Journal of Outdoor and Environmental Education (2018) 21:89–102
https://doi.org/10.1007/s42322-017-0003-4

ORIGINAL PAPER

First Nation pedagogical emphasis on imitation and making the stuff of life: Canadian lessons for indigenizing Forest Schools

Zabe MacEachren[1]

Published online: 20 February 2018

Abstract Canadian Forest Schools are in the early stages of incorporating First Nations' pedagogies as part of a countrywide effort to decolonize and indigenize educational practices. This paper explores the importance of learning through imitation as traditionally practiced by First Nation peoples in Canada. It examines the ability of educators today to offer young children the opportunity to observe adults involved in complex hand work. Specific attention is given to First Nations' use of cradleboards and tethering straps as an initial way to nurture the sensory awareness and focusing ability of toddlers. Research, outlining the degree to which young children are capable of identifying skilled Elders that they deem worthy of imitation, is used to support a greater emphasis on role modeling complex hand skills around children. Decolonizing conventional practices in early childhood education, and indigenizing the curriculum to a place, requires that Canadian Forest School educators examine and create role modeling opportunities as historically practiced by First Nation cultures. These activities demonstrate the skillful use of the body, while engaging with recognizable place-based materials in the construction of functional items—the stuff of 'life.'

Keywords Forest School · First nation · Imitation · Play/child-centered pedagogy · Handwork

In this article First Nations, Elders, Native and Indigenous are capitalized as a form of respect, like when you capitalize a person's name or country.

✉ Zabe MacEachren
maceache@queensu.ca

[1] Queen's University, Kingston, ON, Canada

Canadian forest school context

Contemporary Forest and Nature Schools (FS) first appeared in Canada in 2007 with the opening of Carp Ridge Forest pre-school in the Ottawa, Ontario area by Marlene Powers. Within a few years the number of early-year programs offering outdoor activities had increased substantially. In 2012, Marlene Powers created a nationwide overarching organization called *Forest School Canada* to address the growing interest of educators. Its aim is to offer information and training programs. Initially the training programs were influenced in part by UK educators Claire Warden from Mindstretchers (2016), and Jon Cree from Bishops Wood (Davies, 2014).

Outdoor education in Canada is, as in many countries, linked to health and environmental issues, commonly shaped by diverse interest groups, reflecting local education perspectives and priorities. FSs in Canada address early childhood education and are defined as providing "regular and repeated access to the same natural space, as well as emergent, experiential, inquiry-based, play-based, and place-based learning" (Caruthers Den Hoed 2014, p.22). Forest School Canada's website states that Forest and Nature Schools use a pedagogy that incorporates play & child-directed learning in nature (Forest School Canada 2017).

One feature that distinguishes Canadian outdoor education programming is that it takes place on the traditional land of at least one of many Indigenous groups. Outdoor practices in Canada have been influenced for over 150 years by the mixing of three founding cultures (First Nations, Scottish and French) and more recently by globally-diverse culture and technology. Today in Canada, many aspects of society, including education, are being directed in part by the current political drive to address our nation's history as regards the treatment of Indigenous people.

The examination of Indigenous perspectives based on the traditional experiences of the Indigenous people, facilitates a broader awareness of the ecological and pedagogical activities specific to regional and sustainable, land-based knowledge. The Indigenous population in Canada, along with Canadians' openness to multi-cultural based perspectives, allows Forest School Educators (FSEs) to be in a unique position to synthesize and constructively critique the pedagogical practices introduced from other countries (e.g. Scandinavia and UK) into Canadian FSs. First Nation guidance can directly help Canadian FSEs as they seek to reflect the many cultural perspectives that serve to connect us more deeply with the land we live on.

Canadian First Nation context

Historically, Indigenous people in Canada – broadly identified as First Nations people – lived on and from the land, developing skills and cultural practices well adapted to local ecosystems. A truly Canadian method for educating children on the land must be based on the value of First Nations informed pedagogy. Increasingly First Nations people have recognized and articulated various ways Canadian educational programs can benefit from "the incorporation of Indigenous knowledge and praxis in schools" which also aim "to transform the institutional structures of schools themselves" (Grande 2004, pp.5–6).

All Canadian educators, including FSEs, are being called to effect change by better understanding the Eurocentric assumptions embedded in our educational system, and to recognize the dominance of these assumptions in contemporary educational theory and practice (Battiste 2013). By decolonizing our ideas, we can benefit from the ancient wisdom and ecological understanding rooted in a particular region that Indigenous people hold. Laura Horton, the executive co-chair of the World Indigenous Nations Higher Education Consortium and past director of post-secondary education for Seven Generations Educational Institute, encourages Indigenous people to "remember the teachings of the land and the people" because the land "is suffering, and Indigenous people do have some answers that can help" (Horton 2015, p.1). Horton also states that the most important work to be done at this time is to take our children outside (personal communication, May, 2016). Through dialogue we can begin to explore the differences and commonalities among the way different cultures spend time outside with young children and the activities they encourage them to engage in.

Unfortunately, the cross-generational transfer of cultural practices has, for many First Nations people, been severed or altered due to colonial impositions, (e.g. reduced community sizes following introduction of new diseases, trading practices that offered addictive products and altered family patterns by encouraging families to stay near trading posts), treaty negotiations that limited land access, and forced residential schooling that severed parent and child bonds. Initially, European immigrants did embrace many First Nations practices and technologies because they were well adapted to the landscape and were required for survival. Nothing beats the canoe and snowshoe for travelling through a land of intermingled lakes, rocky shores, and dense forests that make up the Canadian Shield. Trapping and hunting techniques were recognized as important skills to hone, because they were the only source of warm clothing for cold winters, and supplied food in regions of limited top soil and short growing seasons. Canada, like many countries, is struggling as it seeks a truthful way to deal with its painful history as regards Indigenous non-Indigenous relations.

The Canadian government is beginning to deal with the long term impact of years of colonization imposed upon First Nations people. The recent Truth and Reconciliation Commission (TRC), which specifically collected the oral accounts of the impacts made by residential schools, released its report in 2015 with recommendations. Presently, there is public attention and wide-spread awareness directed at addressing the TRC's 94 calls to action, many of which apply to education. Traditional First Nations pedagogy allows young people to learn the ways best adapted to living in this landscape. When Canadian FSEs evaluate the theoretical foundations of their practice it would serve them well to give deep consideration to First Nations pedagogy, thus building on Canada's heritage of multicultural partnerships, providing unique opportunities to critically examine cultural practices and compare theoretical roots.

However implementing this pedagogy remains challenging due to the impacts of non-Indigenous governments and cultures imposed on First Nations people. It is important to realize that much First Nations knowledge will be "lost in translation" if FS models from Europe are readily adapted into Canada without considering the traditional pedagogy of local Indigenous cultures here in Canada (Leather 2018, p.3). Also challenging is use of the term 'experiential' as it is often confused with learning based solely on personal trial and error rather than that developed through observation

and active role modeling. Yet, for the sake of developing better outdoor education pedagogy for all Canadians, it is critical that traditional First Nations pedagogy is included. It is in this way that FS in Canada can create a bridge between the work of outdoor, early childhood, and First Nations educators.

My involvement with First Nations people and teaching children

I write this paper as a non-Native woman whose passion for outdoor education began as a young child. I youthfully idolized First Nations people because I associated their lifestyle with an authentic closeness to the more-than-human world, a lifestyle my own suburban culture did not afford. My passion for the outdoors led me to pursue an outdoor recreation degree, and a summer job as a fishing guide, where I began to meet and work with First Nations people. A request by a Native friend to become a teacher, and return to work in her community, persuaded me to pursue an education degree upon completing my recreation program.

In between earning my degrees, in the mid 1980s I attempted to live alone in the bush for a year in northern Ontario. During this time I met a Cree man who escaped formal schooling when his grandfather pulled him out to raise him in the bush. Long conversations with this man profoundly altered my worldview. I credit him and the knowledge he shared of bush-craft with saving my life during a 60 km trek, alone in midwinter. His keen ability to observe the world around him and the stories he shared of the ways he had learned from his grandfather, strongly shaped my understanding of education, channeling my interest towards any outdoor education model based upon hunting, fishing, and craft making.

I have worked in the field of outdoor education for over 37 years as a teacher on First Nations, as a camp director for Native youth, and as a university professor teaching outdoor educators and First Nations teacher candidates. My graduate research area, *Craftmaking: A Pedagogy for Environmental Awareness*, was influenced by observing First Nations Elders passing on cultural practices through the making of functional items (MacEachren 2001). I noticed that Elders engaged with materials gathered directly from the land, and conversed as they worked in order to share lessons with younger people. They seldom seemed to just lecture or just talk; rather their hands were always busy. Often they would demonstrate something without verbalizing, expecting others to learn through careful observation and their own thoughts.

This paper builds from and acknowledges the many First Nations examples that have influenced my thinking as an outdoor educator and initiated my critical examination concerning what and how such skills are offered in today's Forest Schools. I find myself critiquing pedagogical experiences for what they demonstrate and encourage others to imitate. I draw attention to such ideas as a way of honouring and respecting the First Nations teachings I have received. Ultimately, I recognize that imitation is one of the most powerful ways of learning in all children and that the imitative learning process is common to all humanity. As cultures have been shaped by urbanization and industrialization, we have been encouraged to find ways to 'earn' a wage and then purchase items often superfluous to meaningful lives. In Ontario Canada, where I work, it is possible to graduate from high school never having made an item of utility. Technical classes in subjects like woodworking and sewing are not mandatory or

always available. School achievement is focused on academic grades, positioning vocational programs as forms of alternative education and/or relics founded in a post war era (Smaller 2000). My work aims to draw attention to the personal learning and sense of worth gained by young children, not just adults, learning to work with their hands.

Raising questions

I heard Mark Leather (2013) present his critique of the state of FS at the International Outdoor Education Research Conference in New Zealand. At that time I had begun to write and research the growing FS movement in Canada (MacEachren 2013). Leather's suggestion that Indigenous practices should play a role in the development of FS resonated with me. As I reflected on my own experience in the north with First Nations people, I began to compare it to what I saw developing in the growing FS movement in Canada.

In 2014 when the opportunity arose to attend a Canadian pilot FS training program and to provide input, I invited two colleagues to participate. During the training program, Azza Sharkawy focused on examining the way FSEs introduced science education and discovered that FSEs appeared confident they could introduce science-topics at their center, they just might not call what they do science. Lindsay Morcom focused on FSEs' competency in implementing First Nations practices and learned that while they sought to include First Nations activities, stories and perspectives in their work, they expressed concern as to how best to proceed. My focus was on the collection of examples of practice that FSEs identified as peculiarly Canadian, particularly those which addressed unique features of the local place. I discovered that the activities identified as uniquely Canadian were limited to maple syrup making and perhaps snowshoeing.

At the pilot training course, I observed that few FSEs displayed a high degree of competency in hand skills such as carving; they did however, demonstrate enthusiasm for learning new knots, knife work and other skills. Not many individuals expressed a strong interest in continuing to master these skills once they felt they were capable of teaching the rudimentary level required by very young children. Few FSEs seemed to hold the same passion for learning the bush skills that I sought when I initially headed north to work with First Nations people and learn from Elders. In the following years I attended conferences and events that allowed me to tour various FSs and meet FSEs throughout North America. As my main research area is craft-making, I observed and noted examples of what children at FSs were handling and being encouraged to make. Although I visited many wonderful centers, few offered children practical (making) experiences beyond handling sticks, paper, pencils and paintbrushes. I began to consider the differences between the items First Nations children made and or imitated in the past or present with what is occurring at FSs. I also continued to analyze and examine more deeply the traditional First Nations way of learning skills and the degree of direction given by Elders when instructing.

The frequent use of the terms child-centered learning and play-centered learning that FS programs employ contrasts with my First Nations experiences with regard to respecting Elders. Although children are adored in First Nations cultures, Elders are

considered the knowledge-keepers who are turned to for guidance and wisdom. I came to understand that learning through imitation is a primary component of First Nations pedagogy. This led me to observe and identify the skills that were being role-modeled for children to imitate at early childhood centers and at FS. Did educators mostly supervise with hands still at their side? Who was filling the role of Elders as demonstrators? Do FSEs think it is a better pedagogy to allow children to play and learn from each other as they supervised at a distance? I thought about these ideas each day as I travelled by a preschool center on my way to and from work. Only once did I witness an instructor at this center doing any activity using their hands. I began to focus on exploring the diverse activities First Nations children would have witnessed in their daily lives in the past and what they might learn by imitating these activities. The basis of my inquiry became asking what and how FS might benefit from incorporating more opportunities to watch complex-hand skills.

First Nations pedagogy emphasizes making 'the stuff of life'

This article does not present a synopsis of Indigenous pedagogy, nor an outline of camp craft theory. Rather, it emphasizes two ideas that are associated with First Nations pedagogy: freedom from structured play balanced by an emphasis on observing and imitating to learn. The following acute observation was made by the English immigrant Anna Jameson in 1837 when she queried these two ideas:

> The Indians, apparently have no idea of correcting or restraining their children; personal chastisement is unheard of. They say that before a child has any understanding there is no use in correcting it; and when old enough to understand, no one has the right to correct it. Thus the fixed, inherent sentiment of personal independence grows up with the Indians from earliest infancy. The will of a child is not forced; he has nothing to learn but what he sees around him, and he learns by imitation. I hear no scolding, no tones of command or reproof; but I see no evil results from this mild system, for the general reverence and affection of children for parents is delightful. (Jameson, as cited in Dewdney and Arbuckle 1975, p.196)

The two ideas can be understood to form the fundamental components which define a functional context for First Nations learning outdoors. Firstly, adults imposing limitations on very young children encourages the development of useful skills like fine sensory awareness and encourage a child's capacity to self-impose restrictions on their own personal freedom after they recognize the positive results of the limitation. Secondly, learning by imitating emphasizes the role of Elders and other community members in modeling the fundamental and exceptional handwork skills required to live in direct relationship with the land. A First Nations child's cognitive development and sense of capability flourishes through their individual freedom to choose play activities and their continual exposure to the functional activities worthy of imitation. In support of this, Maracle (1996) describes a Native's perspective on ecology and education, emphasizing that one main

difference between Native and non-Native education is the disappearance of the practical hands-on aspect of learning:

> When our grandmothers sent their children to school it was with self-sufficiency and mastery over the production of new things in mind. They did not realize that we would never be taught to create iron cooking pots from the ore of the earth. Our third generation is being educated in the European system and our children know less about the production of the stuff of life than did our grandmothers. Schools have shown themselves to be ideological processing plants, turning out young people who cannot produce the means to sustain themselves, but who are full of the ideological nonsense of European culture. (p. 88)

Most outdoor education curricula today would likely fall into Maracle's category of 'ideological nonsense.' Few outdoor programs offer the opportunities to produce food or practical functional items, *the stuff of life*. Most outdoor educators are not competent makers of canoes or snowshoes, and only a handful could knit their own wool socks with ease. In Canada, the making-opportunities offered in educational programs often reproduce conceptual-based visual art pieces. Even eco-art projects that make statements about environmental issues are being increasingly critiqued for the environmental sustainability of their production process (Weintraub 2014).

Automation and today's digital conveniences have made the making experience rare, especially in comparison to our parents and grandparents generation. Recognition of this decline has led to a growing contingent advocating for the return of mandated "home-economics" and shop classes in schools (Howe 2014, Robinson 2015). Time once spent making one's own toys or watching a parent make things has been replaced by the purchase of electronic toys and digital entertainment devices. The growing interest in robotics, and the rise in maker spaces and craft guilds, speaks to the unfulfilled desire in many people to work with their hands, discovering a sense of purpose (Lou and Peek 2016).

With the global increase in compulsory schooling, children's opportunities to learn through the imitation of adults at work have diminished, replaced by school activities that prioritize abstract learning. Teaching hand skills is done best in an environment characterized with a small teacher to student ratio, a condition rarely present in today's Canadian classrooms. The pressure for young children to read and write at a young age raises a number of questions, such as: "Can all knowledge be conveyed through written or verbal means rendering the innate need to experience knowledge with the body as irrelevant?" and "Is there knowledge that can only be conveyed through the demonstrated work of the body, particularly the hands?"

Korn (2013) and Crawford (2009) articulate the difficulty in writing about the demonstrated knowledge inherent in manual skill. Competency in making useful items can only be proven through the act of making and the demonstration of an item's functionality. Reading and writing constitute wonderful learning opportunities, but do not fully facilitate an engagement with the material world that is inherent in the production of practical items. The cognitive development and practical outcome resulting from a child integrating the use of their hands in conjunction with their conceptual imagination requires complex ordering of ideas. According to Burke and Ornstein (1997) language development is associated with the complexity of the

"sequential, serial, step-by-step elements" (p. 18) undertaken in skills demonstrated by early humans such as flint knapping. Learning outcomes are demonstrated to be dependent upon the opportunity for: repeated observation, personal bodily-based experimentation, and the reflection upon failures and successes. The opportunities to witness skilled experts working at their craft fine tunes both the reflective processes and an awareness of what the body is capable of.

Imitation-based learning of practical skills has fallen by the wayside with the increased ready access to items made via industrial means. Outside of the realm of family and cultural tradition, the industrial production of the necessities of life has lessened the opportunity to make, and consequently denied us the benefits of learning through necessary hand work. This loss is manifested in the lack of hand-made tools, toys and items in Canadian schools, which have been replaced by plastic, purchased commodities having little in common with material gathered from the land. It must be remembered that children's imitative behavior, throughout most of history, was concentrated on watching adults procure materials for tools that allowed them to obtain food and shelter; all necessitating the use of their hands.

To develop an authentic Canadian early childhood curriculum, FSEs need to examine the assumptions behind the emphasis of child and play centered pedagogies that accompanied the introduction of FS to this country. FSEs need to evaluate the opportunities available at their centre for frequent watching of adults working with their hands in meaningful ways, especially when handwork provides a deep connection to the land as was historically the case for First Nations youth. Undeniably the most skilled workers of the past in a Canadian context were the First Nations people, who had developed complex methodologies to shape tools using local materials. Even if the products once made by First Nations people and copied by early settlers are no longer required in today's industrial societies, we must ask ourselves: what are the benefits that can be derived by offering similar hands-on making opportunities to children? What is conveyed and learned when children make traditional items employing a cultural perspective? What is learned about the environment if the material handled recognizably comes from, or is directly gathered from, the land? The reliance of First Nations cultures on learning through imitation respected a child's freedom to choose what they would imitate when playing. If such experiences allowed First Nations people in the past to develop into capable adults with a strong sense of self in relation to their landscape, then I argue these experiences are worth reclaiming and retaining in all Canadian early childhood programs, especially FS. And doing so would serve as a component of reconciliation.

In her critique of education, Maracle (1996) states that young First Nations teachers should not be counted upon to teach cultural practices because they have been "processed in the same fashion as all the other teachers" (p. 88). For many new and established teachers of both First Nations and non-Native decent, the impact of colonization and the time required in schools to obtain appropriate teaching certification has reduced the opportunity to gain experience and become competent using their own hands, especially in outdoor settings. Without the role modeling of complex hand skills by competent educators, there are few opportunities for children to witness skilled adults at work. This unknowingly perpetuates the Cartesian dichotomy in which the mind takes precedence and is considered separate from the body. Following this paradigm, educators depend predominantly on language in

order to determine what a child is thinking in contrast to examining what a child knows through their demonstrated capabilities. I suggest that more educators routinely demonstrate quality craft-making skills, allowing children to observe, imitate, and learn, thereby creating opportunities for what Korn (2013) calls "thinking with things" (p. 56).

A consideration of Maracle's (1996) observation that schooling does not effectively offer children the opportunity to "be taught any practical skills," and that "few educated children of this country [can] actually produce an object of utility or design" (p.91), suggests that educators should examine the contemplative benefits inherent in making useful items. If the making process is judged to be beneficial, then we must ask at what age skills should be introduced and who is best capable of role modeling/teaching these practical skills around children so they experience quality hand skills. Kilborn elaborates on the way both surgeons and dentists are "as much craftsperson as knowledge worker" (Kilborn 2004, p.6). Making functional items develops the skills requisite to the development of contemplative observation and effective systematic practice.

First Nations Elders have always been held in highest regard by their communities; revered as knowledge-holders, those possessed of the most skill. Logically then, they were considered to be most capable of role modeling to younger people the practices that defined and nurtured their culture. Most people benefit when learning a hands-on skill by first watching over the shoulder of a skilled artisan. It is challenging to learn bodily maneuvers by solely following oral or written directions with no observational opportunities. Maracle's (1996) statement that "it is ridiculous that children don't acquire the practical training necessary to participate in the productive life of society until they are adults" (p. 91), suggests that FSEs should ensure children have as many opportunities as possible to watch and learn from competent adults engaged in productive activities using hand skills.

In the next section I use the example of cradleboards and tethering straps to explain one means of developing the proficiency skills evident in First Nations people's handwork. These examples provide a rationale for why FSEs should role model more activities that involve using their hands in complex and practical ways even though they work with children still too young to be able to accurately imitate them.

Positive developmental outcomes from use of cradleboards and tethering

The common use of cradleboards by First Nations peoples across North America provides a tangible example of how the limitations placed on the movement of babies and toddlers influenced the learning environment, facilitating the development of sensory and awareness skills. Cradleboards are ornate rigid structures on which many First Nations peoples placed or carried toddlers. Popular in the past, they have been used less often in recent decades; however some communities are reviving their use as their benefits are remembered. These structures restrict the use of children's legs and their ability to wander. They are analogous to child car seats in that they offer a secure and safe means for a child to be transported while allowing a caregiver the opportunity to work nearby with unencumbered hands. They differ from other modern carrying devices in that they bind the lower parts of a child in a manner that allows them to be placed in an upright position, offering a higher vantage point for the child to observe

their surroundings. Bibby's (2004) book, *Precious Cargo,* describes the diverse construction techniques for cradleboards used in California and includes parental accounts of why these devices were popular. Narrations describe children's fondness for these devices, crediting them with encouraging good posture and observation skills, the benefits of allowing children to maintain eye contact with working parents, and serving as the initial life-platform which shapes an infant's education.

My recognition of the educational benefits of cradleboards first occurred in the early 1980's when I witnessed children playing at a bus stop in Northern Ontario. Whereas the non-Indigenous children were being encouraged to run around and let off steam before being seated on a bus, a small Native boy sat in silence against a wall, accompanied by a younger sibling in a cradleboard. Together they stayed still, entertaining themselves by observing the other children's movements.

The influence of the environment on the stimulation or stagnation of an infant's education is made apparent when contrasting the experience of a child lying in a crib staring up at a mobile hanging in the void to that of a child held upright in a cradleboard, able to watch a parent's hands move and work in a foreground framed with a forest background. The use of cradleboards by First Nations caregivers episodically limits a child's gross physical motion (e.g., leg movement), thus encouraging the child to develop and engage other skills and senses such as hearing, smell and singular observation (Bibby 2004). Gatty (1983) describes traditional Indigenous people's uncanny sense of direction, sixth sense or intuition as a result of an accumulation of fine sensory skill. In North America the development of these fine skills probably began in infancy through the widespread use of cradleboards.

The limitations placed on gross movements by cradleboards may direct a child's awareness towards hand movements and other novel stimuli found in outdoor environments such as the movement of leaves and clouds. Christakis' (2011) research has demonstrated that too much or too little stimulation during this period can influence a child's neural network, potentially resulting in poor executive function. In preliminary findings from another study, Christakis (2015) compares the level of engagement required by children playing with various devices: toys (like a jack-in-the-box), television screens and ipads, describing varying degrees of meaningful engagement. Still lacking however, is a comparative analysis of the cognitive demands and associated joint-attention for tool use and toy making, versus that offered by tactile-limited electronic devices and toy games. Christakis (2015) defines joint-attention as the meaningful interplay between child and adult in response to external stimuli. His research demonstrates the importance of joint attention and the need to control children's stimulation, which is here evident in cradleboard use.

In addition to cradleboards, tethering straps were used by some First Nations parents as a means to ensure childhood safety. The straps allowed parents to execute the critical daily work of the community, less hindered by the constant monitoring of children. In his journals (written in 1927–1928 after spending a year with a Naskapi community in Labrador, prior to mandatory schooling) Strong notes that children were typically "curtailed by being tied to a lodge pole," and that they "didn't seem to mind even though tempting items were [placed] just out of reach" (Strong, as cited in Leacock and Rothschild 1994, p. 107). Strong observed "children [being] very quiet and awed at the laying of trout nets around inside walls of tent—[a] very serious performance" (p. 107). Leacock and Rothschild point out that such entries demonstrate how children "learn not

to get in the way of serious work" (p. 107). Other serious work included canoe journeys. The ability of young children to sit still in the middle of a canoe so parents could paddle was a critical skill for many First Nations people to learn at a young age. I became aware of how young children were tethered when an Anishinabe friend described how his toddler had fallen out of a canoe. My friend's older brother told him that his mother used to tether him into the canoe so that if he fell overboard he could be readily pulled back in. Later, when I suggested this idea to some non-Native friends with young children, they told me they thought it would be cruel to so restrain a child, and that they preferred to find an adult who was willing to sit in the canoe and hold their (squirming) toddler. Such concepts would have been foreign to young First Nations families who lived in societies that did not designate specific adults to the singular task of childcare. Interestingly Esther Keyser (2003), the first woman guide in Algonquin Park, shares how she tethered her own children into her canoe in the 1940s, although she did not credit First Nations people for this idea (p. 189).

Old photographs of First Nations families in birch bark canoes frequently show children bound to a cradleboard, sitting alone or accompanied by older children nearby. Images often show toddlers holding paddles, contributing what they could to forward motion. Many FSEs do not have the opportunity to take children canoeing, but the discussion of how to encourage young children to learn when to be still and observe (as if they were in a canoe) would most certainly constitute a beneficial exercise. Whether swaddled in a cradleboard or tethered, the limitations placed by First Nations people on children served multiple purposes, e.g., reducing wandering, encouraging sensory-specific development by limiting distracting movements, providing a prime vantage point for children to observe adult work from, encouraging the sense of security that results from being quiet and still (a useful skill for a hunter) and lastly, gaining the understanding that adults work activities take precedence over childhood play. All FSEs and especially Canadian FSEs would benefit from examining the ways that First Nations people placed limitations on children's freedom of movement and play. The understanding gained would act to further secure children's safety and gently guide their awareness of adults engaged in meaningful work activities; adult activities children would likely imitate in their play.

Learning through imitation

First Nations parents, like most parents, have the need to simultaneously work and attend to childrearing. This may explain, in part, the trans-cultural human ability to best learn through imitation. Family units and the community at large directly benefit when young children can successfully perform practical tasks early in life. These benefits are derived to a large degree from adults providing children with the opportunity to watch and learn skills at a young age. Strong conveys such a situation where complex handwork executed by an adult, Mistanabish, is conducted in the presence of a young child, Napiu. Despite the early developmental level of the child and his inability to accurately imitate adult behavior, he displays an inquisitive, curious fascination with what the adult is doing with his tools.

> Mistanabish was busily at work in the back of his lodge whittling out of wood frames with his crooked knife (muhatakut) and tending his small grandson at the same time. Throughout his exacting work of trimming and measuring he sang cheerfully, periodically removing small Napiu from his hold on wood or knife. When the new tent was warmed up, A'kat came to take the baby back, but Mistanabish would have none of it. Keeping one eye on the child and despite the countless interruptions caused thereby, he worked steadily and surely and made no errors in his new calculations. (Leacock and Rothschild 1994, p.71)

Strong's account demonstrates an Elder's ability to proceed with complex tasks while simultaneously serving as a patient role model for the developing child. In the early stages of writing this paper I visited Anna Bosum, a Cree Elder at OujeBougoumou, Quebec. Anna is respected in the region as a matriarchal figure because of her work establishing a Cree Cultural Learning center while at the same time caring for and raising her own ten children. When I asked how she preferred to teach young children, Anna replied: "When children see adults doing something, they want to do it too" (personal communication, March, 2017). As Farber (2006) emphasizes, "imitative learning is vital in sustaining the practices, and traditions that define healthy communities" (p. 376). First Nations people should be consulted to determine what cultural practices and traditions best define their relationship with a local place and which practices they would or would not want others to participate in. Consideration should be given by FSEs to the activities they demonstrate and encourage young children to imitate. Attention should be paid to activities that convey perceptions of the land because these activities ultimately shape a society to attend to the environment in a more transparent manner, encouraging an outdoor-centric culture.

The second critical concept that educators need to explore is the finely tuned selective capacity of young children to discern what, and who, to imitate. McGuigan's (2013) research demonstrates that children "are not necessarily blanket imitators" (p. 963), but that they are capable of selectivity, tending to choose the more trustworthy or particularly skilled/experienced person to imitate. A child's sense of trust in an adult, whether parent or teacher, plays an important role in a child's choice of what to attend to and who to imitate. When a community's life is directly linked to skills connected with the land, the ability to discriminate and the preference for imitating Elders over inexperienced peers can be reinforced by natural selection. If children are "clearly capable of discriminating between individual models based on their perceived expertise" (p. 963), then FSEs need to examine the amount of time young children play without the influence of capable role models nearby who are employing practical skills.

Conclusion

It is not enough to simply provide children with the health benefits derived from time spent in free play outdoors. FSEs need a better understanding of the instinctive drive to imitate, and to ensure that children are exposed to and engaged in meaningful making-activities that stimulate cognitive ability and physical mastery. I am advocating FSEs learn a variety of hand skills enabling the effective role modeling of these skills in the presence of children, and in so doing influence children's play choices. FSEs in Canada

need look no further for inspiration and activities than the local First Nations people in their area. Children's play experiences should reinforce and further develop the skills and techniques that have inspired the best of human ingenuity and quality of life over eons. First Nations pedagogy can offer a new perspective that reminds us that childhood steps are the first in the journey of a healthy society's progress towards its members becoming Elders—the knowledge keepers of a sustainable culture, derived from and engaged with the land.

I suggest that if Forest Schools in Canada want to incorporate First Nation pedagogy, they need to acknowledge the influence of imitative learning. This could best be done by emphasizing and offering a greater exposure to adults engaged in work at FS, specifically traditional activities involving complex hand skills and natural materials. Creating a rich context for the routine observation of traditional cultural experiences, especially those that emphasize the practical handling of material from the land, provides a new way to balance the two ends of the pedagogical spectrum. This First Nations-based approach balances a child's choice of what to play, with an adult's guidance through performing activities children should find intriguing and worthy of imitating.

A successful path to reconciliation with the First Nations people in Canada requires that all provinces and territories decolonize their education systems. FSEs in Canada must fully engage in the process, reexamining the childhood experiences of the people whose ancestral lands we all live on. The knowledge and wisdom developed by using our hands to make the stuff of life can best be reintegrated into our pedagogy by seeking the guidance of First Nations people, the knowledge-keepers who have retained the cultural practices derived from the land we call home. In so doing, we begin to develop a closer connection to place and begin to indigenize our perspective of the world by imitating to a degree the best learning activities.

Canadian FSEs can be an important component in our multicultural nation if they incorporate the Indigenous people's early childhood pedagogy into their practices. In so doing they can become a progressive force that fulfills FS goals and positively impacts society as a whole. They would serve as exemplars, leading the way by demonstrating a means to decolonize and indigenize curricula. All children have the right and need to watch, learn and use their hands to make the stuff of life. This component of pedagogical decolonization would allow us to reengage with our common heritage of learning through imitation, a primary attribute that we all share, as much as the air we breathe.

References

Arthur M. Sackler Colloquia. (2015). Early media and the developing mind [Video file]. Retrieved from https://m.youtube.com/watch?v=HbUtvPfXt24

Battiste, M. (2013). *Decolonizing education*. Saskatoon, Saskatchewan: Purich Publishing Limited.

Bibby, B. (2004). *Precious cargo*. California, USA: Heyday Books.

Burke, J., & Ornstein, R. (1997). *The axemaker's gift*. New York, NY: Tarcher/Putnam Publishing Group.

Caruthers Den Hoed, R. (Ed.). (2014). *Forest and nature school in Canada: A head, heart, hands approach to outdoor learning*. Ottawa, Ontario: Forest School Canada.

Crawford, M. (2009). *Shop craft as soul craft*. New York, NY: Penguin Canada Books.

Davies, G. (2014). Jon Cree. Retrieved from http://www.forestschoolassociation.org/location/jon-cree/

Dewdney, S., & Arbuckle, F. (1975). *They shared to survive*. Toronto: Macmillan of Canada.

Farber, P. (2006). *Mediating imitative learning.* Philosophy of Education Journal. Retrieved from https://ojs.ed.uiuc.edu/index.php/pes/article/viewFile/1567/305 pp. 376-378.
Forest School Canada. (2017). Retrieved from http://childnature.ca/forest-school-canada/
Gatty, H. (1983). *Finding your way without map or compass*. USA: Dover Publications.
Grande, S. (2004). *Red pedagogy.* USA: Rowman & Littlefield Publishers.
Horton, L. (2015). *Locals at World Indigenous Nations Higher Education Consortium this week to connect with global neighbours.* Retrieved from http://www.kenoradailyminerandnews.com/2015/08/10/locals-at-world-indigenous-nations-higher-education-consortium-this-week-to-connect-with-global-neighbours
Howe, N. (2014). Millennials struggle to pass life skills 101. Retrieved from https://www.forbes.com/sites/neilhowe/2014/07/02/millennials-struggle-to-pass-life-skills-101/#7a45708179e7
Keyser, E. (2003). *Paddling my own canoe*. Whitney, Ontario: The Friends of Algonquin Press.
Kilborn, I. (2004). Making it in the information age. *Pathways, the Ontario Journal of Outdoor Education, 16*(1), 5–11.
Korn, P. (2013). *Why we make things and why it matters*. Boston, USA: David T. Godine Publisher.
Leacock, E., & Rothschild, N. (Eds.). (1994). *Labrador winter: The ethnographic journals of William Duncan Strong, 1927–1928*. Washington: Smithsonian Institution Press.
Leather, M. (2018). A critique of Forest School: something lost in translation. *Journal of Outdoor and Environmental Education*. 2-11.
Lou, N & Peek, K. (2016). *By the numbers: The Rise of makerspace/popular science.* Retrieved from https://www.popsci.com/rise-makerspace-by-numbers
MacEachren, Z. (2001).*Craftmaking as a pedagogy for environmental awareness.* (Doctoral dissertation). Retrieved from http://www.collectionscanada.gc.ca/obj/s4/f2/dsk3/ftp05/NQ66359.pdf
MacEachren, Z. (2013). The Canadian Forest School movement. *Learning Landscapes, 7*(1), 219–233 Retrieved from http://www.learninglandscapes.ca/index.php/learnland/article/view/The-Canadian-Forest-School-Movement
Maracle, L. (1996). *I am woman: A Native perspective on ecology and feminism*. Vancouver, Canada: Press Gang Publishers.
McGuigan, N. (2013). The influence of model status on the tendency of young children to over-imitate. *Journal of Experimental Child Psychology, 116*, 962–969.
Mindstretchers. (2016). *Home*. Retrieved from http://www.mindstretchers.co.uk
Robinson, K. (2015). *Why schools need to bring back shop class.* Time. Retrieved from http://time.com/3849501/why-schools-need-to-bring-back-shop-class/
Smaller, H. (2000). *Vocational education in Ontario's secondary schools: Past, present – and future?* Retrieved from http://www.yorku.ca/crws/network/english/Smaller.pdf
TEDxRainier. (2011). Dimitri Christakis: Media and children [Video file]. Retrieved from https://m.youtube.com/watch?v=BoT7qH_uVNo
Weintraub, L. (2014). Eco art criticism. Eco art history. Retrieved from http://lindaweintraub.com/blog/item/eco-art-criticism-eco-art-history

Zabe MacEachren is an associate professor in the Faculty of Education at Queens University in Kingston, Ontario, Canada. She coordinates the Outdoor & Experiential Education program and teaches environmental education courses. Her research focuses on the link between craft making and environmental education. She is a certified Waldorf Handwork instructor. Most days find her seeking a balance between staying indoors and writing about her northern experiences, taking new handwork courses and canoeing or snowshoeing in the Canadian Shield country. Contact: maceache@queensu.ca