

Rethinking Environmental Education with the Help of Indigenous Ways of Knowing and Traditional Ecological Knowledge

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In recent years, Indigenous ecological knowledge has been receiving increased attention due to its potential to help address the devastating impacts of climate change and environmental degradation. Indigenous peoples in various contexts have become engaged in collaborative research projects with scientists and other experts to build environmentally sustainable societies. Environmental education has been another site for incorporation of Indigenous knowledge systems and ways of knowing. This paper presents one such programme designed by the Bunun Indigenous group in Taiwan to support environmental learning and reconnection with the natural world of their group as well as other Indigenous and non-Indigenous individuals willing to participate. While the programme's objective is learning with and from the natural environment (the lessons that can be adopted by non-Indigenous groups), its other objectives include re-building and strengthening Indigenous identities, cultures and ways of life, and potentially contributing to decolonisation of settler societies and reconciliation between groups.

INTRODUCTION

For a long time, Indigenous knowledge and ways of knowing were deemed worthless and irrelevant, leading to the erosion of Indigenous knowledge systems. Combined with abuses of Indigenous rights, disregard for their knowledge and contribution to our collective human heritage have restricted Indigenous peoples' abilities and opportunities to lead a sustainable life and protect the environment. One result of this is the destruction of the Land (everything that encompasses the Earth, including land, air, water, non-human world, but also spiritually and culturally infused aspects) Indigenous peoples inhabit and their own heightened vulnerability to environmental degradation caused by climate change and other shocks and crises. It is

only recently that Indigenous peoples have become viewed as the guardians of the Earth; and their historically sustainable lifestyles, closeness to nature and belief in interdependence between living and non-living world were acknowledged as having great significance and value. Since then, there have been attempts to integrate their knowledge systems into environmental education. Still, despite the lessons Indigenous knowledges hold ‘for teaching environmental stewardship and sustainability behaviour in mainstream classrooms’, they have largely been overlooked and marginalised in environmental education (Beckford, Jacobs, Williams, and Nahdee, 2010, p. 239). Drawing on ethnographic work with Taiwan’s Indigenous communities, this paper showcases an educational programme that can contribute to viewing environmental education from an Indigenous, more transformative, perspective.

INDIGENOUS KNOWLEDGE SYSTEMS

UNESCO (n.d.) defines ‘Indigenous knowledge’ as ‘the understandings, skills and philosophies developed by societies with long histories of interaction with their natural surroundings.’ Such societies include Indigenous peoples for whom these ‘unique ways of knowing’ are integral to their cultures, languages, social interactions, spirituality, decision-making processes, day-to-day lives and locally appropriate sustainable development (UNESCO, n.d.).

‘Indigenous knowledge’ is not one monolithic system. As each Indigenous group inhabits a unique natural community, they all have developed place-specific epistemological processes including relationships with the Land, knowledge systems and approaches to learning, to respond to their local needs. Despite the diversity of Indigenous groups and their knowledges, histories and experiences, there is a common thread that runs across all Indigenous knowledge systems. That thread is a spiritual socio-environmental identity Indigenous peoples sustain and transmit from generation to generation. Unlike the exploitative and short-sighted character of human-nature relationships practiced in many non-Indigenous cultures that has led to the current degradation of the environment, Indigenous identity prescribes them to view all entities as being of equal importance and act non-destructively towards everything that inhabits the Earth. As a result, their knowledge systems are built on the idea of harmonious relationships with others, on understanding that the Earth has ecological limitations and on history of adaptive practices that can help to overcome environmental crises (Harvey, 2009).

Socio-environmental identity is nurtured through traditional land-based learning. Such learning does not simply include a transmission of a particular universal content or knowledge about the environment, but centres on lived experiences, praxis and shared meaning- and knowledge-making. In such spaces, elders are respected guests passing down their knowledge and experience to younger generations and learning takes place indoors and outdoors to give opportunities for intergenerational exploration and understanding of their physical environment (Nesterova and Jackson, 2018). This

way, the Land acts as a teacher and a classroom: it supports its learners' development of a spiritual connection to their surroundings and teaches them to listen to nature. Ultimately, listening, understanding and connecting to the Land will teach learners to be protective of the health and wellbeing of the natural environment.

THE PROGRAMME

The programme is called 'Facing the Mountain Education' and was developed by an Indigenous group for Indigenous and non-Indigenous peoples (see Nesterova and Jackson, 2019). It is part of a community-based education project intended to support the revitalisation of Indigenous cultures, lifestyles and the natural environment. Unlike the rigid system of formal education that primarily focuses on textual literacy and testing, the programme values the process of developing an understanding through dialogue with others and with nature and building relationships that emphasise the value of obligation to the living and non-living world.

The programme is built around the intersection of cultural, social and environmental responsibilities and identities of the Indigenous peoples. Meetings take place in Indigenous homes, followed by activities outside in nature. They rely on what Korteweg and Root call 'intergenerational cultural strength' (2016, p. 189): Indigenous people of all ages, from children to elders, engage in collaborative experiential learning and meaning-making in order to work together for and make collective decisions to protect the Land. Participants collectively discuss and remember the knowledge they received from their elders and ancestors and learn from their diverse experiences. At the same time as they learn, they also engage in social and community-building activities such as cooking and sharing meals, caring for children and grandparents present or being outside in the mountains. They start by discussing their local landscape, with a specific focus on local plants, what they consist of and how they are used in traditional medicine and cooking, with students recalling their own experiences and stories shared by their elders and family members. As the concepts of 'Land', 'living' and 'ancestors' are introduced, the discussion leads to the topics of Indigenous connection to ancestral Land and learning from and through connection to Land.

As the programme teaches, sustainable life can be achieved through developing a comprehensive awareness of oneself; one's roots, past, present and future; and one's duties as well as their reliance on what a person already has. Technical skills and knowledge are not sufficient for this. The programme thus focuses on defining and connecting one's cultural identity as an Indigene with the environment, to establish a strong identity grounded in the culture and environment a person comes from, and an obligation to both. For this, along with group activities, the participants are guided to communicate with the environment on their own and to face themselves (face the mountain), their shattered identity, past and fears, and reflect on their relationships and connection between themselves and the Earth. Only in this way, by developing a strong connection between the cultural and

environmental identities, is it believed that moral responsibility to protect, respect and relate to everyone and everything around them can be restored and reignited. With a secured, healthy identity and understanding of themselves and their place – locally, nationally, globally, they then feel empowered to protect their environment and transmit the necessary knowledge and values for a sustainable life.

Such programmes set Indigenous people on a path to reform their environmental learning. By fortifying their ecological and cultural identities they are able to transform their individual and collective lives. The programme embraces a biocentric approach linking Indigenous people to ‘the mountain’ that signals the nourishing Land they traditionally come from. It also signifies that they themselves *are* ‘the mountain’ and it is only by going back to ‘the mountain’, to nature, and facing it, that they will be able to face their past and fears, develop self-respect and strengthen identities.

LESSONS FOR ENVIRONMENTAL EDUCATION

The programme has core principles that can be adopted across contexts to benefit differing groups of people and their needs beyond Taiwan. *Principle One* is the need to nurture a solid interconnection between the varied individual, group and ecological identities a person possesses, the Land and place they inhabit and their conceptions of individual and collective social, ecological, economic and political life, duty and progress. *Principle Two* is the focus on collaborative, shared meaning- and decision-making between individuals and generations to draw on the diversity and complexity of their knowledge and experiences. As informal discussions and formal interviews after a whole day of the programme showed, the process of building a shared understanding and project for recovery brings a sense of accomplishment, humbleness and spiritual comfort to the participants. As the focus is placed on participants’ lives, *Principle Three* includes localisation of any such programmes to not only (re-)build on Land-based knowledge and needs but to also develop love for and obligation to protect and care for the local context. Localisation also means reliance on local or Indigenous pedagogies, knowledge systems and educational structures that are familiar and relatable for the people involved, as well as local Indigenous ownership and control over such programmes. Finally, the objective should not be to measure the knowledge and skills acquired through testing, but instead to centre the process of learning, teaching, collaborating and interacting.

The programme encourages us to rethink environmental education. It sets out to transform and nurture a new kind of lifestyle, learning, relationality, obligation and way to connect with the world by developing a personal duty to change one’s habits and behaviours, work towards inner peace and listening, as well as learning with others. The focus, however, is not solely on personal responsibility to others and a spiritual life. Rather, a personal and collective shared obligation to the living and non-living world is developed from learning to feel, think, relate, care and love with others to initiate and lead change.

CONCLUDING REMARKS

Learning programmes such as those profiled above are critical for Indigenous people, whether they live inside or outside their communities; although some Indigenous groups have maintained strong knowledge of, relationships with, and connection to the natural world, many others have not been so fortunate and need to reestablish and strengthen their commitment. This is not all that such land and environmental education offers to Indigenous peoples: it also supports their awareness and strengthening of their agency and identity as well as their knowledge and assertion of Indigenous and land rights to be able to resist harmful practices directed at them and the Land and to work towards decolonisation and reconciliation.

It is important to note that programmes built on Indigenous knowledge and values by and in collaboration with Indigenous people would also be beneficial in teaching non-Indigenous learners. As Beckford *et al.* (2010) point out, exposure to Indigenous ways of thinking and interactions with the environment would help non-Indigenous learners to see caring for and respect of the natural world as moral obligations. In the long run, they would be able 'to forge healthy relationships with the environment' and challenge the anthropocentric approach to engaging, learning and living prevalent in the Western world if learning drawing on Indigenous approaches occurs (Beckford *et al.*, 2010, p. 246). This is a lesson for non-Indigenous environmental educators too, Korteweg and Root (2016) suggest. Engaging with Indigenous communities to respectfully learn from them and construct a curriculum with them, environmental educators will be able to not only support the revitalisation of Indigenous knowledges and value systems, and, consequently, the sustainability of the environment, they will also support 'justice and reparation towards Indigenous peoples and their Land' (*Ibid.*, p. 185).

Incorporation of Indigenous knowledge systems into environmental education and education as a whole is essential for at least two reasons. First, it can help us to close some gaps in our knowledge about the environment that will enable us to counter the threats to the natural environment. Second, in settler societies like Taiwan, Australia, Aotearoa New Zealand, Canada and others, introduction of Indigenous knowledge into education can support the processes of transitional and historical justice to heal the damage inflicted on Indigenous peoples during colonialism and reconciliation and the building of new, just and equal relationships between Indigenous and non-Indigenous groups.

While being involved in this process, the challenge for education professionals is to be constantly aware and alert to how it is done. Indigenous knowledge should be approached with respect and a determination to be accountable and transparent in order to avoid appropriation and misrepresentation of Indigeneity. Another critical aspect is to avoid stereotyping and romanticising Indigenous knowledge systems, lives, experiences and identities as static, monolithic, primitive and performative (see, e.g. Beckford *et al.*, 2010). Building trust, establishing relationships and collaborating with Indigenous communities to develop curriculum and teaching methods

that draw on Indigenous knowledge systems and ways of knowing is thus vital for respectful and truthful inclusion and representation. In settler societies, environmental education should consider issues of decolonisation, of the society and its curriculum or pedagogy, striving for reconciliation between settler and Indigenous groups. The shared goal should be to counter the colonial legacy and build a shared future that validates and honours Indigenous knowledges, identities and lives.

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