

Methodological Métissage: An Interpretive Indigenous Approach to Environmental Education Research

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Abstract

This article discusses the development of a methodological métissage that combined Indigenous and interpretive traditions. This métissage was developed during a doctoral study conducted with Canadian environmental educators who incorporate Western and Indigenous knowledge and philosophy into their ecological identities and pedagogical praxis. It is presented as an invitation to environmental education researchers from all cultural backgrounds to acknowledge and engage with Indigenous knowledge, philosophies, and methodologies.

Résumé

Le présent article examine l'élaboration d'un « métissage » méthodologique combinant les traditions autochtone et interprétative. Ce croisement a eu lieu dans une étude doctorale menée avec des éducateurs environnementaux canadiens et incorporant les philosophies et savoirs occidentaux et autochtones dans leur identité écologique et leur pratique pédagogique. Cet article invite les chercheurs en éducation environnementale aux antécédents culturels de toute nature à reconnaître et utiliser les connaissances, les philosophies et les méthodes autochtones.

Keywords: Indigenous, interpretive, methodology, bricolage, métissage

Introduction

After a long history of misuse and abuse of Indigenous peoples and knowledge by Western researchers, conducting research in Indigenous contexts can be a challenging prospect for both Indigenous and non-Indigenous researchers alike (Adams, 1999; Battiste, 2005; Kincheloe & Steinberg, 2008; Kovach, 2010; Lassiter, 2000; Smith, 1999; Wilson, 2008). Non-Indigenous researchers often feel especially cautious, given the legacy of colonialism and subsequent reticence of Indigenous peoples to participate in contemporary research initiatives (Kincheloe & Steinberg, 2008; Lassiter, 2000).

A growing number of Indigenous and non-Indigenous researchers and educators are attempting to address these concerns by recognizing, engaging with, and embodying Indigenous territories, knowledge, and perspectives in their research and pedagogical practices. For example, Denzin and Lincoln (2008) suggest that:

It is time to dismantle, deconstruct, and decolonize Western epistemologies from within, to learn that research does not have to be a dirty word, to learn that research is always already moral and political. It is time to chart a new decade, the Decade of Critical, Indigenous Inquiry. (p. ix)

Working independently and in partnership with allies like Denzin and Lincoln, Indigenous researchers (e.g., Kovach, 2010; Smith, 1999; Wilson, 2008) are guiding the development of research approaches *by, with, and for* Indigenous peoples.

This article is presented as an invitation to environmental education researchers, Indigenous and non-Indigenous alike, to enter into this complex but undeniably important territory. As Blackfoot scholar Little Bear (2000) reminds us, all people in Canada, Indigenous and non-Indigenous alike, continue to be affected by the colonial legacy of this country. Inherent in this recognition of colonization is the fact that Canada is a nation settled and built upon the traditional territory of Indigenous peoples. Euro-Canadian philosopher Saul (2008) states that Canada's historical legacy defines us as a "métis"¹ nation, built on intercultural cooperation and mutual influence between European and Indigenous cultures. For example, the voyageurs were not only purveyors of European cultures, values, and trade goods, they were also deeply influenced by the Indigenous peoples they encountered, often absorbing and adopting Indigenous epistemologies, practices, and materials into their own lives (Podruchny, 2006). If Canadian environmental educators and researchers are authentic in their desires to enact concepts such as place-based education (Curthoys, 2007; Gruenewald, 2003), we must acknowledge and consider this ongoing relationship of Indigenous and non-Indigenous cultures in all of our environmental education endeavours. As a Métis environmental scholar and educator, these issues are close to my heart and my identity.

Personal Background: On Being Métis

I am a Canadian of Métis (mixed European and Indigenous) ancestry on both sides of my family and I currently reside in the unceded territory of the Lheidli T'enneh in north-central British Columbia. Being Métis in Canada is not always easy. As people of mixed Indigenous and European ancestry, we are not either/or, we are both at the same time, simultaneously colonizer and colonized. This is the perpetual relativism that Métis people live with on a daily basis, sometimes creating confusion for ourselves and others, but also offering great cultural richness and complexity (Fujiwara, 2001-2003; Gibbs, 2000; Kienetz, 1983; Richardson, 2004).

The ambiguity of Métis identity has deep roots in the Greek origins of the term which bore connotations to the oblique intelligence of trickster-like animals, such as the fox and the Goddess Metis (Détienne & Vernant, 1974/1991; Dolmage, 2009). In Ancient Greece, metis (pronounced "meh-tiss") literally

meant “no one” or “no man” (Dolmage, 2009); it described someone who did not fit perfectly into any one category, but was skilled at blending in everywhere. This ambiguity extends to the present day, often resulting in a diasporic or in-between feeling among people of Métis ancestry (Richardson, 2004; Roth, 2008).

The diasporic nature of being Métis in modern day Canada, however, also grants Metis people the special quality of cultural bridge-maker. In this article, I discuss my doctoral methodology as a Métis Canadian, as I strived to articulate and embody a methodology representative of my own worldview while exploring and clarifying the complex relationships between Western-derived interpretive (Berry, 2006; Denzin, 1989; Steinberg, 2006) and Indigenous (Kovach, 2010; Smith, 1999; Wilson, 2008) methodologies. My goal is to provide an example of how Indigenous perspectives can be embodied and enacted in contemporary environmental education research, and to argue how Indigenous methodologies are a natural fit with environmental education research sensibilities because Indigenous worldviews already include an inherent recognition of the Land and the connectedness of all beings (Barnhardt & Kawagley, 2005; Bastien, 2003; Cajete, 1994).

Research Background

During the course of my doctoral studies, I had the privilege to interview 10 Indigenous and non-Indigenous intercultural environmental educators from a variety of backgrounds (Stó:lō, Métis, Pakistani, Japanese, various European cultures) from across Canada, who draw upon both Western and Indigenous traditions to inform their ecological identities, philosophies, and practices.

This research grew out of my master’s work (see Lowan, 2009), which explored outdoor and environmental education programs for Indigenous youth in Canada through a lens of decolonization and cultural revitalization. A strong theme that emerged from my master’s study was the potential for rich intercultural experiences between Indigenous and non-Indigenous instructors and participants. This theme was further supported by growing discussion in contemporary environmental education literature from both Indigenous perspectives (Cajete, 2001; Swayze, 2009) and non-Indigenous perspectives (Hatcher & Bartlett, 2009; Snively, 2009), advocating for the integration of Western and Indigenous knowledges and philosophies of Nature. These experiences and influences led to the focus of my doctoral research—intercultural environmental education in Canada—and the overarching question, “Is it possible to blend Western and Indigenous knowledge and philosophies of Nature?”

The background and findings of my doctoral study have been presented in detail elsewhere (see Lowan, 2011a, 2011b, 2012). Therefore, in the following, I explore the methodology that I developed through the study from an initial *bricolage* (Berry, 2006; Steinberg, 2006) or integration of Indigenous and

interpretive methodologies to form a new methodological *métissage* (mix) representative of my own identity as a Métis scholar and educator. This discussion is significant because it expands the limited body of literature exploring bricolage and *métissage* as methodologies (Chambers, Donald, & Hasebe-Ludt, 2002; Donald, 2009, 2010; Hasebe-Ludt, Chambers, & Leggo, 2009) and adds to the limited diversity and engagement with non-Western, especially Indigenous, voices in environmental education research (Agyeman, 2003; Corsiglia, 2005; Dillon, Kelsey, & Duque-Aristizabal, 1999). I also attempted to embody the link between cultural and ecological awareness in Indigenous cultures (Bastien, 2003; Cajete, 1994) and to address the often under-explored connection between thought and action in (non-Indigenous) environmental education research (Hart & Nolan, 1999).

From Bricolage to *Métissage*: A Process

Berry (2006) introduces the concept of bricolage as methodology by sharing an anecdote about an Acadian friend who is constantly at work using “scraps of leftover wood ... to create the most unique and charming birdhouses ... no two ever look the same” (p. 87). Berry notes that, like her friend’s carpentry projects, engaging with bricolage as a research approach involves working “with ‘bits and pieces’ of theoretical, methodological and interpretive paradigms. It works with the scattered parts, overlaps and conflicts between paradigms” (p. 102). Similarly, Steinberg (2006) comments that:

Bricolage involves taking research strategies from a variety of scholarly disciplines and traditions as they are needed in the unfolding context of the research situation. Such an action is pragmatic and strategic, demanding self-consciousness and awareness of context from the researcher. The *bricoleur*, the researcher who employs bricolage, must be able to orchestrate a plethora of diverse tasks. (p. 119)

I have come to realize that I was acting as a bricoleur at certain stages of my PhD study. I drew upon a diversity of cultural and academic sources, including Western and Indigenous theorists, historians, scientists, and educators, and interpretive qualitative researchers from around the world; however, following Steinberg (2006), the methodological diversity inherent in my study was not selected at random due to a lack of organization or focus. Rather, it was a carefully considered, dynamic, and intuitive attempt to express my own identity as a Métis researcher and to engage with a diversity of voices to foster rich and respectful conversations between myself, the literature, and the research participants. While the concept of bricolage denotes the calculated cobbling together of various elements, resulting in a dynamic, but ultimately deconstructable whole (Berry, 2006; Roth, 2008; Steinberg, 2006), Roth suggests that, in cultural terms, bricolage often leads to *métissage*, a term implying a mix or blend so complete

that the parts can no longer be extracted from the whole. In my study, my processes as bricoleur resulted in a methodological métissage of participants, data, research findings, and environmental sensibilities.

Métissage as Methodology

I was inspired by scholars such as Chambers, Donald, and Hasebe-Ludt (2002), who describe métissage as a “way of merging and blurring genres, texts and identities ... a creative strategy for the braiding of gender, race, language and place into autobiographical texts” (pp. 1-2). Donald (2009) describes a researcher employing métissage as the weaver of a braid or a Métis sash, expressing “the convergence of wide and diverse influences in an ethically relational manner” (p. 142).

Another metaphoric image that speaks to this intertwined Western-Indigenous relationship is the infinity symbol, found at the centre of the Métis flag. As Dorion and Préfontaine (1999) note, “the horizontal eight is an infinity sign, which has two meanings; the joining of two cultures [European and Indigenous] and the existence of a people forever” (p. 17). My adaptation of métissage as methodology employs the infinity symbol as a metaphoric image (Figure 1). It is similar in inspiration to Donald’s (2009, 2010) metaphor of a weaver, as it critically compares and combines both Western and Indigenous traditions. However, while Donald’s application of métissage involves comparing and contrasting colonial and Indigenous narratives of historical sites and objects, my approach focused on a métissage of methodological influences that explored contemporary peoples’ lives, experiences, and perspectives through a narrative approach.

Research in the Third Space: Comparing Indigenous and Interpretive Inquiry

As I began my work as a methodological bricoleur, I set out to clarify the relationship between Western and Indigenous approaches to research as they related to my study. When comparing traditional Indigenous approaches to gathering and transmitting knowledge (Barnhardt & Kawagley, 2005; Kovach, 2010; Smith, 1999) to Western science-inspired research models such as quantitative and positivistic approaches (Creswell & Miller, 2000), I discovered that some similarities exist, such as “empirical observation in natural settings, pattern recognition, verification through repetition, [and] inference and prediction” (Barnhardt & Kawagley, 2005, p. 16), but that there are also significant *divergences*. For example, Barnhardt and Kawagley emphasize that, while Western science-rationalist epistemology takes a reductionist view of the universe, attempting to isolate and analyze specific parts, Indigenous cultures

recognize a holistic interconnection of all Creation (humans, more-than-humans, living and non-living entities in nature). They also note other distinctions between the two paradigms, such as reliance on the oral tradition to transmit knowledge in Indigenous cultures compared to the written record in Western knowledge practices, as well as the trust in inherited (ancient) wisdom in Indigenous cultures versus the inherent skepticism of Western science-oriented epistemologies.

The field of qualitative research has, however, increasingly moved away from positivist, science-oriented goals (Berry, 2006). In doing so, more interpretive methodologies have emerged that value non-positivist approaches to research, and that are more *convergent* than divergent with Indigenous traditions for knowledge collection and transmission. Kovach (2010), a Cree and Saulteaux scholar, explains that Indigenous research methodologies are intimately linked to contemporary qualitative approaches, albeit cautiously, due to the ongoing tensions created by the legacy of European colonialism. She suggests that:

Indigenous methodologies can be situated within the qualitative landscape because they encompass characteristics congruent with other relational qualitative approaches ... This matters because it provides common ground for Indigenous and non-Indigenous researchers to understand each other. (pp. 24-25)

I was intrigued by Kovach's notion of "common ground" as it reminded me of Métis scholar Richardson's (2004) interpretation of Bhabha's (1998) "Third Space" in Canada as a "Métis Space," an existential and epistemological meeting place where Western and Indigenous knowledge and perspectives collide, mix, and mingle to form new cultural expressions and understandings. Throughout my doctoral study, I sought to further clarify this uneasy but promising relationship, and noticed that researchers from both paradigms, Indigenous and interpretive, were often employing similar, but not identical criteria, to guide and evaluate their studies. Table 1 and the Métis infinity symbol model (Figure 1) demonstrate how the two research paradigms are closely aligned, proving that it is possible to bring the two methodological approaches together—first through a process of bricolage, and then into a *métissage* where the parts are ultimately indivisible and largely indistinguishable from the whole:

In Table 1, the main distinction between Indigenous and interpretive approaches is the centrality of Indigenous knowledge and community protocols in Indigenous research (Kovach, 2010; Smith, 1999). This is an important point to acknowledge not only for researchers who are conducting research within a specific Indigenous community or attempting to embody their own cultural traditions through methodology, but for all researchers, due to the fundamental fact, as previously stated, that all environmental education work and research in Canada is conducted on the traditional territory of Indigenous people. In the following, I elaborate on some of the concepts presented in the table and figure above, as they relate to my study and the field of environmental education research.

Common Criteria	Indigenous	Interpretive
Was the research reciprocal? <i>Were there benefits for both the researcher(s) and the participants?</i>	✓	✓
Were the researcher and participants explicitly positioned? <i>Who is conducting/participating in this research?</i>	✓	✓
Was there opportunity for participant review? <i>Did the participants approve of how they are represented in the final text?</i>	✓	✓
Was a narrative approach employed? <i>Have both the researcher(s) and the participants shared stories and reflections?</i>	✓	✓
Was the research reflexive? <i>Is there evidence of learning by the researcher(s)?</i>	✓	✓
Has community accountability been satisfied? <i>Have/will the findings been/be shared publicly in an accessible format?</i>	✓	✓
Was it place-based/contextualized? <i>Is there evidence of cultural and ecological consciousness?</i>	✓	✓
Have critical issues been problematized?	✓	✓
Were Indigenous community protocols and customs followed and respected?	✓	X

Table 1. Comparing Indigenous and interpretive approaches (Lowan, 2012).

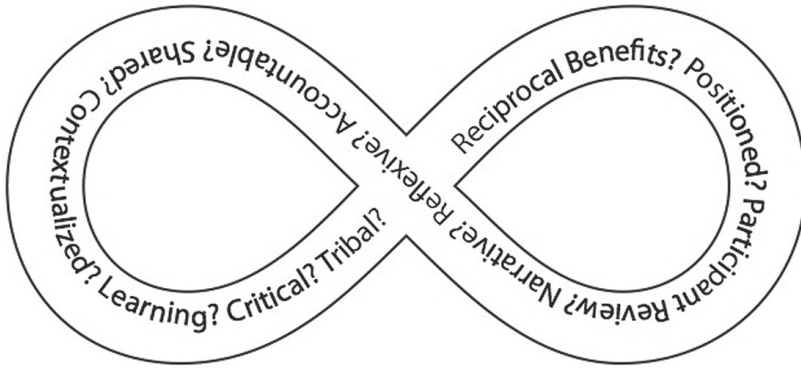


Figure 1. Indigenous and interpretive research: An infinite relationship (Lowan, 2012).

The Oral Tradition

Our theory of knowledge is found in the sacred stories that are the living knowledge of the people. The stories explain the nature of reality, the science, and the economic and social organization of *Siksikaitstapi*. They are the accumulated knowledge of centuries. Each generation ... is responsible for retelling the stories to the next generation. The knowledge contained in them is living. (Bastien, 2003, p. 45)

The oral tradition is a foundational characteristic of Indigenous cultures, as Blackfoot scholar Bastien relates above. Due to the centrality of the oral tradition and story-telling in Indigenous cultures, Indigenous scholars such as Wilson (2008) and Kovach (2010) suggest that narrative methodology, as an interpretive approach, is a relevant and appropriate methodology for Indigenous research, even though it involves presenting stories in writing.

The oral tradition has existed in many societies for thousands of years as a way to preserve history, family lineages, and cultural stories and values (Finnegan, 1970/1996; Hart, 2002). Chief Snow (1977/2005) states that the oral tradition is still taken very seriously in Indigenous communities: for example, contracts and agreements negotiated verbally are accepted as lawful and binding by Indigenous peoples. Kovach (2010) and Miller (2011) also note that oral traditions are increasingly respected in the Canadian judiciary as evidence in land-claim cases. Miller comments that, "In the 1980s and 1990s courts and tribunals in Canada and other jurisdictions began to seriously consider the relevance of Aboriginal oral narratives ... to legal proceedings" (p. 2). Kovach also relates the well-known "Delgamuukw decision," where "the Supreme Court

of Canada ruled that oral testimony has the same weight as written evidence in land entitlement cases” (p. 95).

Interpretive scholars such as Vansina (1961/1996) and Indigenous scholars such as Wilson (2008) suggest that the oral tradition is dynamic and must be considered in the context from which it arises. They note that the oral tradition is an interactive record of perceptions that links lives to context. One of its strengths is that it is highly adaptable; for example, a story meant to pass on cultural values might be updated and interpreted to suit the current lives of its audience without changing the original meaning or lesson. In this manner, the audience might better relate to the story as it comes alive in their contemporary world.

Narrative Inquiry

Hart (2002) notes that narrative inquiry, which grew out of the oral tradition, is increasingly employed in environmental education research and qualitative inquiry in general. He suggests it is “as much a way of knowing ourselves as a way of organizing and communicating the experiences of others” (p. 143).

Narratives may cover broad life histories or more specific topics (Denzin, 1989; Kovach, 2010). For example, my doctoral study was not simply an open biographical exploration of the participants’ lives; I focused on the development of their cultural and ecological identities and their experiences with, and beliefs about, topics such as the relationship between Indigenous ecological knowledge and Western science. In order to create a trustworthy “portrait” (Lawrence-Lightfoot, 2005) and contextualize the perspective of each participant, I provided background information and significant amounts of dialogue on the interview setting and flow. I did not construct completely comprehensive chronological accounts of the participants’ lives; rather, the focus of each mini-biography was the subject matter as identified in my original research questions with special attention to “epiphanic” or “aha” moments (Denzin, 1989).

Clandinin and Connelly (2000), well-known narrative methodologists, remind us of the embeddedness (socially, culturally, historically) and continuity of experiences in our lives—while Denzin (1989) also notes that significant experiences and “epiphanic moments” shared through stories can provide us with enhanced insight into other peoples’ lives. It is also important to consider that life is a continuous series of interrelated events situated in various contexts, the impact of sustained, but perhaps less exciting, experiences and the contexts within which they occur.

In keeping with the oral tradition (Wilson, 2008), I framed the final discussion in my doctoral study by referring back to my original research questions to examine the series of 10 short biographies, weaving intriguing ideas and responses shared by the participants into a dialogue between them, the literature, and myself. I also highlighted “epiphanic moments” (Denzin, 1989) that I experienced or witnessed in the participants during this study.

Reflexivity

Many scholars in the areas of interpretive methodologies (Steinberg, 2006; Tobin, 2006), Indigenous research (Kovach, 2010), and environmental education (Lotz-Sisitka, 2002) stress the critical importance of reflexivity. A reflexive researcher examines their role in the research process, reflecting on their experiences throughout the research journey, the influence of their cultural and social positioning, and their interpersonal interactions with research participants. Explicit reflexivity is also a tool for demonstrating the learning experienced by the researcher, a key criteria for quality interpretive research (Tobin, 2006). Reflexivity recognizes that a qualitative researcher is also a participant in the research process. As Kovach (2010) explains:

In co-creating knowledge, story is not only a means for hearing another's narrative, it also invites reflexivity into research. Through reflexive story there is opportunity to express the researcher's inward knowing. Sharing one's own story is an aspect of co-constructing knowledge from an Indigenous perspective. (p. 100)

Steinberg (2006) and Tobin (2006) suggest that reflexivity is a vital element of interpretive research because it demonstrates the learning experienced by the researcher. In my doctoral study, I employed reflexivity and demonstrated learning as I narrated and responded to the literature and my changing perceptions and understandings of key concepts through conversations with participants. This reflexivity is very important because it allows and encourages the researcher and participants to position themselves theoretically, culturally, geographically and ecologically, another key aspect of both interpretive environmental (Berry, 2006) and Indigenous research (Absolon & Willett, 2005).

Positioning

Absolon and Willett (2005) suggest that explicitly positioning yourself is an especially important aspect of reflexivity in research projects involving Aboriginal peoples because positioning is an integral foundation of many Indigenous cultures. From an interpretive research perspective, positioning means introducing yourself to your research participants and later your audience (Bolak, 1997). For example, during my doctoral study I explicitly informed my participants that I am a Western Canadian with Métis roots on both sides of my family. This helped them to understand my perspective and background and allowed them to position themselves in response. Several participants, Aboriginal and non-Aboriginal, commented that they felt more at ease discussing culturally related topics knowing my background because they had a better sense of their audience (me).

Conscious of such nuances, Ginsburg (1997) describes the importance of situating not only the interviewer but also the interviewee; relating details about

the context of the interview, like the physical setting, adds richness to the final product. I did this in my doctoral study for each participant by including a significant amount of biographical information as well as presenting participants' interviews as intact narratives, rather than breaking and mixing them into themes. This is an appropriate protocol in Indigenous research where treating participants and participants' stories with respect is of the utmost importance (Bastien, 2003; Kovach, 2010). Reflexive researchers understand research to be collaborative, interactive, and constructive. Researchers and participants work together, consciously and unconsciously, to create and interpret the interview/research experiences. Positioning yourself and your participants theoretically, geographically, and ecologically is also an important component of reflexivity, especially in Indigenous and environmental research.

Problematizing: Positioning Yourself Theoretically

Grele (1994) and Steinberg (2006) remind us that an interview is a conversational narrative not only between the interviewer and the participant, but also with the literature of the field that is embedded in current and historical contexts. Grele (1994) also recognizes that reflexive research can lead to conflict and tension with participants; this is a natural byproduct of people who might hold conflicting worldviews. Interviews often touch on controversial or sensitive topics and this can lead to conflict if differing perspectives exist between the interviewer and interviewee. Recognizing, reflecting upon, and reporting this tension can deepen the research process and lead to richer results.

I embraced Grele's suggestions and responded to participants in this study with my own thoughts on key issues (as well as those of other scholars and participants) in a cautious manner. This typically resulted in a deepening of our discussion; one participant even commented that our conversation was going to "keep her up all night" thinking further about the relationship between her identity and practice as a Métis environmental educator.

In consideration of interpretive scholars such as Berry (2006), who explains that problematizing historical and sociocultural issues relevant to a respective study is a key preparatory step for interpretive research, I problematized historical and sociocultural concepts and topics throughout my study. For example, each chapter of my literature review discussed challenging and controversial concepts such as juxtaposing various Western philosophical traditions (e.g. Western science, deep ecology, and bioregionalism) with Indigenous approaches, as understood from my own perspective as a Métis Canadian. I also challenged popular historical and contemporary notions of Métis people and cultures. These discussions continued in the final stages of my study, where I provided interpretation of key issues in response to participants' perspectives.

Contextualizing: Positioning Yourself Geographically and Ecologically

Bastien (2003) notes that responsible citizenship in Indigenous cultures means “taking care of each other *and* our environment” (p. 42). This sense of relationship and reciprocity with the greater-than-human world is foundational to Indigenous cultures and research (Bastien, 2003; Cajete, 1994), and it bears promising similarity to the beliefs of many contemporary Western environmental philosophers, educators, and researchers (Naess & Rothenberg, 1990). Cajete also emphasizes the localized specificity of Indigenous cultures, emphasizing the importance of recognizing the unique relationship that every culture develops to a specific geographical area over thousands of years.

Reciprocity and Community Accountability

As previously mentioned, both interpretive and Indigenous researchers emphasize reciprocity as an essential component of ethical practice. The concept of reciprocity is informed by questions such as, “For whom is this research?” and “Who is benefiting from this research?” (Lemesianou & Grinberg, 2006, p. 230). Reciprocity also means recognizing that, while you may be conducting research with a select group of individuals, they are members of a greater community and it is important to honour and recognize that community. In Indigenous contexts this is especially important because certain forms of knowledge (e.g., ceremonial) are communally owned and governed; their use and dissemination is often dictated by strict community protocols and traditions. Therefore, researchers, Indigenous and non-Indigenous alike, must ascertain in advance through community relationships and consultation what protocols might apply to their proposed investigations (Kovach, 2010; Wilson, 2008). For example, if you were working with participants from a specific geographical or cultural community, it would be important to ensure that the findings of your research were shared publicly in a variety of accessible formats to ensure accuracy, gain approval for their use, and share for the benefit of the greater community (Kovach, 2010).

Kovach (2010) notes that in more ethnically or geographically diverse contexts, where participants come from a variety of cultural and/or geographic backgrounds, it is still important that they are apprised of and benefit from the research findings. For example, Kovach’s doctoral study was with Indigenous academics across Canada, so she shared her results with other Indigenous graduate students and academics at her home university and beyond through publications and presentations.

Public knowledge advocates such as Willinsky (2006) also emphasize the importance of sharing research findings publicly and ensuring that participants benefit in some way. He argues that the evaluation of academic research, especially in the field of education, should be based on its free contribution through

a variety of media, for the benefit of all citizens as a public knowledge. Willinsky also notes that “the warrant for conducting research is that such work will contribute to knowledge, which is regarded as a matter of public good” (p. 440).

Implications and Significance: Some Concluding Thoughts

Conscious of past examples of misappropriation and misrepresentation of Indigenous cultures and knowledge by Western researchers, interpretive researchers like Kincheloe and Steinberg (2008) astutely comment:

We simultaneously heed the warning that the emerging Western academic interest in indigenous [sic] knowledge may not be a positive movement if such knowledge is viewed as merely another resource to be exploited for the economic benefit of the West. Understanding this admonition, we frame indigenous knowledge not as a resource to be exploited but as a perspective that can help change the consciousness of Western academics and their students while enhancing the ability of such individuals to become valuable allies in the indigenous struggle for justice and self-determination. (p. 152)

Kincheloe and Steinberg’s comments seem to match well the perspectives of Indigenous scholars such as Snow (1977/2005) and Cajete (2001), who suggest that the future success of our society will require a combination of the strengths of all cultures. Others warn of the dangers of cultural misappropriation and misrepresentation (Hermes, 2000; Simpson, 2004). I conclude this article by responding to those who wonder how non-Indigenous researchers might respectfully engage with and appropriately respond to Indigenous research approaches. More specifically, is it possible for someone who is not Métis to enact a methodological *métissage* such as the one I have presented?

Building on the work of leading *métisseurs* (Chambers, Donald, & Hasebe-Ludt, 2002; Hasebe-Ludt, Chambers, & Leggo, 2009), my experiences with this study suggest it is possible. It is critically important to note; however, the distinction between a person’s identity and their philosophies and practices: adopting *métissage* as methodology does not mean misappropriating a Métis identity. It would be inappropriate for a non-Indigenous or non-Métis researcher to simply adopt a *métissage* approach without first beginning with a bricolage, carefully considering the similarities and differences of the specific culturally-rooted methodologies they are attempting to engage and combine (Simpson, 2002) as well as building relationships and trust with Indigenous communities and peoples (Snively, 2006). As Roth (2008) emphasizes, this involves a process of moving from bricolage (conscious integration) to *métissage* (unconscious blending), further expanding opportunities for intercultural pedagogical praxis grounded in community-based learning and service, a place-based sense of collective connection to Land and culture, and support for Indigenous self-determination.

In my study I aimed to explore and articulate the relationship between Western and Indigenous epistemologies, using bricolage and then métissage as models for research praxis. I would encourage other researchers to draw inspiration from this particular métissage example, but not simply use it as a template because, as Donald (2009, 2010) reminds us, every instance of métissage is contextually unique, resulting in a wonderfully unpredictable diversity of experiences and perspectives. This diversity is something that is much needed and highly beneficial to the ongoing development of environmental education research because we have never needed as much attention, knowledge, and ancient wisdoms regarding environmental crises as we do now, and will need, for future generations.

Notes

- ¹ In this study, “Métis” refers to the Métis people of North America and “métis” refers to the more general concept of cultural mixing, while “Metis” is understood as a figure from Greek mythology, with “metis” denoting a recognized form of knowledge in ancient Greek society.

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