrality and importance of Indigenous knowledge systems in transforming teaching and learning, as well as service provision. Authors recommended that professionals should “possess the ability to identify sources of cultural wisdom and utilize them as assets” (Trinidad, 2014), which includes “the intergenerational knowledge assets of students, their families and the broader community” (Osborne, 2013). Many found that understanding Indigenous worldviews from a cultural perspective was key to connect learning with the broader Indigenous community (Bessarab, 2015; Brayboy and Maughn, 2009; Chinn 2007; Osborne & Guenther, 2013). Other common ideas about Indigenous teaching and learning included being more hands-on (Weuffen, Cahir, & Pickford, 2016), using mentorship or learning through observation (Naidoo, 2012; Tanaka et al 2007), using culturally appropriate activities (such as talking circles, visual arts, or songs) (Fuemana-Foa’i, Pohio, and Terreni, 2009; Trinidad, 2014), and using Indigenous terminology (Rofe, Moed, Anderson, and Bartholomew, 2016). Common ideas across the described systems of Indigenous knowledge included ideas of place-based pedagogy (Chinn 2007; Osborne and Guenther, 2013; Styres, Haig-Brown, and Blimkie, 2013), service learning (Naidoo, 2012), autonomy and identity (Robinson-Zanartu et al., 2011; Sexton, 2011), shared responsibility for learning (Appanna, 2011), and connectedness to family/community (Fuemana-Foa’i, Pohio, and Terreni, 2009). For example, Brayboy and Maughn (2009) found that “Indigenous Knowledge Systems value contextualized knowledge that is local and particular to the setting.” Further, there was consensus that Indigenous knowledge should be incorporated into curricula and viewed as equal to other knowledge systems (Bessarab, 2015; Iseke 2009). Notably, caution was recommended with Indigenous knowledge, as it was seen as “critical that the profession not perpetuate the tendency to ‘absorb’ Native issues into a larger multicultural context” (Robinson-Zanartu et al., 2011).

Holism: Ideas of holism in Indigenous pedagogies draw upon Indigenous philosophies that identify connections between the world and it’s inhabitants, as well as within individuals themselves. A holistic
approach to teaching and learning as well as to providing services to Indigenous peoples is identified as being important for professionals as this helps to build and responsibly use knowledge given that these “connections are also central to how many Indigenous people view their own places within the larger cosmos of all living things” (Brayboy and Maughn, 2009).

**Narration:** The use of narration in teaching and learning has been identified as a useful tool to connect to Indigenous experiences, and to examine Indigenous knowledge and difficulties. Different types of narratives can be used, including vignettes (Gair 2013), visual and digital media (Bequette 2014; Kutay et al 2012), theatre or role-play (Denomme-Welch and Monero, 2014; Kutay et al 2012), guided narrative journaling (Burnett, Lampert, and Crilly, 2013); and oral story-telling or yarning (Bequette, 2014; Bissel and Korteweg, 2016; Hill and Mills 2013; Iseke, 2009; Pridham et al, 2015; Styres et al, 2013). Use of narration can be a culturally-appropriate way to build trusting connections with Indigenous peoples and validate them as individuals (Vitali, 2016). Narration can also illustrate the “importance of Aboriginal people’s experiences in explaining the significance of policies and practices that have impacted on their lives and the inherent cultural differences, thus validating this knowledge.” (Kutay, Riley, Howard-Wagner, and Mooney, 2012).

**Spirituality:** Indigenous notions of spirituality are identified as being important in teaching and learning (Burns, 2013). Connecting curricula to the deeper spiritual beliefs of Indigenous peoples requires “that the metaphysical nature of things be considered in the daily lives of students and teacher” (Brayboy and Maughn, 2009). Other notions of spirituality recognize the role of the teacher in building trust so that students can “[open] up their spirit” to embrace new knowledge (Osborne and Guenther, 2013).

**Building Relationships and Practical Learning = Connecting to Indigenous Communities**

Connecting to Indigenous communities is possible through practical learning experiences that promote relationship building.

**Practical Learning:** Practical learning experiences are common strategies discussed in the literature. These experiences range from coursework or workshops (Legge, 2011; Riley & Webster, 2016), to service-learning placements (Bolea, 2012; Lavery, Cahin, & Hampton, 2014), or to immersive experiences in Indigenous communities (Harrington, 2013; Richardson & Dinkins, 2014). These experiences are important to connect professionals and students to the real world, as they provide “a rich contextual learning experience that cannot be achieved in a lecture hall at a university” (Duthie, King, & Mays, 2013). These experiences provide an opportunity to learn about Indigenous culture, history, practices and beliefs, structure, and challenges directly from the perspective of Indigenous communities or Indigenous experts, while also providing opportunities to build professional skills to engage with these ideas (Anning, 2010; Bennet & Moriarty, 2016; Chinn, 2015; Harrington, 2013; Lavery, Calin, & Hampton, 2014; Moeller, Anderson, & Grosz, 2012; Weuffen, Cahin, & Pickford, 2016). As a result, professionals appreciate these experiences (Bennet & Lancaster 2012; Bolea, 2012), and there are reported increases in cultural awareness and understanding of Indigenous communities, knowledge, and policies (Harrington, 2013; Labone, Cavanagh, & Long, 2014; McKnight, 2016b; Weuffen, Cahin, & Pickford, 2016). Further, professionals become more socially conscious, challenging stereotypes and presumptions, changing their attitudes and beliefs, and engaging in conversations about marginalization, privilege, and power (Bennett, Power, Thomson, Mason, & Bartleet, 2016; Bishop, Berryman, Wearmouth, & Clapham, 2012; Peralta, O’Conner, Cotton, & Bennie, 2016). By exploring these ideas, there can be a bridging of cultures (Bennet & Lancaster 2012), and the development of community partnerships and more understanding and respectful relationships (Lavery, Calin, & Hampton, 2014; Peralta, O’Conner, Cotton, & Bennie, 2016; Riley & Webster, 2016). However, these partnerships need sustainable funding and buy-in from educational institutions (Lees, 2016).

**Building Relationships:** A major goal and outcome of practical learning efforts is to build and maintain relationships. These relationships between professionals and students, families, communities, or governance structures require engaging Indigenous knowledge and values (Bennet and Lancaster, 2012; Bessarab & Crawford, 2010; Burgess & Cavanagh, 2016; Ford, Nasir, Prior, & Arnott, 2013; Maher, 2013; Moore & Gilliard, 2007). These relationships are often built on shared values (Lynch, 2014),
Carnevale et al. (Advancing Indigenous Pedagogy on Childhood)

rapport (Conrad, 2015), as well as “trust, mutuality, and reciprocity … where both parties [have] equal
voice in the structure and goals of the partnership” (Lees, Heineke, Ryan, & Roy, 2016). Caring
relationships require attention to tone (Melchoir, 2011), expectations (Bishop, Berryman, Cavanagh, &
Teddy, 2009 Bishop, Berryman, Cavanagh, & Teddy, 2009), power sharing (Hynds, Sleeter, Hindle,
Savage, Penetito, & Meyer, 2011), and identity (Bishop, Berryman, Wearmouth, & Peter, 2012). Further
these relationships aim towards reconciliation (Mooney & Moore, 2013), reciprocity (Grudnoff et al.,
2016), and understanding (Baskerville 2009).

Cultural Competency and Respect

Initiatives to promote Indigenous ways of knowing often result in fostering understanding,
respect, and creating cultural competency.

Fostering Respect and Understanding: Many initiatives aim towards or result in more respect for and
understanding of Indigenous peoples, their culture, history, and challenges. Participating in various
forums was transformative for professionals who were able to interact with Indigenous communities
(Bolea, 2012), which was “very significant in shifting their perspectives and developing
understanding” (Blimkie, Vetter, & Haig-Brown, 2014). They not only better understood Indigenous
perspectives (Harrington, 2013), but they valued Indigenous knowledge (Hynds, Sleeter, Hindle, Savage,
Penetito, & Meyer, 2011), diversity (McKnight, 2016b), and challenged perceptions of otherness
(Burgess & Cavanagh, 2016). Professional recognize the “importance of valuing, respecting, including,
and caring” about Indigenous culture (Hynds, Sleeter, Hindle, Savage, Penetito, & Meyer, 2011), and
want to overcome the challenges of professionals of empathizing with Indigenous peoples (Gair, 2013).
Continuing this work of fostering more understanding and respect is important as it forms the basis on
which Indigenous and non-Indigenous people “may engage positively in a spirit of mutual respect and
reconciliation” (Harrington, 2013).

Cultural Sensitivity/Awareness/Competence: Aiming to help professionals achieve increased skills and
understanding of Indigenous culture is the goal of many educational initiatives. While some aim to
achieve cultural awareness (Burgess & Cavanagh, 2016; Nam, Roehrig, Kern, & Reynolds, 2013), others
aim to go beyond towards cultural sensitivity (O’Connor, Chur-Hansen, & Turnbull, 2015), cultural
competency (Bessarab & Crawford, 2010; Burgess & Cavanagh, 2016; Guilfoyle, 2013), and cultural
responsiveness (Bishop, Ladwig, & Berryman, 2014; Conrad, 2015; McCarthy & Duke, 2007; Melchoir,
2011; Oskineegish, 2014). Authors differ in the importance of one type of cultural knowledge versus the
others. For example, while cultural competency is seen as “going beyond mere ‘cultural awareness and
sensitivity’ … [to include] not only possession of cultural knowledge and respect for different
cultural perspectives but also having skills and being able to use them effectively in cross-cultural
situations” (Bessarab & Crawford, 2010), but ideas of cultural responsiveness have also evolved to
describe working with Indigenous peoples “in a way that is collaborative, relational,…respectful, and
inclusive of the local context and inherent worldviews … to respond to the issues and needs of
communities in ways that promote social justice and uphold human rights” (Bessarab, 2015). In order to
achieve these aims, it is recognized that transformative education requires competency training as part of
professional programs (Ford, Nasir, Prior, & Arnott, 2013; O’Connor, Chur-Hansen, & Turnbull, 2015;
Williams, 2013), demonstrating openness to learning and listening to student voices (Oskineegish, 2014;
Snow, 2016), engaging in reflection that pushes past feelings of discomfort with certain subjects (Burns,
2013; Goerke & Kickett, 2013), bridging knowledge gaps (Guilfoyle, 2013), incorporating culturally
appropriate interactions using art or pastimes (Legge, 2011), and providing “authentic opportunities to
engage with Aboriginal students and communities…so that they may be enabled to come to understand
their students’ day-to-day cultural landscapes” (Robinson, Borden, & Robinson, 2012). Challenges to
implementing programs are recognized from both external sources, like societal attitudes or standards,
and internal sources, like low personal awareness and lack of connection to Indigenous peoples (Nam,
Roehrig, Kern, & Reynolds, 2013), as well as lack of material resources (Williams, 2013). Nevertheless,
as a result of these programs, reported results include increased awareness of Indigenous worldviews
(Bessarab, 2015; Melchoir, 2011, Micek, 2014), understanding the significance of Indigenous cultural

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competency for a professional future (Stephenson, Rio, Anderson, & Millward, 2008), better incorporation of Indigenous knowledge and culture into lessons (Ava & Rubie-Davies, 2016), and better understanding of systemic challenges to Indigenous communities such as oppression (Trinidad, 2014).

**Educating Child-focused Professionals**

*Paucity of teacher’s knowledge about Indigenous communities, their histories, and their cultural knowledge:* Some researchers highlighted the paucity of teacher’s knowledge about Indigenous communities, their histories, and their cultural knowledge (Lowe, 2013; Mooney & Moore, 2013). Further to this, Mooney and Moore (2013) found through their research that a recurrent theme was the request from educators for more information about Aboriginal culture, knowledge, and information on appropriate ways to work with Aboriginal communities. Some academics who were interviewed in this study spoke about their “nervousness” and “reticence” to address Indigenous issues because of their lack of both knowledge and experience of Indigenous cultures (Mooney & Moore, 2013).

*Core units or courses in Indigenous education for childhood-focused professionals:* Several researchers speak to the importance of and their experience with including core units in Indigenous education during the training of childhood-focused professionals. In some locations core units or courses teaching Indigenous content is mandated in universities. For example, in Australia teacher education is regulated to include courses with a core unit of study that provides teachers with an understanding of past and current experiences of Indigenous Australians, examines Indigenous Australians history and the social, economic, and health disadvantages that challenge Indigenous communities, and assist education students to increase their understanding of Indigenous cultures (Anderson, 2012). In Montana, USA educators have legal obligations, ethical commitments, and instructional responsibilities to educate students about Indigenous peoples (Carjuzaa and Hunts, 2013), which heightens the importance of educating pre-service teacher to be able to deliver the material in a culturally responsive way.

The content of such core units or courses serves as a foundation for childhood-focused professionals and includes the factors and influences on Indigenous peoples and communities (Anning, 2010). In addition to the content listed in the above paragraph, other learning goals include extending quality teaching and learning, fortifying the Identities of Aboriginal students, engaging Aboriginal students, applying Aboriginal cultural knowledge, and challenging racism (Long, Cavanagh, Nicholson, and Maskell, 2008). In a course of social work students within a model call “Child Centred Practice” at the University of South Australia, students increased their knowledge and skills in communicating with children (Zufferey, Gibson, and Buchanan, 2015). The course objectives are for students to be able to analyze the historical, cultural, economic, and political context of child abuse and neglect and to develop skills in child-focused interventions. Zufferey et al call for a more child-inclusive social work education curriculum to improve the livelihoods of all vulnerable young people in one’s community, with a specific focus on the vulnerability of Indigenous young people. Further programs and/or curriculums that include core courses in Indigenous education are: “Ah neen dush” a three-year professional development program for mathematics and science teaching incorporating Ojibwe language and culture (Dubosarsky, Murphy, Roehrig, Frost, Jones and Carlson, 2011); an early teacher training program at a university in Australia that includes two additional units in Aboriginal education to supplement the core unit in Aboriginal perspectives that was compulsory (Labone, Cavanagh, and Long, 2014); “Aboriginal Infusion” an education program that incorporates Aboriginal content and pedagogies in each of the required education courses and placements through academic readings, films, assignments and assessments, field trips, guest speakers, and everyday teaching practices (Blimkie, Vetter and Haig-Brown, 2014) and, an undergraduate psychology program at the University of South Australia that has developed a three-tiered process that includes a mandatory first year course called “Indigenous Australians: Culture and colonisation”, integrated Indigenous content included in other courses throughout the undergraduate program, and an elective third-year course (Ranzijn, McConnachie, Day, Nolan, and Wharton, 2008).

Outcomes for including core courses in Indigenous education in the training of childhood-focused professionals are reported to be positive and beneficial. Researchers show that these courses are crucial for developing teachers’ competences (Taylor, 2014) and that the impact of knowledge and understanding
of Indigenous history and culture has advantages for teachers and students (Labone, Cavanagh, and Long, 2014). It enhances teachers’ abilities to connect with their students, which results in improved learning outcomes for students (Cronin, Sarra, & Yelland, 2002; Purdie, Boulton-Lewis, Fanshawe, Tripcony, & Gunstone, 2000, as cited in Labone, Cavanagh, and Long, 2014). The knowledge gained by teachers through these courses also gives them the tools to identify biases in the curriculum and to modify it to include Indigenous perspectives (Hickling-Hudson & Ahlquist, 2003, as cited in Labone, Cavanagh, and Long, 2014). Additionally, the article by Labone et al explains that teachers who understand Indigenous history and culture have a more positive attitude towards Reconciliation.

**Teaching approaches grounded in critical theory:** Many researchers discussed grounding teaching approaches in critical theory. These teaching approaches include: Pedagogy of the Oppressed (Sexton, 2011); “learn, unlearn and relearn, reflect and evaluate” (Anning, 2010); decolonizing methodologies (Chin, 2007); critical methodology: application of Habermas’ communication theory (Chin, 2007); Critical pedagogy framework: emphasizing a commitment to anti-racism (Chiido, Sonn, & Morda, 2014); Critical Community Service-Learning (Conrad, 2015); and, Counterstorytelling: a method of telling stories based on critical race theory (Convertino, 2016).

**Teaching how to integrate Indigenous content in teaching programs:** Barlette (2015) discussed the need within the Yukon and all of Canada to train teachers of Indigenous and non-Indigenous background who can integrate Indigenous understandings and knowledge into their curriculum and teaching. In the United States, Carjuzzaa and Hunts (2013) report that educators want to learn how to incorporate Indigenous content and specifically how to teach their students about the history and cultures of Indigenous peoples.

**Mentoring:** Several researchers spoke about the topic of mentoring (Tolbert, 2015; Maher, 2013; Long, Cavanagh, Nicholson and Maskell, 2008; Labone, Cavanagh and Long, 2014). A key part of the Te Kotahitanga reform project that was rolled out in New Zealand was a full-time teacher mentor or Te Kotahitanga facilitator (Tolbert, 2015). The mentor’s primary responsibilities were to observe and mentor teachers, shadow coach, collect data of Maori student engagement and achievement in each teacher’s classroom, and facilitate co-construction meetings with teaching and leadership teams (Tolbert, 2015). One early teacher training program used Aboriginal mentors throughout their program (Labone, Cavanagh and Long, 2014). These mentors were recruited from the existing Aboriginal teacher education programs at the university (Labone, Cavanagh, and Long, 2014). The outcomes of the mentor-mentee program were positive, and mentoring assisted the development of knowledge, skills, and understanding of issues within Aboriginal communities (Long, Cavanagh, Nicholson and Maskell, 2008).

**Educating Children**

**Reciprocal teaching/learning - Repositioning teachers as learners:** Within several articles the concept of reciprocal teaching/learning and/or repositioning teachers as learners was discussed (Hynds, Hindle, Savage, Meyer, Penetito & Sleeter, 2016; Hynds, Sleeter, Hindle, Savage, Penetito & Meyer, 2011; Glynn, Cowie, Otrel-Cass & Macfarlane, 2010; Legge, 2011; Lees, 2016; Lowe, 2017; Oliver, Rocheouste, Vanderford & Grote, 2011; Baskerville, 2009; McMillan, 2013). Many of the researchers discuss the Maori pedagogical approach of Ako (reciprocal teaching and learning), wherein knowledge is co-constructed in the classroom with teachers reciprocally learning from Indigenous (Maori) students (Hynds, Hindle, Savage, Meyer, Penetito and Sleeter, 2016; Hynds, Sleeter, Hindle, Savage, Penetito and Meyer, 2011; Glynn, Cowie, Otrel-Cass and Macfarlane, 2010; Legge, 2011; Baskerville, 2009). With this repositioning, students are placed as “experts” who know best what works best for them (Hynds, Sleeter, Hindle, Savage, Penetito and Meyer, 2011).

**Modifying teacher’s approach to reject deficit thinking:** Much of the literature discussed the need for teachers to modify their approach to reject deficit thinking, particularly deficit theorising/explanations about Indigenous students’ performance (Bishop, Berryman, Wearmouth, & Peter, 2012; Bishop & Berryman, 2010; Bishop, Berryman, Cavanagh & Teddy, 2009; Hynds, Sleeter, Hindle, Savage, Penetito & Meyer, 2011; Pridham, Martin, Walker, Rosengren, & Wadley, 2015). The rejection of deficit thinking should be complemented by promoting “agentic discursive positioning” for teachers, described as “taking
responsibility for the learning of Indigenous students and their achievement, expressing commitment to improve this achievement and having high expectations for students” (Bishop, Berryman, Wearmouth, & Peter, 2012).

**Being a cultural broker/bridging cultures:** Research within two articles spoke about the need to bridge cultural differences and the importance of non-Indigenous teachers learning how to become “culture-brokering” science teachers (Grimber & Gummer, 2013; McConney, Oliver, Woods-McConney & Schibeci, 2011). Culture-brokering science teachers were able to increase the classroom time Indigenous students spent connecting science topics to their issues related to their lives, communities, and to hands-on experiences (Grimber & Gummer, 2013). In topics other than only science, Stevenson (2015) described the teacher’s cultural role as being an agent of cultural development, translator of traditional knowledge, and facilitator for transmission of cultural knowledge.

**Incorporating Indigenous peoples’ beliefs/practice/models/methods into education:** Ways in which Indigenous peoples’ knowledges were incorporated into education included through storytelling/person narratives, visual learning/observation, use of art/artefacts, use of Indigenous languages, and through spirituality. Articles that spoke about storytelling/personal narratives highlighted: links with holistic learning (J. Anuik and C. L. Gillies, 2012); oral versus written learning (Appanna, 2011); using personal stories to illustrate another perspective (Baskerville, 2009); five-minute digital stories using footage from a field trip (Bennett, Power, Thomson, Mason & Bartleet, 2016); using culture-based storytelling telling and oral history in teachers’ language arts curriculum (Bequette, 2014); “Counterstorytelling” (Convertino, 2016); and, using a “vignette,” a published piece by an Indigenous author, to learn empathy (Gair, 2013). Methods of visual learning/observation included learning through observation in Maori pedagogy (Averill, Anderson, Easton, Mara, Smith, & Hynds, 2009) and creation of a visual learning environment within the classroom (Castango & Brayboy, 2008). Many researchers explained the use of art and artefacts, such as: use of drama and puppetry, films and other media, cultural field visits, attending cultural events and tours of museums and art galleries (Anning, 2010); use of local artefacts and community events (Appanna, 2011); beginning each lecture with a “karakia” (prayer) and “waiata” (song), consistent with Maori practice and use of patterns from Maori craft (Averill, Anderson, Easton, Maro, Smith and Hynds, 2009); inviting students to offer a song, a quote, a story, or a movement to open lessons, inspired from Maori practice (Baskerville, 2009); participation in a campfire event as part of series of workshops (Bennet & Moriarty, 2016); collaboration with Aboriginal artists at Winanjikari Music Centre (Bennet, Power, Thomson, Mason & Bartleet, 2016); “Contemporary Artists’ Practice as Place-Based Pedagogy” (Bequette, 2014); applied theatre/theatre of the oppressed/theatre for living as forms of “cultural democracy” (Conrad, 2015); theatre play called "De/colonization: An act of p/reservation" in which the “Elder” and the “Curriculum” are in dialogue (Dénomné-Welch & Montero, 2014); use of art in “critical pedagogy of remembrance”: “Working with Simon’s (1992) concept of “remembrance as a source of radical renewal” (Dion, 2007, p. 330); use of visual art to apply pedagogies (Fuemana-Foa‘i, Pohio & Terreni, 2009); and, process drama to build skills of engagement, empathy, and problem solving (Kana and Aitken, 2007).

**Student Learning and Performance**

**Learning Needs:** Understanding the learning needs of Indigenous students was often an outcome of initiatives to incorporate Indigenous knowledge into teaching or providing a service (Conrad, 2015; Grudnoff, Haigh, Hill, Cochran-Smith, Ell, & Ludlow, 2016; McKnight, 2016b). Recognition of the challenges faced by Indigenous students in the classroom environment related to systemic oppression (Conrad, 2015), inequity (Grudnoff, Haigh, Hill, Cochran-Smith, Ell, & Ludlow, 2016), inflexibility (Snow, 2016), and tension from competing knowledge systems (Hart, Whatman, McLaughlin, & Sharma-Brymer, 2012), was a notable result of many studies. Further, specific approaches and skills were shown to be effective at addressing Indigenous student learning needs, including compassion (Conrad, 2015), reciprocal learning (Oskineegish, 2014), relational focus (Hynds, Sleeter, … Meyer, 2011), and understanding prior connected knowledge (Roehrig, Dubosarsky, Mason, Carlson, & Murphy, 2011). Learning needs for specific populations, such as low SES children (Grudnoff, Haigh, Hill, Cochran-
Smith, Ell, & Ludlow, 2016), rural Indigenous children (Munsch & Boylan, 2008), or university students (Snow, 2016) were addressed. Despite all of these reflections, it was noted that teachers were ill-prepared to address learning needs of Indigenous students in the classroom (Cherubini & Hodson, 2008).

**Student Performance/Engagement:** Initiatives aimed at promoting Indigenous knowledge impact upon the performance, engagement, and identity of students. Programs that aim to reduce deficit models and focus on student learning (Bishop, Berryman, Wearmouth, & Peter, 2012), as well as those that incorporate Indigenous practices, teaching methods, and beliefs (Bishop, Berryman, Cavanagh, & Teddy, 2009; Bishop, Ladwig, & Berryman, 2014; Roje, Moed, Anderson, & Bartholomew, 2016), improve student academic success and learning (Grimberg & Gummer, 2013; Oliver, Rochecoust, Vanderford, & Grote, 2011; Warren & Quine, 2013). Students not only perform better academically, but they report feeling more empowered (Bissell & Korteweg, 2016; Owens, 2015) with a greater awareness of their self-identity (Ava & Rubie-Davies, 2016). Further, students are more motivated and engaged in lessons (Heredia & Icaza, 2012; Hynds, Hindle, Savage, Meyer, Penetito, & Sleeter, 2016), which can reflect the effective incorporation of Indigenous knowledge or use of Indigenous experts (Craven, Yeung, & Han, 2014), and can impact upon student retention (Bishop, Berryman, Wearmouth, Peter, & Clapham, 2012).

**Attitudes/Behaviours/Beliefs**

**Critical reflection of learning at multiple levels:** Learning through critical reflection was written about by researchers at multiple levels including, critically reflecting on oneself (knowing one’s self, cultural position, and privilege) and the learning process (the personal experience of learning about Indigenous peoples).

**Critically reflecting on oneself: One’s knowledge of and relationship with Indigenous peoples**

Researchers highlighted the importance of personal critical reflection about oneself in general, cultural positioning, and (white) privilege.

In terms of learning about oneself in general, researchers in New Zealand highlighted Kuapapa Māori as a culturally relevant pedagogy for child educators that has enabled the tauira (student, of education in this instance) to engage in the critical reflections needed to begin to develop a deeper understanding of Indigenous knowledge and how Indigenous students learn (Sexton, 2011). Further to this, “teachers need to know what they want from themselves, and from Aboriginal people, and to be able to differentiate between the two…the teacher needs to know who he or she is to have any chance of teaching well” (Harrison, 2012, p. 12).

Many researchers spoke about childhood-focused professionals reflecting on and learning about their cultural positioning (Adams, 2008; Bishop, & Berryman, 2010; Anning, 2010; Hynds, Hindle, Meyer, Penetito, & Sleeter, 2016; Dudgeon, Darlaston-Jones, & Clark, 2011; Cruz, 2007; Mackinlay & Barney, 2014; Trinidad, 2014; Riley, 2014). This critical reflection was facilitated through varying means including the examples that follow. Bishop and Berryman (2010) identified “induction workshops” as an activity that provides opportunities for teachers to begin to identify and challenge their own discursive positioning (Bishop & Berryman, 2010). Other examples include: “critical reflexivity” to encourage students to understand their own subject position within a historical and contemporary social context (Dudgeon, Darlaston-Jones, & Clark, 2011); “Diverse Bodies, Diverse Identities” professional education program to improve professional practice through critical reflection and reflexive engagement with sociocultural and personal assumptions, stereotypes, and images that both celebrate and oppress “difference” (Cruz, 2007); “PEARL (Political, Embodied, Active, Reflective Learning)”, a pedagogical praxis that critically engages with social, political and legal discourses, reflects upon and interrogates colonial and white race power and privilege from within and against students’ own positioning in relation to Indigenous Australian peoples, knowledges, histories, and cultures (Mackinlay & Barney, 2014); and, “Critical Indigenous Pedagogy of Place” that includes the process of critically reflecting upon and then acting on acquired knowledge and information (Trinidad, 2014).

A prominent topic was the importance of critical reflection on privilege and in particular, white privilege. “Whiteness studies” serve to increase the awareness of majority group members about the “illegitimate advantages that they hold in society” (Chido, Sonn, & Morda, 2014, p. 184). Young and
Zubrzycki (2011) explain that having the capacity to dismantle Whiteness in practice and develop race cognizance requires social workers to recognize the influence of their own identities and privilege on their work. Race cognizant social work practice provides both students and practitioners with a conceptual lens through which to analyse the privilege of White values, knowledge and practices in social work (Young and Zubrzycki, 2011). Furthermore, researchers discuss a need to conceptualize teacher education in a way that assists teachers in making connections between colonization, Eurocentrism, and Whiteness, supports teachers in the exploration of the ways colonization, Eurocentrism, and Whiteness shape the current education system (including their teaching practices) in ways that marginalize Indigenous knowledges and peoples, and encourages teachers to uncover information about their own ethnicity and ancestry in a historical manner that connects them as settler to the Indigenous land on which they live (Higgins, Madden and Korteweg, 2015). Within a four-year Bachelor of Education program titled “Exceptional Teachers for Disadvantaged Schools,” pre-service teachers were encouraged to explore how their privileged status may hamper them from being better teachers for the Indigenous peoples of Australia and taught the students to consider how they may transcend these limitations (Burnett, Lampert, & Crilly, 2013). Ragoonaden, Cherkowski, Baptiste, and Despres (2009) suggest that teachers should be supported to have the courage to question the status quo starting at the beginning of their education programs in order to gain a deeper understanding of both their own values and beliefs, as well as those in the dominant culture in their schools. In addition to this Ragoonaden et al suggest that pre-service teachers should think about how they can create space for diversity, inclusion and sustainability in their school’s culture.

Critically reflecting on the learning process

Many strategies were identified for critically reflecting on the learning process (i.e. one’s personal journey/experience in learning about Indigenous peoples). One such strategy is keeping a journal/diary to track thoughts and reactions and note progress made. Journals and diaries can be done in the form of online reflective journals (Anderson, 2012), fieldwork diaries (Bennett, Power, Thomson, Mason, & Bartleet, 2016), or guided narrative reflection to tell the pedagogical stories from pre-service teachers working with Indigenous students (Burnett, Lampert, & Crilly, 2013). However, Burnett et al caution that reflection alone is not enough and that dialogue to promote change should follow. Another strategy is to identify “learning blocks,” which are described as the emotional, spiritual, and mental blocks that White students may encounter (i.e. initial resistance and defensiveness, fear, anger, and guilt) when studying topics such as racism and colonialism that may prevent learning (Anuik & Gillies, 2012). Furthermore, “reflective circles” can be used to give students time and space to collect their private thoughts about their personal learning, and to listen to reflections of others (Baskerville, 2009). As childhood-focused students enter professional practice, their learning process may continue. Blimkie, Vetter, and Haig-Brown (2014) suggest an understanding that “not knowing” is an opportunity for continued learning. Additionally, teachers can be encouraged to reflect upon their practice and how they see their role as a teacher (Fuemana-Foa’I, Pohio, & Terreni, 2009). Examples of specific questions that have been developed to help educators reflect on their practice and to identify areas that may need to be modified to facilitate learning (specifically for Ma ̄ori, Indigenous peoples of New Zealand, students in this text) are: How well do I know and engage with Ma ̄ori culture? In what spaces am I and the Ma ̄ori students I teach able to be Ma ̄ori? What Ma ̄ori knowledge do I consciously include in my teaching? What is my commitment to Ma ̄ori language revitalisation? (Stucki, 2012).

Systemic Changes

Systemic changes that incorporate fundamental shifts of the teaching and learning process require moving beyond tokenism and having an authentic commitment to change from all stakeholders.

A few studies identify the need to recognize tokenistic treatment of IK and move towards more authentic inclusion of Indigenous education in curricula. This approach is necessary to normalize Indigenous knowledge, centre ideas of equity, and elevate the position of Indigenous knowledge in wider society (Sexton, 2011; Ngapo, 2013)
A commitment to change comes from teachers, teacher educators, educational institutions, leadership, and community members. They commit to changing attitudes and practices to move away from colonialism, deficit-models, and racism, towards more Indigenist, sovereign, and rights-based ideas (Castagno, 2012; Hynds et al., 2016; Iseke 2009; Rhea, 2015. This requires breaking down systemic power, privilege and oppression (Iseke, 2009; Mackinlay and Barney 2014). The main strategy is to embed Indigenous knowledge into curricula for both professional education and for children, using culturally-relative knowledge gained from Indigenous communities (Averill et al., 2009).

A fundamental shift of the teaching and learning process is needed because the current system fails all students by not valuing Indigenous knowledge, practices, and peoples (Rhea, 2015). Recognizing the value clash between Western and Indigenous philosophies of learning, and building a shared understanding with a focus on equality, relationships, and socio-political dialogue, is a necessary transformation of the education system (Heyer, 2009; Mackinlay and Barney 2014; Osborne & Guenther, 2013; Rhea, 2015). Constructing new worldviews will challenge systemic oppression and engage Indigenous perspectives more meaningfully (Mackinlay and Barney 2014).

Community Support and Funding: There is an importance of funding and resources to sustain programming that supports Indigenous pedagogies, as well as the community supports that guide them.

The impact of financial and material resources is highlighted for its importance as a barrier that impacts the quality of teaching and learning. Providing more support for programming, including funding for professionals or students to attend educational programs, as well as creating more material resources for teachers to use in classrooms are important factors for culturally-appropriate teaching. Problems with funding are noted for teachers who “may find that there is a lack of culturally appropriate resources in their classrooms and including those books and curriculum resources may take a personal effort” (Oskineegish 2014).

Valuing community initiatives by offering them support is necessary to sustain innovative and effective programs that specifically serve Indigenous peoples through a contextual and specific understanding of the issues that impact them. Harnessing Indigenous community leadership through engagement of stakeholders at the local, regional, national, and international levels is important for effective practice.

Indigenous professionals and academics within child-focused professions: Several articles directly spoke of the benefits and/or highlighted the necessity of increasing the number of Indigenous professionals and/or Indigenous academics within child-focused professions (O’Connor, Chur-Hansen and Turnbull, 2015; Oskineegish, 2014; Warren and Quine, 2013; Anning, 2010; Bessarab and Crawford, 2010; Burns, 2013; Ford, Nasir, Prior and Arnott, 2013; Mooney and Moore, 2013; RedCorn, 2016; and, Iseke, 2009). Power, authority, roles, and responsibilities should be shared amongst Indigenous and non-Indigenous peoples and Indigenous and non-Indigenous and team teaching should be used within universities to ensure integrated Indigenous content with specific discipline based content (Warren & Quine, 2013; Anning, 2010). Having Indigenous representation in school, classrooms, and education helps to support engagement of Indigenous students (Oskineegish, 2014) and aides to limit misrepresentation, appropriation, and denigrated Indigenous knowledge (Iseke, 2009). This is not limited to the field of education, as recommendations are also made to increase Indigenous employment within child protection and more broadly (Bessarab and Crawford, 2010).

Within academia, Indigenous people should be actively involved in university governance and management (Ford, Nadir, Prior, & Arnott, 2013; Mooney & Moore, 2013), which can enhance professorial appointment of Indigenous staff amongst various Faculty (Mooney & Moore, 2013). Increasing numbers of Indigenous educators ensures the next generation of leaders are knowledgeable about institutional leadership in education in addition to their own Indigenous ways (RedCorn, 2016). Further benefits of increasing Indigenous academics are that Indigenous knowledges continues in education, Indigenous authors are read and engaged with respectfully, Indigenous pedagogies are linked with Indigenous theorizing, and that complex realities are navigated in culturally attuned ways (Iseke, 2009; RedCorn, 2016).
Evidence synthesis: health professions (excluding mental health)

Of the 66 papers included, 20 (30.3%) were program evaluations, and 12 (18.2%) were show-and-tells (Table 1). Most papers were from Australia (44; 60.6%), while 13 were from Canada (19.7%) (Table 2). While articles have been published every year for the past ten years, there was an increase of publications on this topic after 2009 (Table 3). The first authors of all the papers come from a wide variety of disciplines, though a background in nursing is the most common (21; 31.8%), followed by medicine (9; 13.6%) and public health (7; 10.6%) (Table 4). In addition, the professions targeted by the papers were mostly medical professionals (16; 24.2%), nurses (15; 22.7%), and health professions in general (19.7%) (Table 5). Furthermore, half (33; 50%) of papers targeted pre-service/entry-to-practice education and 16 papers (24.2%) targeted continuing education (Table 6). Finally, of the 20 program evaluation papers, more than half (11; 55%) used mixed methods in their study, 5 (25%) studies were quantitative and 3 (15%) studies were qualitative (Table 7).

Pedagogical approaches (looking at program evaluations and show-and-tells together)

Workshops were the most commonly used single-method pedagogical approach, with 10 (31.3%) programs out of the 32 reporting to have used only that (3, 13, 15, 21, 30, 31, 32, 45, 48, 67) (although 3 and 21 used workshops for faculty development and not to teach students). However, even more programs (13; 40.6%) used mixed approaches (more than one pedagogical method) in their intervention. These mixed approaches included combining workshops with mentorships (38), as well as online learning with classroom teaching (6). However, most of the mixed approaches used community or clinical placements along with another approach like classroom teaching (7, 8, 50, 51, 56) and workshops (29, 53, 61). In addition, many placement programs are both cultural immersions and clinical placements (7, 22).

Program Evaluations

Placements

Five articles were evaluations of programs that consisted of clinical placements (29, 50, 51, 61, 63) and four were of community placements (9, 37, 53, 56). Seven of these programs also involved other pedagogical methods: three had classroom teaching (50, 51, 56), three had workshops (29, 53, 61), and one program provided students with library-support to research information on the community in which they would do their placement (63). Some articles reported results that support the usefulness of these complementary pedagogical methods: one had students saying the preparatory meeting/workshop prepared them adequately for their placement experience (29), another reported students saying that prior research on the placement community made the experience more enjoyable (with other students in the same study saying that they would have preferred even more preparation) (63), and yet another article reported that just the pre-placement lectures themselves contributed to an increase in confidence in communicating with Indigenous people as well as knowledge about culture, history, and Indigenous health (56). However, on the other hand, three articles also included testimonies of students expressing how the experiential nature of placements provide a learning experience and/or knowledge that no other forms of pedagogy can (9, 29, 37). Therefore, both placements and other complementary pedagogical methods can lead to positive results and a combination of both definitely contributes to student learning. (Note: in one “stakeholder consultation” paper, the stakeholders (which included Elders, nurses, students, and faculty) also agreed on having students complete a set of cultural safety modules as a prerequisite for working in Indigenous communities (41)).

There is often a change in student attitudes at the end of a placement. All five clinical placement programs saw attitudinal changes, with four reporting a positive effect on student interest/willingness to doing more work in Indigenous and rural health (29, 50, 51, 61), and one reporting an increase in cultural respect (63). As for community placements, two articles saw a positive effect on student interest in working in Indigenous communities in the future (9, 37), while one article reported students feeling both less uncomfortable and less comfortable working with other ethnic groups (for which the authors offer, as an explanation, the students’ realization of the importance of adequate cultural training to provide appropriate care) (53).
All nine placement programs reported students gaining knowledge in Indigenous health (which may include the current state of the health of Indigenous people, the historical and sociocultural impacts on the health of Indigenous people, indigenous conceptions of and approaches to health and illness, and/or the role of Aboriginal Health Workers). Furthermore, four clinical placement programs (50, 51, 61, 63) and three community placement programs (9, 37, 56) had students reporting an increase in cultural awareness and knowledge (cultural awareness and knowledge here refers to the understanding of Indigenous culture(s), the history of Indigenous people(s), and/or contemporary issues that Indigenous people face).

Some placement programs also reported positive results in the domain of communication. One community placement program reported students gaining confidence in communicating with Indigenous people (56). In addition, students in one clinical placement (29) and two community placement (9, 37) programs reported learning such communication skills as giving time and listening when interacting with Indigenous people.

Experience-sharing

Many programs included elements of experience-sharing in their pedagogy. For example, six programs incorporated storytelling in their intervention (32, 36, 37, 50, 56, 67): three of them consisted of regular in-person oral storytelling (37, 50, 56), one was storytelling through a documentary (32), one had Indigenous people “yarning” in vodcasts (36), and one was a dramatic monologue performance (67).

Four of these articles had results that demonstrated the positive impact of storytelling (32, 36, 37, 56). Two (36, 56) reported high rates of student satisfaction with this approach, with the students in the latter article rating the storytelling activity the highest out of all the activities in that program. Another article reported students engaging so intensely with the story that a few even cried during and after the session (32). Further, in another article, students remembered the community Elders recounting their experience in residential schools in follow-up interviews as far as 24 months after their placement experience (37).

Another form of experience-sharing that is found in many articles is the engagement in dialogue with Indigenous people (where this time, the students themselves are also involved in the talking). This is seen in five different programs, all of which also present results that suggest the benefits of dialogue (15, 29, 37, 50, 63). Of note is one article in which students valued listening and learning from the locals in their placement community the most out of all aspects of the experience (29). Furthermore, while one article notes that dialogue with locals allowed students to translate what they learned from readings into a deeper understanding of the situation in reality (50), another paper reported students rating communication and interaction with Indigenous students as being a more important factor in their learning than the completion of the reading materials (15).

Critical reflection (and/or self-reflection)

Many studies also reported the incorporation of critical reflection in programs (32, 36, 50, 51, 53, 56). Some based their pedagogical approaches on conceptual foundations that favour such reflections, like “critical whiteness studies” and “critical diversity pedagogy” (36), and “transformative learning” (32). However, most simply incorporate specific activities that encourage self-reflection. These activities include “Draw your culture” sessions (53, 56), reflective journaling (36, 50, 51), and lessons/lectures on the concept of culture (50, 56).

The impact of these approaches are generally positive. One study reported students understanding the influence of culture (in general, not “Indigenous-related culture”) on beliefs, behaviours, perspectives, attitudes and assumption (56), while two studies saw students capable of explaining how culture (especially their own) impacts beliefs and behaviours that are specifically related to health, healthcare and illness (53, 56). Furthermore, students in two studies saw attitudinal changes and reported letting go of racist beliefs, stereotypes and prejudices that were previously held (36, 50). It is to be noted that in one other article, students also reported being prompted to challenge long-held stereotypes within themselves, and this despite the lack of any of the aforementioned reflection activities within the program of that
study (37). The authors, instead, attributed this change to the experiential nature of the program (which consisted of a community placement). This explanation would be supported by the data seen here, as four of the six programs mentioned in this section include placements in their pedagogy (50, 51, 53, 56).

**Methods of evaluation**

All program evaluations obtained their data through self-reporting (surveys, interviews, reflective journals, etc.). However, a few studies also included other forms of evaluation: one used practice observation as well as clinical practice reports (looking at what clinical tests and measurements were taken with Indigenous patients) (38), one included testing of knowledge (67), and two used placement rates of students in training or work positions in Indigenous health as a measure of success for their program (50, 51).

Furthermore, most studies only tested the short-term impact of their program (conducting evaluations either during the intervention or immediately/soon after the end of it). Only a few studies measured the long-term effects of their program on students: one conducted follow-up interviews with students 6-24 months after their placement experience (37), while two reported on the number of students choosing to further their training and/or work in the Indian Health Service agency (50, 51).

**Theoretical Papers**

**Towards cultural safety**

All five theoretical papers recommend the framework of cultural safety (10, 18, 35, 57, 66). Three papers advance limitations of the other common frameworks of cultural training before endorsing cultural safety: cultural awareness is criticized for “othering” and essentializing (ignoring the diversity of Indigenous groups and thinking it is possible to understand “Indigenous culture” fully) Indigenous people, as well as for not critically addressing the systemic roots of the problem (18, 35) and cultural competency is considered to be limited in its focus on the achievement of healthcare workers to gain a set of skills and in its lack of attention on the patients (10).

When elaborating on cultural safety, two talk about reflection on one’s own culture and its impacts on the patients (35, 66), three mention being aware of structural processes and social, economic, historical, and political positions (10, 18, 35), and all talk about acknowledging and adjusting for power imbalances between the healthcare worker and the patient (10, 18, 35, 57, 66). The approach to cultural safety, however, differ between some articles. For example, one paper recommends relational ethics (emphasizing the importance of mutual respect, relational engagement, embodied knowledge, and awareness of the environment) as a way of achieving cultural safety (10), while another proposes teaching indigenous knowledge as an entry point to understanding relational and culturally safe practice (57).

**Editorial/Commentaries/Position Papers**

**Indigenous participation and relationship-building**

Three articles emphasize the importance of building relationships/partnerships between academia and Indigenous people, communities and organizations in order to provide better training to healthcare workers in culturally appropriate training (1, 20, 42). One article also endorses Indigenous (Maori) leadership within the medical faculty as well as influence at all levels including on curriculum committees (34).

**Educator support/preparation**

Three articles mention the need to support or train educators of Indigenous content: one simply mentions supporting and training Indigenous educators and mentors (42), one indicates the need to work with communities in order to get Indigenous people to feel comfortable teaching in the university environment (1), and one article stresses the need for professional development of all teaching staff so as to improve the consistency of Indigenous health teaching, reduce reliance on Indigenous health academics, and demonstrate importance of education in this area (34).
Need for guidelines, policies, structures

Many articles mention the need for the elaboration and implementation of institutional systems or guidelines in order to guide cultural training. For example, one article highlights the need for comprehensive guidelines and indicators for Indigenous cultural competence (4), one mentions the importance of clear descriptions of the learning objectives and goals as well as the purpose of cultural training, and another article talks about the need for support by institutional systems, policies and structures (34). Furthermore, two articles also allude to this need for structure but in the form of frameworks: one of them is a whole article about the new Aboriginal curriculum framework in Canada (1), while the other calls for cultural education within a “broad systemic anti-racist framework” (20).

Stakeholder Consultation

Of the four stakeholder consultation papers, two were consultations with nurses: one to see the impact of cultural training on their practice (17), and another to see what cultural safety means to nurses (16). In addition, one article consulted with an Aboriginal community’s members to see what is important to them when teaching health professionals (44). Finally, one paper consisted of a strategy session that brought together Elders, nurses, students and faculty to explore how to integrate a cultural competence and cultural safety framework into a nursing baccalaureate program (41).

Relationship-building

The two articles that consulted with Indigenous people both identified building relationships/partnerships with Indigenous communities as an important aspect of cultural training (41, 44). More specifically, building partnerships with communities is essential because it ensures that community members feel comfortable and safe to teach health professionals (44), and it allows for Indigenous involvement in the general curriculum planning and implementation (41).

Supporting (Indigenous) educators

Nguyen & Gardner reported that barriers to the participation of Indigenous people in teaching health professionals include low confidence, lack of teaching experience, and personal pain/discomfort (44). In their consultation, Indigenous community members advanced many strategies to encourage their participation: presenting to small groups and in a relaxed and informal environment, have co-presenters for mutual support, and being in a “bush” setting where they’d feel more comfortable (e.g., botanical gardens, museum, mission area) (44).

Reflection

In their consultation with nurses about the meaning of cultural safety, Doutrich and colleagues reported nurses talking about the importance of reflecting on one’s culture and identity and being aware of their impact on one’s practice (16). Mahara and colleague’s strategy session also identified the inclusion of activities to encourage student reflection on their own values and beliefs as being very important to cultural training (41).

Limitations of individual change

Downing & Kowal’s study on nurses’ experiences with cultural safety showed the limitations of individual change without change on the institutional level (17). Nurses mentioned that the receptivity and the practice of cultural safety as a model of care depends on the “individual personality” of nurses (17). In addition, they reported that organizational and structural issues such as understaffing and language barriers prevent them from providing culturally safe care (17). The study therefore identifies systemic change and support on the institutional level as key to providing culturally safe care (17).

Reviews

There were two literature reviews (19, 64), two systematic reviews (14, 26), and one purposive survey/review (25) that met the inclusion criteria. Three articles looked at international literature (14, 25, 26), whereas two looked at literature from Australia only (19, 64). The type of training that the articles reviewed included cultural competency programs (14, 25), cultural awareness training (64), “Indigenous cultural training” (19), and Indigenous health curricula (26). Four of the articles looked into evaluations
of the programs (14, 19, 26, 64) (with one reviewing specifically the methodological quality of programs (14)), and one looked at the “unforeseen consequences” of interventions (25).

Overall, there is a lack of evidence for the effectiveness of Indigenous cultural training, cultural competency and cultural awareness training (14, 19, 26, 64). More significantly, there is no evidence that such interventions lead to better patient outcomes or better access to healthcare by Indigenous people, mostly because these parameters are rarely evaluated (14, 19, 26, 64). Westwood & Westwood also reported a lack of evidence for the effectiveness of cultural awareness training on altering participant perceptions and attitudes (64). In addition, programs generally lack methodological rigour and have weak study designs (14, 19).

Interestingly, Clifford and colleagues reported that program evaluations focused on knowledge and confidence outcomes, whereas Ewen and colleagues found that skills, knowledge and/or attitudes were most evaluated (could be related to the types of intervention that they reviewed: cultural competence vs. Indigenous health curricula) (14, 26).

Also of note is the fact that two studies reported some negative effects resulting from cultural training: Ewen and Hollinsworth identified the pathologization of Aboriginality as a potential consequence of incorporating cultural competence within problem-based learning (25), and Westwood and Westwood found that some participants, after having undergone cultural awareness training, felt resentment towards the Indigenous people and cautioned about the possibility of such intervention to reinforce stereotypes (64).

Program Development

Integrating Indigenous content throughout the whole curriculum

Three articles mentioned the importance of including Indigenous content throughout the curriculum rather than just having discrete and isolated courses on Indigenous health (40, 60, 65). More specifically, Virdun and colleagues identified the need to train all academic staff members in order to “thread” Indigenous content throughout the curriculum (60). However, Wilson and colleagues cautioned that including Indigenous content in isolation in individual courses may seem tokenistic. To counter this, the authors opted to establish a mandatory foundational course on Indigenous health for first year students in order to provide context for the Indigenous material included in the rest of the curriculum (65).

Stakeholder consultation and participation

Two articles included consultations with stakeholders in their curriculum reform/modification process (60, 65). Virdun and colleagues included both Indigenous and non-Indigenous faculty and other university members in their working party when elaborating a graduate attribute (60), while Wilson and colleague consulted with practising nutritionists and dieticians before making changes to their new Nutrition and Dietetics curriculum (65). In addition, Wilson and colleagues identified the lack of engagement with Indigenous people in the review and development of the new curriculum as a major limitation in their paper (65). This highlights the fact that it is not enough to simply have a consultation session with Indigenous groups; rather, it is essential to include them in every step of the process, from design to delivery.

Engagement of non-Indigenous faculty and staff

Two articles (they’re related, authors are almost identical) highlight the need to make Indigenous health “everybody’s business” rather than just an issue to be dealt with by Indigenous people (47, 60). Both put emphasis on faculty development (to increase their confidence and cultural competence) and on the collaboration between Indigenous and non-Indigenous members of the university to achieve this sense of responsibility (47, 60).

Empirical Studies (not program evaluations)

Importance of experiential learning (such as placements)

One study showed that self-reported experience with Indigenous people was a significant predictor of higher cultural knowledge self-efficacy but not of cultural skills self-efficacy (self-efficacy is defined by authors as the “sense of confidence when engaged in intercultural interactions”) (49). In
addition, the study reported a general lack of experience with Indigenous cultures and peoples among non-Indigenous nurses (49).

**Need for faculty development**

One study reported results that suggest that GP supervisors are confident and skilled to teach registrars about communication and consultation skills but less so in assessing and supporting cultural competence when registrars consult with Indigenous patients (2).

**Evidence synthesis: mental health professions** (i.e., health professions focused on mental health)

Eleven out of 17 of the articles included were written in Australia or New Zealand, showing a clear majority of 64.7%. 3 of the articles remaining were Canadian and 2 were American, though one of the American authors took a global view on the issue instead of focusing on a strictly American take. The remaining article was conducted across both the United States and Canada.

Of these 17 articles included, 8 were Psychiatry articles (including “Family Medicine & Psychiatry”), making this the majority discipline in the articles conclusions at 47%. 5 articles fall under Nursing, including “Nursing and Midwifery” or “Nursing and Family”, which constitute 29% of articles. 2 of the remaining articles fall under Psychology, 1 under a vague “Higher Education” label, and 1 under Indigenous Health Studies.

No articles published earlier than 2007 were relevant. In fact, 10 articles out of the 17 included were published between the years of 2007 to 2009 inclusive (59%).

Six articles were empirical/"experimental” articles, with one of the four also included under the category of consultation with stakeholders. One article was a description of an experimental study, but with no results included. 7 articles are simply show-and-tell articles, or articles that describe a pedagogy without testing it in order to see whether it actually does tangibly improve Indigenous peoples’ mental health. 2 articles are descriptive articles that simply ask questions to try to build an understanding of a topic related to the issue at hand. The remaining article is a commentary.

**Culture as an approach**

Seven of 17 (41%) articles fall under this category, making it the majority approach. These articles have found that Indigenous culture plays an incredibly significant role in Indigenous peoples’ identity and thus should be integrated into assessment, diagnoses, and treatment in order to reduce the health gap. Suggestions center around:

- using culturally appropriate resources (Zinck & Marmion, 2011; Kirmayer et al., 2012);
- reflecting upon and questioning one’s own relative privilege as the default (“interrogating whether their own knowledge, beliefs and attitudes towards Indigenous people promote or undermine Indigenous health and well-being” –D.et al, 2014) (Hampton & McCann, 2007; Kirmayer et al., 2012; Durey et al., 2014);
- learning and understanding the history behind Indigenous peoples’ oppression (i.e. “social, political, historical and cultural issues that affect Indigenous Australians’ need for treatment” –H&MCC, 2007) (Barnard, 2007; Hampton & McCann, 2007; Kirmayer et al., 2012); and
- adopting treatment methods that cater to the Indigenous understandings of mental health (such as storytelling approaches, traditional healing methods, and others developed in communication with Indigenous healing centres in order to show respect for the culture) (Barnard, 2007; Hampton & McCann, 2007; Green, 2010; Zinck & Marmion, 2011; Kirmayer et al., 2012; Durey et al., 2014).

**Adaptation of an already existing program to include cultural specifications**

Two of 17 articles fall under this category. This approach also ties into understanding the ways in which Indigenous culture will affect treatment; however, instead of building a program or developing
methods from scratch around Indigenous culture, this method takes already existing programs and adapts them to Indigenous culture through:

- **partnerships with stakeholders** (Nagel et al., 2009);
- **understanding Indigenous peoples’ cultural conception of mental health** (for example, “an ‘all of health’ approach, connecting mental health more explicitly to the social and emotional wellbeing of families and communities, as well as the individual.” –D&H, 2014) (Nagel et al., 2012; Doyle & Hungerford, 2014); and
- **using culturally appropriate resources** (i.e. “manual, information sheets, training DVD, flip charts, sample assessment forms and care plans” -N. et al, 2012) (Nagel et al., 2012; Doyle & Hungerford, 2014).

**A consultation model** (i.e. building a training program directly from consultation with stakeholders)

One out of 17 articles falls under this category. It is also the only article that is geared toward teaching mental health professionals how to help Indigenous young people specifically. This consultation model developed out of extensive talks with Indigenous stakeholders and resulted in a five phase training program with courses that target specific mental issues that Indigenous young people might be facing (“Phase 1: ‘Adolescent depression and related disorders’; Phase 2: ‘Further issues in the assessment and management of adolescent depression and related disorders: Self-harm’; Phase 3: ‘Mental distress and wellbeing in Aboriginal, same sex attracted (SSA) and culturally and linguistically diverse (CALD) young people’; Phase 4: ‘Co-existing mental disorder and problematic substance use in adolescents’, Phase 5: ‘Assessment and management of anxiety disorders in children and young people’”). Authors say that the model should be modified for every community and project that will create something similar, as they should be created based on the community’s needs. This loosely ties it to culture playing a role in treatment as well, given that the model is or should be intricately tied to a particular community’s traditions and necessities. (Hillin et al., 2008).

**Experience working within the community as an approach**

Two of 17 articles fall under this category. These articles show the growth of mental health professions that can occur by adapting on the spot to the culture that they have found themselves within. Suggestions include a Fellowship year in an Indigenous community (Wand, 2009), consultations and rotations with local health services (Duke & Ewen, 2009), and research projects on Indigenous issues (Duke & Ewen, 2009) related to the work they have done. These articles were focused mostly on students, thus positing experience within an Indigenous culture to be included as an internship type of method within a curriculum.

**What Indigenous people and mental health professionals who have adapted to the field consider to be important to teach new mental health professionals**

Three of 17 articles fall under this category. These articles are not so much pedagogies as they are suggestions by people close to the issue (i.e. Indigenous elders, who have an intimate knowledge of their culture; Indigenous mental health workers, who both are familiar with their culture and the profession in question; and mental health professionals who adapted to the culture through experience in the workplace) that can inform pedagogies as they focus on what is important to be taught to mental health professionals. Broad suggestions include:

- **adapting to the culture** (i.e. “learn[ing[ how to ask questions, who to ask questions of, and about community involvement. [...] Information about the health of the indicated person might be gathered from family and the community. Sometimes the answer was a matter for family and community consensus.”) (O’Brien & Jackson, 2007);
- **learning to focus on what Indigenous culture placed importance on** (i.e. “being focused on relationships”, “the sense of place, [...]the land took hold of them” –O’B&J, 2007; “the importance of faith, hope, and the power of the activated mind”, “the importance of community”,
“the importance of listening”, “all healing is spiritual healing” –M-M, 2009) (O’Brien & Jackson, 2007; Mehl-Madrona, 2009);

- communicating in a way that accommodates Indigenous people first (“ask the student to begin learning the language of the culture in which he or she planned to work and to reflect upon the relationship of language and consciousness” –M-M, 2009; learning “different ways of communicating with remote indigenous clients that were not as direct as Westernized communication […] developing skills in communicating in a less structured way.” –O’B&J, 2007) (Mehl-Madrona, 2009; O’Brien & Jackson, 2007); and

- adopting Indigenous models, methods, and understandings of healing (Mehl-Madrona, 2009);

while precise suggestions were:

- to use an indirect approach (i.e. “through waiting outside the houses rather than walking in, through discussion of relationships first rather than the topic at hand, through talking with family first rather than approaching the individual with illness, and through observing that individual in the community rather than talking directly with them about their health”)(Nagel et al., 2009);

- to use a storytelling approach (i.e., to tell a story – a traditional method modernized with new technology such as video, computers, etc – that is as personalised as possible to the patient, using pictures of local people and places to familiarize it to the patient) to better convey a message (Nagel et al., 2009); and

- to integrate more ‘modern’ approaches with more traditional ones wherever possible (Nagel et al., 2009).

Examining barriers both systematically and individually to offer direction for future study in how to overcome these barriers (To use for rationale)

Two of 17 articles fall under this category. These articles build an understanding of Indigenous mental health and the barriers that prevent both individual clinicians and the health system as a whole from providing better care to Indigenous people. Transportation, coordination, and communication issues (Vukic et al., 2009) were central, as well as clinicians feeling overwhelmed by a cultural disconnect and a lack of culturally appropriate resources and methods (McGough et al., 2017; Vukic et al., 2009). These articles provide direction for future study as well as immediate suggestions for improving upon these barriers.

Evidence synthesis: grey literature

For the grey literature search, developing broadly-inclusive search terms was difficult. There are various terms in use: First Nations, Native people, Indigenous people, status Indians, non-status Indians, the Inuit, and Métis. We used Indigenous or aboriginal to search the university websites. For Phase I, we focused on one university in each of three selected provinces; limiting the provinces to those with well-recognized Indigenous education initiatives (i.e., British Columbia, Manitoba, Saskatchewan). These decisions were made through advisory consultations.

We searched the curriculum of the following disciplines in each university chosen: education, law, social work, medicine, nursing, and dentistry. We included only pre-service and not continuing education programs. The curriculum search was conducted by browsing through each university program webpage to review courses for each school/discipline.

At this point in our project, we have not yet been able to validate these results with curriculum administrators at each university. Curriculum changes may be in progress but may not be on their websites yet.

Following sources were examined: Final Report of the Truth and Reconciliation Commission of Canada and webpages of the Canadian Medical Association as well as Queensland University of Technology, McGill University, University of Toronto, University of Saskatchewan, University of
Northern British Columbia, First Nations University of Canada, University College of the North, University of Manitoba, and the First Nations Health Authority (in British Columbia).

Keywords used in this analysis included:

pedagogy/ training/ curriculum AND indigenous/ aboriginal/first nations AND law, social work, education, psychology, medicine, nursing with focus on child, youth

Of the 29 final results retained for this grey literature search, only one was from Australia. All the rest were from Canada. Sixteen of the 29 identified sources were from the year 2017 and 4 were from 2016, the years following the 2015 TRC Report.

The largest proportion of webpages on curriculum change focused on the health professions with 12 focused solely on health professions and four involved a mix of professions, which included health. Dentistry was completely unrepresented in curriculum change except in a Provost's Report at the University of Toronto. The McGill University Task Force on Indigenous Studies and Indigenous Education is focused on various professions. The Working Groups on this Task Force include indigenous community members, some of whom are also team members on this grant. The TRC report was also included in this analysis.

Overview: Curricula in the following programs included indigenous content: University of Saskatchewan (Medicine, Law, Nursing), University of Northern BC (education, social work, nursing), First Nations University of Canada, University College of the North (nursing, education), McGill University (education, law, medicine, social work, nursing, global health program), University of Toronto (law, medicine, nursing, social work).

Pedagogical approaches discussed included: electives, stay at indigenous communities (especially in healthcare), involvement of Indigenous elders in teaching, curriculum changes, cultural competency training, use of storytelling and oral traditions.

Community relationships: One recommendation related to building relationships with the community through involvement of Indigenous elders in teaching, either through clinical electives or through elders being involved in the formal teaching process (College of Medicine, College of Nursing, University of Saskatchewan). Relationships are built and students are introduced to Indigenous healing practices through direct exposure and experiences. Indigenous community members have also been involved in curriculum development along with other community members and academics (McGill University Faculty of Medicine). This is also a recommendation of the University of Toronto steering committee. McGill University launched a Task Force based on the TRC report and has enhanced its existing relationships with Indigenous communities through several initiatives; one of them being curriculum change. The Indigenous community is represented on the Task Force.

Framework link between Western and Aboriginal pedagogies: A teacher development model was described. That is, the Kenanow learning model (UNC Bachelor of Education), promoting a bridge between Western and Indigenous perspectives incorporating Elders' perspectives and Indigenous culture with Western research based education. The Canadian Medical Association has developed an Aboriginal curriculum framework to incorporate Indigenous perspective in health care training through the use of political theater, expertise of elders and field visits (Silversides, 2008). This framework was in use before the TRC report to create a culturally safe environment in Canadian medical schools.

Embedding reconciliation: Embedding reconciliation in the curriculum is a way of sensitizing students to the history of Indigenous peoples (UNBC, Education). Specific examples from Cree law including the historical context, theories and sources have been used in an Indigenous law course at McGill University.
Knowledge Mobilization

This report on the findings of our scoping review (i.e., Phase I Report) will (a) inform Phase II and (b) be adapted for publication.

**Phase II: What do we need to know? & What do we need to do?**
Phase II will address the 2nd and 3rd questions for the project. A principal activity will be a 1-day meeting (*Priorities Meeting*) with project researchers, Advisors and other relevant participants. Additional discussions and activities will be conducted before and after the *Priorities Meeting*, using “in person” meetings as well as communication technologies. Phase II activities will draw on a Deliberative Priority-Setting model\(^5\), involving inclusive consultations, discussions and consensus-seeking to identify specific participants and priority-setting criteria, as well as priorities for future research and for education development.

**What do we need to know?** Priorities for future research will be identified through consultation with Advisors and other relevant stakeholders and partners, using the processes described above. *Priorities Meeting* participants will receive the Phase I Report along with specific questions and exercises to help participants provisionally rank priorities for future research that address the identified knowledge gaps. During the morning of the *Priorities Meeting* (3 hours), priority-setting consensus-seeking exercises will be used to specify the most significant knowledge gaps (from Phase I) and priorities for future research. This will inform the preparation of a subsequent operating grant proposal, to be prepared throughout the course of Phase II, finalized after the *Priorities Meeting*.

**What do we need to do? Knowledge Mobilization Plan**
The knowledge produced in this project will be used to advance child-focused professions education. This knowledge will also inform additional educational development and other Knowledge Mobilization (KMb) initiatives. KMb has been integrated throughout the design of the project. Stakeholder involvement at all stages will help ensure ongoing attunement to knowledge use priorities and modalities. Stakeholders provide two types of expertise that are vital for developing Indigenous Pedagogy for the child-focused professions: (a) Indigenous knowledge and experience and (b) child-focused professions education. Collaborators, community partners and other knowledge users that provide input are referred to as “Advisors”. In addition to having assisted with the scoping review, Advisors will also guide KMb by recommending knowledge use priorities and strategies.

Although KMb is integrated throughout the project, KMb is addressed most explicitly in the second component of Phase II focused on “What do we need to do?”. This will identify priorities for KMb in education; to promote improvements in child-focused professions education, in ways that address the TRC *Calls to Action that relate to education*. As described above, a one-day meeting (*Priorities Meeting*) will be conducted with project researchers and Advisors. During the afternoon of the *Priorities Meeting* (3 hours), priority-setting consensus-seeking exercises will be conducted. The results will help advance Indigenous Pedagogy on Childhood as a specialized curricular focus for child-focused professions education by: (a) identifying substantive content that should be addressed in education; (b) specifying optimal teaching and learning methods; and (c) proposing curriculum development models that promote continuous input from Indigenous peoples. This work will be disseminated through a manuscript for publication and conference presentations. All of the materials created in this project will be publicly accessible (at no charge) on the VOICE Childhood Ethics webpage (www.mcgill.ca/voice). Although the principal focus of this project is on entry-to-practice education (for child-focused professions), recommendations for continuing education programs and graduate studies will also be proposed.

We will draw on the team’s (researchers and Advisors) pedagogical expertise, as well as the broader childhood expertise within the VOICE team, to propose (a) conventional “in class” curriculum and materials; (b) written modules for learners or as resources for educators; as well as (c) online teaching modules using innovative video-vignettes featuring children’s own voices.
The findings of the scoping review and our recommendations for promoting Indigenous Pedagogy on Childhood as a specialized curricular focus for child-focused professions education will be disseminated throughout relevant university departments in Canada, professional societies and licensing boards responsible for education programs. Workshop proposals will also be submitted for presentations at conferences.

Social media (e.g., VOICE Childhood Ethics Twitter, team members’ professional accounts) will be used to: (a) convey key messages derived from this project that will promote sensitization and understanding of the TRC Calls to Action and (b) further disseminate the scoping review results and educational recommendations produced in this project, which respond to the TRC Calls to Action.

The scoping review and educational recommendations that are produced will also inform the education-related activities of the VOICE Team researchers; all of whom have mandates to promote the development of child-focused professions education.

Conclusions

Phase I of this project (presented in this Report) has produced a scoping review of existing knowledge on Indigenous Pedagogies on Childhood. The current evidence highlights: (a) the need to recognize substantive foundational content rooted in Indigenous outlooks; (b) a diversity of teaching and learning approaches for preparing professionals in Indigenous pedagogy; (c) the importance of supporting faculty development; (d) a call for community engagement in curricular development; (e) necessary systemic changes; and (f) a small body of “child focused” evidence on Indigenous pedagogy for working with children. This review has also identified significant gaps in the available evidence, including: (a) a lack of cohesion in pedagogical outlooks, aims, or approaches; (b) fragmentation of current outcomes evidence, lacking in the use of agreed-upon outcomes and methods; (c) few rigorously-structured empirical research studies; (d) virtual absence of evidence on the impact of education on practice changes or favorable impacts for Indigenous peoples as service recipients; and (e) a major lack of evidence describing advancements in our understanding of the experiences of Indigenous children and pedagogical innovations oriented for the child-focused professions.

This knowledge synthesis will inform Phase II of this project to: (a) identify priorities for future research; and (b) highlight KMb priorities for child-focused professions education. These contributions will advance research and actions that address the TRC Calls to Action and promote the development of Indigenous Pedagogies on Childhood as a specialized field that bridges Indigenous studies and Childhood studies. This will inform urgently-needed practice improvements with Indigenous children, families and their communities.
Appendix 1: REFERENCES

- Context/Implications & Approach/Methodology
- Social Professions
- Health Professions
- Mental Health Professions
- Grey Literature

REFERENCES: Context/Implications & Approach/Methodology

43. Collin-Vézina, D., M. De LaSablonnière-Griffin, and C. Dutrisac, Development of a Mental Health Services Organization Model among the First Nations of Quebec Communities, FNQLHSSC, Editor. 2011: Quebec.
52. Campbell, S., Deliberative priority setting. Ottawa, Canada: Canadian Institutes of Health Research, 2010.

REFERENCES: Social Professions


REFERENCES: Health Professions (excluding mental health)


Health Promotion Project. *Journal of Holistic Nursing, 35*(1), 44-52.
REFERENCES: Mental Health Professions


REFERENCES: Grey Literature (‘Rep’ = Report)


Appendix 2: Database Search Design

The search listed below is the search that was used for the Medline database. Other databases were searched with adaptations of this search.

Databases searched for this analysis were:
- Medline (Ovid)
- Embase (Ovid)
- ERIC (EBSCO)
- CINAHL
- Scopus
- BIOSIS

**Medline Search Design**
1. "*** COMMENT: General terms for indigenous peoples ***".sm.
2. exp Health Services, Indigenous/
3. "aborigine* OR aboriginal*".tw.
4. indigenous.tw.
5. natives.tw.
6. (tribe* or tribal*).tw.
7. autochton*.tw.
8. or/1-7
9. "*** COMMENT: North America ***".sm.
10. exp Indians, North American/
11. exp Indians, Central American/
12. exp Inuits/
13. native american?.tw.
14. american indian?.tw.
15. first nation?.tw.
16. alaska* native*.tw.
17. (athabascan or ahtna or aleut* or alutor or chelkancy or chukchi or chulymcy or chuvancy or koryak or nanaicy or manci or kumadinecy or negidalecy or nenets or orochi or nganasan or nivkhy or oroki or sa?mi or selkup or shorcy or soiety or tazy or telengity or teleuty or tofolar or tubolar or tuvin-todjin or udege or ukagiry or ulchi or veps or "deg hit?an" or dena?ina or holikachuk or kolchan or koyukan or tanacross or eyak or haida or tlingit or tsimshian* or inupiat or yup?ik or cup?ik or sugpiaq or alutiiq or aluitiq or chugach or koniag or unanga? or yup?ik or cre or mohawk or salish or nuxalk or kimsquit or tallheo or stueie or kwatna or shishalh or sechelt or squamish or Skwxwumesh or qualicum or comox or slaimmon or comos or klahoeo or halkomelem or cowichan or somena or s?amuna? or quw?utsun or quamican or clemclemalut* or ?uml?umulut* or comiaken or qwum?yiqun? or khenipsen or hinupsum or kilpahla* or tl?ulpalu* or koksilah or hwulqwselu or penelaket or lamalche or musqueam or snuneymuxw or tseleil-wauntuth or ts?ailes or chehalis* or sto?lo or aitchelitz or matsqui or popkum or skway or skawahlook or skowkale or squalia or sumas or tzeachten or yakweakwoose or chawathil or cheam or kawaw-kawaw-apilt or scowlitz or scaulit* or shxw?ow?hamel or soowahlie or katzie or kwantlen or kwikwetlem or tsawwassen or songhee* or t?soke or sooke or semiahmoo or malahat or tsartlip or tsawout or esquimalt or tsimshian* or gitxsan or nisga?a or haida or nuu-chah-nulth or nootka or mowachaha* or ahousaht or hesquiaht or cheklesaht or kyuquot or nuchatlaht or huu-ay-aht or ohiaht or hupacasah or opetchesaht or toquaht or tseshaht or uchucklesaht or ucluelet or ditidaht or pacheedaht or kwakwaka’wakw or laich-kwil-tach or eculataws or yuculta or weeswaii or wewayyum or koskimo or namgis or haisla or kiamaat or henaksiala or heiltsuk or wuuinuex or owekeeno or tlingit or
("aa tlein" or deisleen) adj2 kwaan) or athapaskan or dakelh or wet?suwet?en or dene-thah or dene-thah or slavey or tsilhqot?in or chilcotin or sekani or dunne-za or tahltan or "kaska dena" or nlaka?pamux or okanagan or secwepemc or shuswap or sinixt or st?at?imec or lilloet or lil?wat or stl?atl?imx or skatin or semahquam or xa?xtsa or nequatque or ktunaxa or kootenay or ashinaabe or plains_ojibwa or blackfoot or kainai or peigan or siksiqa or dene or chipewyan or nakoda or assimiboiine or ((plains or oji or "james bay") adj1 cree) or "eeyou istchee" or tashtine or "tsuu t?ina" or ktunaxa or sahtu or "tli cho" or yellowknives or dunne?za or gwich?in or kutchin or loucheaux or han or kaska or tagish orutchone or anishinaabe or algonquin or nipissing or ojibwa or mississaugas or failteaux or potawatomi or cree or innu or montagnais or naskapi or beothuk or maliseet or mi?kmaq or passamaquoddy oriroquois or hudenosaunee or cayuga or guyohkohnyo or kanien?kehaka or oneida or onayotekaono or on?ndaga* or tuscarora or wyandot or huron or onondowagah or ganonsyoni or seneca).tw.
18. or/10-17
19. "*** COMMENT: Australasia ***".sm.
20. exp Oceonic Ancestry Group/
21. ("australia* aborigin*" or "torres strait islander*" or koori? or ngunnawal or murri or nyungar or yamatji or wangai or nungar or anangu or yapa or yolngu or tiwi or anindilyakwa or pal?awah or maori?).tw.
22. 20 or 21
23. Education/ or exp Curriculum/ or exp Education, Distance/ or exp Education, Predental/ or exp Education, Premedical/ or exp Education, Professional/ or exp Educational Measurement/ or exp Inservice Training/
24. exp Students, Health Occupations/
25. ed.fs.
26. (educate? or education* or training or curricul* or workshop? or internship? or residenc* or (professional* adj3 develop*) or pedagog*).ti,ab,kf.
27. (medical or professional or p?ediatric* or nurse? or nursing or doctor? or physician? or dental or dentist? or social worker? or teacher* or lawyer* or solicitor* or barrister* or advocate* or ((physical or occupational) adj3 therap*) or rehabilitat* or intensive care or psychiatrist* or psychologist* or ((speech or language) adj3 patholo*) or counsel?or or oncolog* or podiatr*).ti,ab,kf.
28. exp Health Occupations/
29. exp Health Personnel/ or Lawyers/ or Social Workers/ or School Teachers/
30. 8 or 18 or 22
31. 23 or 24 or 25 or 26
32. 27 or 28 or 29
33. 30 and 31 and 32
34. limit 33 to (english or french)
35. limit 34 to yr="2006 -Current"
Appendix 3
PRISMA 2009 Flow Diagram

Records identified through database searching (n = 7956)

Additional records identified through other sources (grey literature): 31

Records after duplicates removed (n = 7968)

Records screened (n = 7968)

Records excluded (n = 3500)

Full-text articles assessed for eligibility = (4468)

Full-text articles excluded, (n = 4185)

Articles included in synthesis (n = 283)
Social=171, Health=66, Mental Health=17, Grey literature=29