

Micro-credentials and Indigenous Knowledge Systems: Creating and Delivering Flexible, Stackable, Accessible, Culturally Appropriate Education Pathways for Indigenous Learners

Bethany Pridmore, Adaptive Learning Boutique, Australia

Zane Hughes, Curtin University, Australia.

In 2019, the Australian Federal government commissioned a review of how universities, industry, and government can increase industry engagement in teaching and learning. The report from Bean and Dawkins provided seven recommendations, including raising the profile, accessibility, and funding support for micro-credentials. Significant investment in this ecosystem has subsequently occurred.

The session described how, within the Australian context, micro-credentials are carving out a foothold in educational frameworks, methodologies, student experience, equity, and accessibility practicums. However, the lived experience of Indigenous cohorts, as illustrated by the *Close the Gap* report, is *not* keeping pace with contemporary Australia. This divergence is preventing entire generations of families and children from accessing the benefits of education

Australia's Indigenous and First Nations peoples are widely accepted as the world's oldest, living continuous culture. In understanding this culture, there is a strong correlation between Indigenous learning methods sustained over millennia and contemporary definitions of micro-credentials. The more recent Australian Higher Education Accord, strongly signals support for Indigenous education, addressing both the need for accessibility and diversity in the education system. This creates an imperative to bring valuable Indigenous Knowledge systems, and their invaluable contributions to diverse fields (such as environmental sustainability, health, and community resilience) into the Westernized education system.

In this presentation, the authors focused on how First Nation Rangers, often referred to in Australia as Aboriginal or Indigenous Rangers, play a pivotal role in managing Australia's growing land estate, particularly in areas recognized as Indigenous Protected Areas (IPAs). These rangers combine Traditional Knowledge with modern science and land management techniques, resulting in a holistic approach to caring for the environment.

The First Nation Ranger Program, supported by all levels of Australian Government and, in specific circumstances, the Private Sector, assists First Nations people and communities in managing land, sea, and water Country according to the objectives set by Traditional Owners. This program acknowledges the unique and critical role that First Nations peoples

play in protecting Australia's natural and cultural heritage. The program's expansion aims to increase the number of rangers, particularly women, and extend its reach to regions without existing ranger groups.

This presentation focused on the First Nations Ranger Program, which uses a micro-credential approach led by Indigenous leaders and developed in consultation with First Nations communities. It protects Indigenous Cultural and Intellectual Property (ICIP) while delivering personalized, cohort-based learning aligned with cultural protocols.

This initiative is now several years into its design and development, working through the opportunities and challenges in:

- Delivering digital credentials at scale.
- Inclusive recognition process that values Indigenous ways of knowing and delivers a personal human experience with sustainment at scale.
- Enacting a Two-Way curriculum framework, through a Both-Ways pedagogy with a 'flexible' curriculum structure, and learning journey where geographical terrestrial ecological zones, and cultural protocols are adhered to.
- Bending technology solutions to deliver personalized cohort-based experiences, which also systematically protect ICIP (Indigenous Cultural and Intellectual Property);
- Learning from AI designing deployment strategies, implementing tooling, and assessing risk.
- Bringing recognition of Indigenous Knowledge holders into a system of recognition.
- Reflecting on ways of working, hiring, building diverse teams operating within cultural protocols.

The presentation was also designed to build on the ePIC 2024 presentation. More importantly, though, it was designed to impart knowledge—the why, the what, and the how so that others might learn, creating momentum in their circles of influence and control in designing education pathways for Indigenous Peoples.

Keywords: Indigenous knowledge, micro credentials, recognition systems, Indigenous cultural and intellectual property