

Indigenous holistic education in philosophy and practice, with wampum as a case study

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Abstract: This article examines holistic educational philosophy from a North American Indigenous perspective, with a particular focus on Anishinaabe philosophy. Holism intercalates every aspect of Anishinaabe and many other Indigenous epistemologies, including one's understanding of the self and one's relationship to the community, other living things, the earth, and the divine. This orientation has a significant impact on pedagogy and classroom practice. It also determines how curriculum is understood and utilized from an Indigenous perspective; in stark contrast to the compartmentalization of subjects in the Western education system, Indigenous educational philosophy focuses on interrelationships between different subjects. This perspective is central to Indigenous sense-making. While the fundamental assertions of Western and Indigenous educational philosophies are significantly different, it is possible to meet Western curriculum expectations through Indigenous pedagogy by enacting holistic teaching practices and focusing on topics and interrelations. A study of classroom teaching focusing on wampum, which is culturally significant to numerous First Nations in the eastern woodlands of North America, offers an excellent example of how teachers may touch on all Western curriculum subjects and meet government mandated curriculum expectations while still teaching holistically in a way that is coherent with Indigenous educational philosophy.

Keywords: indigenous peoples; indigenous knowledge; holistic; education and culture; educational philosophy; culture-based education; Wampum.

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1. Introduction

Since time immemorial, Indigenous peoples have been engaging in both formal and informal education in ways that are coherent with their culturally-based ontologies and epistemologies. These are deeply reflective of cultural norms, intercultural relationships, spiritual beliefs, and connections to place. With approximately 60 linguistic groups belonging to 11 unrelated families (Campbell,

1998), Indigenous cultures and philosophies in what is now Canada are obviously very diverse. However, holism is a fundamental assertion that permeates many Indigenous philosophies of education, and Indigenous philosophies more generally. While this article will focus on a Canadian context, and the eastern woodlands/Ontario specifically, holism is also a common feature of Indigenous philosophies in other Nations globally, including those of the rest of the Americas, the Maori, and the various Nations of what is now Australia (Rasmussen, 2001; Burgess and Berwick, 2009; Andreotti, Ahenakew and Cooper, 2011; Austin and Hickey, 2011).

In addition to being holistic, Indigenous educational philosophies also view learning as personal, subjective, spiritual, and transformative (Couture, 1991; Curwen Doige, 2003; Kanu, 2011). In accordance with this, it is important to clarify my own positionality with respect to Indigenous holistic education and educational philosophy. I am of Anishinaabe (Algonquin)¹ Métis and European heritage. I work primarily with Anishinaabe communities although I live and work in a mixed urban context on the shared territory of the Anishinaabe and Haudenosaunee peoples in what is now Southern Ontario. I engage in Anishinaabe spirituality and Anishinaabe traditional practice, with the intention of living *mino-bimaadiziwin*, or a good spiritual life. Therefore, the understanding of holistic education that I describe in this article is generally reflective of Anishinaabe philosophy, although I have consulted and reference works from multiple authors of Indigenous and non-Indigenous heritages. However, I am not an elder and I do not speak on behalf of the Anishinaabe people or Indigenous peoples more widely; as with all philosophy and learning from an Indigenous perspective, my understanding is subjective and is reflective of my personal development as a seeker of knowledge and understanding.

2. Historical Approaches to Indigenous Education

In North America's current educational climate, the continuing validation of Indigenous educational philosophy is of the utmost importance. Pre-contact, and extending into the current day, Indigenous Nations had and have their own systems of formal and informal education, as well as their own pedagogies based in their own educational philosophies. Since the dawn of colonization, however, the imposed Western education system has been a tool for the assimilation of Indigenous peoples and the attempted destruction of traditional ways of teaching and learning. The residential school system was the most notable example of this. For over a century, the federal government forcibly removed over 150,000 Indigenous children from their homes and communities and placed them in church-run residential schools in

¹ The term Anishinaabe is a collective self-identification term for the Algonquin, Nipissing, Missisauga, Ojibwe, Odawa, Potawatomi, Chippewa, Oji-Cree and Saultaux peoples. Anishinaabe traditional territory is large, and extends across much of northern North America. Anishinaabe communities are found from British Columbia, across the Canadian prairies to the Eastern Woodlands of Ontario and Quebec, and south in to the northern United States, particularly Wisconsin, Minnesota, and Michigan. In places, Anishinaabe traditional territory overlaps with the traditional territories of other First Nations. The Anishinabek share a language called Anishinaabemowin, which exists in a dialect continuum across the territory. While diverse, the Anishinaabek share a common history, as well as many current cultural and spiritual practices and beliefs.

order to assimilate them into Western society in an act of cultural genocide (Truth and Reconciliation Commission [TRC], 2015a).² While the last residential school closed in 1996, a significant educational achievement gap still exists between Indigenous and non-Indigenous students. In addition, on-reserve schools are still woefully underfunded, and curriculum and pedagogy still largely reflect Eurocentric educational philosophies, rather than Indigenous ones (TRC, 2015a). The gap between Indigenous and non-Indigenous students is due to a variety of factors, including socio-economic issues such as poverty and racism, issues with government policy, and issues of cultural discontinuity, as the content, pedagogy, and structure of Western education is often discordant with ways in which children learn at home and in the community. That results in culture shock and a decreased ability to learn effectively when Indigenous children are educated in Western schools based on Western educational philosophies. The cultural discord places Indigenous children at a disadvantage from the start (Cherubini, 2008; Kanu, 2011; Morcom, 2014). Because of the legacy of residential schools and the ongoing gap in educational outcomes for Indigenous children, the TRC in its 2015 *Calls to Action* called upon governments to provide sufficient funding and develop culturally appropriate, linguistically informed, and community controlled educational opportunities for Indigenous children (TRC, 2015b). This means that education must be re-designed to incorporate Indigenous educational philosophies, including holism.

The need for education based on Indigenous philosophies has seen a grassroots resurgence even before the release of the TRC reports. Since 1972, the Assembly of First Nations (then known as the National Indian Brotherhood) has encouraged the development of locally appropriate, culturally-based education for Indigenous children, most notably through its ongoing iterations of its seminal policy document *First Nations Control of First Nations Education* (AFN, 2010). Communities across Canada have taken steps to enact Indigenous controlled education based in Indigenous educational philosophies, cultures, and languages, and have often met with success in doing so (Watahomigie and McCarty, 1994; Greymorning, 1995; Agbo, 2001; Demmert, 2001; McCarty, 2003; Ball, 2007; Lockard and De Groat, 2010; Battiste, 2013).

3. Holism in Indigenous Educational Philosophy

To understand Indigenous educational philosophies, it is vital to understand the concept of holism. At one level, holism refers to the various elements that make up the self. At another level, it refers to a connection to the community, other living things, the earth, and the spiritual, and reflects Indigenous concepts of the nature of the divine. Finally, it also refers to cross-curricular learning, as Indigenous ways

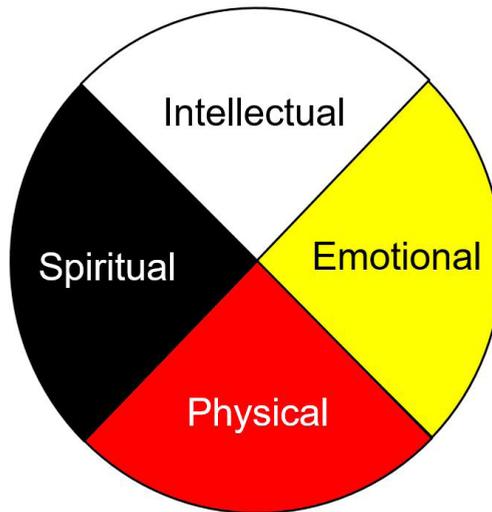
² The TRC delineates cultural genocide from physical genocide (killing the members of a particular group) and biological genocide (removing a group's ability to reproduce), in that cultural genocide involves «the destruction of those structures and practices that allow the group to continue as a group. States that engage in cultural genocide set out to destroy the political and social institutions of the targeted group» (TRC, 2015, p. 9). This extends to the group's cultural philosophies. It must be noted that one could argue that residential schools also constituted physical genocide, since the mortality rate at some schools was over 50%, largely due to tuberculosis (TRC, 2015).

of teaching and learning reject the compartmentalization of Western curriculum and instead focus on the interrelations between subjects and topics. All of these interpretations of holism are also interrelated. In order to fully explore holism as a fundamental assertion of Indigenous educational philosophy, it is necessary to examine the term at its various levels, and in its interpretations by various scholars of Indigenous education and Indigenous philosophy.

3.1. *Holism and the dimensions of the person*

One of the most common interpretations of holism in an Indigenous educational and philosophical context involves the nature of the self. In an Anishinaabe context, as well as in the contexts of other Indigenous groups in North America, the person is believed to have four dimensions: the emotional, intellectual, physical and spiritual. This philosophy is generally expressed through the visual representation of the Medicine Wheel (Corbiere, 2000; Ball and Pence, 2006; Bouchard and Martin, 2009; Andreotti et al., 2011; Toulouse, 2011; Chartrand, 2012; Ray and Cormier, 2012; Kitchen and Raynor, 2013; Goulet and Goulet, 2014).

Figure 1. The Medicine Wheel



The colours and orientation of the Medicine Wheel vary across geographic areas and Nations, but the teachings it carries are consistent (Bouchard and Martin, 2009). While a full understanding of Medicine Wheel teachings takes years of study and spiritual development, its application to the nature of personhood gives us insight into one element of Indigenous holistic educational philosophy.

With respect to the dimensions of the person, a holistic educational philosophy is beneficial because it emphasizes the importance of reaching the learner in various ways. Western education tends to focus on the intellectual, and encourages one's approach to knowledge, particularly scientific knowledge, to be secular, neutral,

and objective (Kanu, 2011), or it focuses on the physical and on the development of particular skills. Certainly, particularly in the study of the humanities and social sciences, the emotional aspect is considered as well, as is the spiritual aspect in terms of religious education. However, from an Indigenous perspective, the best educational experiences reach students in all of these areas concurrently regardless of the topic or subject. Ideally, education encourages intellectual development in terms of knowing, but also involves emotional development, in terms of heart-felt understanding and personal connection, physical development in terms of applicable skills, and spiritual development in terms of honouring teachings and connecting to knowledge. As Chartrand (2012, p. 150) writes, the Medicine Wheel as a teaching tool «provides a framework to decipher between thoughts, feelings, and actions, and it places learners at the critical centre of their own being, to relate to the learning at hand and the world around them». In other words, teaching to the whole learner encourages self-awareness and results in deeper learning (Chartrand, 2012; Ray and Cormier, 2012).

This model also allows teachers to assess student development on different levels. For example, in a system that values intellectual development first, an intellectually gifted student may be given responsibilities that outweigh their level of emotional or spiritual maturity. Conversely, a student who is slower to develop intellectually may display physical, emotional, or spiritual gifts that could easily be overlooked if one fails to consider the whole person. Furthermore, this model relates to Indigenous understandings of health and balance. In order to live a good, balanced life, or *mino-bimaadiziwin*, an individual must seek to develop in all of these areas; the best teachers are, therefore, those who help learner to develop not just intellectually, but emotionally, physically, and spiritually as well (Corbiere, 2000).

In an increasingly secular Western culture, the inclusion of the spiritual element is generally seen as the most incongruous with Western thinking. While the spiritual in an Indigenous context does not correlate to Western concepts of religious learning in terms of dogma or practice, its inclusion means that no learning is truly secular (McNally, 2004); in all things, learners develop the ability to stand in awe of the greatness of creation and to honour their place within it. In order to allow for spiritual learning, it is important to consider ways of knowing outside of detached, empirical Western approaches. That is not to say that empirical scientific knowledge has no place in Indigenous ways of learning, as Indigenous people have been developing intellectual knowledge in this way for millennia; however, for many Indigenous people, other ways of knowing, including spiritually informed knowledge, visioning, and intuitive knowledge are equally valid. Indeed, as Stonechild (2016) points out, while a Western approach views these ways of knowing as less valid than detached empirical knowledge, from an Indigenous perspective, Western ways of knowing are hampered by a refusal to move beyond the observable to recognize knowledge that comes from emotional or spiritual sources.

Such rounded knowledge requires what Battiste (2013) refers to as a «spirited epistemology» and its acquisition requires spiritual practices such as storytelling. Storytelling, in particular, is central to the perpetuation of Indigenous knowledge, as stories, particularly sacred stories or *aansookaanan* (Corbiere, 2000), are a way of making sense of Indigenous philosophies and spiritual ways of knowing (Corbiere,

2000; Battiste, 2013). Even in cases where *aansookaanan* are not seen as literally factual or historically accurate, they are nonetheless true, as they contain spiritual teachings, intellectual philosophies, emotional connections, and teachings about how to behave in the physical world. In this way, intellectual, emotional, physical, and spiritual development are intertwined (Couture 1991).

3.2. *Holism as connecting beyond the self*

Moving from a focus on the internal development of the learner, holistic educational philosophy also emphasizes a «connection between the individual to the family, community, nation, and Mother Earth (the world), which includes the environment (land, water, air, and spirit)» (Ray and Cormier, 2012, p. 169). This sense of connectedness begins by creating reciprocal, respectful relationships within the classroom between teachers and students, in an environment that fosters authentic caring and personal responsibility (Battiste, 2013). In this way of thinking, teachers, in addition to being sources of knowledge, are guides for learners to develop their own understanding. Students are assumed to arrive at school with previous learning and to continue learning outside of the classroom; a teacher who teaches holistically will celebrate prior learning and embrace the opportunity to learn from students and to have students learn from one another. This attitude places learners in a position of responsibility for their own learning, and makes them accountable to one another for providing connections to learning opportunities.

By extension, holistic learning is connected to the family, clan, and larger community. Most Indigenous societies are collectivist. This orientation has two important consequences for the classroom. First, since collectivist societies tend to be non-hierarchical, it is possible for a person to assume the role of leader or teacher in one context, but follower or learner in another context. Furthermore, there is a great focus on one's roles and responsibilities within the community, rather than on individual desires or interests. This approach is not homogenizing; individuals provide one another with openness, acceptance, and autonomy, while acknowledging that everyone has a role to play to build a strong community; the emphasis is on mutual support and mutual respect (Ermine, 1995). The non-hierarchical and collectivist nature of Indigenous societies means that from an Indigenous perspective, no individual is more important than any other, as everyone plays an equally important role within the community and everyone is expected to fulfill certain responsibilities to the community; this again is contrary to Western concepts, where different esteem is attributed to different careers or roles, as recognized through job titles and differences in remuneration.

In practice, this means that it is important to foster egalitarianism in the classroom and beyond, and to connect learning to community and place, past and present. It is also important to learn from the local community in terms of inviting in and respecting the teachings of Elders and knowledge keepers, and engaging in intergenerational learning. This means viewing the school as integral to the community and not separate from it, and acknowledging Indigenous community members as stakeholders in education (Ermine, 1995; Swisher and Tippeconic, 2009; Corbiere, 2000; Ball and Pence, 2006; Burgess and Berwick, 2009; Battiste,

2013). Grounding holistic learning with community connections not only makes learning more appropriate to Indigenous students, but also more interesting, more relevant and more effective (Curwen Doige, 2003; Castagno and Brayboy, 2009).

Holism requires us to focus on balance with non-human entities as well, and to acknowledge the importance of the land, animals, spiritual messengers, and the divine as teachers, rather than as objects of study (Corbiere, 2000). As Couture (1991, p. 59) explains, «Being in relationships is the manifest spiritual ground of native being. In traditional perception, nothing exists in isolation, everything is relative to every other being or thing. As Indians are wont to exclaim: «And all my relations». Native thinking in its traditional modality precludes dichotomous categories». As the pan-Indigenous spiritual statement «all my relations» indicates, interactions between living things, spiritual entities, the Earth and the divine are as or more important than each of these elements are separately (Ermine, 1995). This positioning ties in closely with relationships to the land; as people with millennia of history and knowledge based in specific territories, connection to place and land, as well as connection to one's ancestors and the teachings that have been passed down from them, results in much deeper learning (Ermine, 1995; Hampton, 1995; Corbiere, 2000; Vikashni, 2014).

This learning culminates in a connection to Indigenous spirituality. In contrast to Western conceptualization, where humans are seen as made in the image of God and existing at the pinnacle of creation, therefore having dominion over it, in an Indigenous sense humans are only one link in an interconnected web of life. Humans are one of the most dependent and least needed links in that web. We therefore have an important responsibility to understand our connection to all other life and to honour our dependence on it. Just as in the community the focus is on one's roles and responsibilities, in a wider sense, the focus is on how the actions of humans impact other living and non-living things, and on our ancestors and descendants. This focus on interrelationships between all things is fundamental to Indigenous ways of making sense and finding meaning (Couture, 1995; Haig-Brown, 2008; Kanu, 2011). The nature of the divine, at least from an Anishinaabe perspective, is panentheistic, permeating and transcending all of creation, thereby linking all of creation into one essential reality (Ermine, 1995; Curwen Doige, 2003; Morcom, forthcoming). As Ermine (1995, p. 103) writes, «Aboriginal people found a wholeness that permeated inwardness and that also extended into the outer space. Their fundamental insight was that all existence was connected and that the whole enmeshed the being in its inclusiveness». This also means that spirituality is not abstract or distant, but rather flows into and informs an understanding of daily life (McNally, 2004).

3.3. Holism as cross-curricular learning

The emphasis on interconnectivity and relationships in Indigenous philosophy means that nothing makes sense in isolation; concepts can only be understood in relationship to other concepts. Indigenous educational philosophy «engenders synthesis across the putative boundaries of a modern Western sociology of knowledge» (McNally, 2004, p. 608), meaning that rather than teaching content by subject, in an Indigenous way of teaching and learning, content is taught by topic,

with flow across the boundaries of various subject areas (Redwing Saunders and Hill, 2007; Haig-Brown, 2008; Battiste, 2005, 2013). Traditionally, content was delivered through the development of oral literacy, particularly storytelling and guided questioning; this allows students to delve into various teachings through various means that may correspond to the Western subject areas of language, social studies, science, mathematics, etc. However, these are taken together, and the emphasis is on the connection between subjects as they relate to the topic at hand in a way that defies categorization in a Western sense (Battiste, 2005). This does not mean an absence of empiricism or validation of concepts; it simply means that the learner may use various strategies to test and validate learning that would not necessarily be available in a subject-based approach. At the same time, the student relates learning to other topics, as well as to how the learning impacts him or her in all four dimensions of the self and how it connects to the community, the land, and the larger universe.

Western curriculum theory, by contrast, is reductionist in nature, and compartmentalizes knowledge into various subject areas (Deloria, 2001; Haig-Brown, 2008; Castagno and Brayboy, 2008; Cherubini, 2009; Battiste, 2013). This is obvious when examining Canadian provincial curriculum documents, for example, which divide knowledge by subject and grade level. With an increasing emphasis on the pure sciences, there is a resultant increase in the emphasis on rationality, detached observation, and controlled experimentation, rather than on building and examining relationships (Corbiere, 2000). Furthermore, just as Indigenous societies are non-hierarchical and place equal value on all individuals and their roles and responsibilities, from an Indigenous perspective all learning is of value, and balance is key. It is vital to explore a concept through various avenues in order to fully understand it and fully grasp how it connects with other concepts. However, in a Western approach, some subjects are compulsory and some are elective, and varying degrees of importance are placed on different subjects, with particular esteem placed on the sciences; this corresponds with societal emphases on economic development and employment prospects, which are often held as more important than other societal contributions. Thus, the very structure of Western education, and the resulting way in which learning is delivered in the classroom, is in contrast to Indigenous approaches.

Without stating it directly, by reducing knowledge into various subjects, we instruct learners about the nature and structure of knowledge. In this way, in the current education system we impose a hidden curriculum that enforces Western epistemologies, and alienates Indigenous learners who, in the other facets of their lives outside of school, are exposed to knowledge in a holistic way. As Ermine (1995, p. 110) writes, «The 'fragmentary self-world view' that permeates the Western world is detrimental to our Aboriginal epistemology. The Western education systems that our children are subjected to promote the dogma of fragmentation and indelibly harm the capacity for holism. The mind-set created by fragmentation impedes the progress toward inwardness that our ancestors undertook. Only through subjectivity may we continue to gain authentic insights into truth». By forcing Indigenous knowledge into a Western classroom and curriculum structure, we risk losing the emphasis on connections that are vital to understanding the nature of knowledge itself (Deloria,

2001). By contrast, «a refusal to divide and compartmentalize in any reductionist way is accompanied by adherence to recognizing all things existing in relation to one another» (Haig-Brown, 2008, p. 13).

4. Holism and Authentic Indigenous Education

The realization that Western compartmentalization is fundamentally at odds with Indigenous knowledge and educational philosophy leaves the modern teacher in a difficult position. Currently, the use of provincial curriculum, which is compartmentalized into subject areas, is mandated by both provincial governments in provincial schools, and by the federal government in on-reserve schools unless a self-government agreement is in place that states otherwise. The structure of high school, in particular, is not amenable to holistic education, since in most high schools the learner's day is divided into periods by subject. This approach to education is inherently disempowering for Indigenous knowledge and Indigenous learners (Watt-Cloutier, 2000). However, it is possible to adapt current curricula so that teachers can teach holistically while still meeting the educational goals mandated by governments. In its simplest form, teachers can engage project-based learning centred on local topics, relating external learning and prior experience to curriculum expectations, and using learning from various subject areas (Vikashni, 2014). This type of holistic integration can be done reasonably easily, and should be done consistently or else it risks becoming tokenistic (Castagno and Brayboy, 2000). However, to really move from imposed Western education (whether delivered by Indigenous or non-Indigenous people) to authentic Indigenous education (Hampton, 1995), it is necessary to redevelop ways of teaching and learning, at least in Indigenous communities, that is consistently, respectfully, and empoweringly holistic (Corbiere, 2000; Watt-Cloutier, 2000).

As Battiste (2013, p. 76) writes, «an overwhelming number of authors, international and interdisciplinary, acknowledge and agree on the holistic framework of Indigenous epistemologies that are foundational to Indigenous peoples». We can see from the success of Indigenous-led education for Indigenous learners that the value of education based in Indigenous educational philosophy rooted in holism is intrinsic; that is, the development of Indigenous holistic education is not simply beneficial because it allows Indigenous learners to catch up to their non-Indigenous counterparts. Rather, Indigenous holistic educational philosophies are of value in and of themselves, as they allow students to connect with content in a way that emphasizes interrelationships, and that also underscores the depth and complexity of the human experience, builds strong communities, and encourages lifelong learning. Therefore, holism is a fundamental principle for decolonizing education; in incorporating holism as part of the larger field of Indigenous educational philosophy, we create educational opportunities that are not anti-colonial, or developed in response to colonial oppression and colonial experience, but truly decolonized, in that they authentically reflect Indigenous ways of knowing, understanding, doing, and honouring. There is a deep pride in the resilience of these philosophies, since, in spite of hundreds of years of suppression and attack, they survive to guide the development of education today as we move forward in reconciliation.

Hampton (1995) describes five stages of Indigenous education:

1. Traditional Indian education: education prior to colonization, both formal and informal;
2. Schooling for self-determination: schools established for Indigenous children that were controlled by Indigenous peoples and perpetuated Indigenous cultures and languages. These schools existed during the colonial period, but were shut down by governments;
3. Schooling for assimilation: schools, including residential schools, that aimed to assimilate Indigenous children into colonial society, thereby destroying Indigenous cultures and languages;
4. Education by Indians: education based in Western educational philosophy, but with Indigenous peoples taking a more active role as teachers, administrators, and resource providers. Funding and oversight is still provided by non-Indigenous governments.
5. Indian education *sui generis*: Indigenous education, controlled and determined by Indigenous people, based in Indigenous educational philosophies and utilizing Indigenous curriculum and pedagogy.

Corbiere (2000) points out that most First Nations are currently at Stage 4, with an increase in Indigenous administration, teaching, and control, but a dependence on provincial curriculum and federal funding (with attached oversight and constraint). In order to transition to Stage 5, it is vital to redevelop Indigenous education to reflect Indigenous philosophies, curriculum, and pedagogy, with Indigenous control and oversight. Indeed, since holism is a fundamental assertion in Indigenous educational philosophy, Indian education *sui generis* is by nature holistic (Corbiere, 2000).

5. Holistic Education as Demonstrated Through Wampum

The move from education by Indigenous people to Indigenous education *sui generis* (Hampton, 1995), with an emphasis on holistic teaching and learning, will not happen overnight, and indeed has been underway for decades. This section explores what a practical application of holistic educational philosophy, as delivered through authentic Indigenous curriculum, might look like in a system that still requires teachers to adhere to provincial curriculum and meet curriculum expectations.

5.1. About Wampum

Wampum refers to short, tubular beads made from whelk and quahog shells; the beads are either white, made from whelk or the interior of quahog shells, or purple, made from the darker exterior of quahog shells (Haas, 2007; Tweedy, 2013). The Naragansett and Pequot Nations traditionally harvested the shells along the Atlantic Coast of North America in the area that is now Cape Cod and New York State and painstakingly formed them into beads using stone drills and water. They then traded them through trade routes that extended far into the interior of the Eastern Woodlands (Tweedy, 2013). Wampum has been used for hundreds of years

for a variety of purposes. Most commonly it was strung or woven into belts using the technique of loomed beadwork. Loomed beadwork, which is still common today, is created by stitching horizontal rows of beads onto vertical threads, or warps, on a loom. The beads are strung onto a single thread, or weft, which is passed under the warps. The beads are placed between the warps from below, and the weft is pulled back through them from above to secure them onto the warps.

Wampum belts served as records and ceremonial markers of important events such as alliances, treaties, marriages, ceremonies, and wars, and as ways to honour individuals (Haas, 2007). While wampum belts are most commonly associated with the Nations of the Haudenosaunee confederacy, they were used by a variety of other First Nations throughout the Eastern Woodlands as well, including the Anishinaabek. Wampum beads were also used as currency amongst early colonists, and wampum belts exist to commemorate agreements between colonial and Indigenous governments (Haas, 2007; Tweedy, 2013). Notable examples of this include the Two Row Wampum, commemorating a 1613 agreement between the Haudenosaunee confederacy and the Dutch, as well as the Fort Niagara Treaty of 1764, between the British Crown and 24 Nations of the Great lakes (Crawford, 2015). As Haas (2007, p. 80) writes, «Wampum strings and belts served to engender further diplomatic relations, and their presentation was a gesture that required reciprocity on the part of the recipient. Consequently, accepting a gift of wampum meant that the recipient accepted its implied message and responsibility». Because the shells are durable and the belts are considered sacred, many ancient wampum belts exist to this day, and they are continually revisited as reminders of longstanding agreements and as part of various communities' cultural transmission. Haas (2007, p. 80) continues, «wampum is a living rhetoric that communicates a mutual relationship between two or more parties, despite the failure of one of those parties to live up to that promise (which we know was the result of most wampum treaties with the colonists...). Thus wampum embodies memory, as it extends human memories of inherited knowledge via interconnected, nonlinear designs».

Because the creation of wampum belts was dependent on extensive trade connections, and because the belts are sacred and connect individuals, communities, and Nations through unbreakable bonds, a study of wampum is ideal for an exploration of holistic education. Furthermore, because of the sophistication involved in the production and design of the belts, as well as the fact that loomed beadwork continues to be a commonly practiced art form today, a study of wampum allows one to touch upon every subject area of the compartmentalized Western curriculum while still teaching in an authentic, modern, holistic Indigenous way.

5.2. Wampum as cross-curricular learning

Wampum can be used to touch upon every curriculum area in the Ontario Provincial Curriculum; this is important since many, although not all, of the communities in which wampum is of importance are now in modern-day Ontario. For this reason, the subject terminology employed here is that of the Ontario Ministry of Education. Teachers who are mandated to use Ontario Provincial Curriculum can teach about wampum, and then check provincial curriculum documents to ensure that they are meeting curriculum expectations without compartmentalizing knowledge.

The most obvious connection between Western curriculum and a study of wampum is in the humanities and social sciences, including social studies, Native studies, social sciences, and Canadian and world studies. Here, younger children can learn about their roles and responsibilities in society through a study of wampum belts, and can also gain an appreciation for the history of Indigenous governance and relations between First Nations and colonial societies. Building on those themes, more advanced students can gain knowledge from a study of the geography of trade routes for wampum, the nature of treaties, and the impact of historical interactions on current events. This is most notable in the study of belts such as that commemorating the Treaty of Fort Niagara; here, we see that Indigenous peoples and colonial governments envisioned treaties as very different things, and also thought very differently about land and land ownership. Indigenous people saw and continue to see land as equivalent to air, in that it cannot be owned or traded; Colonial governments, on the other hand, saw and continue to see land as real estate that can be bought and sold. This difference in fundamental assumptions has led to centuries of misunderstanding culminating in broken treaties, loss of land, and oppression of Indigenous peoples. This opens the door for discussions of equity, governance, and beliefs and values.

A study of Wampum belts can also be used to meet curriculum expectations for languages, including English, Native languages, French, and international languages. Wampum belts serve as mnemonic devices relating to rich oral and written literature, and a study of this creates opportunities for the inclusion of «spirited epistemology» (Battiste, 2013), with the incorporation of both sacred stories (*aansookaanan*) and historic narratives (*dbaajmowinan*), either in English or in a target second language, such as Anishinaabemowin (Corbiere, 2000). Furthermore, the production of new loomed beadwork gives cultural insight and can be used to illustrate events from *aansookaanan* or *dbaajmowinan*. In the second language classroom, language students can learn to create loomed beadwork in a hands-on way that lends itself well to Total Physical Response (TPR) as a language teaching methodology. More advanced learners can interpret and retell stories commemorated in wampum in the original Indigenous language.

With respect to the arts and technological education, loomed beadwork is an age-old art form that can be taught to children from a relatively young age, depending on their level of fine motor development. Students can explore the aesthetics of wampum belts and other forms of loomed beadwork, and compare how these vary across Nations, observing the symbolism of the images in wampum belts and other beaded works. While simple looms can be crafted from cardboard, students in technological education can create their own more sophisticated looms and beads with wood, metal, or other materials, and could even explore ancient and modern techniques for shaping wampum beads from shells.

Wampum can also be related to the scientific and technological curricula. In teaching about wampum, students focusing on relationships can investigate the life cycles of the quahog and whelk whose shells are used to make wampum, as well as the physical properties of the various shell types and the materials used to make and shape the beads. Building on this, they can explore the relationships between humans and other life forms such as these animals. With respect to mathematics, loomed beadwork and wampum belts offer an opportunity to take graphing and

tables off the paper for a hands-on learning experience. Loomed beadwork applies to patterns, algebra, multiplication, trigonometry, and measurement. For computer studies, various websites exist to explore wampum and loomed beadwork, including the virtual bead loom at csdt.rpi.edu/na/loom/homepage.html and the virtual wampum belt at www.nativetech.org/beadwork/wampumgraph/index.html.

5.3. Connecting the dimensions of the self and the world beyond through wampum

In addition to addressing curriculum expectations, in creating authentic holistic learning it is vital to also explore how this topic can be used to connect learning to the dimensions of the self and to the greater world. Wampum is particularly effective in this because the point of wampum belts is often to memorialize relationships such as treaties and other agreements in a way that is central to diplomacy in the eastern woodlands; as Gehl (2010, p. 21) writes, «Wampum Belt diplomacy is a sophisticated system of codifying political relationships using an Indigenous set of symbols and traditional medium». In terms of connecting to the community, learners who live in places where wampum belts feature in the culture can learn about local belts and how these foster relationships within the community and with other communities. This is best done by inviting knowledge holders into the classroom, thereby fostering further connection with the community and creating opportunities for intergenerational learning. The sacredness of wampum belts is due to the sacredness of our relationships with one another, and they stand as a reminder of our duties and responsibilities to one another. This realization connects learners to each other and their communities even further, and also connects them to their spirituality and to their ancestors who also understood the importance of wampum.

In terms of connecting the four dimensions of the person and building relationships in the classroom, teachers must focus on moving beyond intellectual knowledge, to building an understanding of the importance of wampum, teaching the physical skills required to make use of it, and ensuring that students honour the deep spiritual symbolism of wampum belts and the relationships that they signify. Building on this, teachers can use wampum belts daily in classroom management. First, it is vital that students know about (intellectually), understand (emotionally), know how to make loomed beadwork and wampum belts (physically), and are able to honour (spiritually) the significance of the belts. Following this, the students can collaborate to create a Treaty for Classroom Behaviour, which they agree upon and which will be the standard for behavior in the classroom. They can then make their own small wampum belts with pony beads to signify their personal commitment to abide by the conditions of their treaty and behave in a way that respects others and fulfils their responsibilities in the classroom. This technique underlines the importance of wampum as a tool for building relationships, and it builds an understanding that respectful relationships are the basis of agreements and treaties. By having students place their wampum belt in a specific spot each morning, this technique can be used as a tool for monitoring attendance, as well as having students reaffirm their relationship to one another through the Treaty for Classroom behavior each day.

6. Conclusion

In conclusion, holism is a fundamental assertion in Indigenous educational philosophy in the Eastern Woodlands of North America and beyond. Holism informs educational philosophy, and philosophy more generally, at various levels. First, it informs an Indigenous concept of human nature and the dimensions of the person, which consists of the emotional, physical, intellectual, and spiritual. Secondly, it informs our understanding of how to relate to our families, clans, communities, ancestors, and descendants, as well as the Earth, all that is living and non-living, the spirit world, and the divine. The focus throughout all of this is on relationships. Finally, it informs our understanding of the structure of knowledge; in contrast to a Western perspective, which sees knowledge compartmentalized into subject areas, Indigenous holistic perspectives place the focus on concepts, which can be explored through a variety of means, and which are intrinsically related to other concepts. Holism is inextricable from Indigenous educational philosophy, and so it is fundamental to creating an environment conducive to meaningful and authentic Indigenous learning. In the educational system currently present in most Indigenous and other communities, even where education is delivered by Indigenous people, this is hampered by the imposition of Western ways of teaching and learning and Western compartmentalized curriculum. It is not possible to truly incorporate Indigenous knowledge fully into this system, since by compartmentalizing it we change its nature. However, it is possible to teach holistically while still meeting curriculum expectations. The case study presented here, which examines teaching about wampum, demonstrates this. Through the topic of wampum, teachers can develop knowledge, understanding, skills and ways of honouring that relate to all subject areas of the compartmentalized Western curriculum. This is best done by «reverse engineering» lessons: teaching about *topics* instead than focusing on *subjects*, and then relating material taught back to curriculum expectations, rather than starting with compartmentalized curriculum and building lessons from there.

In moving toward Indigenous education *sui generis* (Hampton, 1995) teachers and learners must develop knowledge of holism as a concept central to Indigenous sense-making. They must also gain an understanding of the depth, sophistication, and meaning of the concept, an ability to employ it as a primary learning strategy, and a capacity to honour it as central to fully comprehending Indigenous philosophy, spirituality, and worldviews. In this way, we will see a continuation of the progress away from colonial and anti-colonial education. In its place, we will build authentic decolonized Indigenous education that celebrates the intricacy and beauty of Indigenous philosophies and Indigenous ways of knowing, understanding, doing, and honouring.

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