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The SAJEE aims to publish and report on a wide range of aspects relating to Environmental Education, Ethics and Action in southern Africa and elsewhere, with a strong focus on research. The journal seeks to further the academic study and the practice of environmental education by providing a forum for researchers, scholars, practitioners and policy makers. The journal aims to carry papers reflecting the diversity of environmental education practice in southern Africa. It includes a variety of research genres; conference reviews and keynote papers; comparative studies; retrospective analyses of activities or trends in a particular field; commentaries on policy issues; and critical reviews of environmental education, ethics and action in a particular country or context. The journal actively seeks out international dialogue in order to provide perspective on and for environmental education in southern Africa.

The SAJEE aims to provide southern African and other authors with a forum for debate and professional development. The journal incorporates an author support programme to encourage new authors in the field to establish themselves as scholarly writers.

Papers published in the Research Paper section of the journal are reviewed by two or three reviewers. Keynote, Viewpoint and Think Piece papers are reviewed by one of the editors of the journal and/or another reviewer.

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Editorial: A South–South exchange begins to re-frame historic dialectical exclusions into situated heritage discourses of reflexive re-imagining

Rosa Guadalupe Mendoza–Zuany, Universidad Veracruzana, Mexico, and
Soul Shava, University of South Africa

The environments in which indigenous communities live have been sustained through complex interactions over centuries. Since the advent of colonial modernity, however, these interactions have experienced change and risk. In education for sustainability, these indigenous environments can be read as changing social–ecological landscapes which both sustain diverse livelihood practices and exhibit the escalating challenges of late modernity. This Special Issue of the *Southern African Journal of Environmental Education* (SAJEE) focuses on the intergenerational knowledge and livelihood practices of indigenous communities who – often marginalised and facing ever–narrowing prospects of future sustainability – are confronted with an education system that is a relic of colonial modernity and devoid of any social–ecological heritage to which they can relate.

Environmental educators and researchers are therefore asking questions concerning colonial modernity in current educational practices, such as:

- What can be done to address the predominantly reified and disembedded curricula offered in school and post–school contexts today?
- What is the value of bringing local, indigenous and intergenerational heritage and knowledge practices into the curriculum?
- How can this inclusion be done in pluralistic and intercultural ways?

It is precisely these themes and topics that are addressed in this Special Issue’s research, viewpoint and think–piece papers. Many of the contributions have emerged from an international collaboration around Education for Sustainable Development (ESD) through the ESD Expert.Net programme.¹ This has involved exchange visits between South Africa, Mexico and India, which have produced research collaborations and contact with researchers from further afield – in Zimbabwe, Zambia, Australia and Norway – who responded to the call for papers. There is clearly a strong interest within the international academic community to explore the relevance of indigenous knowledge, in research and in education, in order to better direct human activities towards a sustainable future.

Some key thematic aspects from the papers are:

- Indigenous environmental knowledges, sustainable livelihood practices and resilience in socio–ecological contexts;
- Situated intergenerational and intercultural indigenous knowledge heritage;

- The education of indigenous people at school, and at undergraduate and graduate levels;
- Indigenous environmental knowledge in transformative formal education contexts;
- Indigenous environmental knowledge, epistemological access and knowledge plurality in formal science education in relation to ESD; and
- Cutting across these, the themes of plurality, epistemological access, legitimation, resilience and sustainability.

As the guest editors of the Special Issue – from the Universidad Veracruzana in Mexico and the University of South Africa (UNISA), South Africa – we found that the South–South dialogue reveals common challenges, as well as many shared values. In both our contexts, scholars writing on heritage and indigenous knowledge value the high cultural and biological diversity in their countries of origin. The papers reflect the researchers’ motivation to explore the inclusion of indigenous knowledge heritage and practices within formal and informal learning interactions across the schooling, university and community contexts of ESD.

Across the authors’ diverse socio-cultural and ecological contexts, there is agreement that indigenous knowledges are bodies of intergenerational knowledge that have emerged in, and are sustained by, indigenous populations in a particular territory through their interactions with their lived environment. These knowledges are embedded in memory and embodied in the peoples’ cultures and practices in these territories. Such knowledge is expressed and shared – mainly orally – through stories, songs, dances, myths, values, rituals, community laws, local languages, taxonomies and agricultural practices, amongst others. These knowledges are also cumulative, representing many generations of experience as the result of experiments and innovations that have shaped cultural dispositions and practices over thousands of years. They are a collective wisdom that continues to emerge in response to local problems and conditions specific to a lived environment. It is thus not surprising that there has been a sustained scholarly interest in indigenous knowledges over the years, with both scientists and educators exploring their relevance for understanding and addressing current sustainability issues.

The researchers also agree that, while the decision to incorporate indigenous knowledge into current education and research practices is an academic one, it is also political. Such a decision challenges the academy and the sciences with the questions and the answers that indigenous knowledge raises about the nature of our existence, our conscience and the way in which we produce and represent knowledge.

As collaborators from the Global South in countries colonised by Eurocentric and modernist thought, we recognise that the epistemologies and theories produced in the Global North have influenced our ways of thinking, our sciences, our beliefs and our conceptions of life and the world and, therefore, the way we collaborate with others. Historical influences and patterns of exclusion have contributed to risky asymmetric conditions and unfair relationships that commonly devalue knowledge that is not generated within western academic canons and sciences. Questioning and challenging the status quo permits new positions and more inclusive opportunities to emerge, and help us make visible the richness and epistemological diversity of situated intergenerational knowledge that has been obscured by the dominant forms of colonial and modernist abjection. This Special Issue contributes strongly on all these aspects.

The papers in this issue deepen our insight into colonial exclusion and the historical marginalisation of indigenous knowledge heritage. In Latin America, concern has been centred on interculturality in education. The papers in this Special Issue thus consider both the inclusion of intergenerational heritage and interculturality in education. This is particularly significant in the context of the global challenges reflected as the 17 Sustainable Development Goals (SDGs) in the *Global Goals of Education 2030* (Brussels Declaration, 2018), which all of the current nation states have ratified.

If we are to achieve the goal of sustainable development for all, educators will need a deeper understanding of how the marginalisation of indigenous peoples and cultural plurality in colonial modernity is still with us as a challenge today. At a seminar on indigenous knowledge at the UNISA Centre for African Renaissance Studies, then director, Shadreck Ghuto, challenged the audience to address the problem of relevance in southern African initiatives in ESD. Informed by colleagues' encounters with intercultural work across indigenous knowledge and the modern sciences in Veracruz, Mexico, the opening paper on 'Navigating non-sense' (O'Donoghue, Kibuka-Sebitosi, Tshiningayamwe & Palmer) opens up the challenge of transcending past exclusions and highlights the role of heritage in meaningful learning at school. It sets the scene for a series of contributions on indigenous knowledge practices (Aparicio; Sandoval-Rivera; O'Donoghue, Sandoval-Rivera & Payyappallimana; Shava & Masuku; Mendoza-Zuany). These research papers illustrate the depth of indigenous knowledge, which has been uncovered and recovered through research on indigenous knowledge systems over the last few decades. They reflect an engagement with the marginalising effects of colonial history so as to reposition 'indigenous knowledge' as a body of knowledge in its own right and as a counterpoint to the hegemonic dominance of the western sciences of colonial modernity. They illustrate how research on indigenous knowledges has opened the door on an expanding role for indigenous heritage knowledge in education.

The above discourses extend into a set of papers that probe exclusion, epistemological questions and legitimation, comprising contributions from Australian, South American and African scholars (Ryan & Ferreira; García-Campos; Ngcoza). These papers provide a vantage point from which to explore the challenges of including heritage as a foundation for learning and change in relation to emerging environment and sustainability concerns.

The work on social-ecological landscapes of change (O'Donoghue, Sandoval-Rivera & Payyappallimana, with short case studies from Mexico, Zambia, South Africa, India and Sweden) first developed as a South–South collaboration that has been extended to include an example from the Global North. The Think Piece (Pesanayi, O'Donoghue & Shava) illustrates research that transcends narrow western ecological idealism, which has driven a wedge between nature and culture. The papers carefully navigate the tendency to portray indigenous peoples as custodians of nature in order to avoid setting them up as different and as a source of restorative hope. The social-ecological research also avoids the intellectual trap of appropriating indigenous knowledge into a reified intellectual discourse or of creating situations where the modern sciences act as a 'mediating doorman'. Experience in compiling this Special Issue suggests that the decontextualised intellectualisation of indigenous knowledge in education only serves limited analytical purposes. Rather, the knowledges must be viewed and represented from

within the natural contexts in which they are located, namely, intergenerational learning, knowledge exchange and reflexive action.

Engaging the complex contours of indigenous knowledge discourses exposes some fractured – and thus difficult to navigate – narratives of idealising opposition. Many of the indigenous knowledge research agendas are maturing within dialectical trajectories of ‘indigenous versus western’ that are already somewhat locked in. The challenges of re-integration – where indigenous knowledge practices provide heritage foundations for learning across intergenerational capital and where modern scientific institutions provide new environmental knowledge – are raised in two papers (Maldonado, Cruz, Bello & González; and Ndlovu), which discuss inclusive learning in the sciences. Another paper (Mandikonza) enriches and expands the interweaving threads that have become apparent in the course of this contemporary scoping of indigenous knowledge and intercultural meaning-making in education.

The Special Issue contains research by 25 authors from nine countries around the globe, but mainly from the Global South. Overall, the papers that have emerged – from collaborative exchanges and the open call for papers that followed – reflect a formative, diversifying and maturing of indigenous knowledge and interculturality that appears to be both gaining traction and opening up an expanding and more integrated research agenda that is:

- Making the scope and scale of historical marginalisation in colonial modernity more tangible and explicit for informing continuing research;
- Informed by a more nuanced understanding of the challenges inherent in including indigenous heritage knowledge for reflexive relevance in relation to current environment and sustainability concerns; and
- Surfacing the need for realist epistemic theory in education to (1) inform research across diverse knowledge systems and (2) engage with current environment and sustainability concerns.

All of the papers in this Special Edition reflect a necessary critical engagement across heritage and the present-day concerns about sustainability challenges in lived environments. This is clearly an important focus for any curriculum work attempting to realise the *Global Goals of Education 2030*. Here, continuing research into indigenous knowledge practices and systems will hopefully transcend the oppositional struggles between western and indigenous epistemes of the past and redirect the dialectic towards a new era of intercultural and pluri-epistemic co-engagement on heritage, context and future sustainability.

Endnote

1. See <http://www.esd-expert.net/home.html>

Acknowledgement

The editors would like to thank Professor Rob O’Donoghue for his critical insights reflected in this editorial, and for his pivotal role in the South–South research collaboration from which the Special Issue was conceptualised.

Tribute to Tich Pesanayi

This Special Edition is dedicated to the memory of Dr Victor Tichaona (Tich) Pesanayi (7/12/1965–16/04/2019), who contributed to this Special Issue shortly before his untimely passing. Dr Pesanayi actively contributed to the field of environmental education in southern Africa in many ways, including by serving as Project Manager for Environment Africa, Programme Manager for the SADC Regional Environmental Education Programme (SADC-REEP) and as Council Member for the Environmental Education Association of Southern Africa. Through this work, he has touched and transformed many lives with his gentleness, kindness and commitment to education and training. Tich’s research interests were in the traditional agro-ecological knowledge and practices of small-holder farmers in southern Africa, and their transformative role towards attaining sustainable agriculture.