Indigenous Knowledge

Bem Le Hunte, Tyson Yunkaporta, Jacqueline Melvold, Monique Potts, Katie Ross, and Lucy Allen

Definition

Indigenous knowledges are knowledges that are developed by groups of people through "centuries of unbroken residence" in a place (Dei et al. 2022, 104). Importantly, they privilege the knowledge of ancient cultures whose practices have survived millennia, despite colonization. They have transdisciplinary value in the contemporary university environment – an environment that privileges mostly Western ways of knowing and being – as these ancient knowledges, or what some describe as spiritual knowledges, tend to offer a more unified, connected, relational field of knowledge as a starting point, which at closer examination may provide transdisciplinary insights that other disciplinary-bound knowledges may obscure (Lange et al. 2021). By providing a more unified understanding of knowledge as a connected whole, they balance Western ways of compartmentalizing knowledge in university institutional structures that are set up to create silos and fiefdoms that serve to separate us (Ross and Mitchell 2018).

Indigenous knowledges provide a more inclusive contextual framework that incorporate not just contemporary thought but ancient, spiritual, relational, Indigenous ways of thinking, knowing, and being. Infusing these into a transdisciplinary curriculum can be seen as an act of resistance – a way to detox compartmentalized thinking, whilst also transforming and expanding student worldviews and learning (Harvey and Russell-Mundine 2019).

Background

In his *Transdisciplinary Manifesto*, Nicolescu writes: "No single culture is privileged over any other culture. The transdisciplinary approach is inherently transcultural" (Nicolescu 2002, 150). Indigenous knowledges have found their way into the transdisciplinary curriculum as a way to counteract the somewhat "shrunken" notion of knowledge as being predominantly Western, single-disciplinary, and linear.

Indigenous knowledges have been categorized into three intersecting forms: (1) *traditional knowledge*, generally passed down by elders; (2) *empirical knowledge* that is knowledge sourced about and from nature, culture and society; and finally, (3) *revealed knowledge*, which privileges knowledge revealed through visions, dreams, and intuition (Castellano 2000).

Along with these forms are a set of qualities that Indigenous knowledges possess. For example, they are often personalized – in the sense that knowledge is inherently tied to the person who holds it or speaks its truth, and these received knowledges come with responsibilities. They are also orally transmitted and experiential – in other words, they depend on subjective experience and the inner workings of the self to generate social interpretations, meanings, and explanations. They are also holistic and relational. "They connect economic, cultural, political, spiritual, ecological and material forces and conditions. Indigenous epistemologies are grounded in an awareness and deep appreciation of the cosmos and how the self/selves, spiritual, known and unknown worlds are interconnected" (Dei 2000, 115). This idea of connectedness of knowledge – "of people to rocks to heavenly bodies to animals – is not a concept that comes from the Judeo-Christian world, but it is present in other worldviews", which can be challenging for Western thinkers (Le Hunte 2022b, 224). For example, it is simply too hard to translate the complexity of the word "Dreaming" in the worldview of Indigenous Australians – it might translate as a "supra-rational interdimensional ontology endogenous to custodial ritual complexes". But saying this every five minutes is a challenge, "so Dreaming it is" (Yunkaporta 2019, 22).

Academics have debated the responsibility of Western institutions to decolonize their curricula, acknowledging that knowledge is not exclusive to the powerful. There is also a growing trend to support students to understand the legacy of a white, patriarchal, heteronormative intellectual tradition that remains rooted in colonial and Western-centric worldviews (Keele University 2018).

> Colonialism has from the very beginning been a contest over the mind and the intellect. What will count as knowledge? And who will count as expert or innovator? Such questions have been central to the project of colonizing diverse cultures and their knowledge systems. Indigenous knowledges have been systematically usurped and then destroyed in their own cultures by the colonizing West [which has only served to keep them isolated from the Western curriculum]. (Shiva 2000, vii)

Debate and criticism

One of the conflicts around Indigenous knowledge is that it generally takes a very different stance on what knowledge is and where it comes from. Added to this, colonial influences in Western education systems have meant that the "intellectual heritage of non-Western societies was devalued" and "knowledge plurality [has] mutated into knowledge hierarchy, the horizontal ordering of diverse but equally valid systems [has been] converted into a vertical ordering of unequal systems, and the epistemological foundations of Western knowledge were imposed on non-Western knowledge systems with the result that the latter were invalidated" (Shiva 2002, vii).

According to Dei (2000), educators should recognize the coexistence of knowledges and their complementary nature (as well as their sometimes contradictory nature – yet this contradiction can be addressed if educators do not conceive the past and present as separate – "frozen in time and space" (Dei 2000, 120). In Indigenous cultures with ontologies embracing relatedness with all of life, learning is a process of inquiry involving coming to know those relations between knowledges, which include the innovations and discoveries of contemporary sciences (Frazer and Yunkaporta 2021).

The value of Indigenous knowledges is also that they challenge the notion that knowledges are separate – and force people to examine their notion of "discipline". Indeed, "understanding how we are 'disciplined' may be something of a precursor to transdisciplinary work" (Le Hunte 2022a, 1670). If people can undo the limited and limiting understanding of knowledge and where it resides, they might then be able to unpack the power dynamic that informs so much of their learning in Western institutions.

Whilst university structures have been responsible for curating how people learn, students have been learning for millennia in a systemic, non-linear, networked fashion – in a way that is fully embedded in the materiality and philosophy of a face-to-face culture that learns and adapts whilst we are learning. In a bid to move beyond the limitations of dominant paradigms, systems thinkers are creating words to describe this type of learning – words like *symmathesy*, from the Greek *syn* or *sym* ("together") and *mathesi* ("to learn") for "learning together". Nora Bateson created this word to describe a process of contextual mutual learning in an interconnected way outside of institutions (Bateson 2015a). For example, where learning to play a violin, learning may take place in the muscles, in the teacher, in the music, in the emotions and memory, in the culture and history of the instrument (Bateson 2015b).

Ancient and Indigenous cultures have long had notions of the connectedness and relatedness of all things in their philosophy – ideas that identify knowledges as non-separate, before Western thinking sought to exert power through the dis-

ciplines to "tame the wild profusion of existing things" (Foucault 2005, 16) – before knowledge was categorized into fields and professions – into faculties and divisions. Indigenous knowledge is categorized according to the sovereign context of knowledge keepers rather than discrete topical abstractions (e.g. by age, status, location, totemic relation, clan, and gender). Knowledge is distributed throughout the society, with each member and family responsible for specific content and the aggregate wisdom of the group only being accessible for governance through rituals of collective intellectual representation (Yunkaporta 2022).

By contrast, the intellectual ghettos that have evolved in contemporary global knowledge production rarely invite confluence between disciplines, and this has potentially detrimental consequences. If universities began with seven disciplines in the 13th century, this proliferation has resulted in more than 8,000 in 2012, meaning that "a great expert in a given discipline is totally ignorant in more than 7,999 disciplines" (Nicolescu and Ertas 2008, 17).

Legitimizing Indigenous knowledge sets students up for success, as these knowledges act as boundary objects to promote understanding between cultures (Aikenhead 1996). It also promotes the incorporation of core Indigenous values (Cajete 1999), as well as supporting contextual place- and problem-based learning (Newberry and Trujillo 2018). Indigenous knowledges also foster a sense of connectedness and relationality between disciplines and humans (as well as the beyond-human world), which might be a useful starting point in helping to understand a more expansive version of complex systems and the role of learning – for example, in the eco-social crisis that we now face (Ross 2020).

Current forms of implementation in higher education

The transdisciplinary curriculum globally is attempting to open up the boundaries of learning to other ways of knowing and being well beyond the scientific paradigms privileged in the West, to live the ambition of transdisciplinarity and advocate for the openness, inclusivity, and wisdom required to do transdisciplinary work that truly broadens students' worldviews. The diversity of Indigenous knowledges means that their incorporation into curricula around the world is highly contextualized and differentiated as it is often co-designed with Indigenous people.

The first case study offered is a transdisciplinary program at the University of Technology Sydney in the Bachelor of Creative Intelligence and Innovation. This degree combines with 26 other disciplines from every faculty within the university and opens up a new world for learners where different knowledges form confluence from across all fields, industries, and disciplines. In such a context, it would be unwise to privilege only Western or scientific ways of knowing. One subject, New Knowledge Making Lab, has been designed as a site for engaging

with non-Western as well as Western knowledge from around the world and it covers the work of Australian Indigenous scholars through to Vedic philosophers and Chinese ways of knowing. Through this work, the notion of decolonization naturally arises. As Australia is a migrant nation, living on Indigenous land that was never ceded, it is easy to understand how some academics might feel they have a particular responsibility to decolonize their curriculum, acknowledging that knowledge is not exclusive to the powerful (Gothe and De Santolo 2022). Also, with students in this degree course coming from 26 disciplines, it is not within the remit of educators to teach any of these fields in depth. Instead, they privilege the Vedic (ancient Indian) idea that "there are many knowledges but only one knower" (Le Hunte 2020, 30). The approach to research within this program also follows the principles of the transformative research movement (Fazey et al. 2018) and the growing understanding that transformation in our systems involves transformation of self, because we are not disconnected from the systems we are attempting to change – a very Indigenous notion.

A case study from the United States introduces transdisciplinary education as a model of decolonizing curricula in climate change education (Newberry and Trujillo 2018). In this context, academics created a model to enable students to learn science from multicultural perspectives; the program integrates knowledge and understandings from the social sciences, water policy, traditional ecological knowledge, and climate change science to examine strategies for including Indigenous knowledge and cultural traditions into water policy and environmental decision-making. Students were provided background on the Tohono O'odham cultural perspectives and traditional practices, alongside knowledge on current and predicted climate change, and required to include Indigenous viewpoints on water as well as Tohono O'odham cultural values as part of their final projects. Newberry and Trujillio conclude by remarking on the importance of the incorporation of Indigenous knowledge in the curriculum for: (1) approaches to climate education in promoting resilience within Indigenous communities; (2) for the student's ability to navigate between different knowledges and methodologies in order to produce new knowledge, and (3) having well-trained Indigenous ecologists who also have a strong grounding in their own cultural knowledge can provide the scientific community with unique multiple contexts.

Another case study from the University of Fort Hare in South Africa centers around the Life Knowledge Action and Grounding Program that embraces African heritage in Western epistemology (Mahlangu and Garutsa 2019). The learning community is divided into three different levels of community – an individual home (or *amakhaya* in isiXhosa or Zulu), a community of homes (or *imizi* in isiXhosa or Zulu) and entire villages, where all relationships between stakeholders (think learners and community members) are reciprocal and all stakeholders are a part of an interconnected whole. Learners undertake a problem-solving project

within their own community, and the whole program takes place in a particular language, a dialogue which is supported by visiting lecturers (community members). The use of vernacular terminology is important for its humanizing function. "This program allowed for resonance between students' real-life experiences, their histories and the learning process" (Keet and Porteus 2010).

Given the colonial heritage of many of our societies, there is ongoing debate around designing learning for the inclusion of radically different worldviews in a transdisciplinary curriculum, but educators are also cautioned to do so in a sensitive fashion, given that engaging with Indigenous ways of knowing as a non-Indigenous person requires a very active form of allyship and explicit intention to remove the structural racism, colonialism, and inequalities experienced by Indigenous people today (Williams 2018). And, where possible, it is argued that educators should attempt to invite Indigenous knowledge holders into the educational space to ensure that knowledge is not appropriated or simplified, but rather amplified, to create the much-needed insight into principles of unity – that which connects humans, disciplines, and fields – rather than focusing on that which separates people.

References

Aikenhead, Glen S. 1996. Science education: Border crossing into the subculture of science. *Studies in Science Education* 27 (1): 1–52.

Bateson, Nora. 2015a. *Symmathesy: A word in progress*. Available from https://norabateson.wordpress.com/2015/11/03/symmathesy-a-word-in-progress/.

Bateson, Nora. 2015b. *Beginnings?* Available from https://norabateson.wordpress.com/2015/09/22/beginnings.

Cajete, Gregory A. 1999. The Native American learner and bicultural science education. In *Next steps: Research and practice to advance Indian education*, ed. Clarice Baker, 135–60. Charleston: ERIC.

Castellano, Marlene Brant. 2000. Updating Aboriginal traditions of knowledge. In *Indigenous knowledges in global contexts: Multiple readings of our world*, eds. George J. Sefa Dei, Budd Hall, and Dorothy Goldin Rosenberg, 21–36. Toronto: University of Toronto Press.

Dei, George J. Sefa. 2000. Rethinking the role of Indigenous knowledges in the academy. *International Journal of Inclusive Education* 4 (2): 111–32.

Dei, George J. Sefa, Wambui Karanja, and Grace Erger. 2022. *Elders' cultural knowledges and the question of Black/African indigeneity in education.* Cham: Springer.

Fazey, Ioan, Peter Moug, Simon Allen, Kate Beckmann, David Blackwood, Mike Bonaventura, Kathryn Burnett, Mike Danson, Ruth Falconer, and Alexandre S

Gagnon. 2018. Transformation in a changing climate: A research agenda. *Climate and Development* 10 (3): 197–217.

Foucault, Michel. 2005. *The order of things*. London: Routledge.

Frazer, Baressa, and Tyson Yunkaporta. 2021. Wik pedagogies: Adapting oral culture processes for print-based learning contexts. *Australian Journal of Indigenous Education* 50 (1): 88–94.

Gothe, Jacqueline, and Jason De Santolo. 2022. Decolonising design practices and research in unceded Australia: Reframing design-led research methods. *Architecture_MPS* 21 (1): 1–13.

Harvey, Arlene, and Gabrielle Russell-Mundine. 2019. Decolonising the curriculum: Using graduate qualities to embed Indigenous knowledges at the academic cultural interface. *Teaching in Higher Education* 24 (6): 789–808.

Keele University. 2018. Keele manifesto for decolonising the curriculum. *Journal of Global Faultlines* 5 (1–2): 97–99.

Keet, Andre, and Kimberley Porteus. 2010. Life, knowledge, action: The grounding programme at the University of Fort Hare. Report on the Pilot July–December 2009. Available from https://www.academia.edu/8923662/Report_Life_Knowledge_Action_Programme.

Lange, Elizabeth A., Joy Kcenia Polanco O'Neil, and Katie E. Ross. 2021. Educating during the great transformation: Relationality and transformative sustainability education. *Andragoška spoznanja* 27 (1): 23–46.

Le Hunte, Bem. 2020. *A curriculum for being: Creativity for a complex world*. Available from https://opus.lib.uts.edu.au/rest/bitstreams/445b7a36-7419-4c03-a16e-62aa232335cf/retrieve.

Le Hunte, Bem. 2022a. Transdisciplinarity. In *The Palgrave encyclopedia of the possible*, ed. Vlad P. Glăveanu, 1669–76. Cham: Palgrave Macmillan.

Le Hunte, Bem. 2022b. The Anableps guide to serendipity: Intentional serendipity as creative encounter – a decolonised, literary perspective. In *The art of serendipity*, eds. Wendy Ross and Samantha Copeland, 221–38. Cham: Palgrave Macmillan.

Mahlangu, Petrus M., and Tendayi C. Garutsa. 2019. A transdisciplinary approach and Indigenous knowledge as transformative tools in pedagogical design: The case of the Centre for Transdisciplinary Studies, University of Fort Hare. *Africa Education Review* 16 (5): 60–69.

Newberry, Teresa, and Octaviana Trujillo. 2018. Decolonizing education through transdisciplinary approaches to climate change education. In *Indigenous and decolonizing studies in education*, eds. Eve Tuck, Linda Tuhiwai Smith, K. Wayne Yang, Eve Tuck, and K. Wayne Yang, 204–14. London: Routledge.

Nicolescu, Basarab. 2002. *Manifesto of transdisciplinarity*. Albany: State University of New York Press.

Nicolescu, Basarab, and Atila Ertas. 2008. *Transdisciplinary theory and practice*. New York: Hampton Press.

Ross, Katie E. 2020. *Transforming the ways we create change: Experiencing and cultivating transformative sustainability learning*. Available from https://opus.lib.uts.edu.au/bitstream/10453/149105/2/02Whole.pdf.

Ross, Katie E., and Cynthia Mitchell. 2018. Transforming transdisciplinarity: An expansion of strong transdisciplinarity and its centrality in enabling effective collaboration. In *Transdisciplinary theory, practice and education*, eds. Dena Fam, Linda Neuhauser, and Paul Gibbs, 39–56. Cham: Springer.

Shiva, Vandana. 2000. *Indigenous knowledges in global contexts: Multiple readings of our world*. Toronto: University of Toronto Press.

Williams, Lewis. 2018. Transformative sustainability education and empowerment practice on Indigenous lands: Part one. *Journal of Transformative Education* 16 (4): 344–64.

Yunkaporta, Tyson. 2019. *Sand talk: How Indigenous thinking can save the world*. Melbourne: Text Publishing.

Yunkaporta, Tyson. 2022. *Blackpilled: Conspirituality, backlash, and Indigenous online radicalisation*. Available from https://www.abc.net.au/religion/tyson-yunkaporta-indigenous-online-radicalisation/13877124.