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Learning from the Land: The Application of Archaeology and Land-Based Learning as an Experiential Learning Tool for Building Intercultural Competency

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Abstract

The written nature of Western society and oral basis of Indigenous society present a key difference in the way we approach the world (Duarte and Belarde-Lewis 2015; Kovach 2021; Scully 2012). Within an Indigenous ontology, there is an inseparable relationship between story and knowing and a holistic nature to this knowledge (Kovach 2021). Stories become a valuable tool for teaching and learning, which can also be used in other areas where value is placed on contextualized knowledge. Through the inclusion of Siksika (Blackfoot) Elders in our archaeology field school on the Siksika Nation, we attempt to present culturally appropriate curricula which increases student's intercultural competency. Our study sought to evaluate our teaching pedagogy and to understand what value students attach to instructional methods which incorporate Indigenous teachers. Using the First Nations Holistic Lifelong Learning Model (Canadian Council for Learning 2007) as a guide, we examine data from student reflective journals to evaluate the cultural inclusivity of the curricula developed and its efficacy in increasing student's intercultural competency. We demonstrate that the holistic curricula provided was highly valued, and that the land-based and immersive learning environment created allowed students to reframe their own previous biases and understandings that ultimately increased their intercultural competency.

Introduction

As archaeologists in the era of reconciliation, it is our responsibility to teach our students about ethical and reciprocal research relationships, as well as about Indigenous histories, worldviews, and current realities. The majority of archaeology in North America today continues to be done primarily by white, settler archaeologists, despite the fact that most archaeological sites are remnants of the Indigenous past. At the same time, the United Nations Declaration on the Rights of Indigenous Peoples, formally adopted by many countries including Canada and endorsed by the United States, fundamentally asserts the rights of Indigenous people to effective and meaningful participation in decisions and activities that affect them, their communities, and territories (United Nations 2007). Therefore, to create ethical and meaningful research and teaching environments, we must engage with descendant communities regarding both the past and present of these communities and their homeland.

Barnhardt and Kawagley (2005) note that knowledge is embedded in the environment, something that is exceptionally apparent in archaeology as an intimately place-based practice. As such, archaeology courses provide an excellent opportunity to create inclusive frameworks of teaching and learning that integrate Indigenous perspectives and to create culturally informed curricula. For many Indigenous communities, learning is a holistic and lifelong process that is experiential in nature, as it

is a relational and communal activity (Bastien 2004; Kovach 2021). It is centered in the experiences that take place on the land and in the community and engages all aspects of the self (Canadian Council on Learning 2007). This is no less true of the Blackfoot people, whose traditional homeland extends from the North Saskatchewan River to the Yellowstone River and from the Rocky Mountain foothills to Saskatchewan's Great Sand Hills, encompassing large parts of southern Alberta, southern Saskatchewan, and Montana. According to Blackfoot elders, the Niitsitapi (the Blackfoot) have occupied these lands since time immemorial (Blackfoot Gallery Committee 2001).

The University of Calgary operates our archaeological field school within the Blackfoot homeland on the Siksika First Nation, situated approximately one hour's drive east of Calgary, Alberta. The Siksika are one of four tribes (along with the Piikani and Kainai in Alberta and the Amsskaapipikani in Montana) that make up the Blackfoot Confederacy. Our field school site, EePf-54, is located at Sooyohpawahkoyi (Ridge Under Water), an important place in the Blackfoot cultural landscape. By learning together at our field site, we have created a pedagogy of place that "stresses the importance of teaching by means of culture, rather than on the subject of culture, by instilling knowledge about the student's environment" (Marule 2012:131). Through the inclusion of Blackfoot partners and Elders in the development of curriculum for and instruction of our archaeological field school, we hope to increase the intercultural competency of University of Calgary undergraduate students who live in the homeland of the Blackfoot.

Nicholas (2008:1660) argues for a practice of archaeology that is "more representative of, relevant for, and responsible to Indigenous communities." This principle lies at the heart of our field school and Indigenous archaeology, which has been advocated for as archaeology that is done with, for, and by Indigenous communities, and which includes an active commitment to integrating Indigenous knowledge and ways of knowing (Atalay 2006, 2008, 2012; Colwell-Chanthaphonh et al. 2010; Supernant 2018; Watkins 2000). We are certainly not alone in our endeavor to create a community-driven, culturally inclusive program of archaeological teaching and research, with several other researchers and field schools providing a model to follow (e.g., Cipolla and Quinn 2016; Gonzalez and Edwards 2020; Gonzalez et al. 2018; May et al. 2017; Rahemtulla 2020; Silliman 2008; Silliman and Sebastian Dring 2010). For example, the Confederated Tribes of the Grand Ronde and the University of Washington have worked together to offer the "Field Methods in Indigenous Archaeology" field school since 2015, a community-based archaeology field school in northwest Oregon (Gonzalez and Edwards 2020; Gonzalez et al. 2018). Similarly, the University of Northern British Columbia has partnered with eight different Indigenous communities to offer 13 field schools on the coast and in the central interior of British Columbia since 2000 (Rahemtulla 2020). These are only a few examples of the important work being done in this space. Nevertheless, Gonzalez and Edwards (2018) note that:

the pedagogical benefits and impacts of engaging with Indigenous perspectives within the context of archaeological practice receive less attention, this despite the fact that a number of Indigenous archaeologies feature education components. [2008:24]

These authors advocate for a renewed focus on pedagogy as a central theme of archaeological inquiry. Thus, this study seeks to explicitly address the benefits and outcomes of an archaeological pedagogy which centers Indigenous ways of knowing and teaching, as applied in the field school context.

Positionality

We would be remiss to begin any discussion about cultural inclusivity without offering our own positionality (Jacobson and Mustafa 2019). Lindsay Amundsen-Meyer is an archaeologist currently employed at the University of Calgary. Lindsay comes from a white settler background, the descendant of Norwegian settlers who came to Alberta in the early 1900s. While Lindsay is not Blackfoot, she has worked for over a decade to incorporate Blackfoot traditions into archaeological study and sees value in lending her technical expertise to Indigenous communities seeking to study their own past.

Kelsey Pennanen is an archaeologist and educator of Finnish settler descent who grew up on the trapline in northwestern Ontario. She is passionate about centering Indigenous stories using decolonizing practices and strategies and has worked closely for several years with Knowledge Keepers, Elders, and educators from the Siksika Nation to design curriculum-aligned archaeological activities and on-the-land learning experiences for Indigenous and settler students.

Kristal Turner is a doctoral student in the Werklund School of Education, and a former archaeology and traditional knowledge assistant. She is of settler descent and has lived in locations across Canada. Through her research, she seeks to improve the postsecondary student experience to be more supportive and culturally inclusive, making their time in school a more positive experience overall.

Patricia Campos Díaz is a Mexican, professional, tangible heritage conservator pursuing a doctorate in archaeology at the University of Calgary. Her focus is on working with Indigenous communities in Mexico to create community-engaged strategies for long-term heritage conservation projects, as well as understanding different knowledge systems and ontologies regarding Mexican tangible heritage.

Vivian Ayoungman is a member of the Siksika First Nation. Vivian holds a Doctorate in Education and is a curriculum development expert. She has used her expertise to develop, along with Elders and Knowledge Keepers, numerous Siksika Studies and Heritage Management courses offered through Old Sun Community College and leads a Siksika language-immersion program. These courses and Vivian's

efforts have made a significant contribution to a revitalization of cultural knowledge and language on the Siksika Nation.

Background and Pedagogy

Several authors have noted that the written nature of Western society and oral basis of Indigenous societies represents a key difference in the way that we approach the world (e.g., Duarte and Belarde-Lewis 2015; Kovach 2021; Little Bear 2000). Kovach (2021) discusses how, in many Indigenous worldviews, stories are a relational tool which hold knowledge. These stories provide a purposeful mechanism to share knowledge which is flexible, collaborative, and reflexive (Kovach 2021:164). Within an Indigenous ontology, there is an inseparable relationship between story and knowing and there is a holistic nature to this knowledge. Stories, then, become a specific and valuable tool for teaching and learning (see also Basso 1996; Bastien 2004; Cajete 2000; Little Bear 2000). While this pedagogy is prevalent in Indigenous cultures, stories as a teaching and learning tool are also used in other areas where value is placed on contextualized knowledge, such as in the discipline of archaeology. This type of framework relies on the co-construction of knowledge and research tools which focus on qualitative methods, as the story lets you hear another person's knowledge and invites reflexivity into your own knowledge and practice (Bruno and Dell'Aversana 2018). Reflexive learning helps students develop a professional identity as they engage with assumptions, experiences, beliefs, values, and/or feelings which are not their own, allowing them to question their current ontology (Bruno and Dell'Aversana 2018; Colomer et al. 2020; Maracle 2015). These synergies present a unique opportunity to create culturally inclusive and land-based educational opportunities for both Indigenous and non-Indigenous students.

We must also recognize that, for most of its history, curriculum development has been grounded in colonial practices, as has archaeology as a discipline (Marek-Martinez and Gonzalez 2023:48; McGuire 1992; McNiven and Russell 2005; Watkins 2005). Traditionally, learning in Indigenous communities, including the Blackfoot, flowed with everyday life on the land and daily activities such as hunting and gathering, the needs of the land, family, and community (e.g., Bastien 2004; Bowra et al. 2021:132; LaPier 1997). These traditional educational models were disrupted and broken by colonialism, as the Blackfoot were forcibly confined to Reserves following the signing of Treaty 7 in 1877 and many children were forced to attend residential schools. Indigenous ways of knowing continue to be marginalized in mainstream education systems, including within the postsecondary sector. For example, Leanne Betasomasake Simpson (2017:149), a Michi Saagig Nishnaabeg author, speaks of the impact on her well-being of dealing with "someone else's agenda, curriculum, and pedagogy" that did not have her or her people's interests or principles at heart. This null curriculum is a continuation of colonialism, forcing the perception that the land and people are separate (Bowra et al. 2021:132; Gonzalez and Edwards 2020). Kovach (2021) speaks of the need to see

systemic deficits as the perpetrators of this ethical misstep, and not blame individuals or social systems.

With this in mind, we need to recognize that simply because an experiential or place-based learning opportunity is offered does not automatically make it culturally inclusive or centered on Indigenous pedagogies.

Experiential learning emphasizes the application of Western theoretical constructs to real-world experiences, thereby going beyond conceptual knowledge presented in class. Land-based pedagogies are similarly experiential, but they are also rooted in Indigenous epistemologies, where the land is a source of knowledge (Simpson 2014). [Arellano et al. 2019:395].

True land-based learning must center Indigeneity. It must include the land as first teacher and a place of reflection, must take a holistic perspective which centers relationships, and must resist colonial structures (Bowra et al. 2021).

In our own work, Kovach (2021) challenges us to consider how Indigenous storytelling can be included in how we teach and do research in archaeology, to allow for the co-creation of archaeological knowledge. Recognizing that Indigenous knowledge is oral and embedded in relationships with the land, we strive to incorporate storytelling as a teaching and land-based learning tool in our archaeological field school curriculum. In doing so, we seek to recognize the whole of the Blackfoot worldview, which Duarte and Belarde-Lewis (2015) describe as key to inclusive teaching. Land-based education allows students the opportunity to “experience the history of their land with cultural and territorial specificity” (Scully 2012:156). Our program aims to increase the intercultural competency of our students by creating a personal connection with the land, the archaeological record, and its descendant Indigenous community. By including Blackfoot Elders, Knowledge Keepers, and educators in course development and instruction, we use land-based education “to disrupt racialized perceptions of Aboriginal peoples [and] to create awareness of all peoples and pedagogies” (Scully 2012:148).

Lifelong Learning Model

In North America today, as in the past, there is a great diversity of Indigenous people and cultures. Despite this diversity, Indigenous people generally share a vision of learning and education as a purposeful, holistic, and lifelong process (Canadian Council on Learning 2007:5). This learning is based on relationships not just between students and educators, but also with knowledge, place, and other living beings. Furthermore, this learning entails certain responsibilities on the part of both student and educator to facilitate these relationships and the transfer of knowledge (Bastien 2004; Cajete 2000; Marule 2012).

Following a series of workshops with First Nations, Inuit and Métis educators, Elders, and Knowledge Keepers, the Canadian Council on Learning (2007:5–7) identified six key attributes of Indigenous learning:

1. Learning is holistic. Learning engages and develops all aspects of the individual (emotional, physical, spiritual, and intellectual) and the community.
2. Learning is lifelong. Learning is a lifetime process that repeats itself across successive generations.
3. Learning is experiential. Learning occurs through doing, in a traditional classroom that consists of the community and the natural environment.
4. Learning is rooted in Indigenous language and culture. Language forges connections (between people and between people and culture), transmits cultural knowledge, and allows individuals to understand their shared experiences.
5. Learning is spiritually oriented. Learning happens when an individual turns inward. Knowledge is gained in a spiritual quest, as knowledge itself is sacred.
6. Learning integrates Indigenous and Western knowledge. Learning today includes the best from both traditional and contemporary knowledge.

Based on these key attributes, a First Nations Holistic Lifelong Learning Model was proposed, which portrays learning as a holistic, lifelong, cyclical and regenerative process that contributes to individual and community learning and well-being. This model, visualized as a tree, includes four components: the roots (sources and domains of knowledge), the rings (stages of lifelong learning), the branches (an individual's personal development), and the leaves (the community's well-being). The roots demonstrate that all learning is rooted in an individual's relationship with both people and environment, and in their experiences with ceremony, tradition, and language. The rings of the tree, within the trunk, show that Indigenous and Western knowledge are complementary and show the importance of including both formal and informal (experiential) learning in an individual's education. Learning is a personal journey gained through these stages of learning. The branches of the tree depict how personal development occurs because of these learning stages, and how harmony is achieved through balance in spiritual, physical, mental, and emotional dimensions. Finally, the leaves of the tree are symbolic of learning as a regenerative cycle, and of the collective well-being in cultural, social, political, and economic realms gained through learning (Canadian Council on Learning 2007:18–19). This model is fundamentally built on relationships which “are circular, rather than linear, holistic and cumulative, rather than compartmentalized” (Canadian Council on Learning 2007:19).

Although Indigenous students are a minority of the undergraduate student population at the University of Calgary, as a postsecondary institution the University of Calgary has committed to the creation of a culturally competent and inclusive campus community which respects and promotes Indigenous ways of knowing, teaching, and learning and understands Indigenous histories and worldviews; to

fostering a respectful environment for multidirectional teaching and learning; and to decolonizing the curriculum offered at our institution (University of Calgary 2019). The underrepresentation of Indigenous students in undergraduate programs is something experienced by universities across Canada (and likely North America), and some research has shown that, besides under-acceptance rates, there is a reluctance of racialized students to self-report their identity to institutions that have been a part of the colonial oppression of their people (Robson 2018, 2021). Therefore, we apply these principles of Indigenous lifelong learning to our archaeological field school to create culturally appropriate curriculum and offer a land-based learning opportunity, that allows undergraduate students of all backgrounds to undertake a learning journey that deepens their knowledge of Indigenous cultures, worldviews, and current realities through integrated curricula grounded in Indigenous pedagogy and ontology (Ghostkeeper 2007).

Objectives

Our goals for student learning are to increase the intercultural competency of our students so that they leave the archaeology field school with a deeper understanding of Indigenous cultures, worldviews, and current realities. Exploring this intercultural competency and empathizing with communities other than our own is key to the ongoing process of reconciliation in our society, and a challenge for many individuals who have never had the opportunity to learn from Indigenous teachers or visit an Indigenous community. As this field school takes place on the plains in southern Alberta, it was critical to engage with Blackfoot culture, within whose traditional homeland we live and work. Therefore, our scholarship of teaching and learning (SoTL) study sought to examine:

1. What are the benefits to students of experiential learning with Indigenous Elders and community members on an archaeological dig, with a particular focus on learning outcomes related to intercultural competency and disrupting settler colonial narratives?
2. Is the inclusion of Indigenous educators/Elders in course design and instruction successful in creating a pedagogical shift to a more culturally appropriate and inclusive curriculum?

Methods

Curriculum Development

Our archaeological field school is run in partnership with Old Sun Community College, the postsecondary institution on the Siksika Nation. We follow a community-based, participatory research method, where the community (in this case the Siksika) have the right to define the nature and extent of the research that occurs (Atalay 2012;

Colwell 2016). Through this partnership between the University of Calgary and Old Sun Community College, our field school curriculum was redesigned to combine archaeological methods with cultural teachings from Siksika Elders and Knowledge Keepers. The 2022 field school represents the first time this curriculum was offered to University of Calgary students. The curriculum for the field school was developed collaboratively by archaeologists, Blackfoot educators, and Siksika Knowledge Keepers and Elders. The course includes instruction in traditional archaeological field methods and analysis techniques, as well as teachings related to Siksika ways of knowing, Siksika stories, and other cultural components. While a University of Calgary field school had previously operated on the Siksika First Nation, this earlier iteration of the program did little to work with or include Siksika Elders and community members.

Importantly, all our work occurs with the specific permission of the Siksika Nation Chief and Council and the Siksika Nation Lands Department and, thus, is formally supported by the Nation's leadership. Further, we ensure that we report back on our findings and programs to both leadership and the community through a series of presentations each year, including public community events and more formal presentations to entities such as the Siksika Culture Task Force (a division of Chief and Council), the Board of Governors of Old Sun Community College, the Siksika Nation Lands Department, and other stakeholders on the Siksika First Nation. This step, of both requesting permission for our work and providing regular reports on our activities, helps to ensure that we approach the work in a respectful way and communicate regularly with Siksika Nation leadership and community members. Such communication is key to ongoing and respectful relations.

Reflective Journals

In our field school curriculum, we focus heavily on learning from place, as our Elders advisory group indicated that this is essential within a Blackfoot epistemology. As noted by Marule:

The essential feature of learning from places is that the knowledge is internalized as a result of the experiential learning format. Through the lived experience, students are able to make connections between knowing and doing. This reflective practice raises students' consciousness to a higher level. [2012:140]

As part of their archaeology field school course, students were thus required to complete a series of reflective journals discussing archaeological and cultural knowledge gained and the relevance of this knowledge to the practice of archaeology, to reconciliation, and to themselves.

During the six week field school program, each student submitted three reflective journals. The initial reflective journal was submitted in the first week of the course prior

to attending the ceremony or traveling to the Siksika Nation. The second reflective journal was submitted roughly halfway through the course, and the final journal was submitted upon completion of the course. Self-reflection thrives in environments where there is time to reflect, build solidarity, and receive support from educators to engage students with new ways of thinking (Hoggan and Kloubert 2020). By taking students on a learning journey that requires the submission of successive reflective journals and provides prompt educator feedback both before and after certain pivotal experiences at the field school, we are able to guide students to a new understanding. This guided process of reflection allows students to complete the cycle of experiential learning, which requires a four-step learning process in which students experience, reflect, think, and act on their learning (Kolb 1984).

As part of this reflection, students were asked to think about and discuss the value they saw or felt in learning directly from Siksika Elders and community members, and how their learning experiences have impacted their own lives and preconceptions. They were further asked to think about how they will take the lessons they have learned forward into their lives and careers upon completion of the course (see Table 1 for the

Table 1. Reflective Journal Guiding Questions.

Journal #1	<p>Use these prompts to start thinking about your own positionality and bias.</p> <ul style="list-style-type: none"> • Where did you go to school? • What is your and your family's heritage? How do you stay connected to your heritage? • When reading and learning about history, how often do you see your family's experience represented? • Think about, and jot down, some of your main impressions about Indigenous people in Canada prior to this learning experience. • Think about and explain where your impressions/knowledge of Indigenous peoples has come from? Personal experience? Experiences of friends, colleagues, and family who are Indigenous? Depictions of Indigenous peoples in current events/news, books, history or social studies classes, or social media? Somewhere else entirely? • What experiences have you had with Indigenous people and culture up to this point.
Journal #2	<p>Use these prompts to start thinking about your learning experience in the field and on the Siksika Nation so far.</p> <ul style="list-style-type: none"> • How do your previous learning experiences compare to this experience? • Would you say you have a more negative or a more positive view of history? What influenced your perceptions? • Have your main previous impressions of Indigenous people evolved after learning in this course about Blackfoot protocols, ceremonies, and experiences. Why or why not? • What do you know about the Truth and Reconciliation Commission of Canada's activities that took place across Canada starting in 2008?
Journal #3	<p>Use these prompts to reflect on the entire process and learning experience of your field school experience on the Siksika Nation.</p> <ul style="list-style-type: none"> • Describe the most impactful or memorable moment/experience with Blackfoot peoples and culture for you and explain why it is memorable. • Why do you think this learning experience differed from prior learning? • Have your perspectives on definitions and knowledge of history changed as a result of this learning experience? Explain • In what ways can you seek out more learning about, with, or alongside Indigenous people and culture? • How do you plan to bring your learning from this experience into your life moving forward?

reflective journal guiding prompts provided to students). This type of reflective learning allows students to understand themselves and their motivations more fully (Fullana et al. 2016).

Ethics Approval

Prior to the start of the 2022 field school, ethics approval for this scholarship of teaching and learning study was sought and received from the University of Calgary Conjoint Faculties Research Ethics Board (REB19-1882). Students completed reflective journals as part of their course assessment during the Spring 2022 semester. During the field school, the journals were read and graded by the instructor of record (Dr. Lindsay Amundsen-Meyer) who is the only individual who saw the journals with student's identifying information. Once the course was complete, final grades were submitted, and the deadline to challenge grades for the spring semester had passed, all 22 field school students were contacted once via email by Dr. Amundsen-Meyer to seek permission to use their journals in this study. Those students who responded affirmatively were provided with the full information on the study and signed a consent form allowing use of their journal in this study. Following this, Dr. Amundsen-Meyer removed all identifying information from the reflective journals to be included in the study before providing them to the project team, in order to protect student anonymity. On completion of this manuscript and prior to its initial submission, all students participating in the study were provided with a copy of the manuscript for review. This provided participants with a chance to review how their journals were used and a final opportunity for students to withdraw their permission for use of reflective journals.

Thematic Analysis

Reflective journals were reviewed and thematically coded by all authors separately using qualitative methods (see Terry et al. 2017). The data were manually coded using themes drawn out from our literature review to guide into which category the responses were placed. While this type of coding can take longer to process, it allows for a deeper connection with the data and a more humanistic perspective (Creswell and Creswell 2018; Thornberg 2012). The authors then met to discuss and find commonalities between the coding of the journal entries. The final codes were chosen from the lifelong learning model and included person (referring to a personal account—experienced or shared), people (referring to a home experience or something learned about the Siksika community), land (referring to the cultural connection to land, archaeology, or environmental factors), and language/traditions.

University of Calgary Archaeology Field School (2022)

The University of Calgary's archaeology field school is a six-credit course which takes place over six weeks every spring semester from early May through mid-June. The

first week of the 2022 field school was classroom-based instruction. Our University of Calgary teaching team taught lessons on Northwestern Plains culture history, archaeological method and theory, and artifact analysis, among other topics. At the end of this first week, students attended a Beaver Bundle opening ceremony on the Siksika Nation, led by Siksika Knowledge Keeper Kent Ayoungman (*Kayiihtsipimiohkitopi*). Ceremonies are not only sources of knowing, but are also acts of great importance to the people (Kovach 2021). Kovach (2021) reminds educators and students that there can be no decolonizing of research areas like archaeology without the inclusion of authentic Indigenous experience such as this. Starting with the ceremony and integrating these cultural and archaeological teachings set the tone for the remainder of the course and allowed students to begin to make connections between Siksika traditional knowledge and the archaeological record. This ceremony also provided a chance for the instructors and Elders to explain the importance of keeping the ceremony sacred and not sharing details or pictures in public.

For the next four weeks, students participated in land-based learning at archaeological site EePf-54, on the Siksika Nation, an important place within the Blackfoot cultural landscape. Students worked through all phases of an archaeological investigation, from surface survey and mapping, through shovel testing, and, finally, archaeological excavation. Throughout our four weeks in the field, we received on-site teachings from Siksika Elders Clement Leather, Ruth Scalplock, Francis Melting Tallow, Christine Little Chief, and Marie Calf Robe. While on site, these Elders actively engaged with the students and the archaeological record, sharing their cultural knowledge. They talked about the history and traditions of the Siksika, their own lives and experiences, and showed students Blackfoot places visible on the surrounding landscape. These Elders also taught Blackfoot words for these places and for the objects found in the archaeological excavations to the students. In this way, our field program offered land-based, experiential learning which combined cultural and archaeological teachings. Following best practices as allies, the details of oral traditions and ceremonies shared with the students will not be detailed as this information is not ours to share in the current context.

In addition to on-site teachings from Elders, students were given a tour of Old Sun Community College. Now an Indigenous postsecondary institution, these buildings once housed the Old Sun Residential School, operated by the Anglican Church from 1886–1971. This real-world experience allowed students to better understand the legacies of intergenerational trauma and loss of traditional knowledge that result from the operation of residential schools. Finally, students participated in a field trip to two important Blackfoot places (which are also archaeological sites) with Siksika Knowledge Keeper Kent Ayoungman (*Kayiihtsipimiohkitopi*): *Ohkotokskoyi* (Big Rock) and *Aakiipiskan* (Women's Jump). At each place, students listened to the associated Blackfoot stories and learned about the archaeological record, bridging connections

between traditional and archaeological knowledge and demonstrating the importance of the former in understanding the latter. The last week of the field school saw the students reviewing the field experience and cataloging artifacts in the lab.

Results

The 2022 University of Calgary archaeology field school was attended by 22 undergraduate students, 15 of whom gave permission for their reflective journals to be used in this study. Students enrolled in the course came from a wide variety of backgrounds: white settlers from rural and urban settings, recent immigrants, students of Métis¹ background with varied levels of connection to or knowledge of their Métis culture, and others. Most students were archaeology or anthropology majors. Each of these students brought their own prior knowledge and perspectives to the program, and each experienced a very personal learning journey through the six-week course.

Analysis of student journals demonstrates how each individual's knowledge expanded and perspectives changed through the six weeks of their field school course, as well as how the acquired knowledge impacted that individual personally and professionally. The lessons learned are unique to each person, as each individual started in a different place. However, five key themes that crosscut these learning journeys are evident in student journals: 1) bias/objectivity; 2) land-based and experiential learning; 3) decolonization; 4) empathy/transformation; and 5) lifelong learning.

Bias/Objectivity

Transformative learning, such as provided in our course, can help students to acknowledge deeply embedded assumptions and stereotypes through the perspective of other experience, by providing a place for them to reflect on why they hold particular knowledge (Hoggan and Kloubert 2020). These deeply embedded assumptions create a skewed perspective and may contain personal motivations from untrustworthy sources, which reflection can uncover (Wallace et al. 2020). The types of preconceived notions about Indigenous people exhibited by students cover a wide range of ideas, from positive through neutral to negative.

At the start of the field school course, negative stereotypes were noted by most students. This results, in part, from where their previous knowledge of Indigenous peoples was learned. Many students report learning in home environments from individuals of a different generation, in which these negative biases were the norm. Others noted that they were not taught about things like Indigenous communities or residential schools in secondary school, with most of their knowledge coming from social media, and many had never previously had meaningful interactions with an Indigenous person. Several of the students who had previously learned from Indigenous individuals noted that even these interactions did not occur in a setting free of bias:

I had very little experience meeting with Indigenous people on their own terms, in the sense that most of the conversations I have had with elders and influential members of the community sees them being called into Western institutions and presenting their ideas in very formal instructions rather than storytelling, or having to cut their stories short for the sake of presentation. [Student 6]

One of the benefits of working on the Siksika Nation frequently discussed in student journals was the opportunity to learn from Siksika Nation Elders and community members, who made both formal and informal visits to our archaeological excavations. The students developed reciprocal learning relationships with these individuals, which they have carried forward beyond the end of the course.

Several students in the 2022 course self-identify as Métis. These individuals all expressed a desire to connect more with their Indigenous roots. A few noted that their family celebrated these roots and that they had always felt connected to them growing up. Others, however, noted that they felt disconnected from their own Indigenous ancestry, as it was not something celebrated by their parents or grandparents. One Métis student noted:

Being white passing has allowed us to escape much of the discrimination that many Indigenous people face. But, nonetheless, for fear of that discrimination our Indigenous heritage was something that was often hidden or simply not talked about until more recently. [Student 1]

Regardless of their pre-existing stereotypes and perspectives, all students in the course showed an openness to learning and to confronting their own biases moving forward. The successive reflective journals of students show their perceptions of Indigenous communities evolving in a variety of ways. For those students whose biases were largely negative and stemmed from their upbringing, you can see them grappling with these stereotypes as they move through the course, challenging their previous epistemological integrity (Hoggan and Kloubert 2020). In several cases, they found themselves facing conflicts internalized from their upbringing as their experiences broadened and they began to understand and empathize with the Siksika community members they met. Although many returned to home environments in which negative perceptions of these communities are entrenched, these changing perceptions are a direct result of students' interactions with the Siksika.

In observing the Beaver Bundle opening ceremony, one student noted:

During the ceremony there was a very subtle blending of the old and new; the beaver sat next to a couch cushion being used as seating. The saskatoon soup was being cooked in a crock pot. Rather than horses or dogs, a congregation of flatbed trucks met outside. The meals were served in Styrofoam containers, and our gifts of cigarettes were not out of

place in the tipi. I have a suspicion that my idea of Indigenous people is a very idealized, historic perception that results from learning about the past culture, and not knowing the modern people. [Student 6]

This quote is particularly relevant here, as it demonstrates the power of experience in confronting our biases, as well as the importance of reconsidering how we teach about Indigenous cultures in our educational system. In discussing the latter issue, one student astutely stated:

What I have really begun to realize is that through the standardized curriculum Indigenous peoples and their history is often taught with a perspective that these cultures and communities are past remnants and static, with a focus on more negative topics. However, our experiences down on Siksika, everything from learning from elders and knowledge keepers to being invited to participate in the Beaver Bundle opening ceremony, really emphasized the resiliency of the Blackfoot in keeping their culture alive. [Student 8]

What is clear in the reflective journals is that the field school experience challenged each individual's preconceived notions about Indigenous people and demonstrated to them the importance of recognizing and confronting their own inherent biases. While this may appear as a bold statement, the journals do show an honest vulnerability on the part of students to confront their previous experience that moves beyond the realm of qualifiers. One student, who self-identified as someone from a white settler background with an overall negative perception of Indigenous people prior to the course, noted:

I have learned so much, not just about archaeology, but about myself. I realized that biases need to be broken because there are so many amazing things I would have missed out on and amazing people I would not have met if I allowed myself to give in to those entrenched biases. By interacting with the Blackfoot community, I have gained a new perspective on viewing the land and everything around us in Canada today. [Student 15]

Land-Based/Experiential Learning

Our field school is designed to provide land-based, experiential learning focused on teachings from both archaeologists and Siksika Elders, Knowledge Keepers, and community members. This type of learning relies on the telling of stories as well as on experiences in the landscape and at Blackfoot places. The high value to students of this pedagogy is evident in their reflective journals. Furthermore, students felt that these teachings could not be reconstructed as effectively in the traditional classroom:

As Kent Ayoungman mentioned, many of the stories are best taught and understood at the places in which they are about. I don't think I would

have learned as much when listening to him speak about traditional stories if we were in a brick classroom in the basement back at the university, we needed to be outside and be able to see the places and be able to situate ourselves in the landscape as we learned about them. [Student 8]

I think this class has been incredibly beneficial for a diverse spectrum of learning experiences, ranging from listening to Blackfoot elders speaking, taking tours of traditional lands and landmarks, visiting an old residential school, observing prayers, and taking part in a Blackfoot ceremony. I have found this class to be invaluable in that it is immersive, hands on, and provides real experience as opposed to sterile, in class theoretical knowledge. [Student 5]

In their final reflective journal, students were asked to reflect on which experience during their six-week field school was the most impactful to them in their learning journey. While the answer varied, most of the 15 students mentioned the immersive, land-based learning opportunities in which students learned from Siksika Elders and Knowledge Keepers as genuinely impactful: the Beaver Bundle opening ceremony, our field trip to *Aakiipiskan* and *Ohkotoksoyi*, the tour of Old Sun Residential School, or teachings from Elders at our excavation site. In witnessing living Blackfoot culture during the Beaver Bundle ceremony, students realized that the lifeways represented in the archaeological record are not just a static entity of the past, but belong to a cyclical, resurgent, and vibrant present. While touring the former Old Sun Residential School, students began to understand the realities of these institutions, the resulting loss of culture, and the impacts of intergenerational trauma on descendant communities and these communities' understandings of their own past. While on a field trip to important Blackfoot places and while listening to stories from Elders and Knowledge Keepers, the oral nature of Blackfoot culture and the importance of their deeply embedded connection to place becomes real.

These land-based learning opportunities are so powerful because they take students out of their comfort zone and allow them to form connections between Siksika cultural traditions and the archaeological knowledge they have gained thus far in their postsecondary degree. This is well articulated by one student, who indicated that:

I have always felt distanced from Indigenous culture, whether it be a result of personal or societal attitudes towards Indigenous people. But after listening to the stories Kent [Ayoungman] shared and witnessing the Beaver Bundle ceremony, I started to understand things a little differently. I feel as if I see the landscape, the artifacts we find, etc. differently, because I have gained a small amount of access to a vast amount of information I never knew existed. [Student 15]

At the same time, not all learning experiences can be designed, and simply the act of being on the land created opportunities for self-guided learning. One student related how simply traveling through the Siksika Nation each day caused them to confront their biases, as they found buildings to be well maintained and communities to be present, which was not what they had expected.

In all cases, a key lesson related in student reflective journals is the importance of the connection between the Siksika, the land, and the community as a whole:

When we met with Kent [Ayoungman] and he told us all the stories in a sequence, and then connected it back to the landscape, it really made me understand just how interconnected Blackfoot stories and traditions are with the land. These experiences really enhanced how I see Blackfoot traditions and stories in a way that a course about the subject could never do quite as well. [Student 7]

The importance of place-based storytelling as a critical pedagogy of place is similarly noted by other authors (e.g., Basso 1996; Gonzalez and Edwards 2018). This realization, that the Siksika hold a powerful and spiritual connection to the land, caused our students to consider the ethics of how we do archaeology, how we can create respectful and reciprocal research programs, and how we can work to decolonize archaeology in future.

Decolonizing Archaeology

In considering decolonizing approaches to archaeology, we must include consideration of how we train our students to be archaeologists. The field school is the natural place for this type of reflection on pedagogy and practice (Rahemtulla 2020:106). Before taking our field school course, all students are made aware that we work in the traditional homeland of the Blackfoot people and that the field school takes place on the Siksika First Nation. Initially, however, this seems to be an ambiguous and static idea. Their successive reflective journal entries demonstrate that, as they moved through the field school, the numerous land-based learning opportunities they experienced and the teachings they received from Siksika Elders and Knowledge Keepers caused students to realize that the Blackfoot community is active and vibrant, as are the associated cultural traditions. This is summarized well by one student, who stated:

Many people feel that when they learn about an Indigenous groups' history, they are learning about the past. However, these communities are still here, and their resilience has kept traditions alive through traumatic and formidable experiences lasting generations. [Student 3]

Furthermore, these land-based, culturally centered learning opportunities allowed students to begin to see archaeology differently, and to understand the importance of connecting with descendant communities in our archaeological practice. This is

articulated by one student describing their experience at the Beaver Bundle opening ceremony:

Being at the ceremony was undoubtedly the most memorable because it was clear to me how important it is that we attend and learn why we are on the Siksika Nation. I learned through this that their traditions go back a very long time and so it is important that I remember that the artifacts that are found through archaeology are part of those longstanding traditions and histories. [Student 11]

The power of authentic learning (or active learning) experiences such as these cannot be understated, especially when paired with critical reflection on current issues related to gender and diversity (Singer et al. 2020).

By becoming familiar with Siksika cultural traditions and viewing archaeology in this new light, students are beginning to develop the capacity for “two-eyed seeing” (Bartlett et al. 2012; Little Bear 2000) and to understand the value of this approach. Two-eyed seeing is defined as a “co-learning journey” and includes seeing the world holistically through Indigenous and Western perspectives (Bartlett et al. 2012:331). Many students were surprised to hear from community members such as Kent Ayoungman that he saw value in archaeology, given the colonial history of the discipline and the often-adversarial relationship archaeologists have had with Indigenous communities in the past. In their archaeology field school, students instead found that there was a safe space created for multiple worldviews, as noted below:

I appreciated that there is space for multiple perspectives. An example that comes to mind is the origins of the Big Rock, where science posits that the giant boulder is a glacial erratic carried south from Jasper to where it rests today, just outside of *Okotoks* (Alberta). The Blackfoot version of the story tells that the boulder was angry and in pursuit of *Napi*, moving north and creating a path along the way, until the boulder was broken and now rests where it is today. Why can't both be true? What difference does it make? I think to a certain extent they are both true. The truth is what you make it. [Student 1]

Understanding what history means for different groups of people is crucial for people who study the past the past for a living, especially when we are taught through a Western lens. The idea that time is cyclical, and past and present can exist at the same time is not something we tend to learn about as university students in Canada. However, we live on land that holds deeper roots than we can understand, and we owe it to the people who have been tied to this land for generations to, at the very least, learn and respect these beliefs. [Student 3]

This type of safe space facilitates knowledge sharing, which is essential for moving forward with an approach based in two-eyed seeing and for interpreting the archaeological record in a culturally familiar way.

In seeing with two-eyes, students realized through their experiences that archaeological data can support oral tradition, and cultural knowledge can inform archaeological interpretation. The value and importance of braiding these two forms of knowledge together and the shift in thinking this entails is best demonstrated by a narrative from one student, who writes:

A great example of this was hearing the story of *Napi* and the Big Rock in *Okotoks* from Kent Ayoungman which changed how I think about theories about the peopling of the Americas. I also found it incredibly interesting that archaeological evidence, in the form of specific motifs of rock art on these erratics throughout the Blackfoot homeland, seemingly have connections to that story which may support the notion that oral traditions can be used as reliable sources for history. I am aware that in the field of archaeology it is still debated if oral traditions and histories should be considered as reliable sources of information. However, this experience has demonstrated to me that many of the stories that elders and knowledge keepers shared with us are likely as reliable as any written source, like Bede's *Ecclesiastical History*. Although some aspects of stories may be fantastical, such as a giant rock chasing *Napi* across the plains, there appears to be some truth in the stories, in this case it could be the movement of the Blackfoot, or their ancestors, into this area after the glaciers began to recede. As such, I've begun to think about how oral traditions can be used as evidence to support archaeological finds or to rediscover sites where the connection has been severed and information lost due to colonialism. [Student 8]

Providing learning opportunities that emphasize the approach of two-eyed seeing had two primary learning outcomes. First, students came to realize that the benefits of this approach are not one sided; that there is a benefit to Indigenous communities as well as archaeologists. This approach to archaeology helps us to interpret the archaeological record in a more meaningful way. It can also help Indigenous communities to reconnect with culture and identity that has been lost through the impacts of institutions such as residential schools and policies of assimilation:

When the many elders came to speak at the site, I remember them talking about their experiences with the residential school system and the Government of Canada's other efforts to undermine Indigenous culture. I had a general idea beforehand about the scale of the damage done, but I never really understood before this class how long the road to recovery

takes. After hearing about how even today, much of the Blackfoot culture is still mystery to much of the community, I began to understand why academic archaeology is important; because it's a gateway for people to reconnect with their identity. [Student 4]

Secondly, students came to understand that, moving forward, we need to adopt a new perspective of doing archaeology that is sensitive to and includes Indigenous communities:

This field school experience has shown me a way we can decolonize archaeology by prioritizing the people whose ancestors we are studying by viewing things through the lens of their traditions and beliefs. The combination of attending ceremonies, listening to elders and other guest speakers, touring Old Sun, etc. with doing the physical work of excavating amounted to an overall new perspective of how archaeology should be done. I really like how Kent [Ayoungman] put it; that we complement one another. [Student 3]

Such a perspective contains, as noted by Cipolla and Quinn (2016:125), “the possibility of changing the discipline from within.”

Empathy/Transformation

When we began to analyze student reflective journals, it was impossible to escape the fact that these journals were full of anecdotes of personal connection and empathy. Over the course of the field school, students who began with negative conceptions of Indigenous people and/or who had never met an Indigenous person connected with the Siksika individuals that they met on a personal level and developed empathy for these individuals, the community, and Indigenous people generally.

A primary driver of this connection seems to be that the experiences they had in field school allowed students to realize that Indigenous people are just that, people (see also Bang et al. 2014). This is clearly articulated by one student, who stated:

The most impactful experience, however, would have to be Joe [Crowfoot Clark] coming to hang out with us. It probably seems like such a small thing, but for someone who has never engaged in meaningful conversation with any Indigenous people before this class, it really helped me see Indigenous people as just...people, and also to erase that us versus them mentality I grew up with. [Student 11]

Yet another student stated:

Both of them [Joe Crowfoot Clark and Kent Ayoungman] have their stories about their lives and their culture, but you can also just talk about the latest hockey game with them. What they taught me is that while

Indigenous archaeology must be sensitive to the history, it can also be something that brings people together. [Student 14]

Forging these connections with Siksika individuals as *people* allowed students to break down stereotypes, to empathize with Indigenous people, and to develop a sense of responsibility to Indigenous communities as an ally. One student succinctly stated that “Empathy is something that connects us, and we owe it to those who were here before to try and understand their pain” (Student 3).

Engaging both settler and Indigenous knowledge in the same space allows for commonalities to be found and for the development of more inclusive perspectives (Hoggan and Kloubert 2020). This empathy and sense of responsibility is demonstrated almost universally in students’ reflective journals. Furthermore, this sense of responsibility is shown to be transformative for most students in the course. It has changed the way in which they want to approach doing archaeology in the future and created advocates for a decolonizing approach to archaeology. This is clearly demonstrated by one student, who writes:

Having members of the Nation join us as we dug and how elders would come and share thoughts and prayers with us made the whole field school experience feel more valuable. This is because it gave me a sense of purpose as I dug. Not only was I learning the techniques I would need if I continued in archaeology, but I was also working towards something bigger than myself. That being giving the Siksika Nation a way to reconnect with their heritage. [Student 4]

At the same time, this empathy was transformative to numerous students on a more personal level. Reflecting on their own experiences in the community, one student confronted their own privilege:

I guess this opened my eyes to my own privilege; I get the option to learn about the experiences of children in the Residential Schools. The children who attended never had a choice to ‘learn’ about it. They were forced to experience the things that made me cringe and turn away. I’m ashamed for never really conceptualizing this before now. [Student 6]

Another student, a self-identified atheist, was surprised by their reaction to ceremony and prayer:

I found it uncomfortable to be so comforted by the prayers and smudges that the community and elders did for us. I was really shocked by how my relationship with the land changed as well, as, for example, I never really spent time and appreciated the land. I always admired the beauty of nature, but I did not respect or appreciate it in the way I have been

recently. I even left cigarettes and returned a pebble that I kept because I did not want to upset the land and the spirits on it. [Student 13]

The transformation seen in student reflective journals, both personally and professionally, demonstrates that these students will take the lessons learned with them forward beyond the field school into the future. These interactions shape priorities of value (Canadian Council on Learning 2007) and can allow for a reframing of knowledge and responsibilities for students to carry through life (Bouvier et al. 2016).

A similar outcome was noted by Gonzalez and Edwards (2018:244) on the Field Methods in Indigenous Archaeology field school, where embedding learning in personal relationships was seen to humanize archaeological research and education. Similar to our University of Calgary field school, these researchers found that the field school experience allowed students to develop empathy and better understand how abstract lessons related to archaeological ethics, for example, could personally impact the Indigenous community within which they are working.

Lifelong Learning

Students were tasked in their final reflective journal with considering how they will take knowledge gained during their field school forward into their personal and professional lives. Reading their reflections it is clear that the field school is only the start of each student's personal journey of education and reconciliation, and that the experiences they had and knowledge they gained profoundly impacted how they intend to move into the future. This lifelong learning is best demonstrated by the words of the students themselves, as provided below.

Each student undertook a very personal learning journey, but all are breaking patterns and biases of the past:

I find it hard to put into words how much I feel I have gained so far. I think I have been given a hands-on education in what was done wrong in the past and how to properly move forward as someone who will work with (and for) these communities throughout my career. [Student 5]

I hurt for my dad, his parents, and anyone that has been affected by colonialism. I want to use my privilege as a white individual who has had easy access to education to help break some of these biases and patterns. When I see young Indigenous people wanting to reconnect with their heritage and reach out to elders, I get very emotional because this is something I believe is the foundation for a better world. [Student 3]

As well, they are committed to working towards reconciliation and to a better societal future:

This was prevalent for me the entire field school, but especially at Old Sun College when we toured the old residential school. This was an experience for me that I couldn't have prepared for, no matter my prior understanding and empathy. It made the issue of Indigenous trauma much more real to me...Seeing the way the people in the community are so resilient and want to revisit these experiences for the better of their lifeways and the coming generations is very powerful, and we need to do everything we can to support them in Reconciliation. [Student 3]

This is important knowledge that needs to be shared to all Canadians if we are going to move forward in a positive way. This class has proved there is hope for Reconciliation, and I have learned that the only way towards a better future for generations to come is through cooperation. [Student 3]

With this commitment to reconciliation, students advocate for the decolonization of archaeology and for connecting with descendant communities in our work. Furthermore, as many intend to move into the cultural resource management industry as practicing archaeologists, they are thinking about how to take what they have learned forward and how to use their skills and knowledge as an ally in that context. This commitment is best articulated by a student who stated in their final reflective journal:

It would be ideal to have solely Indigenous archaeologists who have control over knowledge diffusion and museums or heritage exhibits, but it may take some time before we can get to that point. If I can do my part by working for Indigenous communities in order to help piece [together] some of the lost knowledge and tradition as a result of colonialism, I would feel like my degree and privilege were used for a positive reason. [Student 3]

At the same time, many of the students have taken this lifelong learning journey further, discussing their role in righting past societal wrongs and teaching future generations:

It is extremely frustrating to me that the government and media portray a desire to build better relationships with Indigenous communities but doesn't seem to care that people are still dying because of the impact of residential schools. They don't appear to want to help the individuals who still suffer from these traumas. I think the best thing I can do is use my privilege as a white person to speak up and educate others about these issues. [Student 11]

I believe it is now part of my job to use my degree and knowledge to help the next generation, like my nieces and nephew, to stray away from the mindset of my parents and grandparents generation, and towards a more understanding and holistic mindset. [Student 13]

These reflections demonstrate that students have considered, on a personal and professional level, how they will take knowledge gained out of the course and into the future.

Discussion

As Gregory Cajete (2009:183) states, “Indigenous education is, in its truest form, about learning relationships in context”. It is these relationships and the synergy between traditional Blackfoot pedagogy and archaeological study of cultural landscapes that we draw on in our field school curriculum because, as Scully (2012:152) states, “places are literal common ground.” Exposure to Indigenous culture, language, and traditions are central and essential to developing intercultural capacity (Bouvier et al. 2016). Through inclusive practices, the curriculum offered in our archaeology field school allows the opportunity for students to engage in and become changed through experience.

As the results above show, our pedagogical approach and the learning environment created on the Siksika First Nation during the archaeology field school were beneficial to students, who consistently noted the importance and power of learning at specific places and learning directly from Siksika Elders, Knowledge Keepers, residential school survivors, and community members. Many students noted that the course was a different and more powerful learning environment than they had experienced in a campus setting. All students’ intercultural competency increased over the field school, clearly demonstrated through the transformative personal change each student recorded in their successive reflective journals. The clear benefit of learning from Indigenous Elders and Knowledge Keepers and on the land is demonstrated by the learning experiences students noted to be the most impactful: participation in the Beaver Bundle opening ceremony, the tour of Old Sun Residential School, and the field trip to Blackfoot places with Kent Ayoungman. The value of this approach in increasing our undergraduate students’ intercultural competency and informing their practice of archaeology in the future is well summarized by one student who states:

My experience in this class has been only positive, and I have been in tears many days when I get home from school thinking about the work we are doing at Siksika. Understanding generational trauma, and how archaeology at sites like the one we are working at can give descendants a connection to their ancestors is so important for reconciliation. The strength I see at Siksika from elders and community members reiterates the need for cooperation between academic archaeologists and Indigenous groups. The spread of knowledge through the elder’s stories and the physical past being displayed creates a narrative that we all should learn. [Student 3]

Further, we believe we have succeeded in creating a culturally inclusive curriculum that incorporates and respects Indigenous voices and provides a safe space for multiple perspectives to grow and thrive. Recognizing that Indigenous pedagogies are largely land-based with an emphasis on oral teachings, our goal was to create an archaeology field school curriculum which is inclusive of these pedagogies. To evaluate our success in this regard, we look back to the First Nations Holistic Lifelong Learning Model (Canadian Council on Learning 2007) as this model has Indigenous pedagogies at the core. The model portrays learning as a holistic, lifelong, cyclical, and regenerative process based on relationships between people, knowledge, place, and all living beings (Canadian Council on Learning 2007:5–7). Evaluating our archaeology field school curriculum against the model's six key attributes indicates we have met our objective to create a culturally inclusive curriculum (Table 2).

We further see this in the reflective journals of our archaeology field school students. Their learning is holistic, encompassing archaeological methods, techniques, and theories, as well as Siksika cultural knowledge and protocols. Students gain this knowledge through experiential learning with archaeologists, Siksika Knowledge Keepers and Elders, fellow students, the Blackfoot cultural landscape, and the spirits the Blackfoot know to be present. Furthermore, these teachings impacted students on a personal level and are being carried through into the future in their own relationships and careers, creating a cyclical and regenerative process of learning. Finally, the First Nations Holistic Lifelong Learning Model suggests that learning entails responsibilities related to the transfer of knowledge gained. This sense of responsibility is clearly articulated by several students in their reflective journals, with one stating:

As I continue my education journey, I want to make it a priority to continue incorporating Indigenous knowledge into my understanding of archaeology on the Plains. I would like to continue to 'build relations' as Kent [Ayoungman] said earlier in the field school. [Student 15]

An unintended consequence of this pedagogical shift goes well beyond archaeology and our own desire to decolonize curriculum. Because we have created this safe space for students to learn and grow, along the way we also have shaped individuals who are kinder, more empathetic, and brighter people. This is most evident in the writings of one student, who noted in their final reflective journal:

I am aware that I have been taught with a Eurocentric bias and have benefited from the results of colonization. However, one of my goals in life is simply to become a better and kinder individual and I feel the best way to do so is to speak with and learn from people and cultures outside my own. I have always believed that it is through the introduction and learning of new or different perspectives and knowledge that we are able to truly

reflect on ourselves and our biases and enact changes to become a better person. [Student 8]

As previously noted, archaeology is well suited to this type of pedagogical shift, as our discipline relies heavily on place-based learning, which fits well with Indigenous

Table 2. Alignment of Key Attributes of the First Nations Holistic Lifelong Learning Model with Reflective Journal Themes and Field School Practices/Outcomes.

Key Attribute ^a	Journal Theme	Practice/Outcome
Learning is holistic , developing emotional, physical, spiritual, and intellectual aspects of the individual and community.	Empathy/ Transformation Bias/Objectivity Decolonization	<ul style="list-style-type: none"> • Students learned about archaeology (intellectual), but also developed emotionally/spiritually while learning about Siksika culture through ceremony and from Elders. • The physical demands of archaeological field work developed their physical person. • Bringing students and Blackfoot community members together created a sense of community that crosscuts our university campus and the Siksika Nation.
Learning is a lifelong process that repeats itself across generations.	Lifelong Learning	<ul style="list-style-type: none"> • Students provided concrete ideas about how they would take what they have learned forward into the future. • Several students provided narratives of sharing their teachings with other individuals in their lives, including family members, children, and colleagues.
Learning is experiential , and traditionally occurred in community and the natural environment.	Land-based/ Experiential Learning	<ul style="list-style-type: none"> • Reflections present in the journals demonstrate that the learning opportunities that students found most valuable through the course were invariably those that took place at Blackfoot places with direct teachings from Elders/ Knowledge Keepers.
Learning is rooted in Indigenous language and culture .	Land-based/ Experiential Learning	<ul style="list-style-type: none"> • Students had the opportunity to hear the Blackfoot language during ceremony and learn words for the landscape surrounding our archaeological site from the Elders.
Learning is spiritually oriented , as knowledge is gained in a spiritual quest and learning happens when an individual turns inward.	Bias/Objectivity Empathy/ Transformation Decolonization	<ul style="list-style-type: none"> • Students participated in the Beaver Bundle opening ceremony and, in the process, learned about Blackfoot spirituality. This was the first time many of them realized that Blackfoot traditional culture and ceremony is still practiced. • Students' successive reflective journals demonstrate that they have turned inward and undertaken honest and deep personal reflection through the course of the field school. This has allowed them to internalize lessons learned and reframe understandings to gain new knowledge.
Learning integrates Indigenous and Western knowledge , with an approach that includes the best of both.	Decolonization	<ul style="list-style-type: none"> • Curriculum for our field school was developed collaboratively by archaeologists, Blackfoot educators, and Siksika Knowledge Keepers/Elders and included archaeological field methods, as well as Blackfoot cultural components. • The merit of this approach is clearly demonstrated in the theme of decolonization, and the many students who discussed the concept and value of two-eyed seeing as well as the safe and respectful space created in the course for multiple perspectives.

^a Attributes from Canadian Council on Learning (2007:5–7).

pedagogies that center land-based learning and relationships among all beings. Further, Indigenous cultures are based on oral tradition, and rely heavily on storytelling as a teaching tool. Similarly, archaeologists are creating a story based on the artifacts found in the archaeological record, which are the belongings of the ancestors. Bringing together these perspectives in a culturally inclusive archaeology field school curriculum allows for a powerful and safe space for teaching and learning that centers Indigenous worldviews and pedagogies. As many of our field school students will move into the discipline of archaeology as researchers and practitioners, a major outcome of this pedagogy is a generation of future archaeologists with an understanding of an archaeology more tangibly grounded in the perspectives and goals of descendant communities.

The Truth and Reconciliation Commission of Canada² calls on us to incorporate culturally appropriate curricula, to include Indigenous peoples' historical contributions in curricula, and to provide opportunities which integrate Indigenous traditional knowledge and history within the classroom setting and through interactive experiences on the land (Truth and Reconciliation Commission of Canada 2015). The curriculum and pedagogy used during our 2022 archaeological field school course was an effort to act on these calls to action. In the future, our own call to action is for postsecondary educators to consider how they can implement a similar pedagogical shift in their own contexts. While not every course will be able to offer land-based learning experiences as we did, we believe this shift can begin in a traditional postsecondary classroom setting by prioritizing experiential learning and student reflection and by centering Indigenous voices and practices as equals in Western postsecondary institutional contexts through the inclusion of Indigenous Elders, teachers, and voices.

Conclusion

To promote change as archaeologists and educators, it is our responsibility to teach our students about Indigenous histories, worldviews, and current realities, and to challenge them to confront their own perspectives through transformative experiences. Through the inclusion of Siksika partners and Elders/Knowledge Keepers both in the development of curriculum and instruction at our archaeological field school, our goal was to create a culturally inclusive and holistic curriculum that increases the intercultural competency of our students. Combining archaeological and cultural teachings in our field school program on the Siksika Nation allowed students to begin to make connections between Siksika (Blackfoot) knowledge and the archaeological record. The most impactful learning experiences in this setting occur when land-based learning opportunities, which are centered on Indigenous voices, are provided.

Archaeology as a discipline has a colonial history, but also has the power to begin to affect change, as analysis of our student's journals has demonstrated.

To finish off this journal I think I am going to end it with one of the most impactful pieces of wisdom I have ever heard someone say. Unfortunately, I cannot remember the name of the elder [Clement Leather] who spoke with us and gave a tobacco offering the last week we were excavating on site but what he said will always stay with me and influence my perspective on how archaeology as a field can improve and start to do work with and for Indigenous communities, how we move towards Reconciliation, but also how to deal with things in my personal life. He said that there is always a good and a bad path and even when we are on the good path, the bad path is still there and it is our job to look back at our past, fix the wrongs in order to do what is right and move forward into a better future. [Student 8]

It is our job as teachers, students, and professionals to understand and confront the colonial history of our discipline and to understand Indigenous histories, worldviews, and current realities. In doing so, we can work to decolonize archaeology and push our practice towards a better path.

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Endnotes

- 1 The Métis are people of mixed European and Indigenous ancestry, descended from fur traders (typically Scottish or French) who married Indigenous women.
- 2 The Truth and Reconciliation Commission (TRC) of Canada was created with a mandate to inform all Canadians about what happened in residential schools. Between 2007 and 2015, the TRC documented the truth of those affected by the residential school experience. This mandate concluded in 2015

with the publication of a final report, in which the TRC provided 94 Calls to Action to redress the legacy of residential schools and advance the process of reconciliation in Canada.

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