

The background of the cover is a spiral-bound notebook. The pages are decorated with indigenous-style artwork. The top page features a drawing of a person with long, flowing hair. The bottom page shows a large central figure surrounded by smaller figures and a row of small, identical figures at the bottom. The notebook is bound with a black spiral on the left side.

Learning Communities

INTERNATIONAL JOURNAL OF LEARNING IN SOCIAL CONTEXTS

SPECIAL ISSUE

GROWING OUR OWN: INDIGENOUS EDUCATION ON COUNTRY

Number 25
DECEMBER 2019

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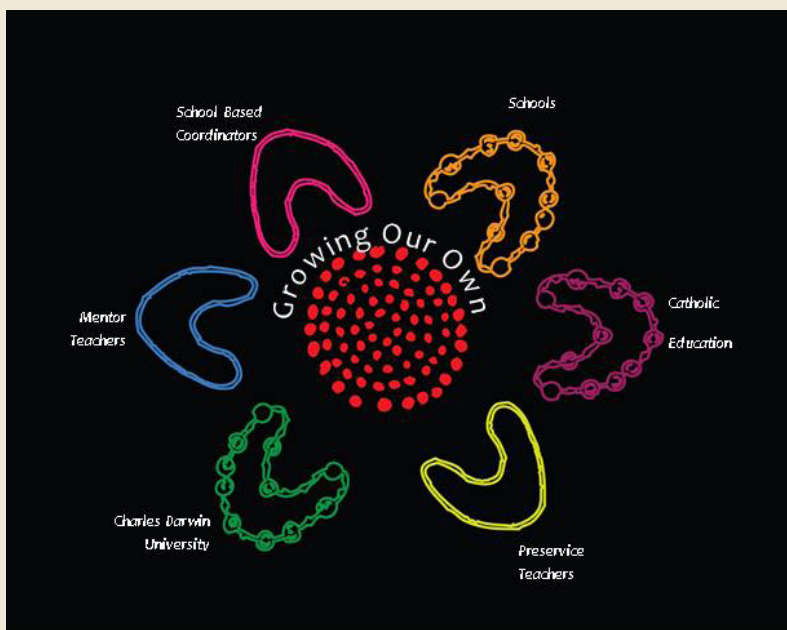


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GROWING OUR OWN: INDIGENOUS EDUCATION ON COUNTRY



 **CHARLES
DARWIN
UNIVERSITY**



**NORTHERN
INSTITUTE**
People. Policy. Place.









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Editorial

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This Special Edition of Learning Communities Journal celebrates ten years of delivery of the Growing Our Own program and the robust partnership between the College of Education at CDU and the Catholic Education Office, NT. Each of the papers included in this edition elucidate various permutations of both-ways learning. The contributing academic authors critique their positionalities and pedagogical practices. Articles contained here also include graduate, undergraduate students, and school based mentors who theorise their experiences as co-authors and first authors.

You will see the Growing Our Own logo on the inside cover of this edition, a yarnning circle of interdependent entities facilitating, teaching, learning and growing. Within each school there is a band of people whose work supports the program, and crucially, within the Charles Darwin University seat in the circle, and the Catholic Education Office, there are the Project Coordinator (CDU) and the Project Manager (CEO) whose complementary work has ensured the longevity and integrity of the program. It has been a privilege to work alongside Therese Kersten, Ben van Gelderen and Cris Edmonds-Wathen in the College of Education in a seven-year involvement in GOO: the degree of consultation and reciprocity with colleagues at the CEO, Laura Avery and latterly Geoff Perry has been impressive. They liaise regularly with each other and with the on-site school-based coordinators and principals. Decisions are made jointly on such issues as enrolments, units to study, intensive weeks, visiting lecturers chosen and timeframes. This is a collaborative, interactive leadership structure that is clearly apparent to each of the participant cohorts, and effective because flexibility is invariably the modus operandi. All parties are given a significant 'voice' and this edition gives testimony to this ethos.

The program also delivers. In 2016, it received the CDU Vice-Chancellor's award for "Outstanding Contributions to Student Learning". Catholic Education Northern Territory (CENT) considers that the following empirical outcomes rightly represent success.

Table 1: GOO statistics

55	Enrolments over 10 years
28	Graduates – Undergraduate degree
8	Graduates – In-service (upgrade)
8	Ongoing students
11	Employed teachers in CENT
5	Employed teachers outside CENT
4	Retired teachers still leading in community
14	Students withdrawn and working as Aboriginal Teaching Assistants

Source: Catholic Education NT

However, it must be noted that the program is capital intensive and costing can render good programs vulnerable. In an internal report submitted to the College earlier this year, Therese Kersten and Laura Avery wrote¹ :

It is acknowledged that studying as a GOO student is an expensive model both in terms of dollars and GOO. In truth, however, we often wonder if GOO is really as expensive as

¹ A full citation of the two publications mentioned within this quote are provided in the reference section.

the financial outlay suggests. An average university student in rural Australia who must leave home to undertake further education has to add accommodation and travel costs not encountered in GOO. One of the main aims of GOO is reducing the financial costs involved in bringing teachers, often from interstate, into a remote community, which involves additional costs of transportation, resettling and housing. While acknowledging that each external appointment is unique; the financial benefits of having long-term local teachers in their own community are significant.

Wilson (2014) identified the need for long-term commitment and funding (p. 200). Anyone who has worked with an organisation that is primarily funded by government knows the challenges of securing long term funding. However, each time we start a new cohort, we are mindful of whether we can take them all the way through the course and be able to financially support the new group of students for the next 3-4 years. As CENT [Catholic Education NT] and CDU are both experiencing change in system leadership, we need to take time to work together and help each other understand the critical place of this program as a system priority. CENT and CDU do not waiver from their commitment to this program because we see “the urgency for more Aboriginal and Torres Strait Islander teachers [as] a specific social justice concern” (Patton et al., 2012, p.15).

Any reader of this edition will already have a keen interest in Indigenous education and will most likely recognize the imperative that more Indigenous teachers are needed, particularly on their own country. So, we invite you the reader, as you engage with the articles – the peoples, the places, the voices, the learning – to discern what furthers this agenda, and what practices might further these imperatives throughout the next decade.

The papers in this edition fall within the four broad themes outlined below.

1. Why and how GOO was developed.

I look behind me...genesis of Growing Our Own, by Elliott and Keenan, explains the vision and goals underpinning the development of the Growing Our Own program. It summarises the principles, rationale and foundational elements in the initial design, which informed the funding application and guided the program implementation. The authors reflect on the dynamic environment that led to GOO's creation and recognise the important relationship between three parties:

- Charles Darwin University as the provider of high-quality flexible teacher-education
- Catholic Education Office as the manager of remote schools in Indigenous communities across the NT
- Aboriginal Teaching Assistants employed by Catholic Education and candidates for the university courses offered under GOO.

2. GOO as experienced by the preservice teacher students and the lecturers.

It's just a matter of time: The perceptions of growing our own students of the Growing Our Own program, by Barnes, van Gelderen and Rampmeyer, profiles statistical evidence of poor teacher retention in remote community schools and discusses the barriers to Indigenous people gaining university qualifications, which have been addressed by the GOO program. The paper includes information about GOO's pedagogical approaches:

- Work-integrated learning
- Place-based approach
- 'Two-way' teaching philosophy

It then explains the methodology behind a research project, designed in cooperation with GOO students, to

collect feedback about their perceptions of the GOO program. This empowering qualitative methodology ensured a high level of participant engagement and produced pertinent and thoughtful feedback. The results are presented through extracts from interview transcripts categorised as: relationships; sanctioned and embedded flexibility; cultural knowledge and the way we learn; success; and time. The paper explores the dynamic of Time and Power that operates in the GOO program and suggests that the GOO students' definitions of linear time and synchronous time provide clues about how the program could be improved.

The red dirt stays in your shoes: Reflective practice and both-ways learning, by Sue Erica Smith, explores the cultural interface at the heart of the GOO program, which calls on lecturers and students to learn from each other using both-ways pedagogy. The discussion of cultural competence/intelligence/humility shines light on the intricacies of forming student-teacher relationships in a remote setting and reinforces the need for university lecturers engaged in the GOO program to be open to, and interested in, a new way of seeing. Like other papers in the Journal, this paper discusses the issue of teachers being faced with a classroom of students capable of speaking different and multiple languages yet required to learn in English. The path forward calls on the Government, the university sector and preservice teachers to continue to tackle these tricky challenges.

'More than an academic thing': Becoming a teacher in Ltyentye Apurte and beyond by Strangeways and Pettit, theorises about the development of teacher identity using arts- based, narrative, and dialogic methods. The paper comprises a series of extracts from conversations between a GOO lecturer and an Aboriginal man who entered the GOO program as a student, became qualified and worked as a teacher, and then transitioned into a community role and returned to work as an Aboriginal Teaching Assistant. The dialogue explores teacher identity issues from an ecological perspective and recognises that many factors interplay and impact on the individual during their transition from student to teacher. Most significantly, becoming a teacher changed this man's community position and challenged his sense of identity, leading to a decision to step away from teaching in order to focus on the underlying problems of poverty, self-harm, and distress that were negatively effecting school students in his remote community. In this paper, the complex interactions of remote community reality for GOO students are brought to life through art and a well- structured dialogue with probing summations and analysis.

3. GOO as a driver for Indigenous student teachers to use their local history, culture and language/s.

Historical perspectives: Murrinh ku thepini pumpanpunmat (Nemarluk) by Bundock, Crerar, Dorward & van Gelderen, focusses on a GOO student essay that exposes differing perspectives of historical events in a GOO community. The story comes from a book published in the local language and used to teach literacy in the school classroom. It relates to the murder of Japanese fishermen off the coast of Northern Australia in 1931 and the subsequent police hunt and criminal conviction of a local 'hero' of the people. The student author presents an alternative version of events, based on oral history from community members and relatives who were alive at the time. This juxtaposition of historical truths is likened to the 'history wars' of the 1990s, and the essay discusses the moral and ethical issues for student readers challenged to decide which 'truth' is credible. The essay also refers to heroic Aboriginal leaders in other places (NSW & WA) who were similarly portrayed as criminals, indicating that history issues are not place-specific. This paper is an exemplar of using local language resources to fully integrate Indigenous history and culture into the curriculum.

Language at home and in the school: Resistance and compromise, by Zemits, Mullins, and Parry, explores some of the complexities of moving between the language of home and community and the Standard Australian English used in school. The authors suggest that the level of resistance to fully adopting the colonising, dominant language of English varies from one individual to another. Those that succeed in the dominant system have adopted a measure of compromise for their benefit and for the benefit of the community in which they live. The paper features a conversation between a GOO lecturer and two GOO students who each began school with a language that was not English and managed to traverse their education and working life bilingually. It draws attention to the necessity of providing access to bilingual teachers and teaching assistants, especially for students enrolled in remote community schools.

Referring to the recommendations from the *Second National Indigenous Languages* survey, the paper concludes that schools should:

- Ensure that teachers coming to work on communities can empathise about the use of multiple languages and the practices of a community. This may be through pre-arrival training for that community.
- Extend language teaching practice based on evidence of what language activities work best for the interests of the community (Recommendation 2, Marmion et al., 2014).
- Aboriginal English speakers should be given support akin to bilingual language learning programs (Recommendation 8, Marmion et al., 2014).

This paper demonstrates the value of bilingual speaking teachers being supported by the GOO program.

Barriers to inclusion: Aboriginal pre-service teachers' perspectives on inclusive education in their remote Northern Territory schools, by Staley, Freeman, Tipungwuti, King, Mullins, Portaminni, Puantulura, Williams, Jason, and Busch, discusses inclusive education history and theory. Using a framework of critical multicultural equity pedagogy, the paper analyses data from GOO students' essays on inclusive education. Seventeen GOO students identified barriers to learning and suggested how to help students engage more successfully with school. At the core of the paper, essay extracts have been categorised under five themes: attendance, hearing impairment, culture, speech and language issues, and access to resources. Through numerous examples from different locations, the paper provides an excellent summary of the barriers of exclusion faced by Indigenous children trying to participate in Australian school life. The GOO students call on international conventions as sources of support, for example the United Nations General Assembly agreement to protect the 'rights of Indigenous peoples to revitalise, use, develop and transmit to future generations their histories, languages, oral traditions, philosophies, writing systems, and literatures'. This paper illustrates how GOO works to empower Indigenous teachers to assert their viewpoint through their academic work.

4. GOO as an enabler for the authentic delivery of the Australian curriculum.

Both-Ways science education: Place and context, by Rioux and Smith, explains why and how the author-lecturers apply both-ways pedagogy to develop place-based science lessons with GOO students in five remote community schools in the NT. The recognition and inclusion of local Indigenous knowledge about place is fundamental to the examples of place-based science education featured in this paper. Using the concept of 'border crossing', the paper shows how GOO students' specialised knowledge fields—defined in language, culture and community—are integrated into the Australian Science Curriculum. The paper demonstrates that both-ways cultural border-crossing legitimises Indigenous knowledges alongside western knowledges and makes science local and culturally relevant for Indigenous school students.

Beyond perspectives: Integrating local Indigenous knowledge/s into humanities and social science education, by Crerar and Mullins, employs a narrative between a GOO student and a GOO lecturer, interspersed with environmental and historical information about a remote community, to describe the process of integrating Indigenous and western knowledges. The conversation mainly focuses on the development of culturally integrated learning resources for Humanities and Social Science lessons based on a both-ways learning approach. The paper emphasises the importance of considering *how* Indigenous people would like their history and perspectives to be integrated into Australian education. It also discusses *who* has the right to teach Indigenous knowledges.

The evidence in this collection provides guidance as to how these priorities can be further advanced.

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I look behind me... genesis of *Growing Our Own*

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Key words: teacher education; Indigenous

Abstract

This paper offers a critical reflection on the *Growing Our Own* program, reviewing some of the particularities and challenges facing educators, authorities and communities in the Northern Territory and in so doing elucidates both how and why such a program can sustain the successes that it has achieved.

Introduction

Building a strong Indigenous teacher workforce for remote communities is a key component of improving educational and experiences for Aboriginal and Torres Strait Islander children. Efforts over several decades to build Indigenous teacher capacity for remote communities are well evidenced but there are few Aboriginal (and/or Torres Strait Islander) teachers in remote schools and annual staff churn is the norm. As Hess (1998) contended, this situation is not unexpected given the complexity of remote communities. The challenges of physical isolation are compounded by a shifting policy landscape, frequent administrative changes, and often entrenched bureaucratic resistance to authentic community participation in planning and delivering education. Providing quality teachers for every school has long been a top priority for governments and education authorities but is inherently elusive and challenging in remote, isolated communities.

Issues around teacher quality are amplified by the fact that few teachers in remote communities share the culture (or language) of their students or a sense of 'belonging' to the community. Most teachers in remote schools in the Northern Territory are not local; they come from Darwin or other parts of Australia. Each incoming teacher has to adapt to a new local cultural context as well as to the school. Many teachers are in their first few years of teaching and are still building confidence as teachers and developing their pedagogical repertoire. They must also adjust to Northern Territory policies and curricula, as well as becoming familiar with a new community that is probably vastly different from their home town.

Given on-going research about the positive impact of teacher quality on student learning experiences and outcomes, it makes sense to build teacher quality from within communities where possible, and *Growing Our Own* was intended to do just that. Teachers who know their communities, families and children have a head start in creating quality learning environments. *Growing Our Own* was designed to build Indigenous teacher capacity in Catholic Schools located in remote Northern Territory communities. As educators, we recognised the critical role of teachers in improving student performance and, as research at the time was highlighting (Darling-Hammond, 1997, 2003; Hattie, 2003; Rowe, 2003; Ingvarson & Rowe, 2007), teacher quality is a key pillar of quality student experiences and outcomes.

Ideally, schools in any community should be staffed by teachers who have strong social and cultural ties to their communities and who want to live and work there. Teachers must be able to identify with children and children's families and communicate with families in their home language for real home- school collaboration to occur. However, for a range of complex historical, cultural, social and economic reasons, this sort of connectedness rarely happens in very remote communities. There are very few qualified Aboriginal or Torres Strait Islander teachers who live and work in their remote hometowns. Clearly, many Indigenous people living in remote Australia would make excellent teachers (or doctors, lawyers or

architects) but they are not in the position to participate in mainstream higher education including teacher education programs. Similarly, there are barriers to participating in traditional distance education and on-line learning programs, including a combination of resource, social and communication challenges.

Catholic Education in the Northern Territory has a long history of working in partnership with local communities and *Growing Our Own* was intended as another strategy to support connectedness of community and school. Most importantly, the *Growing Our Own* collaboration was determined to support local educators to become teachers—the best teachers for their communities—a situation that had proved elusive for some time. As an Indigenous school principal said at the time: “I’m the only Indigenous principal (in the Catholic system). I look back and there’s no one behind”.

The importance of partnerships

The Charles Darwin University first started to talk about practical options to enhance Indigenous teacher capacity in mid-2007. After a period of brainstorming options, consultation with remote community educators and leaders and our respective colleagues, plus drawing on diverse experiences and research, we proposed what appeared to be a practical approach to leveraging the respective skill sets of our organisations to build teacher Indigenous capacity in collaboration with communities.

Years of literacy and numeracy benchmarking at local and national levels had shown that achievement of remote Indigenous students was generally significantly poorer than that of other students. It was well documented that a complex matrix of factors including inherent disadvantages associated with isolation, policy and funding cycles, and the challenges around attracting and keeping the best and brightest teachers, mitigated against student success. As any educator or community leader will attest, continuously shifting policy landscapes, endless ‘new’ curriculum and teaching initiatives, pilot projects, program trials, and recycled ‘initiatives’ are rarely successful.

With the knowledge of research about teacher quality and effectiveness front-of-mind (e.g. Darling-Hammond, 1999; Hattie, 2003; Rowe, 2003), our aim was to develop a sustainable strategy to build Indigenous teacher capacity for remote schools. It was important that this strategy avoid any focus on supposed ‘problems’ with schools, students or communities. Rather, we were seeking a true partnership that would support communities to ‘grow their own’ teachers starting from a strengths-based model (Gonzalez, Moll, & Amanti, 2005) that is, with communities’ own highly regarded resource, existing Teacher Assistants.

A key message from our previous work, and that of various educational leaders, was that a successful educational enterprise must be a partnership between community and school, whatever the context (Epstein, 2001; Sarra, 2003; Mellor & Corrigan, 2004; Elliott, 2006). Successful educational outcomes for students are rarely achieved in stand-alone, one off projects. Equally though, while the concept of ‘partnership’ is relatively easy to acknowledge in principle, the process of forging functional and sustainable partnerships is much more challenging. Sustainable partnerships have to be ‘led and nurtured’ (National Curriculum Services, 2013).

Central to our thinking about this partnership was the need for it to be ‘place-based’ and in this context, ‘place’ referred to each of the remote communities in which there was a Catholic school. Clearly, a community in the far northern tip of Australia is considerably different to one in the Central Desert region. Each has its own identity, language, traditions, cultures and connections with country. Significantly, we recognised that the ‘starting point’ for any initiative must be the cultural and educational strengths and capacities within communities. Given our roles in the Northern Territory education sector at the time, the local and national appetite to improve educational opportunities in remote communities, and appreciation of the talented Aboriginal Teaching Assistants and educational support teams already working in schools, we felt confident to move forward with a proposal to support building Indigenous teacher capacity - *Growing Our Own*.

The Northern Territory landscape

The Northern Territory is sparsely populated region with some 212,000 people (in 2011) spread over a huge area of about 1,420,970 square kilometres. It has a number of remote and very remote communities with a predominantly Aboriginal population. These communities have generally been characterised by rich cultural traditions and connectedness to country, often enveloped in poverty. They tend to have limited access to services and development opportunities including health and education. Challenges faced by schools in remote and very remote communities are largely around resourcing and access issues. This is due to remoteness and isolation including attracting and retaining qualified teachers, variable internet access, supporting large numbers of learners for whom English is a second or third language, and poor school attendance. Challenges are exacerbated by roads that can be cut off by flood water for months on end, expensive housing, lack of services and fresh food, and limited employment and transport options. Most professionals, such as health workers and teachers, come from outside the communities. Many professionals work on a Fly-In-Fly-Out (FIFO) basis, including curriculum and specialist education support personnel.

Catholic Education has a long history of service provision in remote Northern Territory communities and manages one-school per community in five key locations.

- Ltyente Apurte Community Education Centre (Santa Teresa)
- Murrupurtiyanwu Catholic School (Bathurst Island)
- St Francis Xavier Catholic School (Daly River)
- Our Lady of the Sacred Heart Thamarrurr Catholic School (Wadeye)
- Xavier Community Education Centre (Bathurst Island).

These schools were the main sites for *Growing Our Own*. Participation opportunities were afforded to Indigenous staff who were working in these Catholic provincial schools.

Teaching Indigenous students is a core role of Catholic Education in the Northern Territory. With growing Indigenous enrolments in the all schools, an ongoing challenge for Catholic Education, indeed all educational sectors in the Northern Territory, has been to attract, develop and retain skilled, experienced teachers and educational leaders. This challenge has been particularly significant in remote communities. High rates of teacher and staff turnover make it difficult for schools to deliver quality teaching that comes through teacher experience and understanding of the local environment and continuity of program delivery.

Catholic Education's long involvement in schooling demonstrated that local Indigenous educators were more likely to stay working at their local school than were non-resident contract teachers. In addition, teachers and other educators from within local communities provided a clearer link between the school and the community. Experience showed that local Indigenous teachers were also best placed to deliver and plan the curriculum around Indigenous languages and culture. By the early 2000s though, many trained Indigenous teachers were being lost from the system with a large cohort of women expected to retire by the end of the decade. Few Indigenous people appeared to be entering teacher training and the number applying for teaching positions in Catholic Education was negligible.

Image 1: Catholic Education remote community schools (highlighted)

Source: <http://www.ontheworldmap.com>

Program foundations

In thinking about building Indigenous teacher capacity and improving educational outcomes for students, our professional experiences indicated that any capacity building initiative had to be strategic, long term and in partnership with communities. As a system of schools, Catholic Education is very specific and clearly aspirational in its call for:

- Covenant relationships.
- Being consciously transformational.
- Commitment to personal, professional and communal growth.
- Dedication to students and learning.

Across the system, Catholic Education employed relatively large numbers of Aboriginal Teaching Assistants and of this group, many had excellent potential to become teachers. There was a further untapped pool of Indigenous staff working in schools as Indigenous Education Workers who were also interested in teaching, but who found current teacher training courses inaccessible, often irrelevant and inconceivable for a range of reasons. As was indicated at the time and quoted in the original funding submission:

Focus on the capacities and potential of Indigenous students is required to avoid them being inappropriately channeled into the most convenient or lowest entry options, such as Community Development Employment Projects (CDEP) or preparatory VET courses. Many

Indigenous students would benefit from higher-level VET courses or tertiary education but do not feel capable enough or the possibility has not entered their horizons. There is a role for universities to collaborate more closely with schools and TAFE colleges to raise Indigenous students' confidence and perceptions of the relevance and attainability of higher education. (Ministerial Council on Education, Employment, Training and Youth Affairs, 2006)

We stressed that our 'approach to Indigenous teacher training and recruitment needed to change'. We highlighted the need to be 'strategically bold, to approach and develop Indigenous teacher training creatively, differently and with purpose—a new way of doing, a new way of being.' In arguing a funding rationale to develop *Growing Our Own*, we highlighted that Catholic Education Northern Territory was seeking:

- Indigenous teachers and staff from within each Indigenous Catholic Community School.
- To promote the teaching profession as a positive and attainable pathway and support Indigenous graduate students with corridors leading to the teaching profession.
- A long-term career framework for Indigenous staff across our system of schools.
- A 'two-way' process of 'academic recognition—for Indigenous teacher education students to be supported by experienced mentors, and for mentors to be supported by Indigenous educators—with both pathways academically recognised and both ways appropriately resourced and managed—a notion of 'authentic counterparts'.
- Teachers who understand the contextual environment of Indigenous students and who value their cultural traditions.
- The best teachers for Indigenous students.
- Teachers with good technical skills who are exemplary practitioners.
- Teachers who could build and sustain strong school, community and student relationships.
- To identify positive entry and exit points in teacher education courses to meet the individual aspirations and skills of Indigenous students.
- To develop better and different transitional arrangements from VET certificate courses and allied educational work roles, including better use of Recognition of Prior Learning to articulate into a degree level qualification.
- To implement processes of place-based training, on-site recognition and on-site teaching placements.
- Provide a coordinated and strategic approach to teacher education for remote Indigenous students, appropriately resourced and managed.
- To work with the Northern Territory Teacher Registration Board to clearly identify appropriate standards, skills and qualities essential for teachers working with Indigenous students.

In summary, we envisaged *Growing Our Own* as a long term, sustainable approach that would provide creative and accessible pathways to teaching. Central to its conception were commitment to pedagogies that would draw and build on the cultural skills and expertise of Indigenous participants. These approaches would simultaneously enrich the understandings of mentor and classroom teachers' and lecturing (facilitating) staff about local Indigenous ways of knowing, being, learning and doing. This multi-pronged approach recognised that academic staff must work in culturally effective and educationally authentic and significant ways with Indigenous learners.

Planning, structure and delivery

Growing Our Own developed as a partnership between Charles Darwin University (CDU) and Catholic Education Northern Territory over 2008-09 and was initially funded by a \$1.82 million Commonwealth government grant. The program was designed to support Aboriginal Teaching Assistants who worked in one of five remote Catholic Primary schools to complete CDU's *Bachelor of Teaching and Learning* degree in a way that was personalised to the needs of individuals and communities. The course was to be delivered 'in-place' over teaching periods aligned with the 4-term school year. This time frame was more consistent with the rhythm of school, family and community life than traditional University teaching semesters. It was anticipated that students would complete the course over a two to three-year period, depending on each student's personalised pathway and individual factors such as academic credit received for previous study and work experience.

As mentioned earlier, the principles underpinning the delivery design and framework focused on valuing and actively embracing cultural knowledges to build culturally authentic ways of knowing and doing 'schooling'. These were designed to meet CDU's *Bachelor of Teaching and Learning* course learning outcomes and Northern Territory Teacher Registration Board graduate standards. The program used one-to-one and small group tutoring for each unit or cluster of units within each community. These sessions were complemented by support from site-based mentor teachers and on-line resources and activities to personalise learning and provide access to the wider world of education, teaching and learning. Each remote school established a dedicated teaching space in which students could work and study and all students were provided with a computer.

Customisation of the *Bachelor of Teaching and Learning* course was designed to build on students' existing teaching, community and cultural skills. Students were selected to participate in *Growing Our Own* on the basis of a combination of personal interest and commitment, community and school recommendation, and family commitment. Each student's participation was endorsed by his or her community and family as well as the school. Simultaneously, course design and teaching approaches were developed in collaboration with leading Indigenous educators across each community, Catholic Education and CDU staff. Special consideration was given to participants' relationships within their communities, kinship and group alignments, and family or other cultural and community responsibilities and obligations.

Students in the first cohort were employed as Aboriginal Teaching Assistants in their community's school. Most had worked there for many years and were considered the 'backbone' of the school and their community, sometimes with a history of teaching children from multiple generations. They were embedded in their communities. Mostly, they were the mothers, daughters, sisters, cousins and aunts of many children in the school and community and they brought a wealth of knowledge, competence and skill to their schools and communities. In planning our delivery approach, we wanted to honour, celebrate and leverage this community connectedness as the basis for learning to be a teacher in terms of contemporary curriculum and pedagogy and, ultimately, Northern Territory Teacher Registration.

In addition, most Aboriginal Teaching Assistants had completed components of various Vocational Education and Training (VET) qualifications such as the *Certificate III in Children's Services* (now the *Certificate III in Early Childhood Education and Care*). Because of these prior learning and professional experiences an RPL (Recognition of Prior Learning) assessment was negotiated for each student. Generally, this RPL meant that students were required to complete about two thirds to three quarters of the degree rather than the entire degree.

Simultaneously, the *Growing Our Own* framework was designed to support CDU academic staff and Aboriginal Teaching Assistants' classroom teachers to enrich their understandings of local Indigenous cultures and ways of knowing, being and doing. As Darling-Hammond (1999) indicated, an important part of building teacher quality is for teachers to work together to scaffold each other's learning and to share pedagogical journeys. Underpinning this working 'side-by-side' idea was the importance of learning about each other's cultural and pedagogical perspectives and infusing cultural identities and knowledges across all aspects of the program to strengthen learning for all participants. This culturally responsive and engaging orientation stressed Indigenous educators' strong sense of cultural identity and focus on learning styles that valued collaborative work. Equally, it recognised the importance of mainstream educational values such as that every Australian child must be a fluent speaker, reader and

writer in English. Concomitantly, the *Growing Our Own* framework embraced the University's mission to work in more culturally effective and educationally significant ways with Indigenous learners. Fortunately, digital technologies enabled access to a range of resources available to on-campus students or online students in any other part of the country. Scaffolding personalised learning in this way meant that mentor/classroom teachers, Aboriginal Teaching Assistants enrolled in the Degree, and CDU staff were able to calibrate personal and local knowledges with mainstream curriculum knowledge and pedagogies, including assessment tasks.

Bachelor of Teaching and Learning units were 'clustered' to fit within the school term model and CDU scheduling patterns. Unit content was customised to align with each student's in-class teaching and learning roles and responsibilities, and was professionally and well as theoretically oriented. Each student was mentored by his or her classroom teacher and the CDU academic assigned to the community/school. CDU unit coordinators worked with CDU place-based mentors and mentor (classroom) teachers to support students' learning within each community. Delivery was supported by weekly or fortnightly visits from CDU staff complemented by some attendance at on-campus workshops, plus the usual on-line support afforded to all teacher education students.

A key component of the program was the on-site mentoring. It was intended that Indigenous educators would be mentored by a designated on-site, classroom teacher who in turn was mentored by the Indigenous educator and by a designated CDU staff member. It was also intended that the classroom teacher would enrol in the *Master of Education (or Graduate Certificate in Education)* and complete the professional learning units within this program. These units could be customised to the context of each teacher.

Conversations with key educational leaders and community elders, together with knowledge from previous work, had highlighted the importance of mentoring and strong, personalised academic support to ensure that Indigenous educators successfully completed their higher education program. Typically, students had many competing work, family and related demands on their energy, time and resources, therefore, one-to-one, sensitive and responsive mentoring was central to timely completion of each unit and of the entire course. It was also acknowledged that some students would need additional support with academic writing.

CDU academic liaison staff worked with the Indigenous educators on a one-to-one or small group basis, depending on the community. The sessions were held on-site in their school for 4 to 6 hours per week (or equivalent), which amounted to 2 to 3 hours per 10 Credit Point unit/subject or the equivalent of face-to-face delivery time for on-campus students. In addition, Indigenous educators had one-to-one tutoring support from their mentor teachers and/or other designated professionals to assist with related learning tasks including completion of assignments. Overall course delivery, administration, logistics and liaison with schools and community personnel was supported by a Project Officer. Given the customised nature of the course, student diversity and remoteness, administration and logistic requirements would be fairly complex.

In addition to day-to-day mentoring support in their normal classroom workplace, it was intended that students would have one day per week for on-site supervised academic work. Most teaching and learning for each unit, including reading, research, and assignment preparation would occur during this time. Generally, as previously mentioned, most teaching and learning tasks were customised and contextualised to ensure close integration between theory and students' classroom practice.

As is the case in any initial teacher education program, central to *Growing Our Own* and the *Bachelor of Teaching and Learning* was participation in formal, supervised professional experience in schools. Generally, this was completed in students' own communities and workplaces, but also, where possible in schools outside their own community. It was also planned that students would participate in a CDU on-campus workshop (in Darwin or Alice Springs) for 3 days twice per year for intensive work in their units and most importantly when they commenced the course. These workshops covered orientation to teaching, library research, familiarisation with schools and teaching approaches outside their communities, and contemporary issues in teaching and learning. Similarly, Teacher Mentors would be required to participate in similar on-campus workshops, most importantly when they commenced their mentoring role.

The initial *Growing Our Own* proposal envisaged a staged model for building the Indigenous teacher workforce in Catholic schools. First, to build on the existing skills and expertise held by Indigenous educators (mainly Aboriginal Teaching Assistants) in remote Catholic schools. Simultaneously, it supported classroom teachers to become mentors with whom the Aboriginal Teaching Assistants worked to enrich their understandings of Indigenous students' cultural and learning contexts. It was envisaged that later, the project would be able to support young Indigenous people transitioning from school to higher education, hopefully with a focus on initial teacher qualifications.

In developing the *Growing Our Own* initiative we were mindful of principles that embraced genuine partnerships with community, educational leaders and Aboriginal elders to build local teacher capacity including:

- Design, planning and implementation that was culturally authentic and pedagogically strong.
- Contextual sensitivity and cultural responsiveness in pedagogical design.
- Building knowledge collaboratively including transferability of understandings and skills within and across contexts.
- Integration of traditional teacher education course content and assessment in practical classroom settings.
- Authentic, culturally appropriate ways of progressively documenting student learning outcomes to meet University course and teacher registration requirements.
- Joining culturally and personally relevant Indigenous ways of being, knowing and doing with contemporary curriculum and pedagogical knowledge and teacher professionalism to strengthen pillars and opportunities for children's learning.
- Promoting children's learning and spiritual well-being in authentic ways.
- Supporting the development of home languages (where relevant) while nurturing the parallel development of Standard Australian English.
- Developing 'school ways' of knowing and doing that better connect with family and community and create learning environments and opportunities that engage and enthuse children leading to sustained and deep learning.

Intuitively, we knew that building a strong, grounded Indigenous teaching workforce in remote communities would provide children with better opportunities within mainstream education. As research has indicated, closer school-community connectedness (Epstein, 2001) and consistently effective teaching (Darling-Hammond, 1999; Hattie, 2003) would facilitate children's development of skills, knowledge and understandings needed for successful academic outcomes in schooling, improved school retention and lead to employment and /or further educational opportunities. As we said in the original funding submission:

....the key message to be gained from educational effectiveness research is that quality teachers and their professional learning do make a difference in the classroom. It is not so much what students bring with them that really matters, but what they experience on a day-to-day basis in interaction with teachers and other students in classrooms that does.

Risks

Despite the careful planning and high expectations of *Growing Our Own*, we highlighted two main risks with the potential for negative impacts on longer term success and sustainability of the program. The first risk was at the student level, the second at a policy level. As our original submission stated:

Indigenous students in remote communities have complex lives that are adversely affected by a range of poverty-related issues such as ill health, early and unexpected deaths and poor housing. With the best will in the world, and the most flexible and accommodating teacher education program, these can impact negatively on their participation and academic progress. A second concern is the short timeframe and 'pilot' nature of this and other 'intervention' oriented and funded programs. Educational changes and gains happen over time and long-term vision is needed to build social and economic capacity in communities.

Programs such as Growing Our Own must be part of longer-term planning and funding to make sustainable improvements to teacher capacity and to improve learning outcomes in remote communities. Fragmented and unconnected initiatives have little sustained impact on educational and employment capacities of communities. In-community higher education programs need to be part of broader educational policy, strategic directions and in-community action to effectively engage children and families in meaningful and equitable schooling. One-off crisis-initiated responses may well solve some immediate problems but are unlikely to have long term benefits. Educational pathways must engage and empower learners from early childhood through to the work place and higher education. In the longer term, a strong, culturally embedded Indigenous teaching workforce that is committed and accountable to its community, will be well positioned to overcome the intransigence of remote schools. Remote Indigenous children must be scaffolded to develop the skills, knowledge and understandings to fuse cultural knowledges and school-based learnings that promote successful academic outcomes and contemporary employment.

Conclusion

This paper has highlighted the genesis of *Growing Our Own*. Remote and very remote communities are dynamic and diverse with strong local and cultural traditions and languages but with a history of challenges around students' engagement with schooling and learning outcomes. All families want the best for their children, but too often school and community views of learning, teaching and educational engagement were disconnected. Traditionally, remote schools have been staffed by teachers from outside communities who may have little affinity with local cultural traditions, no relevant community languages and no plans to work in the community long-term. We also knew that it was difficult, if not impossible, for many local people to pursue higher education or other tertiary programs in distant cities. Factors including cost of education, family and work responsibilities and other local issues prevented people moving from community to access education; similar factors hindered participation in local educational opportunities.

In designing *Growing Our Own*, we hoped to build Indigenous teaching capacity by harnessing the strengths of in-community Aboriginal Teaching Assistants already employed in schools and over time, build a stronger, educational culture led by local educational leaders and classroom teachers. It has long been acknowledged and celebrated that Aboriginal Teaching Assistants in remote communities are the 'backbone' of their school, the holders of their community's cultural knowledges and languages, and the key conduit to local families. Many have long tenure in local schools but there is little opportunity to move beyond the Aboriginal Teaching Assistant's role.

Remote and very remote communities want to source local teachers embedded in community culture who want to continue living and working in their communities, therefore teacher education would have to be more accessible. Extensive consultation with community leaders, educators and families, confirmed that communities were keen to grow local teacher capacity and valued what we termed 'place-based' education. Communities wanted longer term school leadership to be in local hands to enhance the quality of learning experiences for children and to ensure that local cultural ways and languages were promoted and maintained.

Indigenous disadvantage in higher education is well documented and deeply rooted. Evidence from higher education sources indicates that Indigenous students who enrol in university level studies are more likely than other students to face challenges that impede successful course completion. To ensure

that each participant in *Growing Our Own* had the best chance of success, we knew it was important for students to be supported by their communities, that the teaching program was customised to meet specific learning needs, and that each student was supported by strong, personalised mentoring.

Underpinning the course design, structure and provision of resources was a deep understanding of potential course participants' contexts, particularly the often complex and competing personal and professional demands and responsibilities. The design framework encompassed dedicated teaching and study spaces, laptop computers, internet and other learning materials, in-community personalised teaching and mentoring support, and authentic assessment activities to facilitate participants' engagement with learning.

Fundamentally, the *Growing Our Own* program and curriculum was the same as that for mainstream students studying CDU's accredited 4-year initial teacher education degree program. However, the dedicated funding we sourced plus co-contributions from Catholic Education NT and CDU, enabled teaching approaches that were place-based and personalised and aligned with each student's Aboriginal Teaching Assistant role.

Design and development of *Growing Our Own* learning and teaching activities was based on the underlying premise that pedagogy must acknowledge each student's unique social, cultural, linguistic and cognitive characteristics and the ways they impact motivation and learning, together with the specific content requirements of the initial teaching qualification. Broadly, it was intended that Indigenous ways of knowing, doing and being and specifically, notions around family-community connectedness, sense of personal and cultural identity, and multi lingual skills would be fore-grounded across all course components. Workshops, tutorials and on-line learning materials were designed to both reflect and extend cultural traditions and simultaneously align with contemporary education theory and practice and relevant curricula and teaching standards. The notions of strong partnerships with community and educational leaders and scaffolding students' learning within the context of their community and existing classroom roles was central to the pedagogical approaches implemented in program design and delivery across each site.

While course design for delivery across local sites had essentially the same structure, purpose and focus on educational expectations and program quality as evidenced in on-campus and traditional external delivery of the *Bachelor of Teaching and Learning* there were a number of enabling design characteristics, which included:

- Celebrating diverse ways of understanding, knowing and doing in locally relevant and authentic ways consistent with each Assistant Teacher's classroom and community role.
- Engaging with family, community and elders, and the wider school community and/or linked-in services (such as church, health services, playgroups) in course design and on-going nurturing and sustaining students' participation and retention in the program.
- Infusing local cultural identities and knowledge with Northern Territory and national professional teaching expectations and standards.
- Acknowledging and accommodating family, kinship and skin group conventions.
- Recognising the confluences of knowledge, country and place that value and build on domain specific knowledge about community, culture, and learning.
- Appreciating the interrelationships and interactions between multiple factors that facilitate participants' involvement in family and community life and impact on academic and study commitments.
- Responding sensitively to participants' specific learning styles and attention to learners' cognitive, metacognitive (e.g. planning, monitoring, controlling) and affective dimensions of learning (e.g. attitudes to learning, motivation, resilience)
- Recognising that modelling, demonstration and cooperation, collaboration and team work are central to learning and teaching.

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- Highlighting the interconnectedness of learning across domains and the importance of incremental learning progress over time.
- Providing enhanced, customised and personalised academic and professional support.
- Designing pedagogies infused with the day-to-day work of Aboriginal Teaching Assistants.

(Elliott & Keenan, 2009)

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It's just a matter of time: The perceptions of growing our own students of the Growing Our Own program

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Introduction

In this paper, we give the *Growing Our Own* students¹ the opportunity to tell us their perceptions of the *Growing Our Own* program. As *Growing Our Own* partners and lecturers, it has been easy to provide our view of what we see happening when we work in the *Growing Our Own* program. We are aware that what this program offers to us, both personally and professionally, is highly valuable. We commonly express the privilege we feel to be working in the program and our talk often turns to the care that is given to and received from the people involved: our students, our mentor teachers, our schools, our relationship with Catholic Education, our teaching, our learning (and learning and learning), our joys, our failures, the extreme hilarity and the sadness we feel at some of the stories we hear of the struggles our students encounter.

Contained within all these discussions is our unquestioning assumption that *Growing Our Own* works. We see it and experience it every time we enter the communities that we work with and despite all the things that could go wrong—intercultural misunderstandings, the danger of the elements and isolation, internal community issues, a lack of language (on our behalf), an often inflexible, mainstream institutional system at schooling and university levels, logistical issues with travel, resources, the extreme need for flexibility—it still works.

Evaluations have been done in the past and will be again, so we know that it works (Ebbeck, 2009; Giles, 2010; Maher, 2010). We, as lecturers, regularly share all this, strongly believing that *Growing Our Own* works from our perspective. But are we wrongly assuming that it is the same for our students? In this paper, we explore what our *Growing Our Own* students believe is happening that helps them (or doesn't) to engage, learn, grow and succeed as fully trained teachers in the isolation of remote communities in the Northern Territory (NT), a place that typically challenges the best teachers and the most dedicated teacher education students.

The need for the 'Growing Our Own' program

The literature supporting the need for the *Growing Our Own* program, especially in the NT, is compelling. What follows is a discussion of the statistical, research and media landscape that demonstrates, a) the need for vastly more Aboriginal teachers, b) the barriers to retaining teachers in remote community schools and c) the alternative approach used in *Growing Our Own* to overcoming these barriers. This foreground leads to an analysis of the *Growing Our Own* student recollections of their experiences, particularly in the ways they speak about time.

1 The use of 'student' refers to our Growing Our Own students rather than school students.

The need for more Aboriginal teachers

Ten percent of Australian's live outside of urban areas (Ross, 2015). Yet, nationally, our education systems are struggling to provide a quality education to school students in rural and remote areas that make up this percentage. Education systems in the NT face many obstacles. Schools in remote areas are especially vulnerable.

Research evidence indicates that Aboriginal students have very high rates of absenteeism in the NT. For example, in 2014 only 37% of aboriginal students attended school more than 90% of the time (Dreise et al., 2016). Recent media reports (Aisthorpe, 2017) identified that more than half of students enrolled in NT schools were not attending school regularly. In fact, across remote areas of the NT, over 650 students had an attendance rate of just 31% in 2017. Students need to attend school far more regularly in order to be 'successful' (Dreise et al., 2016; Lamb et al., 2015; Aisthorpe, 2017). One of the more disturbing statistical outcomes of reduced attendance for remote students is that they are only one third as likely as city students to meet international reading benchmarks (Ross, 2015). The issue of low attendance has therefore been, and continues to be, problematic, although the reasons for this are contested. While these statistics are distressing, it needs to be remembered that these types of statistics presume definitions of 'success' from a white, middle class perspective and set aside discussions of what actually determines 'success' from an Aboriginal perspective and whether these statistics even count in this debate.

Bringing more Aboriginal teachers into schools with Aboriginal students to address these needs is therefore logical (Price, 2016), especially in the NT where, for example, 44% of the student population in Darwin is composed of Aboriginal students². However, only 4% of highly qualified teachers in Darwin are Aboriginal. In remote schools, where there is a much higher percentage of Aboriginal students (often 100%), there is an even lower percentage of Aboriginal teachers. The domination of the teaching profession by predominantly 'white' teachers, is also found in the United States (US). Research into the impact of teacher race on student achievement in the US showed that the lack of teacher diversity was detrimental to student achievement, while same culture/ethnicity teachers achieved better academic results for their students (Villegas and Irvine, 2010). The reasoning for this was purported to related to the higher teacher expectations of same culture teachers for their students (Villegas & Irvine, 2010; Dee, 2004). Similarly, while white teachers in Australia were seen to have good intentions and took a strong social justice stance in teaching Aboriginal students, these good intentions were not enough to overcome the issues of achievement that Aboriginal teachers could (Luke, 2017). Aboriginal teachers showed distinct cultural differences in their approach to education (Malin, 1994). Social reformers now cite this 'Pygmalion Effect' or 'self-fulfilling prophecy' as the key to reversing prejudice in the classroom and encouraging child achievement, though this is difficult when prejudices and expectations are sometimes subconscious (Ellison, 2015; Luke, 2017). The implication for NT schools is that having Aboriginal teachers in classrooms will raise the expectations and therefore the 'success' of the students in their schools.

Barriers to retaining teachers in remote community schools

High rates of teacher attrition in remote schools also negatively impacts on student attendance and achievement. Quin (2016) argues that this is due to students not being able to build relationships with teachers primarily due to the lack of staff or constant change over of staff in these schools. Quin also identifies strong links between these issues and the very high attrition rates of the staff who are employed in rural and remote areas concluding that the situation in the NT is worse than anywhere else in Australia.

Media reports support this with around 70% of NT students attending schools in which principals had reported a lack of teaching staff with the next highest attrition rate reported for Tasmania, where 37% of schools lacked enough staff (Shipway, 2017). This is supported by research such as that by Downes and Roberts (2018) who argue that, despite decades of reviews and policy change, and the availability of more nuanced research, rural and remote schools remain hard to staff, and retention is difficult. It has also been found that around 16% of NT teachers leave their job each year; more than double that of any other Australian jurisdiction (Aisthorpe, 2016). The implication is that teachers appear to be reluctant to apply for NT teaching positions and, if they do take up NT positions, they don't stay long.

2 Source: NT Department of Education (2017)

Related reports have found that NT teachers were more likely to suffer violence in the workplace (Shipway, 2017) and a third of teachers were on short-term contract, which could be further disincentive for them to work remotely (Shipway, 2017). NT teachers also encountered a higher cost of living, limited housing options, isolation, and a general feeling of culture shock (Ross, 2015). The inability of the NT education departments to both attract and keep its teachers is therefore understandable. Getting teachers to NT urban areas has become a massive challenge for the Government; enticing them to work in remote communities has been almost impossible. Government incentives have been tried, but have not been working (Ross, 2015). Quin (2016) rightly argues that these issues have had an extremely detrimental impact on both student engagement and attendance.

Alternative approach used in Growing Our Own to overcome these barriers

In response to all these difficulties and feedback from Aboriginal educators, a group of passionate Territorian educators from Charles Darwin University and the Catholic Education Office began to look at the problem from a different perspective. Instead of focusing on how to attract and retain quality teachers from distant metropolitan areas (who eventually or immediately left the remote area), why not focus on training Aboriginal people from within Aboriginal communities to be teachers?

A vision for *Growing Our Own*, grew from this group and, in 2008, they established a program that was to provide a generation of qualified Aboriginal teachers for remote Aboriginal schools while maintaining the integrity of Aboriginal communities in remote NT. The program was unique in that it delivered a Bachelor of Education (Primary) to Aboriginal Teaching Assistants in NT Catholic school, for the most part, in their home communities, where they concurrently worked as Aboriginal Teaching Assistants for three days a week, while attending university, in situ, on the other two days of the week. Student retention in the *Growing Our Own* program, and subsequent employment rates, have been impressive, with 74% retention and 90% employment. These percentages have been considerably higher than national standards across any other program offered for the past 10 years (CDU, 2017).

Pedagogical approaches of Growing Our Own

Growing Our Own has begun to build a pool of teachers that are already established in communities through a combination of three different pedagogical approaches in order to address these long-term issues in the NT. The pedagogies—work-integrated learning, place-based education, and a two-way (or both ways) teaching philosophy—overcame many of the issues of educational costs, and of students needing to leave family and community to gain a teaching degree. Given the levels of poverty and family/cultural responsibilities in Aboriginal communities (especially remote ones), these are significant issues to be overcome.

Though not without their limitations, integrated learning and place-based models have proven to be an effective way to prepare indigenous people for the workplace across the world. In the NT, these integrated, place-based learning models are helping to 'bridge the gap' between westernised epistemologies and Aboriginal ways of knowing with the incorporation of a two-way or both-way mode of learning. *Growing Our Own* provides learning processes that are enhanced by existing Aboriginal Teaching Assistants being immersed in a learning community (the classroom), which gives them the ability to apply an academic, pre-service teacher training program in practice through an integrated teaching model (Dornan, Boshuizen, King, & Scherpbier, 2007). Through respectful compromise, targeted approaches to teacher training, and examining research to avoid repeating past mistakes, *Growing Our Own* works to strengthen its effectiveness and reach. These three pedagogical approaches are briefly described here.

Work-integrated learning

Work-integrated learning is given to a program that integrates academic learning with immediate application in the workplace. No matter the context, students immediately acquire practical skills through exposure to the real world while receiving 'traditional' education. In the case of the integrated learning

model used for *Growing Our Own* teacher education, participants work as Aboriginal Teaching Assistants and attend formal education classes. They are supported in this endeavor by both classroom mentors and a *Growing Our Own* mentor located in the school.

Work-integrated learning has numerous advantages both for the student's personal/work development and for their professional development. Stewart, Meadows, Bowman, van Vuuren & Mulligan (2010) suggest that, while students tend to feel challenged by work-integrated learning and often have a heavier workload, they recorded positive outcomes. These outcomes included:

- significant shifts in their commitment, enthusiasm, and motivation;
- immediate feedback through workplace training and supported self-directed learning and collaboration;
- the mixture of workplace experience with 'traditional' classes helped the students to develop notetaking, critiquing, interview, and executive functioning skills.

Additionally, the role of the classroom mentor and the *Growing Our Own* mentor in work-integrated learning is vital. Westhuizen and Kesa (2014) found the most common advantages of being mentored was improved self-confidence and self-image, a sharper focus on career aspirations, the improved visibility of the mentee within the school/organisation, and the role modelling possible by the mentor for the mentee. All these benefits have been incorporated into the *Growing Our Own* program.

Place-based approach

Broadly, 'place-based education' has philosophical underpinnings dating back to John Dewey, Paulo Freire, Gregory Smith, David Sobel, and David Gruenewald (Deringer, 2017). It refers to targeting an entire community to address issues that exist within a specific location, generally at a community level, and is based on the belief that education and the experience of living cannot be separated. This ensures that the unique needs of every community are identified from a local perspective. The approach aims to help improve the health and well-being of those living in a specific area, enhancing the engagement of students and their overall performance.

Research has indicated that place-based education enhances the engagement of students and their overall performance (Smith, 2007, as cited in Molyneux & Tyler, 2013). It was shown that students who were engaged in real-world learning were more likely to succeed than those who learnt the same material from textbooks (Powers, 2004, as cited in Molyneux & Tyler, 2013). For example, a case study in India found that teaching must honour the lives of students and their pre-existing linguistic, cultural, and experiential knowledge, and teachers must view the local community and lifestyles as catalysts in learning, not as a deficit (Molyneux & Tyler, 2013). The act of harnessing existing knowledge and resources empowered students and led to a transformed classroom. The key to this transformation was unpacking and celebrating the collection of an individual's knowledge, experiences, and questions, which are often marginalised, ignored, or dismissed (Molyneux & Tyler, 2013).

However, one obstacle to place-based learning can be the reluctance of teachers to use the approach (Howley, Howley, Camper, & Perko, 2011). This reaction epitomises the challenge of abandoning 'traditional' teaching methods for progressive instructional methods with a focus on place and the environment. At an institutional level, *Growing Our Own* lecturers often use a place-based approach in their units of work. Most lecturers have adapted their curriculum to incorporate community understandings and knowledges into their learning, and they continue to learn and adjust as they work in the *Growing Our Own* program to enhance the learning experience of the *Growing Our Own* students.

'Two-ways' or 'both-ways' teaching philosophy

'Two-ways' or 'both-ways' philosophy centres around a partnership between Aboriginal and non-Aboriginal people. It recognises that both groups can learn from the other. Relationships are built on compromise and respect and rely on education occupying a neutral space where neither side assume authority or

dominance. Teaching, therefore, must occupy a neutral space between westernised ways of 'doing' education and Aboriginal cultures, where neither side takes up a position of superiority, dominance, or authority (Purdie, Milgate, & Bell, 2011).

The contributions of two-ways/both-ways learning suggest that there is a professional determination to see effective and sustainable change towards equal education. Overwhelmingly, scholars agree that the answer to this does not lie in merely creating an education system that simply places Aboriginal content within an essentially western curriculum. For an educational system to be truly effective, Aboriginal people need to feel some healing from the wounds caused by colonisation, historical trauma, racism, and disparities in health, education and living conditions (Chino & DeBruyn, 2006). Healing will not come from ongoing feelings of dominance and authority, but through compromise, negotiation, and respect. Australian research has shown that Aboriginal students struggle with westernised curriculum and testing. Furthermore, it was suggested that non-Aboriginal educators were detached and disengaged from Aboriginal social and cultural influences, and that this had greatly impacted on Aboriginal attendance, self-esteem, academic performance, and led to continued non-Aboriginal ignorance of Aboriginal ways of being (Purdie et al., 2011). In contrast, 'two-ways/both-ways' philosophy infers a partner relationship between Aboriginal and non-Aboriginal cultures. During the design stage, this approach was captured within the *Growing Our Own* program.

There is no doubt that language presents a difficult hurdle and cannot easily be remedied through compromise. With over 100 spoken languages within the NT, it is a major challenge to ask non-English-speaking teachers from Aboriginal communities to teach their lessons in English. However, it's important to remember that Australia is not the first country to face this challenge. When Papua New Guinea, for example, approached education by using a multiplicity of languages as a tool for improving teaching and learning, this helped the country move towards more equal education for all (Klaus, 2010). In the early 2000s, the country began a gradual introduction of the use of local indigenous languages in the early years of basic education, in contrast to their previous education system, which used English as the only medium of instruction (Klaus, 2010). Subsequent research has shown that students who attended schools using this approach became literate more quickly in their 'native' tongue, and learned English more quickly and easily than students of the past methods (Klaus, 2010). In addition, students were more excited, pro-active, self-confident, engaged, and inquisitive about learning as a result of this initiative (Klaus, 2010). A similar approach has been employed in the Philippines (Laureno, 2016) with education beginning in children's 'mother' tongue, and progressively moving to a full English curriculum over several years. Training people locally was paramount in this transition. Under the reform, local members of the community received basic training to be teachers within their home community. An obvious drawback to this approach was if untrained teachers lead instruction during kindergarten, Grade 1, and Grade 2; three very formative years in education (Klaus, 2010). However, *Growing Our Own* addresses this issue by providing a Bachelor of Education (Primary) for its Aboriginal students.

Theoretically, the combination of the three pedagogical approaches within the *Growing Our Own* program should be successful and have obvious benefits for both students and teachers. The obvious next question was therefore to ask the *Growing Our Own* students what they thought.

Methodology

In order to collect *Growing Our Own* student perceptions without lecturer influence, we accessed a very open research methodology, a collective biography. A collective biography, in the tradition of Haug et al. (1987) and more recently the work of Davies and Gannon (2006, 2011), allows for multiple recollections to become one 'voice' in relation to a set theme. This method allowed us to collect reflections from the *Growing Our Own* students and express the common thread found within these as one *Growing Our Own* student voice.

In choosing this method we were conscious that the *Growing Our Own* students ought not to feel influenced by their lecturers, and it was decided that we would bring in an 'outsider' to take the position of the 'etic' (outsider) researcher to combine with the experience of the lecturers giving an 'emic' (insider) perspective during data analysis (Pole & Morrison, 2003). Our 'outsider' was external to the *Growing*

Our Own program. The process involved a discussion with the *Growing Our Own* students about the research and data collection and emphasised that they did not have to participate in the research or could withdraw at any time.

The *Growing Our Own* students and our 'outsider' then designed the theme that they wanted to address about *Growing Our Own*. This was a risk, as we could have ended up with data that may not have related to anything we wanted to know, but it proved effective. The students were given the option of responding either individually or in groups to the questions they designed and the choice of journaling or recording their responses. We do not know how many individual participants provided data, as most responses were recorded and journaled in groups. We do know that four 'sets' of data were analysed. All written responses were received as typed text, as the *Growing Our Own* students typed their reflections directly onto their laptops and provided a copy to our 'outsider'. Verbal responses were transcribed into typed text later by our 'outsider'.

A Foucauldian discourse analysis was then applied to the textual data to explore the ways in which the students spoke about the *Growing Our Own* program, the lecturers, and the institutional and local community structures and demands. A Foucauldian discourse analysis focuses attention on the power relations that exist within the text (Humphry, 2014). In this case we were looking for the ideas, the structures and the influences that created ease or difficulty for the *Growing Our Own* students while they were studying in the *Growing Our Own* program. As part of this process, the 'sets' of data were collated, and various factors were identified as being embedded in the ways the *Growing Our Own* students described their experience of the *Growing Our Own* program. From the textual data, we identified factors that acted to liberate or constrain the students' efforts to engage freely in the BEd(Prim) program. These notions form the basis of the following analytical response. Three main ideas emerged from the data: success; the juggle of cross-cultural expectations; and time.

The following analysis is presented in two sections. Firstly, a brief summary of the ideas that came from the students' data is provided so that we can hear what they had to say about the *Growing Our Own* program in a pragmatic way. This material not only covers the positives of the program, but also includes critical and constructive feedback. Reflections of this nature were enabled by the openness we built into the research process and our willingness to accept this as a way to engage with the ongoing improvement of our practice. The students' openness came from students designing their own questions to which they responded. Their questions not only allowed discussion about what was working but also gave the opportunity to express strongly felt concerns that had arisen during their *Growing Our Own* experience.

The Growing Our Own students speak

The *Growing Our Own* students spoke strongly of factors supporting their ability to engage in *Growing Our Own*. In the next section, the notion of time will be expanded to explore more closely the issues of power embedded in the language used by the *Growing Our Own* students when they spoke about time. However, here we will look at the more pragmatic issues of relationships, flexibility, culture, success, and time raised by the students.

... of relationships

One of the big advantages of the *Growing Our Own* program was that the students had an intimate knowledge of the community, the families and the children with whom they were working. The program allowed them to tap into this knowledge by keeping them primarily in their community's school. This allowed them to build on their existing connections to the advantage of both their work and their study before transferring this knowledge to their final placement in a school outside their community. *Growing Our Own* gave them a way of being able to put what they learned into practice and the students saw the value of this approach.

Working in the community and with students that you have grown around gives you an advantage of being able to study in a context that you know and best suits you.

They were proud of the connection they had been able to make through their study (the theory) and work (the practise) and wanted to share these changes as they began taking on more of a teacher identity.

The lecturers need to come and see how the Growing Our Own students work and visit their classrooms where they go and to see them how they have built up their confidence.

The students acknowledged that it was the *Growing Our Own* program that had allowed the connections to happen. However, they also explained that great flexibility is always needed if they are to do the juggling required in their lives. As discussed below, their family and cultural responsibilities would always come first.

... of sanctioned and embedded flexibility

The students commonly spoke about *Growing Our Own* as being 'enabling' for them. Their talk of enablement was always connected to their talk of negotiating their lives, especially their negotiation of study, work, family and cultural responsibilities. Students appreciated the inbuilt flexibility of the *Growing Our Own* program that allowed them to effectively juggle their life circumstances.

What works best in the program is that you are able to study (part time) and work (fulltime) at the same time, which is a good incentive when you have a family you need to support.

The significance of family and cultural responsibilities was a constant presence in the way they spoke of the *Growing Our Own* program.

It is really hard leaving family behind because there is a lack of family support. E.g. a father looks after the kids whilst their mum is in Darwin and plays the role of being both parents - mum and dad.

There is a time, we have to make a time, when it comes to sorry business and family meeting, community meeting, ceremonies, and all cultural awareness.

Like we have a kid, parents to look after, family's kids, you know sisters and brothers. Um, and when we have elderly person passed away, or there has been a passing in the community.

And we have sorry business, and some other responsibilities, responsibilities to the community, when we leave the classroom, and we leave the assignment in the middle.

The students expressed a feeling of pressure due to these multiple expectations. The problem did not seem to be that students had these responsibilities but that they needed the space to juggle the competing needs of culture/family and work/academia. Culture/family did not seem to have the space to accommodate this need and was therefore given priority as can be seen from the following statements:

Families might give us problems for missing out on things.

The lecturers need to know that when we are not there is it because we got responsibilities. And those responsibilities that we are responsible for.

The students suggested that, to be supportive of them, *Growing Our Own* lecturers therefore needed to,

Understand that what we do in life, basically in our remote communities, a non-indigenous person would not understand where we, and how we, stand and how we live.

These responsibilities meant that some academic requirements, such as the two internal intensive study weeks held at the CDU campus each year became a challenge for some of the students.

Although travel only covers about 1/10 of the school year, it is challenging to organise your family commitments when you are away. This includes picking up/dropping children off to school/day care and can create stress for the other partner who has to juggle their work commitments and family life for that given week. It also affects family income for that week if both parents are working due to the other taking off time to ensure family commitments are upheld. E.g. finishing of work early to pick up children.

These issues were often expressed in our visits to community and were a concern of our female students. While these women were not stopped from participating in the *Growing Our Own* program, they found varying levels of support from family/culture. In some circumstances, our students' community/family did not recognise that their women do this type of 'organisation' daily and then have to add study on top of their work and family obligations. 'Family' was not seen as men's responsibility and therefore, it became problematic for women when additional requirements were put in place by the academic culture. This is not meant as a judgement but an observation of what *Growing Our Own* students needed to negotiate.

Anecdotally, the *Growing Our Own* lecturers were very aware of the issues raised by the *Growing Our Own* students and worked alongside them in trying to help negotiate the culture/family and academic/work tensions. However, we (lecturers) also struggled with a lack of support from academic and bureaucratic structures that were not prepared to adjust to the flexibility required in the *Growing Our Own* program. In some cases, we were trying to act as a buffer between this and our students. For example, the government requirement for LANTITE testing (in English) of people operating in English as their third or fourth language, may preclude many of our students from graduation. One of the most valuable aspects of having the *Growing Our Own* students as teachers in classrooms is their bi/multilingualism, particularly in the community's mother tongue, a skill which renders many white teachers ineffective in overcoming the statistics presented earlier in this paper. Lobbying of government was one area being addressed to support *Growing Our Own* students. There is no requirement for any other CDU students to be competent in multiple languages, so this issue was unique to *Growing Our Own*.

.... of cultural knowledge and the way we learn

The students had advice for the lecturers they worked with to understand the communities and culture they were engaging with:

We need more time. The lecturers need to know what we do in our own communities and school.

Some need to be informed of certain specific aspects of communities, as the context can be vastly different from community to community. This information is something that students of specific communities should be able to deliver, however they may need guidance if lecturers are looking for specific information.

But, in general, the *Growing Our Own* students supported the idea that most lecturers usually took the time to find out about each school's community context and work with it.

Yes, they do know about our school, our community and how it operates.

Growing Our Own students also had several very clear messages for lecturers and the program stakeholders (schools, university and Catholic Education Office (CEO), their mentors and mentor teachers and lecturers) that would help with their ability to do their work and study. Each of the following is simply good educational practice, easily done. Students suggested that *Growing Our Own* maintains a shared vision and clear communication.

Communication and liais[on] between schools, CDU and CEO could be improved.

The need for a clear purpose/direction that was shared between these stakeholders was emphasised by students. Students spoke about having to deal with conflicting information at various times. Again,

the notion of competing demands was raised, this time between the three major institutions involved in *Growing Our Own*, as they tried to work together with students. Clarity between the three is therefore important so that confusion does not manifest within the program.

Growing Our Own students also wanted academics to talk less!

There is too much talking coming from the unit lecturers. We would like the lecturers to talk less and get us more engaged in their units.

Here is a very straightforward, simple, and slightly embarrassing request for academics to 'practise what they preach'. It is a timely reminder that as lecturers (many of us ex-school teachers), we need to actually engage in the practices and theories and philosophies we are teaching about.

... of success

Growing Our Own students thought that overall the program worked well and was a success.

I believe the program works. It has been proven to allow Indigenous students from remote areas to successfully finish their teaching degrees. It has allowed me to have a Growing Our Own level of academic support while studying and working full time. There are a lot of factors which also contribute to this success, but the program definitely works.

Students were proud of having their own *Growing Our Own* room to work in with the CDU lecturers and mentors. They could also access new information that was not available to them outside of the *Growing Our Own* program.

The program is currently working well at the moment, because we learn a lot of new knowledge that we have not heard or know of before. The program is also Growing Our Own because we get to do courses in our local community and our lecturers and Growing Our Own coordinators get to come over to work with us two days a week in the Growing Our Own classroom.

Finally, what they did see was of great benefit was that, regardless of whether they managed to finish the BEd(Primary) degree or not, they considered themselves privileged to have been involved in the *Growing Our Own* program.

The benefits I see from completing the program are becoming a teacher, stable income for my family, becoming a role model for my community and young Indigenous people. Even if I don't complete the program, gaining experience and knowledge from what you have learned helps to improve how effectively you are able to do your job. So, I could say that I have already benefited from the program without completing it yet.

... of time

Growing Our Own students talked about preferring to focus on one large task at a time rather than having multiple and competing activities. This was a distinct need being expressed by the *Growing Our Own* students about their university work. For this to happen, they wanted more time with the lecturers. The assumption here is that students would like more time with lecturers in community, rather than online.

We need more time and attention from the lecturers.

We need more time with lecturers, actually. You know, they come out to visit communities so we need more time with them to talk about our assignments, work, studies.

The purpose of this time seemed to be primarily assistance with assessment work.

We also need catch up time on the assignment that we are doing. So, whatever assignment that has been delivered to us, we have to continue on that and the other assignment that comes in has to wait until we finish up the assignment.

When we come back we have to continue on with the same assignment instead of moving on to the new one. That is confusing us.

Students spoke of the pressure of the constant demands of a time-based, academic system. They needed the academic process to slow down and wait for them, so that they could focus on one task at a time rather than being confused between multiple tasks. They needed this to happen with the assistance of the lecturers. An important part of this assistance was lecturers making time for feedback when they were not physically present in community or when the students were at CDU for intensives.

[It] is challenging to get regular feedback from lecturers when you only have email and phone to rely on, as there is no time given to liaise with lectures after the intensives.

Time also impacted by the structure of the program.

Each community is allocated different times to study, this could be due to funding or the discretion of the host school that this is determined.

Time seemed to equate with success. The length of time related to the depth of success. For example, the 10 years that *Growing Our Own* had been established equated to a successful program.

The program works, the Growing Our Own Program, because it has started, well we are coming up to ten years now, so it would be in 2007, 2006 around there. So, this program here, this Growing Our Own, is working well with our four communities. Wadeye, Daly, Bathurst Island, and Katherine at St. Joseph College.

Similarly, lack of time was equated with a lack of success. While we recognise that, as with any teaching circumstances, some students found the work easy and others struggled, some could put in large efforts, others were limited. Therefore, there were contrasting responses such this quote compared the next quotes. Here the student is happy with the time given.

Um, the week has been set up for two days. It is good from my perspective. It is set from Tuesday to Wednesday.

However more of the students' comments were requesting additional hours be added to the days that lecturers visited.

But I would like to see in the future, would like to see that, um, can we finish up and go more than 2:30? Because when we do the two days in GOO we start at 8:30 - 2:30, which is not enough time. I reckon we should start at 8:30 - 4:00 and that would give us more time to finish off an assignment.

... we would need more extra times together from 8:30am to 3:15pm. This would give us more time to complete our Assessments and Assignments.

I believe that I am not given enough time (6hrs per week) to study a 4-year Bachelor degree. This puts more stress on a student over a long period of time and can be hard to maintain study focus for more than 4 years.

When asked themselves whether they get enough time on one assignment before being asked to work on another assignment, *Growing Our Own* students generally agreed that the lack of time between assignments was an issue and the multiple tasks being requested simultaneously was hard to juggle.

No, because we only spend two-days in GOO and 3 days in the classroom and this makes it hard for us to complete one assignment [and move] to another.

It can be difficult to cover what is necessary for understanding, but this is more due to time constraints than the lecturer visiting.

The way in which the academic culture required *Growing Our Own* students to move through the course did not suit most students. Lecturers therefore acted as the bridge between academia and the *Growing Our Own* students, particularly for their assessment work. There was a suggestion that lecturers should make sure that *Growing Our Own* students had completed the current assignment before a new lecturer was sent to the community for a new unit/assignment.

It is. Because, um, when the lecturers come to visit our community to deliver the, any assignment which we all do, is when it comes to that assignment and the lecturer who is delivering the assignment to us, we need to stick with the lecturer and the assignment they are delivering to us to finish it off before changing it into another lecturer or another assignment.

Time and power

The analysis of this data suggests that, within the *Growing Our Own* program, time appeared to produce a form of power. Each of the four data 'sets' spoke of the notion of time to describe their participation within the *Growing Our Own* program. Time impacted on their lives, which impacted on their participation and thereby determine the success of their participation in the *Growing Our Own* program.

When students described time in a linear way (one event after another), they were also describing competing demands that required negotiation, created stress and produced difficult choices around their time as a student. Successful negotiation of these lineally described events generally required students to prioritise their actions and the order of importance of the events. This was viewed as a negative experience where hard choices had to be made. The *Growing Our Own* students saw only one way to succeed, and this meant putting one priority ahead of another and acting on each in turn. The only way they saw to overcome this pressure was to gain 'more time' which allowed them to engage with both priorities.

When students described events as synchronous (happening simultaneously), their talk of stress and competing choices and priorities was not present. In these descriptions, one event did not need to dominate another. Events were described as occurring without the negative impacts on the student. It was interesting to note that a) different students had different reactions to the same event. A description of an event could be linear for one group/person and synchronous for another; and b) talk could move from a linear discussion to a synchronous discussion if 'time' was altered. To describe this use of the language, specific examples from the data have been used, although these findings were reflected across all the data.

Linear time

The use of linear time in student talk was particularly prominent when the *Growing Our Own* students spoke of their ability to meet the competing demands of both a tertiary educational culture and the multiple aspects of their Aboriginal heritage. Where these two cultures (academic and Aboriginal) intersected and competed, time became a scarce resource and *Growing Our Own* students struggled to resolve the competing demands within that space.

The negotiation process required by students appeared to be accompanied by a lack of acknowledgement, by either culture, of the demands each was making on the *Growing Our Own* students. Students always chose to meet the demands of their Aboriginal culture, in which family and 'sorry' business were a priority, before meeting the demands of the academic culture.

Growing Our Own students then also prioritise action in a linear way. Their first priority, for example their family, took precedence over their next priority, for example their assignment work. This is demonstrated in the following extract from the data.

There is a time, we have to make a time when it comes to sorry business and family meeting, community meeting, ceremonies, and all cultural awareness. Just what we need more time and attention from the lecturers. The lecturers need to know that when we are not there is it because we got responsibilities. And those responsibilities that we was responsible for. Like we have a kid, parents to look after, family's kids, you know sister's and brother's [children]. Um, and when we have elderly person passed away, or there has been a passing in the community. We need more time. The lecturers need to know what we do in our own communities and school.

Here, time for family and Aboriginal cultural activities was the chosen priority. The *Growing Our Own* students' response suggests that it was important that this be understood by the academic culture because Aboriginal culture had been prioritised over academic culture. The responsibility to Aboriginal culture was always greater than to academic culture. This means that time was devoted to Aboriginal culture first and then to academic work second. "The lecturers need to know that when we are not there it is because we got responsibilities."

In effect, this is a request to draw time from academic work in order to meet the time demands of family and cultural responsibilities: "Just what we need more time and attention from lecturers".

The events are also described one after the other. First, 'cultural responsibility' takes ownership of their time; second, lecturers and students exchange time. Again, in saying this, there is no judgement as to the choice (this is likely to be the same choice for many university students), just an observation of how this linear time allocation and prioritising was conducted.

And we have sorry business, and some other responsibilities, responsibilities to the community, when we leave the classroom, and we leave the assignment in the middle. When we come back, we have to continue on with the same assignment instead of moving on to the new one; that is confusing us.

Similarly, in this quote, Aboriginal culture is prioritised and there is a request to draw time from academic work. The language is assertively stating that academia should help students make up time that has been lost rather than forcing an arbitrary finishing date for their assigned work. The assignment will be put on hold while students looked after their other responsibilities and it is very important for lecturers to understand this point. When the *Growing Our Own* students return to the academic culture, lecturers and mentors need to be aware firstly, of the priority given to Aboriginal cultural responsibilities, and secondly, that time will need to be given for them to complete their assignment before starting on the next one.

The linear language drawn on by the students sounded almost desperate; 'we have to make time', 'we just need more time', 'lecturers need to know', 'we need more time', 'lecturers need to know what we do', 'we have responsibilities', 'we leave in the middle', 'we have to continue', '[it] is confusing'. The students use of these types of phrases indicates a point where the academic culture can act. It is at this point that alternatives can be put in place and students can be supported to negotiate around their study responsibilities. Negotiation of other support in communities might also be an option and could free up time for the academic requirements, but this may not be a high priority for Aboriginal students.

Synchronous time

When students described time in synchronous ways, they described events as happening simultaneously. When *Growing Our Own* students spoke of events synchronously, it appeared that they felt they had the power to achieve their goal of education. When time was spoken of in these ways, there seemed to be less pressure on students. The use of 'and' was prominent. Things fell together without the need to manipulate or prioritise time.

It has allowed me to have a good level of academic support while studying and working full time.

What works best in the program is that you are able to study (part time) and work (fulltime) at the same time. Which is a good incentive when you have a family you need to support.

The program is also good because we get to do courses in our local community and our lecturers and GOO coordinators get to come over to work with us two days a week in the Growing Our Own classroom.

These reflections from *Growing Our Own* students show that they are aware that negotiating between their responsibilities to family and community, and their commitment to academic study, is a large part of their learning through their participation in the *Growing Our Own* program. Their language is far from the stressed language of linear time in these quotes; 'allows me', 'support while xx and xx', 'you are able to xxx at the same time', 'good incentive when...', 'we get to ...', 'come over and work with us'. There is no sense of juggling or prioritising here, just confidently getting on with what needs to happen. It appears to indicate the level at which students are comfortable with the demands being made of them. It also strongly suggests that the overall organization of the *Growing Our Own* program is successful from their perspective.

Applying Time

The following, final quote shows where the overlap of linear and synchronous time occurs in the *Growing our Own* students talk and is also reflected in the quotes above.

The weeks intensives are more than enough time spent with lecturers to help with the unit being covered, however it is when students are sent back to the community and left to pick up where we left off, that the time catches up.

Here, synchronous time ('more than enough time') was consistently drawn on in relation to the overall organisation of the course. Linear time ('sent back', 'left to pick up where we left off' and 'time catches up') is consistently prominent in talk of the minutiae of unit and assessment work, and the negotiate of this with community and family responsibilities.

Conclusion

For students to gain the best from the *Growing Our Own* program, we went to them and asked them what they wanted to tell us about the program. They told us that they enjoyed being involved in the *Growing Our Own* program; they felt successful; and they were confident enough to want lecturers to share their pride in their development as teachers and to tell us to 'stop talking so much'. However, the students found it difficult to negotiate the competing demands of Aboriginal and academic cultures while undertaking their study. This competition was expressed through their use of linear and synchronous language about time.

Linear events seem to hold a dominating power over students and have the potential to be damaging, whereas synchronous events seem to free students to participate in the multiple areas of their lives comfortably. Reducing or altering linear events would allow for better and more fluid participation of students in the *Growing Our Own* program and, wherever possible, events should be structured so that students can speak of them as synchronous. We need to focus on ways to make this happen. The examples above suggest that the overall organisation of the '*Growing Our Own*' program is not an issue. They also suggest that a look at the language being used can quickly identify if students are coping with what is being done within the program.

However, a focus on the management of time is suggested and should be carefully considered. We need to explore how certain events come to be synchronous (i.e. the overall organization of *Growing Our*

Own) and others are seen as linear (the competing demands of assessment and unit work with family and culture) and focus on how to change 'linear' events to 'synchronous' events. While care needs to be taken for flexibility not to become an excuse for incomplete work, there are very strong reasons for time flexibility to be given consideration.

The overall message from our *Growing Our Own* students is that, like the perception of the *Growing Our Own* lecturers, *Growing Our Own* works for them. What we need to ensure is that this remains the predominant view and that we, as lecturers, continue to maintain open communication with our students and continue to listen to them to make ongoing improvements.

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The red dirt stays in your shoes: Reflective practice and both-ways learning

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Keywords: Indigenous; teacher education; reflective practice; narrative

Abstract

This paper tracks the pedagogical genealogy that informs the delivery of the Growing Our Own program: longstanding and continuous commitment to Indigenous education from the Catholic sector, navigations to include bilingual education, and the articulation of both-ways learning and red dirt pedagogy. This mapping is interspersed with some poetic signposts, from an undergraduate participant and the author, as artefacts that illustrate enactment and embodiment this approach to teacher education: how the undergraduate participants can be empowered by the program, and how teaching in the program demands reflective, reflexive and perhaps transformative practices by the lecturers.

Introduction

The footprints of educators and teacher educators cross the breadth of the Northern Territory (NT). These have shaped the development and delivery of the Growing Our Own (GOO) program and continue to leave signposts in the Indigenous education landscape nationwide. The GOO program is delivered in partnership by the Catholic Education Office and the College of Education at Charles Darwin University (CDU). It has grown from the forerunner educators and institutions in the NT: the Northern Territory Department of Education; Batchelor College, now the Batchelor Institute of Indigenous Tertiary Education (BIITE); and Darwin Community College's evolution into the Darwin Institute of Technology, then the Northern Territory University, and now Charles Darwin University.

The GOO program operates in a selection of Catholic schools under the remit of the Catholic Education Office NT. It is, in many respects, an evolution of the sustained Catholic commitment to Aboriginal education in remote and very remote communities since the 1800s. It is fitting that the first NT mission school began in Daly River in 1886 (O'Loughlin, 1986) and is today producing graduate teachers from the GOO program.

The program draws its heritage from 1950, when the Commonwealth Government assumed responsibility for remote Aboriginal education and, with bipartisan agreement, deemed that bilingual education was desirable. This marked an important signpost for the direction of Aboriginal education because Aboriginal students in remote and very remote areas are bilingual or multilingual. That reality needed to be accommodated if their success in education was to be assured. A genealogy of how this significant challenge has been met, or not, has been tracked by Nicholls (2005), and more extensively in mappings of bilingual education in the NT by Devlin, Disbray and Devlin (2017). Qualified Aboriginal teachers were needed, and are still needed, and this challenge continues to inform the delivery of programs such as GOO. Connection to land, home, family and culture in which language is integral, hallmark indigenous identity and the program seeks to fulfil these aspirations by delivering Initial Teacher Education (ITE) degrees on-country. Bilingual education remains a perennial challenge faced by educators, policy makers and communities who strive for equitable education outcomes for Indigenous Australians and finding ways to utilise the various language assets of the students within a mainstream education degree continues to both enrich and at times challenge us all.

The quest for equity in education and teacher education in Indigenous contexts has also been mapped by Guenther, Bat and Osborne (2014) whose scholarship into democratic, compassionate and equitable pedagogies they called red dirt thinking. This work was occurring contemporaneously with the GOO program, and, sharing such a philosophy and requiring culturally responsive and practical pedagogy (Guenther, Disbray and Osborne, 2015) their red dirt approach continues to resonate with me. Guenther, Disbray, & Osborne (2015) have sought alternative indicators of 'success' to match the aspirations of local people living in remote communities. In this paper I extend the metaphor to reflect on my own experience, and potential indicators of the teacher herself.

A lecturer on-country

Academic staff arrive in remote communities equipped with skills, knowledge and student-centred pedagogies but, invariably, with scant knowledge of the languages and cultures of our students. My uncertainties were keenly felt, and I wrote:

I pick up the 4XD twin cab at 6:00 and am on the highway by 6:30 a.m. getting some distance before the rising sun reaches cabin height. The Bureau of Meteorology site says that the road in is still closed, but the school has confirmed that it is open. I hope there will be no more rain. I pass a few road trains and reach the first turn-off, and I'm into the windy stretch past hills and termite mounds, hoping that no wallabies spring out onto the road. A few hours on and I reach the community. It's their first subject in the course, Academic Literacies. We are a couple of weeks into it, and each time I go down there, I rack my brains to find points of engagement, relevance, or even faint enjoyment. In this remote classroom, the conventions of the academy are sifted, summarised, redrafted and crafted (there will be no plagiarism here) and referenced (meticulously). It is so white, so prescriptive, so alien. I am white, prescriptive, an alien.

The elders sit outside under a tree. They are keeping an eye on the students, and me. It is important that we all get through. (Smith, 2017, p.54-5)

As Lowell and Devlin (1999) found, even with good resources, careful preparations, scaffolding the learning and with the best of intentions, miscommunications between Aboriginal students and their non-Aboriginal teachers will be inevitable. It was incumbent on me, the academic, to work to mitigate these barriers if academic progress was to be made. Learning could only occur in mutuality with the teacher learning from the students, and for the students to be learning from the teacher. This pedagogical reciprocity is now known nationally as both-ways learning.

Both-ways learning

Both-ways education is about allowing the students to have the freedom to be who they are, yet at the same time empowering them with essential knowledge, skills and concepts from the western domain to enable them to make key decisions in their lives, be they professional or personal. (Ober, 2004, p.9)

A both-ways teaching philosophy, as elucidated by Ober and Bat (2007), enabled both Indigenous and western knowledges and ways of learning on campus, on-country or in workplaces. Batchelor Institute of Indigenous Tertiary Education that had been providing tertiary and further education to Aboriginal Teaching Assistants since the 1960s had embedded this culturally responsive, both-ways pedagogy throughout their courses. Educators at CDU were inspired by the potential afforded by this approach and drafted a submission to the Federal Government for a program that would join culturally relevant knowledge, and ways of being and doing, with contemporary curriculum and pedagogy (Elliott and Keenan, 2008). This was the genesis of Growing Our Own.

The cultural interface

From the outset, the GOO program presented a bold innovation in higher education teaching. Founding educators, Slee and Keenan (2009), a former CDU colleague and a Catholic Education Office Deputy Director respectively, recognised that the requisite intersection between higher education and Indigenous experience in the GOO program was complex and required flexibility at all levels of the system for it to work. Teaching and learning occurred at cultural interfaces, constituted by points of intersecting trajectories that would take detours, sometimes stall, and forge new paths. Teaching and learning Growing Our Own is always a multi-layered and multi-dimensional space. Nakata (2007) describes the space: one of dynamic relations constituted by the intersections of time, place, distance, different systems of thought, competing and contesting discourse within and between different knowledge traditions, and different systems of social, economic and political organisation.

GOO students are Aboriginal Teaching Assistants seeking to become qualified as registered teachers. They hold language, cultural knowledge, and a contextual understanding of education in their communities. Listening to these students, hearing them, learning from, and crucially, affording respect through responsive action has contributed to the longevity and success of the program. This is illustrated in the poetic provocation below, delivered by a student at the launch of Growing Our Own in Wadeye:

*Come meet us half way
It's time for you to...learn about us*

*You will learn real story about me in my own environment, in my own homeland
Come with me to my place
See me as I am*

*I will help you understand me...
Come meet us halfway
You will learn about us for who we are*

*This will help you to teach our children in a real way
It will help you at school
It will help you in the classroom
It will help you become wise
It will help you build strong respect towards us and toward yourself*

*The way of teaching Aboriginal children will start to become clear... clear... and CLEARER
if you willing to meet us halfway with an open mind and heart!*

Tobias Nganbe, speech at Growing Our Own launch, Wadeye, 29th May, 2009 (quoted in Thornton, Giles, Prescott & Rhodes, 2011, p. 236).

Nganbe's advocacy continued at an Indigenous Catholic Community Schools Leadership Meeting in 2009. The meeting coincided with the roll out of the First Four Hours of Every School Day in English Policy. He and his colleagues expressed their community's concern that the emphasis on students' performance on standardised tests at Year 3 and 5 was overshadowing first language and culture learning. They raised concerns about the appropriateness of administering mainstream tests so early in children's English language and literacy learning, and the negative impact that this has had on recognising and supporting instruction in Murrinhpatha, the children's first language (Nganbe, 2017).

Again, it was an appeal to the education system to recognise, validate and support the cultural capital held in their community. Nganbe was utilising power from his own education (Martin, 1990) to speak back to the system on behalf of his people, the school, and, in particular, his junior primary students. Poignantly too, it was also a direct signal to forthcoming lecturers to learn from and with their undergraduates.

Ladson-Billings (1992, 1995) described such interfaces as a bridge where meaningfulness between the learners' two worlds is how "culturally relevant teachers utilise students' culture as a vehicle for learning" (p. 161). Also described is pedagogy that utilises the students' culture as culturally responsive teaching

“using cultural referents to impart knowledge, skills and attitudes” (Ladson-Billings, 1992, p. 382). The term ‘culturally responsive teaching’, perhaps now synonymous with cultural competence, is discussed later in this paper.

I worked to enact this approach to teaching when, in a unit that involved teaching grammar and linguistics. Even as a former secondary English teacher, I found the prescribed text turgid and demanding. I determined, as Ogbu (1987) suggested, that a “culturally relevant pedagogy must provide a way for students to maintain their cultural identity while succeeding academically” (p. 312). I started by inviting the students to describe their surroundings beginning with their local languages in the first instance: Murrinhpatha and the lingua franca, Kriol. We sought permission from elders to film at specific sites to record their multilingual descriptions of places of significance. The recordings were then parsed and analysed back in our classroom. The learning outcomes for the unit were crafted into a short film that demonstrated the students’ linguistic dexterity and understanding of the required Standard Australian English grammar. As a result of this group submission, each student was awarded a Distinction at grading moderation.

While filming I saw a flock of brolgas and a lagoon blooming with crimson water lilies. I learned the local names for magpie goose and turtles, picked Billygoat plums, made string from sand palm fronds (poorly) and on the drive back home munched lily seeds picked that morning. The GOO program provides these types of opportunities for reciprocal learning. While I was learning from my Indigenous students, I was also learning more about the limits of my own knowledge and, as Nakata (2007) suggested, that was the most valuable exercise of all (p. 225).

We were transforming ourselves by learning from each other: learning both ways.

Cultural competence/ intelligence/ humility

When staff secure tenure at our university, an Indigenous cross-cultural awareness training day is mandatory, and upon completion a certificate of competence is awarded. However, a mandated Certificate in Cultural Competence does not reflect the complex and nuanced communications required for effective teaching and learning in GOO contexts.

Payi Ford (2010) wrote of her experiences as an Indigenous woman negotiating the foreign, even hostile terrain of academia, requiring the alertness of a “hunter”. Our students share such trepidations. Working in community, away from the edifice of the university, the opportunities for other ways to construct knowledge are possible. Yet to do this requires skill. I become hyper-aware, looking for signs, wanting to understand peoples, country, challenges and strengths gathered from any source available to me. This need for cultural awareness and a general knowledge goes beyond my competence (Hardy & Laszlosfly, 1995; Sermeno, 2011).

I had worked with Indigenous peoples and communities in education for many years in other states prior to coming to the NT. I had avidly read books about Australia’s dark histories of death and dispossession across what was termed *terra nullius* and knew of intergenerational health and education inequities. But I was yet to know the particularities of these students and their community, and I tried to work with sensitivity to carefully and respectfully compare cultural differences through the lens of my own cultural experiences and make appropriate responses (Hardy & Laszlosfly, 1995). What might be the reasons for M not speaking or for T not to sit next to male J? Why had S left the class and not returned? Was I too directive?

But “competence” does not do justice to our experience. ‘Cultural intelligence’ (Earley & Ang, 2003) is a more accurate term in that the exercise involved a successful navigation and adaptation of different cultural experiences and settings in ways that were both natural and respectful of our respective cultures. Nevertheless, an orientation towards ‘cultural intelligence’ was still wanting.

Cultural humility

Entering a community as an educator and as a guest, I felt humbled that the students shared aspects of their life stories, histories, land and cultures so generously. Beyond competence, cultural humility was what I and my colleagues, both past and present, were learning.

Cultural humility has emerged as a more suitable goal for intercultural medical education. Tervalon and Murray-Garcia (1998) defined this term, in a medical context, as “a lifelong commitment to self-evaluation and self-critique, to redressing the power imbalances in the patient-physician dynamic, and to developing mutually beneficial and non-paternalistic clinical and advocacy partnerships with communities on behalf of individuals and defined populations” (p. 117). Later, Wear (2008) contrasted competency-based approaches with the cultural humility approach to diversity. Central to her thesis, was the notion that professionalism requires the application of knowledge in unique situations for effective decisions to be made in treatment. Furthermore, (health) practitioners need to hold sensitive and appropriate dispositions, over and above knowledge and skill. These alone were considered “insufficient without a simultaneous and ongoing process of humble reflection on how one’s knowledge is always partial, incomplete, and inevitably biased” (Wear, 2008, p. 626).

More simply, Reynoso-Vallejo (2009) contrasted cultural competence with humility where competence was equated with knowledge, and humility with understanding, and it was found that the latter was more effective. Foster (2009) emphasised the importance of long-term relationships in international partnerships, and especially in Indigenous Australian programs and initiatives.

To develop a stance of cultural humility, another reflexive layer needs to be added to the reflective practices of a teacher. Also, in accord with Hook, Davis, Owen, Worthington and Utsey (2013), positive relationships with Indigenous students are built upon “the ability to maintain an interpersonal stance that is other-oriented in relation to aspects of cultural identity that are most important to the client” (p. 354). Dedicated attention is required to consciously cultivate an other-orientated stance.

As lecturers we encourage our students to accept their not-knowing as both a starting point for their education journey, and as a marker at many points along the way. We encourage students to listen deeply, read carefully, reflect from multiple perspectives and speak gamely—even if the answer might not be correct. As a lecturer teaching in communities in the GOO program, I have needed to apply these same strategies to my own practice.

Walking forward

In this paper I articulate some of my experiences in prose as I have sought reflexivity in my teaching. A colleague, Dr. Al Strangeways, researched her practice in the program in Central Australia through art. Through portrait painting, narrative and analysis, and a hybrid arts-based research text (Barone & Eisner, 1997), she engaged with various people at the school. In doing so, she began to examine the impact of shifting between the identities of teacher and artist, and how these artistic endeavours problematised her educator identity and impacted on her pedagogical practices as a teacher educator. She scrutinised her own identity—dynamic, social, multiple (Akkerman & Meijer, 2011)—that challenged the tacit knowledge and perspectives she brought to the remote setting and her interactions with staff, children and families. She drew out three dimensions of thinking differently: looking differently, seeing differently, and being differently. These highlighted “the value of foregrounding such perceptual and ontological questioning practices in our work as teacher educators” (Strangeways, 2016, p.70). My own reflexive practices echo Strangeways’ experience. Beyond the community, my way of looking seeing and being had shifted and I sought new ways to engage with my students, and the other cohort of ‘aliens’, international students, in particular. Below I have used the Indonesian Throughflow, the ocean current that traverses between the Pacific and Indian Oceans, as a metaphor for another subtle transformation in my journey as a teacher educator.

I am walking on the beach with a colleague and my dogs. The day is muggy and the water is warm, but we dare not enter. It holds a heady mix of creatures lurking. Will they bite, or sting or lacerate me completely? We wiggle our toes at the waters’ edge and flick around in

the safer pools that have formed away from the shoreline. There are storm clouds a-billow, but it is unlikely that it will rain. The sea is calm today yet the surface belies present currents, powerful currents whose flux is always some tussle for identity. The Arafura meets the Timor Sea; they look pretty much the same to me, on the surface, on my beach, the one I always go to. Beyond, but not so far (much closer than my family in southern Australia) surges the Indonesian Throughflow. This mighty ocean current funnels water from the Pacific Ocean through the Indonesian archipelago and around New Guinea and Timor to cool and freshen the Indian Ocean, spawn life, new life, myriad possibilities. Just over there, a massive churn and negotiation of currents, but it is smooth and sparkly on the top. There are families black and white picnicking, except the Aboriginal people are in the shade. Their voices, inaudible, roar against the tide, "This is my country!"

To the back is my university, but not before ochre sand, dripstone caves, mangroves and valiant casuarinas weathering the vagaries of the tropics. There is a rowdy band of red-tailed black cockatoos, acting like ratbags in the treetops, and circling above it all are Brahminy kites, always up there, especially in "the dry". Brahminy kites: perhaps they are also common to India, Pakistan, Nepal, Vietnam, Philippines, Singapore, China, Thailand, and Indonesia, throughout South-East Asia, where our students come from? I wonder whether any see them in the sky right now and think of home. I really do not know much about them, the international students. (Smith, 2017, pp.53-4)

Conclusion

In this paper I have tracked some of the genealogy of the Growing Our Own program including the long-standing commitment to Indigenous education by the Catholic Church up to the current partnership between the Catholic Education Office and the College of Education at CDU. Also, shown in deference to the people whose work has continued to inform the teaching and learning that occurs in the Growing Our Own program, at BIITE and in other Colleges in our university. At the risk of hubris I have given a deeply personal account of my experience in Growing Our Own, and perhaps, as Ladson-Billings (1995) stated all those years ago, "that's just good teaching," I am confident that colleagues both past and present each has their own versions of reflexive practice and transformation.

It is a long road, potholes and a corrugated track, a washed-out bridge, but no turning back. A single prop, a build-up stop. Standing tall and talking back, laughs and tears (mine and theirs). Both-ways knowledge (perhaps wisdom too). Grow for better, skills to use. Red dirt stays in your shoes.

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‘More than an academic thing’: Becoming a teacher in Ltyentye Apurte and beyond

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Keywords: teacher education; Indigenous education; arts-based methods; narrative

Abstract

Becoming a teacher involves much more than building an effective collection of professional knowledge and practice. Establishing a satisfying and meaningful teacher identity is the foundation of teacher development and has implications for teacher retention and for reclaiming the profession from its current domination by policy discourses. Much can be learned by teacher educators, education leaders and teachers themselves from narratives of identity development. Such stories offer an embodied picture of the complex inter-relationship between the different elements of a teacher's identity and how a teacher's experiences, relationships and socio-cultural context shape the meaning they make of their teacher-self. This paper draws on arts-based, narrative and dialogic methods to share *Author 2*'s story of his professional identity formation before, during and after his participation in the Growing Our Own (GOO) program at Ltyentye Apurte (Santa Teresa).

The story emerges from data collected over six years of the eight-year working relationship between *Author 2* and *Author 1*, a lecturer on the program. It casts light on the people, places and experiences that shaped his professional identity, on the challenges he encountered, and the impact becoming a teacher had on his identity as an Indigenous man and a member of his community. This story contests the notion of professional identity development as a straightforward journey towards a known destination and offers a rich embodiment of the complex nature of teacher identity as ecological, transactional and relative to time and place.

Background and context

Teacher identity

When *Author 2* said, “It's more than an academic thing: it's about relationships and feeling good, feeling like you belong”, he wasn't referring to his own learning. He was talking about his students' experience of school at the remote Indigenous community of Ltyentye Apurte (Santa Teresa) in central Australia where he learned to become a teacher as part of the Growing Our Own (GOO) program. GOO is a joint initiative of Charles Darwin University and Catholic Education, designed to deliver Indigenous teacher education ‘on-country’ and so address the shortage of remote Indigenous teachers. *Author 2*'s insight into the relational and cultural aspects of his students' learning applies equally well to his own experience of learning to become a teacher.

Becoming a teacher is “more than an academic thing,” and this is supported by the literature, which foregrounds the ecological nature of teacher identity formation (Beauchamp & Thomas, 2009). Researchers and teacher educators are becoming increasingly aware that a teacher's development involves far more than the “acquisition of assets” such as skills, knowledge or beliefs (Akkerman & Meijer, 2011, p. 308). Identity formation also involves the experience and negotiation of emotions, commitments and other elements that are not captured by a predefined set of professional standards. The post-structuralist recognition that identity is multiple and that it changes over time and in different contexts, offers a further layer of complexity to any inquiry into teacher identity formation or operation.

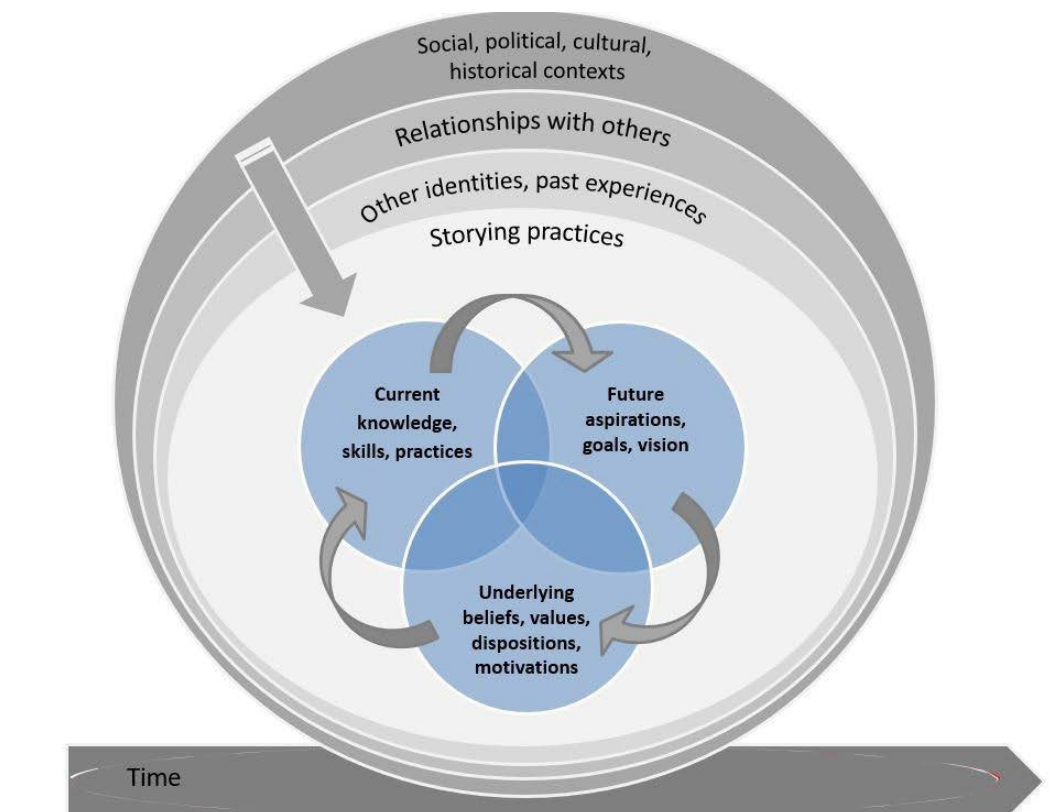
These layers of complexity are one reason there is no agreed definition of teacher identity in the literature (Beijaard, Meijer, & Verloop, 2004).

This paper's aim is to present and explore *Author 2's* story of becoming a teacher in order to: (1) demonstrate how recognising teacher identity as ecological, transactional and relative to time and place enables better understanding of the complexities of identity development; and (2) highlight the influences and challenges of beginning Indigenous teachers in remote contexts and the impact of becoming a teacher on their other identities and their community position.

Ecological and post-structural conceptions of identity

This paper frames teacher identity in terms of the ecological and post-structural conceptions of identity noted above, and expresses identity in terms of the model shown below (see Figure 1). This model draws on Mockler's (2011) understanding of teacher identity formation as an interplay between teachers' "motivations for entering the profession and their experiences as teachers" and involving personal experiences, professional contexts and political-cultural environments (p. 517). The model also embraces a dialogic understanding of identity as "*both* unitary and multiple, *both* continuous and discontinuous, and *both* individual and social" (Akkerman & Meijer, 2011, p. 308). The implication of this dialogic conception is that teachers negotiate their identity positions within these dyads in response to the contexts and relationships of the moment. Identity is "an ongoing process of interpretation and reinterpretation of experience", an ever-changing answer to the recurrent question, "Who am I at this moment?" (Beijaard et al., 2004, p. 108).

Figure 1: *Author 1's* ecological and post-structural model of teacher identity



Source: Al Strangeways

The teacher identity model created for this paper (Figure 1), identifies three inter-related elements of identity:

- Underlying beliefs, values, dispositions and motivations.
- Current knowledge, skills and practices.
- Future aspirations, goals and vision.

These elements are constructed through a series of ever-widening ecological spheres of influence (Bronfenbrenner, 1977), including: individual influences such as a teacher's storying practices; mesosystemic influences such as relationships with family and colleagues; and macrosystemic influences such as culture and history. The elements and influential factors of identity are all dynamic; they interact with each other and change over time. The purpose of the model is to express the individual elements of identity (the three inner circles of the model) and the ecological influences that work to construct these elements of identity (the four concentric circles and the timeline). The model draws on the ecological perspective that Strangeways and Papatraianou (2019) developed when re-mapping the landscape of teacher resilience. The spheres of influence described in the model need to be viewed and understood as ecological, transactional and relative; occurring in a socio-culturally constructed context, through a process of negotiation amongst contextually situated meanings and values, and changing according to these contexts and negotiations.

Arts-based narrative and dialogic methods

Teacher narratives have a long and well supported history in educational research (Goodson, 1990; Clandinin & Connelly, 2004). They, along with other arts-based educational research (ABER) methods, are a key element of the "more nuanced and holistic approaches" to understanding professional identity that Mockler (2011) identified as essential to counter the increasing privileging of "technical-rational" understandings of teachers' work and role in policy and public discourse (p. 517). This paper uses narrative methods because identity itself is constructed by narrative. As Mockler (2011) asserted, narratives work both to produce identity, and to lay claim to it. Further, the knowledge that stories offer is always "situated, transient, partial and provisional" (Cormack, 2004, p. 220). This is because stories are the product of a series of reconstructions, by the participant who tells the story, by the writer who interprets the story in a paper such as this, and by you, the reader of the story. As such, narrative form serves well to represent the equally situated, transient, partial and provisional nature of identity, and the ecological system within which it develops and operates. As Clandinin, Downey and Huber (2009) asserted:

A narrative way of thinking about teacher identity speaks to the nexus of teachers' personal practice knowledge, and the landscapes, past and present, on which teachers live and work...using a concept of 'stories to live by' is a way to speak of the stories that teachers live out in practice and tell of who they are and are becoming as teachers. Important to this way of thinking is an understanding of the multiplicity of each of our lives – lives composed around multiple plotlines. (Clandinin et al., 2009, pp. 141-2)

Dialogic approach

Building on the work of Akkerman and Meijer (2011), this paper takes a dialogic approach to research methods as well as to the conceptualisation of identity. Dialogic inquiry is "an act of dialogue with the respective teachers," rather than research "about" them (Akkerman & Meijer, 2011, p. 316). This paper is co-written with the teacher whose story it tells. *Author 2's* story is presented in the italicised texts, which were extracted from over 15 hours of transcribed interviews undertaken by him and his co-author, *Author 1* who worked with *Author 2* as his lecturer on the GOO program from 2010-2015. This period marked the end of his first year of full time teaching at the remote Indigenous community of Santa Teresa (Ltyentye Apurte) in central Australia.

The analytic and interpretative text that forms the rest of this paper is the result of collaborative discussion between *Author 2* and *Author 1*, as are the structure and themes that run through the narrative, analysis and artwork. Throughout this approach, the authors were careful that *Author 2*'s story was not "colonized" in its retelling, so it maintained its authenticity whilst also serving the purposes of this research paper (Garrrick in Cormack, 2004, p. 234). For this reason, we chose not to indent *Author 2*'s text as "block quotation" to avoid relegating his voice to a supporting or illustrative position in relation to the interpretative and analytic text.

The care we took in maintaining the authenticity of *Author 2*'s story was particularly important because much of it is very personal, and as Elbaz-Luwisch (1997) found, whilst "stories are most instructive when they are most personal," this is also the time "when the owners of the stories are most vulnerable" (Elbaz-Luwisch, 1997, p. 82). In addition to foregrounding the storyteller as co- constructor of this inquiry, a dialogic approach allows for analysis of both micro and macro spheres of identity. It recognises "the embeddedness of the lived experience in proceeding discourse and in situation and culture," and overcomes the unhelpful dichotomy between personal and professional identities, recognising instead the ways they inform and construct each other (Akkerman & Meijer, 2011, p. 316).

Narrative overview: from 'Drifting in' to 'Stepping out'

This paper is structured around Eisner's arts-based educational criticism framework (1991), which operates to express an experience vividly, to interpret and evaluate it, and to draw out broader themes by locating the experience in the larger context of common concerns. The paper therefore draws on both types of narrative method, as articulated by Polkinghorne (1995). First, analysis of narrative, which views stories as data and analyses them for common themes; and second, narrative analysis, which views descriptions of events as data and generates stories by a process of emplotment, or selection and organisation of the events described into a narrative with a plot. This paper emplots *Author 2*'s story as a sequence of four stages in his journey across the landscape of teacher identity: from 'drifting in' to the profession, to 'stumbling on' in his early years of initial teacher education, to 'stepping up' to managing the complexities of professional identity and practice, to 'stepping out' from the conventional classroom teacher identity and role. The narrative will highlight moments of re-construction or "epiphanies". These moments "alter and shape the meanings persona give to themselves and their life projects" (Denzin, 1994, p. 510). At these times *Author 2* conforms to, resists or rewrites his culturally determined ways of talking, thinking and being (Denzin, 1994).

Themes

Within this plot, the paper foregrounds three main themes relating to the complexity of teacher identity formation and to the experiences of beginning Indigenous teachers. Two themes focus on the ways in which identity formation is rarely a straightforward journey across a clearly mapped landscape towards a single known destination. The paper demonstrates how recognising the relative-yet-unified nature of identity and the ecological-transactional aspects of identity formation offers a valuable lens through which to understand the complexity of this journey. The third theme is an implication of the ecological-transactional nature of teacher identity (Strangeways & Papatraianou, 2019), in that it identifies the challenges facing remote Indigenous beginning teachers in negotiating often incongruent professional and cultural identities, and the impact becoming a teacher can have on their cultural identity and community position. The employment and theme analysis of the narrative is supplemented with an artwork created by *Author 1* (Figure 2), where visual imagery has been used to more fully access the spatial, dynamic and ecological interconnections of the identity journey. The creation of this artwork worked both "to elaborate on the data...and to serve as [a] point of departure for dialogue" with *Author 2*, as we constructed this paper together (Leavy, 2015, p. 232).

The narrative

For me, the core of good teaching is being honest and real about who I am and where I'm from. Making sure I tell students why I'm teaching and why they're learning. Why it's important. Also, being honest about what I know and what I don't know so I'm not faking or trying to be pretentious. And letting kids know it's alright not to know everything, and teachers don't know everything.

Drifting in

The whole reason I wanted to be a teach...that I decided to do the teaching and all that, was to help out. I wanted to come back and see if I can help out.

Author 2 drifted in to the teaching profession and for several years resisted identifying as a teacher, preferring to describe himself as “doing the teaching” as distinct from “being a teacher”. Unlike many teachers, whose motivations for joining the profession are primarily an intrinsic desire to “be” a teacher (Chong & Low, 2009), Author 2's entry onto the landscape of teaching and teacher identity was motivated by more altruistic and extrinsic reasons. He described returning to Ltyentye Apurte:

At that time, 2006, I didn't know really where I was going, kind of between jobs, so I came out and just stayed with family, signed up for the CDEP [Community Development and Employment Program], but sort of with one eye over, looking at the school, like, “I wonder if they need any tutors or anything”. Because you hear stories of low literacy, even now. I knew there was always that big gap, so I walked in and asked them if they needed any tutors, because at that time I was just going to do maybe one- on-one tutoring or just the basic literacy and numeracy. And they were like, “Yeah, you could. What's your name?” They found out I was Nora Hayes' son and they were like, “Yeah, no worries, come in”.

There were two whitefellas teaching the seniors, a teacher and a TA [Aboriginal Teaching Assistant], and when I walked in my jaw hit the ground. They were both from Melbourne. Non-Indigenous. All the right criteria. One, burnt out and ready to leave; the other, brand new and a fish out of water. No people skills. It wasn't a good situation, so when the TA left that's when I started, not running the show, but taking on that role that I have ever since. I was just shocked, firstly at the students, at the lack of respect. When I was a kid here, there was always that respect for your elders, black or white. There was a generation of strong old men who you didn't mess with and this filtered down to everything. And I was shocked at some of the teachers too. What were they doing? Standing at the front and just talking. To no-one in particular. The range of levels in a class was huge but everyone was taught the same. And everyone would move up a year every year, no matter where their levels were. Why was it like this?

His later choice to join the GOO program in 2009 was also driven less by the intrinsic desire to “be” a teacher and more by extrinsic factors such as pay and conditions. He had little sense of the challenges that he would later encounter.

The school said, “There's this Certificate IV you can do, which if you do that, your pay will go up”. So, I did that and moved up to AT [Aboriginal Teaching Assistant]. So that was really doing the same stuff but just getting holiday pay and benefits. And then this GOO thing came along and it was basically the same thing. “If you do this you will become a teacher and it would be a good piece of paper to have. And you know, your pay will go up”, which is what everyone says, an incentive. So, I just said, “Yeah, no worries, I'll give it a go”. I knew it was hard work to get a degree but I didn't realize how much work goes into it. I could do it, but do I want to do it sort of thing? Maybe I'd be happier being an AT.

Becoming a teacher was never an aspiration for Author 2, because school was not a significant place

and the teachers he saw there were not people with whom he could identify. And yet, while he never saw himself in the identity of “teacher”, many of the elements of his childhood can, in retrospect, be viewed as leading towards the landscape of teacher identity. In this sense, then, *Author 2*’s teacher identity formation was ecological, rather than purely individual, “resulting from influences in a variety of contexts...and at the same time representing the interactions of the elements of these contexts” (Sfard & Prusak in Beauchamp & Thomas, 2011, p. 7).

His teacher identity was constructed from his interactions with the people and contexts in which he was situated. It arose from his desire to help in the community and his sense of responsibility and comfort in the role of looking after and sticking up for the younger members of his family:

I’m comfortable with it [teaching], with parts of it. And it feels like it’s always been that you know. Because growing up I was usually the eldest looking after the kids. So, I think that comes across you know. I think it’s natural, and not very academic.

While *Author 2* had no initial aspirations for himself, the motivation that formed his teacher identity in those early teaching days continued throughout his teaching degree. His motivations were primarily altruistic, to change things in the classroom and in the community, rather than to “be” an effective teacher. His aspirations, too, were for the school and the community rather than for himself as a teacher. Whilst the individual aspect of finding academic learning straightforward had some influence, the ecological aspects of his connections to family and community accounted for much more in this first part of his journey.

His sense of himself as a teacher contrasted with his understanding of the identity of “mainstream” teachers with the “right criteria”. He was awkward with calling himself a teacher in his early years because those “right criteria” that positioned academic knowledge above relational skills, did not align with his beliefs about the importance of pedagogic relationships. In terms of Beijaard, Verloop & Vermunt’s (2000) framework of teacher perceptions of identity, *Author 2* privileged the “pedagogic role” over “didactic knowledge” and “subject expertise”. While Beijaard et al. (2000) pointed out that other teachers also privileging of pedagogic role was influential, they noted that this identity position usually occurred later in a teacher’s career, as part of a shift from beginning teachers’ identification with the role of subject matter expert. As a preservice teacher, *Author 2* identified more with his students than with other teachers. He recognised this positioned him outside the expected practices of the profession and therefore the definitions of a “good teacher”.

I don’t think I’m a good teacher. I think I’m good at...just good with the kids sort of thing. I don’t know what it is. Like relationships but some other word for it. Kids respond to the personality. They get a bit cheeky and I was, “I know all the tricks in the book” so I’d just say something smart-arsy back. Which I probably shouldn’t have.

His rapport with students, particularly with those disengaged with schooling, was grounded in his own experiences of being a student. Paradoxically, then, the aspects of his identity that made him fit outside the parameters of the “good teacher”, were the things that enabled him to make strong and effective connections with his students. His youthful disengagement with school and disrespect for institutional authority were aspects of his identity he drew on. His students felt drawn to him because they saw he was, in many ways, just like them. This was apparent when he evaluated his first Professional Experience placement beyond Ltyentye Apurte, in urban Alice Springs 80km away.

I don’t know if I was good [at teaching], but I had a good feel with them. Because I was just me. If you talk to kids in their language, you know, well those town kids, they saw that, saw me as someone they could relate to. And then because I spoke a bit of Arrernte too, a couple of the [Arrernte] camp kids were like, “Oh, you’re from Santa Teresa.” So, we made a connection there.

His sense of standing outside the traditional teacher role led to his focus on the practice of teaching rather than the identity of “being a teacher.” This focus also highlighted his essentially democratic disposition as a teacher.

My personality is like I don't want to stand up at the front. I'd rather be in the trenches, behind the scenes. Teaching to me is more of a guided discussion, where you [the teacher] are not someone bigger. Like you're teaching them, but it's not a teacher-student thing.

Author 2 recognised the incongruence between conventional notions of teacher identity and his own professional identity. In a similar way, he saw his cultural identity not easily fitting into the accepted mold. Returning to Ltyentye Apurte and becoming a teacher to “help out”, was intrinsically bound up in *Author 2*'s uneasy sense of himself as an Indigenous man with a white father and a mother who was a Traditional Owner.

Because of the race, the identity and the whole light skin thing, it's bothered me for ages, because all the family's pretty dark and I'm like this, so where do I belong? I wonder what my family think and feel about me. Basically, I got sick of wondering, “What am I?” Men's business was a big part of it. If you go through it, it gives you a place and a status and a respect from the community. All my younger cousins were going through initiation. I should have gone through it before them. So it made me wonder, “Well maybe the men don't see me as what I thought they did.” So, I challenged them on it. “What am I to you mob? I'm good enough when you come around looking for money, food and smokes, but am I too white for you mob?”. Because in my mind, I wasn't coming out to Santa Teresa without being initiated, because you just need them stripes, you need that earned. You could be mocked or ridiculed and it would be like, “He hasn't been through it.” It would make things uncomfortable. Make me uncomfortable. So anyway, it happened. That changed and gave me that direction. Now I could go out and live at Santa.

Summary

The story of *Author 2*'s return to his community and his subsequent drifting into teaching draws attention to the ecological nature of professional identity and its formation. *Author 2* recognised that, because of the ecological influences of his contexts and the interactions between these influences, his identity did not align with what he saw as the conventionally accepted identities of an Indigenous man or a teacher. This lack of congruence between his own sense of himself and the conventions of his cultural and professional identities was exacerbated by his firm belief in being “real” or honest about his identity. At this point in his journey, all three elements of his identity: his underlying motivations, his current teaching practices, and his future aspirations; were determined more by the social than the individual spheres of his ecological system. His motivations were primarily to help the community, and his practices and aspirations were to advocate for others. He had no aspirations to “be” a teacher. Whilst his mother had worked in education support when *Author 2* was young, he had never viewed her as a teacher. There were no Aboriginal classroom teachers when *Author 2* began work as a tutor in school, and no male Aboriginal Teaching Assistants. He therefore had no teaching role models with whom he could identify or aspire to. It is not surprising then, that his entry into the profession took the form of ‘drifting in.’

Stumbling on

Don't put me on this pedestal...I'm just like you...I'm not this perfect thing.

Author 2's journey to becoming a teacher was not smooth. At different times and in different contexts, he encountered challenges that caused him to stumble, or left him simply ‘stumbling on,’ at odds with the vision others had for him as a teacher. The intertwining of *Author 2*'s personal and professional identities, coupled with his belief in being honest with his students, presented considerable challenges on his journey to becoming a teacher. Although his motivation in returning to Ltyentye Apurte was to help, he was deeply concerned about how his return might be viewed by the Indigenous and non- Indigenous community.

I don't know how people saw me, like family and that, coming back. But I shot any thought

that I was this great white, well not white, but great hope, come back to save the people. Because family was like, "Ah, you're at the school. We need you to be here." Because I am who I am and my skin colour and all that, you stand out. So, there's been a couple of times when I've purposely run amok to let people know that I'm not here as a savior... "I'm just like you. I've got my own things and I'm not this perfect thing." People got that pretty quickly when I'd come back from the [community] boundary after fights and with black eyes and whatever.

As Santoro and Reid (2006b) suggested, the struggle for Indigenous teachers to establish teacher identity,

is complicated by the teachers' identity positioning within their own Indigenous communities and the set of expectations that are placed on Indigenous teachers by parents and community members who see them as potentially mediating or changing the Whiteness of schooling in ways that will benefit their culture. (Santoro & Reid, 2006b, p. 144)

Similarly, in the eyes of the non-Indigenous community, expectations were high. They failed to recognise what Santoro and Reid (2006a) identified as the "complexities [facing Indigenous teachers] of identifying with both school and Indigenous communities" and the "gulf between community and school [which] can cause problems that many Indigenous teachers are unable to resolve" (p. 295). When the GOO program started, an Alice Springs newspaper sent a reporter to the community for a story that focused on *Author 2*, the only male in his group of Indigenous preservice teachers.

They tried to put me on this pedestal or something. It was funny to me. I was just happy to do what I was doing. They were like, "This is so great. You're doing this for your people." And I was like, "No don't put me on this pedestal." I was really against them trying to make me out to be something that I wasn't. Like some people are on posters, you know: "Don't do this," or "You should do this," and I knew enough to go, "Don't paint me to be something that I'm not, because I come from town and I've been involved with all kinds of stuff – drinking and smoking [weed]." They didn't want to put all that stuff in the article, but it's real. It's real you know. Back then, I was like, I'm not a role model. But you are. If you go into that teaching thing, you are. Whether you like it or not. But I was against it back then.

For *Author 2*, embracing the reality that, as a teacher, he was a role model for his students and for the community, was a significant turning point in his journey. He recognised the impossibility of separating his identity in the classroom from who he was outside of the school. He accepted that "the me, good and bad, will flow on to the teacher." It was also a point that brought him to an identity landscape of increased ambiguity and complexity. Embracing the responsibility of being a role model was accompanied by the recognition of a further reality. As the teacher, the responsibility for much of what was challenging in the classroom was his; either directly because of his behaviour in the classroom, or less directly but equally powerfully, as a member of the community whose behaviour was not always exemplary.

His dilemma was managing the tension between fulfilling his belief in being authentic in the classroom, and being a role model. When considering his first Professional Experience teaching placement outside of the community in an urban school, he reflected,

*I knew what I didn't want to go in as: the whole, "Ah hello kids. Alright, today we are going to be learning about...and if you open up your books." That real stiff stuff. I'm not going to go in there and pretend to be, or try and do something that I'm not. More important than delivering a perfect lesson to me, is making that connection to that kid. That's where my heart is when it comes to teaching. Like f*** the latitude and longitude [learning topic]. Who cares. If the kid's, you know, had a good lesson, he had a good day. I'm not invested in the academic; I'm more invested in the student.*

In this, *Author 2* aligned with what Santoro and Reid (2006a) described as the "identity position of 'the Indigenous teacher'," which, they argued, is often "assigned" to Indigenous teachers "at the expense of any other identity and role as 'teacher'." (p. 298). In this role, they are expected to have primary expertise

in cultural and relational areas at the expense of other skills and knowledge. While this identity can be constricting if assigned, as was the case for Santoro and Reid's interviewees, *Author 2* embraced this identity position and challenged the conventional bias he saw that placed academic capacity above student wellbeing and relationships.

Author 2's recognition of the importance of authentic relationships presented challenges for his ethics and practice. He needed to fulfil his need to "be real" in the classroom, and a person with whom the students identified. He also needed to accept and embrace his status as a community role model. It was not a dilemma that could be resolved because of the ecological nature of professional identity, and the connectedness of his remote Indigenous context, where, as *Author 2* asserted,

Everything's connected: everything affects everything else in this place.

Because of the ecological nature of identity, *Author 2's* teacher-self was the result of an ongoing series of transactions between different elements of his identity and contexts. There was no perfect balance to be achieved between embracing his professional position and being honest about his personal struggles with anger and substance abuse; struggles with which many in his community also dealt. Instead, his professional identity was constructed as an ongoing series of identity positions that were constantly negotiated and re-negotiated.

Transactional negotiations

The transactional aspects of *Author 2's* identity development can clearly be seen in the uneasy identity negotiations involving his conflicting professional and community positions, and his incongruent commitments to authentic relationships and responsible role-modelling. An equally challenging aspect of his identity development was the transactional negotiations between his teacher and cultural identities that centred around his obligations as an Indigenous man and his responsibilities as a teacher. Strong cultural structures of inter-personal obligation to members of his immediate and extended family operated to shape his identity and the routines of his daily life, in both supportive and restrictive ways.

I've always had that thing, you know, that the other [white] teachers don't have to deal with. Like a phone call from family, saying, "Son, I need money for food or bills," or knowing your cousin needs rent-bond money or a car so they can do the right thing by their kids. Or having to make more and more space in a one-bedroom teacher flat because family need a place to stay. You know, "blackfella" things. But one of the main reasons I came back here in the first place, was to spend time with family and reconnect with my culture: go out bush, go hunting with the uncles. But that didn't happen as much as it used to. I also need to make time for people like my cousin-brother, be a good big brother to him. But lately, it's like I don't have the energy for any of that after school. For the things I came back for. All the energy goes into the school and I've got nothing left. I'm just Grumpy, and I don't want to be that.

Santoro and Reid's (2006) research reflected some of *Author 2's* experience when they suggested that:

...remaining in their own country appears to help teachers overcome some of the problems that arise from the assumption of a generic Indigenous teacher identity who is expected to solve 'all the problems' just because they are known to be Indigenous...their work is enhanced by the relationships of kinship and family, even though these can sometimes be taken for granted by the system and taken advantage of by the community...they do have emotional support in their homes from the struggle that their position often entails. (2006b, p. 157)

For *Author 2*, however, the nature of his teacher role and identity curtailed some of the opportunities to access this relational and emotional support. The way that *Author 2's* cultural obligations and connections as an Indigenous man impacted in both supportive and restrictive ways on his teacher identity was an important aspect of his teacher identity development. Similarly, the significant human losses he experienced, in his final years of the GOO program and first years of qualified teaching, both challenged

his sense of purpose and increased his resolve as a teacher. The deaths of two close family members and that of his school principal were both emotionally destabilising. In the case of the loss of his principal, Kwementayaye Crowe, it removed a key mentor, champion and professional support, someone who *Author 2* knew would always “have my back”, even when *Author 2* did not live up to his own and others’ expectations. Equally, however, these losses also became motivations to justify the belief these people had in him as an Indigenous man and a teacher, to honour his memories of them, his relationships with them and their belief in him.

Stepping up

Me the person is getting better as a person, and Me the teacher is getting better as a teacher, so they go together.

Author 2 continued at times to stumble on the ongoing challenges of negotiating obligations, managing his struggles with his cultural identity, substance abuse and the human losses he experienced. Many things, however, changed as *Author 2* stepped up and moved closer to becoming a qualified classroom teacher. The passage of time, his experience of different school contexts, and his change in status from preservice to qualified teacher all modified aspects of his professional identity. However, the core elements of his professional identity in terms of his beliefs, his practices and his aspirations, and the central tensions within his ecologically-influenced identity remained constant. In this way, as Akkerman and Meijer (2011) attested, his identity was both continuous and discontinuous, or both unitary and relative to context.

The two final Professional Experience placements that *Author 2* undertook as a preservice teacher were away from his community. These placements in Alice Springs, and in central New South Wales, instilled confidence that he could “teach anywhere, not just at Santa Teresa”.

I knew I was good with the kids out here [Ltyentye Apurte]. And I thought it was just out here, so I was freaking out a bit about going into [the Alice Springs school]. But then I was just “myself” there as well, and I don’t know if I was good, but I had a good feel with them... The main thing I took away from [the NSW placement] was the different experience and knowing I could survive in this environment if I wanted to. The things I use at Ltyentye Apurte, it was good to see that they worked there. That balance of visual, discussion and doing, that was pretty much the model for all of our lessons, because that’s a good balance. They get to see something, then talk about it, and they get to show they understand it.

In both placements he was able to apply his skills in making authentic connections to students with whom other teachers often struggled to engage. In these different contexts too, his dispositional orientation towards supporting students with additional behavioural and/or learning needs was consolidated.

Those [disengaged] kids. They’re the ones going, “Hello Mr P!” The other teachers were like, “They never talk like that to anyone else. They usually run amok. They switch off or they don’t listen.” But I always gravitate towards them and always have good relationships with them. Maybe I’m giving them that extra. Not extra time, but that [particular kind of] time. Acknowledgement of who they are. It can be a look, a smile, a quick comment or question about something that matters to them. And, as I go through this journey, I want to do more of that.

In the very different context of NSW too, he stepped up in his focus on academic learning outcomes. Instead of viewing academic and relational aspects of teaching as in conflict, he began to employ his capacity to support socio-emotional learning in order to build academic learning outcomes. He described his use of visuals in a lesson on the extremes of poverty and wealth as a way for students.

...to make the emotional connection [to the topic] so they want to start asking the questions themselves. Because then it’s real to them, what’s happening in the world, from seeing the pictures and thinking.

He also recognised that, as he became more committed to “the academic” side of teaching, his commitment to authentic relationships extended to influence his pedagogical practices.

The thing with me is if I'm teaching something, I want to be invested in it. I don't want to just, “OK, we're doing molecules and whatever today, just read and answer the questions.” If I'm genuinely interested in the thing, the lessons are better because of this. I did a lesson with the extremes of poverty and wealth. I got the idea from talking to someone in the launderette about, “How can people be starving in the world and yet there are eating competitions where people get paid thousands of dollars?” And that was it, bang! I thought, that's perfect for this lesson on what I'm going to do on extremes of poverty. There's wanting to show kids, wanting to tell them, wanting to do that. Whereas if it's something you're not interested in, like salinity, of course it's going to affect things. And the kids know. I can't sell this.

Author 2's identity was constant in his commitment to the authentic relationships in teaching. However, as his contexts changed, he became increasingly committed to delivering authentic content in lessons, and began to focus on developing his planning skills and practices. When he returned to Ltyentye Apurte, it was with a clear sense of academic mission.

We have to load them up with skills and knowledge regardless of whether they use it or not, they have the right to know, to learn and have skills because you never know, we're dealing with human beings here. So, planning's just natural now. It's not like, “Oh I have to do it.” It's got to be done if I want to get the best out of the class, each class, not just today but each class and the follow-on lesson, where we are going next and all that. The thing that scares me the most, and should scare every teacher, is going in unprepared. It's the worst. Teaching on a whim.

Author 2 recognised it would take time to convince his colleagues of his increased pedagogical commitment. It would involve him stepping out from the identity position he inhabited as a result of his past behaviours. This was made harder because of the kinds of institutionalised racism identified by Hall (2016), which holds Indigenous teachers “at arm's length, treated as ‘white but not quite’ according to the theory of colonial mimicry” (p. 336).

I understand because of my past, my irresponsibility, people might take a bit longer to go, “OK, he's serious.” But I want to do all that questioning: “Why exactly are we doing this activity?” Or saying, “I don't think we should be doing this activity with the kids here.” And people might joke about it: “Oh look at you, look at the big words you're using now.”

Equally as significant as his changes in geographical context was Author 2's change in status when he completed his teaching degree and took responsibility for his own class. For more than a year before he qualified, he recognised the requirement that qualification represented; to embrace the responsibilities of a classroom teacher.

After his first year of full-time teaching, he reflected on the changes he underwent:

I always knew it was step-up time when I got my own class, so that combination of knowing it was coming, and then it came and it was: “Let's do it. You're that person now. You can be that person now, who you always planned to be when you got there.”

From stepping up as a teacher, Author 2 also saw himself making personal gains, which in turn fed into his professional practice. He recognised he was now “a calmer influence in class,” and a teacher who could better fulfil his commitment to instinctual teaching because he could:

*...follow my instincts better because my own f***ups haven't been on my mind, which is probably fifty percent of the reason I would blow up at the kids years ago, because I had my own s***, drinking issues, the identity thing. And I just see myself as getting calm and liking myself more, liking the person who I am now more than the f*** up that was years ago. People would say its maturity. I don't know what to call it – just liking myself. It's like seeing*

yourself turning into the person you always wanted to be. It's kind of freaky for me, but it feels good to be turning into that person.

Stepping into the classroom as a qualified teacher did not re-direct his thinking but rather:

...reinforced my thinking of the problems with the school and this place. Because I saw it from when I first walked in. I saw the problems but I just didn't see the reasons. It's clearer and clearer, the reasons now. And that's positive because you can change it. Or try. Go down trying, or swinging or whatever. And I guess the more experienced I get, the more I know, the more noise I'm going to start making. Because it's needed. And you need to. It needs to be challenged, this way. Even though people's hands are tied, or they think they are. People know we should be doing things differently, but they don't, we don't. Why is that? I think the system won't change. But I think you need to try whatever works, you need to try different things. And every school's different. Every community's different. Sometimes, what works somewhere else doesn't mean it's going to work here. So, you need to be flexible.

Another significant change in Author 2's way of thinking about "the problems with the school and this place" occurred shortly before he graduated as a teacher. It was the result of a single conversation with his principal at the time, Brother Daniel. Author 2 described this conversation as a moment of epiphany:

I was getting angry with kids and angry with my family. It was all sort of coming up from all angles and I said to Brother, "Brother, I don't know if I can keep going, keep doing this, because I don't want to start hating this place and hating the kids, or hating the school, or hating everything." And he spun it in a way that changed my thinking. He said, "That's true what you're saying but just imagine you weren't in their lives. If you weren't being that boundary for them. Where would they end up?" And that made me think totally differently, make me flip my thinking and it actually gave me energy to keep going. The understanding that it's the way you think about things and which way you're looking at something. That's changed me. Not wasting energy on the negative...Instead, accepting and changing the way you look at something. That's been my main change. So now, I've just gotta do that work, put in that extra, because that's what's needed. It's changing it from yourself, to shining that light from yourself out. It's a change that has made me a better person. And happier, because it doesn't feel like I'm going against the grain. I'm going with the grain but I'm kind of more in control. Change the way you look at something if you want it to change.

Summary

Author 2's stepping up in his professional identity was influenced by his external teaching placements, becoming a graduate teacher, and choosing a positive perspective. He also recognised the impact these changes in context had on his attitude toward "helping out". When he graduated, he reflected:

Teaching has changed for me a lot from when I first started. I came out with the mentality, "I'm just going to help people because they need it out on the community, on Mum's community." But now I realise I was the one that needed the help just as much, with getting myself together. And it's that realisation, that basically it's a two-way street, that I've gained. And I have to take as much as I can from this learning journey to become a better teacher, but more importantly a better person.

Stepping out

I know there's a big job here to do...I always want to be connected to the school, whatever I'm doing in the community. I'll always think of myself as a teacher in some way, even if I'm not teaching.

After two years working in the school as a full-time classroom teacher, *Author 2* chose to step away from the role. He remained at the school, but returned to the position of an Aboriginal Teaching Assistant, working in the classroom of a newly arrived non-Indigenous teacher. He became more involved with community matters such as coordinating various agencies' delivery of their school holiday programs, involving the community men more closely in school matters, and facilitating community discussion about social issues such as drinking and children on the streets at night. *Author 2* did not see his choice to step out as a rejection of his teacher identity, rather it was an affirmation of the ecological connectedness of his own identity within his community. The commitment to community that originally motivated his 'drifting in' to teaching also motivated his 'stepping out' from the school into broader community concerns. Because of his Indigenous and Anglo-Australian heritage, he had always felt a keen sense of responsibility to help improve things in the community:

That's been my number one thing. Not burden, just constant worry, I have to have a crack at changing things because people see me as black and white. I walk in both sides and all that and I need to use that. I have to because my family can't do it, whitefellas can't communicate with blackfellas, so the pressures on me.

As Santoro and Reid (2006b) noted, "It is highly unlikely that there are supports of [Indigenous] teachers in these positions as they are most likely to be the only such intermediary person in the community" (p. 156). This was certainly true of *Author 2*'s experience. He recognised that, while his heritage gave him a "unique perspective and a shortcut to building rapport" in both the classroom and the community, it also brought conflicting demands from which he could not step back. He reflected on his experience of balancing his work at school, with trying to bring different service providers and stakeholders together to discuss drinking in the community:

It's frustrating, because, really, organising a meeting is not that hard, but no-one else is doing it, so I'm running around all afternoon which is pulling me in different ways. It's that thing I knew was going to happen once you put your hand up for something: everyone looks to you for everything else then.

Santoro and Reid (2006a) asserted that it is this "extra workload and the emotional stress associated with the expectation to be 'all things to all people' that has the greatest influence on Indigenous teachers' decision to leave teaching" (p. 298).

Author 2 recognised that stepping up at a community level meant full-time teaching would be increasingly less sustainable for him. He also stepped out from the school because he found it hard to justify his authenticity in the classroom if he were not involved in broader community and cultural issues. Near the end of his second year as a classroom teacher, he reflected:

I don't know if I have the same drive, as much of the drive as I did in my first year. I have stepped up involvement in community issues...like outside of school...that are affecting the school. Things that are happening, like the drinking and the youth in the community having nothing to do, or nothing to work towards. There's no real employment options and there's no real willingness to go look for work or go outside the community. I can talk till I'm black and blue about, "When you leave school this is helping you," but if we're still struggling to get housing, we're still struggling to get employment, and there's no real industry to move into or motivation, then you know, what's the point.

Author 2 saw that supporting the changes he envisioned in his community involved embracing the connected and often conflicting responsibilities that wove through his professional, cultural and personal identities. He remembered the excitement of his class in his first year as a teacher as they brainstormed things to improve community liveability:

That's what I mean by big things in the future, because I'm now capable of doing things to help out and helping myself too in the process. I genuinely want to help my mob and I couldn't do that if I was the same person I was five years ago, because you need to not only say but do as well, and you need to be that example. I can't be that same person [the drinker

and fighter] if I want those big things in the future, to help my mob.

More than an academic thing

Kids wanting to be at school, I mean in your class, that's big for some kids here. And to know it's because it's how you make them feel when they're in the classroom. I can be tough on them but they know it's fair and they know I'll look out for them whoever it is – boy, girl, family, non-family -- they know that it's a neutral zone. If they do the right thing then we're cool, we're safe and the boundaries are there. So, it's been good to see kids that weren't hardly here before, but now because they feel that way they want to be at school. And that's also more than any academic thing, I think.

Author 2's motivations as a teacher stemmed from his commitment to his community but also to the socio-emotional development of his students that he saw as “more than any academic thing.” So too, the path he took to becoming a teacher (and beyond) covered a more complex landscape and resulted in more significant personal changes than that of a simple journey towards acquisition of the skills and practices of the profession.

Art-based analysis

The artwork below (Figure 2) presents an alternate way to understand both the landscape of teacher identity and *Author 2's* journey across it, acting as a companion to the narrative. The following interpretative comments are offered as an invitation to your own engagement with the image, and a visual re-framing of the story that has come before.

The landscape represented, of a central Australian range, perhaps rising from an ancient claypan, can also be read as a map across whose contours key places in the landscape are named. This landscape is constructed of layers, where the lithosphere of “knowledge, skills, practices” rests between the often-hidden geology of “values, motivations, dispositions” and the airy atmosphere of “aspirations, goals and vision.” Running perpendicular to this geological cross-section are the other named features of this place over which the journey occurs, “ecological, transactional, relational.”

As we shift from reading the horizontal phrases to reading the vertical words, we shift in our perspective from seeing a landscape to seeing a map. Look closer, and the trails that thread their way across this landscape are also names, forming, over and over, the threads of a journey from ‘drifting in’, through ‘stumbling on,’ to ‘stepping up’ to ‘stepping out’. These pathways seem both to clamber across the range, and to have their route shaped by the contours of the map. In this, the artwork attempts to articulate what writer and artist Kim Mahood (2016) described as the “tension between ways of seeing the landscape. The perspectival [European, imperial view] of foreground, middle ground and horizon, and the bird’s-eye view of a schematic, inhabited topography [a feature of much Australian Aboriginal landscape art] [which] mirrors the tension between ways of being in the landscape” (p. 294). As well as the ontological tension of “being” in both Western and Aboriginal cultures, the artwork also expresses Mahood’s conception of landscape as one “where map and metaphor become the same—smoke and mirage, shadows and absences, through which meaning slips like light” (2016, p. 295). The artwork represents how identity and identity development is resistant to fixed or certain meanings, and how, therefore, we need to continually question, make and remake such meanings that are offered.

Figure 2: *Author 1's* mixed media artwork, 'From "drifting in" to "stepping out": Journeys across landscape of teacher identity.



Source: AI Strangeways

Insights and learnings

The story of *Author 2's* journey has foregrounded three main insights relating to the complexity of teacher identity and to the particular challenges faced by remote Indigenous teachers.

First, teacher identity is both relative and continuous. *Author 2's* underlying beliefs, current practices and future aspirations were modified across the changing times and places of his journey. The three commitments that characterise his identity were however, evident from the beginning and sustained through all these changing contexts. These were: his desire to 'help out' and subsequent embracing of the responsibilities of teacher, colleague and community member; his commitment to relationships; and his determination to take an authentic approach to relationships and pedagogy. Each of these three commitments changed relative to *Author 2's* professional and cultural contexts, and to each other, as he negotiated who he was, and what he would do to best fulfil them.

Second, teacher identity is ecological and also transactional: it consists of individual and socio-cultural factors and is constructed and reconstructed in a series of transactions between these factors in different

situations and for different purposes. *Author 2's* journey was shaped by the ecology of socio-cultural factors, which also constructed his professional identity. As such, personal and socio-cultural factors including his Indigenous/Anglo-Australian heritage, the culturally embedded expectations of familial obligation and of teacher professional values, were inseparable from his underlying values, his current practices and his future aspirations.

Third, a significant implication of the ecological-transactional nature of teacher identity relates to the differences between Indigenous culture and the western culture of schooling. Aboriginal teachers, and particularly Aboriginal teachers located in their remote home community, encounter specific challenges and tensions in negotiating an inter-cultural professional identity. These challenges are currently not fully understood or supported by initial teacher education providers or school communities. As Fredericks (2002) challenged us to recognise:

Aboriginal people live in the contemporary world and weave in and out of two, three and even more cultural domains. We are part of colonisation, just as it is part of us... You might have to look and listen more closely, but culture is always there in some form, always was and always will be. (Santoro & Reid, 2006b, p. 148)

Conclusion

Becoming an Indigenous teacher in one's own remote community brings with it a unique set of motivations and challenges unfamiliar to individuals outside that situation. The "walking in two worlds" that *Author 2* undertook as a man of Indigenous and Anglo-Australian parentage brought with it challenges and particular responsibilities to negotiate intercultural communication, collaboration and identity. Further, being both a classroom teacher and a member of his community brought a range of often competing professional, familial and cultural obligations.

Becoming a teacher meant negotiating the professional responsibilities of a classroom teacher and the familial and cultural obligations of an Indigenous man. While his original motivations to become a teacher stemmed from his commitment to community and family, his decision to give up full-time classroom teaching was also motivated by the same ecological identity that integrated being a teacher, a son, a nephew, a cousin, an uncle and a Traditional Owner. Such complexities of Indigenous teacher identity need to be better understood and more fully considered if Australia is to attract and retain the Indigenous teachers needed in our schools into the future.

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Historical perspectives: Murrinh ku thepini pumpanpunmat (Netmarluk)

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Key words: Initial teacher education; Indigenous languages; Indigenous education

Let no one say the past is dead. The past is all about us and within. (Noonuccal, 1992)

Abstract

The History Wars in Australia started in the 1990's with political recognition and discussion of the *unresolved cultural struggle over the nature of the Indigenous dispossession and the place it should assume in Australian self-understanding* (Manne, 2009, p.1). The Prime Minister of Australia of the time, Paul Keating, spoke openly about the crimes committed against Indigenous people throughout Australia's history but with government change some of the subsequent leaders, particularly John Howard, challenged this black-armband view of history (Manne, 2009). The History Wars provided the stage against which the Australian Curriculum: History (ACARA, 2014) was written, and tensions remain about what should be taught and in what context, particularly considering the cross-curricular priority Aboriginal and Torres Strait Islander history and cultures (ACARA, 2014).

This is the context within which the following essay is written, it was 2016 when a student in Wadeye enrolled in a unit ECU102: History for Schools and a lecturer from Charles Darwin University visited to facilitate learning. In discussion, the student later revealed that she had been apprehensive about the unit, worried that it would take a colonial slant and focus on the landing of the first fleet and early settlement of southern Australia. Instead the lecturer introduced a unit that asked students to critique versions of historical events and consider interpretations from different socio-cultural perspectives.

The second assignment for the unit required students to read and review Australian historical fiction and comment on how it developed their historical understanding while stimulating some notion of ethics or morality in response to the recorded event or social history (Charles Darwin University, 2016). The following essay is in response to this assignment and based on the book *Murrinhku Thepini pumpanpunmat* produced by the local Literacy Production Centre which was illustrated and written in Murrinhpatha. Importantly the book was reviewed and critique considering other text-based resources but also local oral histories so that different versions of events emerged.

Murrinh ku thepini pumpanpunmat (Nemarluk)

The main characters in the story are Nemarluk, the Japanese and the people from Port Keats region. According to the Northern Territory Police website (2016), Port Keats was named after Vice Admiral, Sir Richard G Keats, who commanded many British battleships in the late 1700's and early 1800's. Captain Phillip Parker Kin on the Ship called the Mermaid gave it this name in 1819. Murrinhpatha people of Werntek Nganaiyi (first mission) were the people Father Docherty first found at Port Keats.

Nemarluk was a great leader of the Murrinhpatha people of Werntek Nganaiyi. He was always protecting his people and his land from other clans attacking. He was also a great hunter who fed his people all year round when the wet season was difficult for others. The people of Murrinhpatha always fought for their land. There were about 6 or 7 Murrinhpatha clans that were always protected by Nemarluk and his group. His group was selected fighters from the Murrinhpatha clans.

The book is aimed for grade 4s right up to grade 10, 11 & 12.

The books are all written in Murrinhpatha. The local language of Wadeye is not spoken anywhere other than within the community of Wadeye. Until the 1970's Murrinhpatha was only an oral language. In the early 1970's Chester Street and other people started to make an alphabet and to put Murrinhpatha into writing. The students learn to read Murrinhpatha so they can read the story themselves.

Murrinh ku Thepini pumpunpunmat tells the traditional story of Nemarluk and his men and how they murdered the Captain of the Japanese boat that was near the Ngarntimeli beach in 1931 (NT News, 2006a). They killed the captain in the bush and hid him in the jungle. Once they killed the captain they went off on their canoes to the big boat and killed the other Japanese that were on the boat and chased after the Tiwi men. Somehow the Tiwi men escaped from them. This is the story of Nemarluk after this event.

In the Murrinh patha version of the story about Nemarluk, called Murrinh ku Thepini pumpunpunmat, Nemarluk attacked the Japanese sailors because the Japanese sailors lied about having no tobacco. According to the Our History article 'Bloody trail of murder in Top End' from the NT NEWS, 2006a, the Japanese were looking for water, fire, wood and women. They were given wood and water and later on, five aboriginal women were taken to the boat. The Japanese gave Nemarluk and his men tobacco in exchange.

There are several other things that are different between the story book and the history articles. In the newspaper article, the Tiwi men warned the Japanese that Nemarluk and his men were 'cheeky' and they noticed that they came on board with axes. This isn't mentioned in the story book. Both the story book and the articles tell how the Tiwi men lied and said that the boat sank, and the Japanese drowned. Then they told the priest that the Japanese were killed by Nimarluk and his men. The Tiwi men and the priest then told the police what Nemarluk has done to the Japanese sailors. The police took the Tiwi mob back to the place where it had happened and then the police tracked them down looking for the killers. Also, it was because the help of local people in the area the authorities were able to find the boat and the bones of the Japanese. Nym Bunduck (Parntak) the newspaper article and the book both mention chains being put around the necks of the men when they were captured. The picture on the cover of the book is of men with chains around their necks. The photo in the article shows that the men are also chained up around their necks. The photo in the articles shows this also. In the story book and articles Nemarluk was captured but escaped from Fannie Bay jail. In the book and our traditional story, it says he jumped over high fence and swam across the harbour to escape. In the newspaper articles, it says he walked out with the workers and escaped and probably walked out around the harbour to find his way home. Another difference is that the story book ends after talking about him escaping again. In the newspaper article shows great details about what happened after his great escape, who chased him and how he was bought back to Katherine. Birt a policeman said, "I drooped in the saddle, Fitzer likewise, Nemarluk, on the contrary, showed no signs of fatigue who marched for miles through heat, bog and flooded rivers without complaint".

The story is important because it's part of the history of Port Keats (Wadeye) for the history to be passed on to the future like we are studying by looking at the book, news articles and asking elders. The elders know the story to tell but the book and article gives us more details of what Nemarluk was like according to non-indigenous people that probably have never lived in the area.

Eventually Nimarluk was captured at Yempunhi but escaped after six months of tracking by Bul bul and other police trackers he was captured at Legena

Another version of the story told by Mary Naye, my great grandma, and Gypsy Jinjair who was Nym Bunduck's sister and my great aunt, was recorded by Mark Crocombe in 1993. This was translated to

Mark by Cletus Dumoo. These two ladies were alive when this thing happened. The story is nearly the same as the other about the murder of the Japanese, but the ladies have used different names. Mary Naye and Gypsy Jinjair say in their story that Nemarluk was in the group but he wasn't the one who killed the Japanese. They say it was Cumaiyi and Perdijert who murdered the Japanese. Mary Naye and Gypsy Jinjair didn't want to talk more about Nemarluk. They respected him because he was the leader of the Murrinhpatha people and the protector who always protected his people. Nemarluk was also a teacher that taught young boys to hunt all year around in the right seasons. The story is of interest because it was the first killing of Japanese men by the aboriginal people of Port Keats (Wadeye). Yet according to the old stories Nemarluk often raided other aboriginal communities killing people and stealing women.

The story relates to the community because Nemarluk was important to the Murrinhpatha (murinbata) people from Werntek Nganaiyi (Old Mission). This was before the news of Father Richard Docherty spread across the lands some people (tribes) walked from their homelands (country) to Wadeye to see Father Richard Docherty, this was in 1935.

Children would find it interesting to know the history of Nemarluk and aboriginal warriors and the book has a lot of pictures and not a lot of writing. The children would be excited to hear more about the story.

Other warriors includes The Kimberley Warrior, his name was Jandamarra, is a similar story to Nemarluk's. He attacked five white men who were setting up cattle station in the Kimberley Region of Western Australia, with some of his men. Jandamarra was protecting his country and he was trying to stop people from coming to his country. He died in 1897 thirty four years before Nemarluk story.

Another person is Pemulwuy from Parramatta, Botany Bay, Sydney. He was an Aboriginal Warrior and a muscular person who fought for his land and his people.

His people were being killed so he tried to protect them. He was injured for two years when the Convicts from England shot him after twelve years. They cut off his head and sent it to Sir Joseph Banks for his collection. This was in 1802 a long time before Nemarluk's story.

As mentioned before there have been several versions of the story. The newspaper articles are Secondary sources. So are the internet versions. Nganpe's version is a Primary source because he wrote the story and he was there when it had happened. My grandfather, Stephen Bunduck who is the son of Nym Bunduck (Parntak) told me his version of the story he. He was a boy when these things happened.

The students can find the secondary information about Nemarluk on Wikipedia or Newspapers. For the other two Jandamarra and Pemulwuy can be on the internet sites and YouTube. The story book Murrinh ku Thepini Pumpanpunmat about Nemarluk is a primary source because it is was told by a local elder. I heard stories about him by my grandfather, other elder people from Wadeye and the journalist who wrote on newspapers.

This story could be used in the classroom for students in Years 4 upwards. I would engage students by creating visual images of the story through Power Point presentation, with pictures to talk about, show them a video on you tube and read them the book and news articles. I would also arrange an excursion to show the students where it happened.

The students in their class could act out the story. A teacher would read the story and the kids could do a little play or they could just do a role play without reading it to them.

This story could be used to meet History and Geography outcomes in the Australian Curriculum. For example, in Year 4 **how people, places and environments interact, past and present**.

Some other outcomes in Australia Curriculum (2016) that this story could be used for include; Pose questions to investigate people, events, places and issues (ACHASSI073), Locate and collect information and data from different sources, including observations (ACHASSI074), Sequence information about people's lives and events (ACHASSI076). This last one could be a lesson making a timeline of Nemarluk's life. One of the concepts for developing understanding of history that comes from the Curriculum documents could be the nature of contact between Aboriginal and Torres Strait Islander Peoples and others, for example, the Macassans and the Europeans, and the effects of these interactions on, for

example, people and environments (ACHASSK086)

There are other moral and ethical issues about Namarluk as it shows in the articles, 'Fierce guerrilla resistance warriors'....Or 'Barbarous killer' NT News (2006b, p. 20). No, he wasn't a hero but he was a good hunter and always looked out for other tribes entering his land. He was a protector of the land by chasing them away with spears. I don't think he was a hero because he was trading women to get tobaccos from other clans. He murdered the Japanese when they weren't attacking him.

For some people, Namarluk was a Hero that protected his land and his people, but for others they say that Namarluk was a murderer. Some people believe that he was a great hunter and was always feeding his people when they had difficult times like in the wet seasons. For other people they believe that he was a strong man who walked back from Darwin and came all the way back to his country. These different opinions make some moral and ethical issues that could be discussed with the children. Some of the questions the students could be asked are "Was Namarluk a good person?", "Was he a hero?", "Would you be in his band of Warriors?" It is important that the children make their own decision about whether Namarluk was a hero or not.

In conclusion, because there are so many versions, both traditional oral and printed it is very difficult to say exactly which version is true. In my personal opinion, Nganbe's book is the one that I was always believed because it's the same story that my grandfather had told me.

Conclusion

This essay of Namarluk opened new and contrasting versions of the story, introduced issues of bias, silences and interpretation in the portrayal of historic events. Writing the essay also produced a wonderful opportunity for this detailed and textually dense Murrinhpatha book to demonstrate that two-way bilingual learning is compatible with the Australian Curriculum: History. The essay and book became resources for the development of several history lessons in a Year 5 class, including guest presentations from local Elders. This experience provides a success story of integrating Aboriginal and Torres Strait Islander history and cultures into history curriculum despite the history wars as it ensures that *Aboriginal and Torres Strait Islander students see their cultural identity and knowledge reflected in their school experiences* (ACARA, 2014).

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Language at home and the school: Resistance and compromise

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Keywords: Indigenous education; Indigenous languages; initial teacher education

Abstract

When a bilingual or multilingual person lives in a country where the national language dominates, many adjustments need to be made from one context to another. This is especially true when people whose first language is not English, are required to participate in Australian schools using the English language. To better understand some of the dynamics that occur for an individual in this transition, the authors background the situation and then give a personal recount of their experiences of moving between one language context to another. The purpose of this article is to explore some of the complexities of moving between the language of home and community and the demands of standard Australian English in the Indigenous student's school. It suggests that the resistance to fully adopting the colonising, dominant language of English, varies from one individual to another. Those that succeed in the dominant system have adopted a measure of compromise for their benefit and for the benefit of the community in which they live.

Background

With the march of global languages dominating ways people communicate, Indigenous languages are undeniably under threat in Australia since English has become the principal means of communication through the media, in institutions and in most areas for daily life in the dominant cultural milieu. The Second National Indigenous Languages Survey found that only 13 of the originally identified 250 Australian Indigenous languages are still spoken in a 'strong' way; where there are a relatively large number of speakers across all age groups (Marmion, Obata, & Troy, 2014, p. xii). Government education policies have waxed and waned with respect to supporting language maintenance and revival in school in the Northern Territory (NT). This has often been to the detriment of ongoing support for Indigenous language teaching, in spite of clear evidence to support the value of teaching literacy in the child's first language (Devlin, Disbray, & Devlin, 2017; Devlin, 2009; Disbray, 2014). This rocky history of bilingual education means that in 2018, the language of the home is rarely the language of instruction in the school, despite the first language's dominance in a community (McKay, 2017). The challenges for individuals developing strategies to maintain their own language(s) are in part reliant on these external factors.

Many individuals in communities in the Northern Territory want to hold onto one or more Aboriginal languages. The school is a place where staff and students come into a complex interaction about language maintenance and use. Within this domain, there are particular challenges faced by bilingual and multi-lingual Aboriginal Teaching Assistants as a move is made from the languages used with students when out in the community in which they live, to the expectations of Standard Australian English (SAE) as taught in the school. Members of the community may have a strong resistance to the imposed standard English, which depletes and diminishes the importance of an Indigenous community language. However, the pressure to maintain progression using the national curriculum (Australian Curriculum Assessment and Reporting Authority, 2018) alongside national testing regimes (Australian Curriculum, 2011), make it difficult to prioritise the community language for teaching, especially when the NT Education Department

does not support bilingual delivery of lessons.

In the NT, an Aboriginal Teaching Assistant (TA) needs to traverse these complex domains of communication. As trainee teachers in the Growing Our Own program, they develop strength by understanding how government policies can impact school cultures, yet they are still embedded in a system that may not understand the language pressures they experience. The ideology that a classroom teacher holds in relation to bilingualism and diverse language use can seriously impact the possibilities for students in the classroom. Freeman (cited in Henderson, 2017, p. 22) suggests that the challenge is to shift ideology and teacher language expectations together with a change in overarching policies.

Nauiyu community

Communities such as Nauiyu on the Daly River (approximately 220 kilometres south west of Darwin) have survived through the strong values linked to a sense of belonging and community responsibility (Ungunmerr, 1988). The community has maintained cultural values in spite of many interventions through colonising actions (Remote Area Health Corps, 2010) and extensive incursions into the underpinning values and beliefs of a traditional way of life (Rose, 2005). Projects such as the CSIRO Indigenous language calendar and plant identification, representing many of the Daly River languages including Ngan'gi, MalakMalak, Matngaala and Wagiman (CSIRO, 2017), have highlighted the diversity of linguistic influences in the community. These differences can be attributed to the Catholic mission, established in 1956, which drew together ten different language groups from the area as land was sold to farming interests. Traditional languages such as Ngan'gi are diminishing and most community members use Aboriginal English to discuss everyday events and life.

There is a disconnection between the languages used at home and in the school. Aboriginal English is the community language children predominantly use in St Francis Xavier School at Nauiyu, although many also understand and speak one or two other languages with greater or lesser capacity. The school caters for students from pre-school to secondary and recognises the importance of addressing the needs of children for whom English may be a second, third or fourth language (Catholic Education, 2014). The principal language of instruction remains English and the non-Indigenous teachers seldom speak or understand community languages, although most can comprehend Aboriginal English. The reality in the community is that students are rarely exposed to standard Australian English other than through the teachers at the school, through media exposure and when they have interactions in the shop.

The narrative of three voices

Given the background, highlighted above, Indigenous students in a multilingual community require their teachers to develop a high level of empathy to understand the challenges they may have in learning the required Standard Australian English. The next part of this paper introduces the perspectives of three people speaking together about language maintenance and use in the community while they worked on completing university assignments. Two of the voices are from Melanie Mullins and Therese Parry who have lived most of their lives at Nauiyu and are embedded deeply in the school and the community. At the time of writing, they worked as Aboriginal Teaching Assistants at the St Francis Xavier School and were in their third year of a teaching degree. The third voice, Birut Zemits, is a lecturer from Charles Darwin University who has worked in the Growing Our Own program, delivering academic writing, studies about cultural intelligence, and language related units.

All three authors hope that their experiences resonate with readers and will help them to see how a belief in the value of other languages can be considered as front and centre of teaching and learning. The authors have chosen a personal narrative style to consider the issues and to highlight main points. These stories were shared at a panel presentation at the 2017 Australian Council for Adult Literacies Conference (Ober, Sefton-Rowston, Mullins, Parry, Oldfield, Willsher, & Zemits, 2017) where audience members commented positively on the empathetic response they felt in identifying with this style of presentation. In writing, we have aimed to maintain this tone. The narrative started with the lecturer's voice and then we moved into a few themes while trying to maintain a conversational style for the benefit of the audience.

The narrative

Birut: Over the three years I have been visiting the community to deliver units of study in the Catholic Education funded Growing our Own program, we have had many conversations about negotiating language use for learning in the academic study zone. Sometimes these conversations were related to assessment tasks, sometimes just as a topic of shared interest. My observations of the skill with which the teaching assistants shift from one mode of speaking to another in the classroom and in the playground, and their capacity to identify the differences, has impressed and fascinated me. This has made me reflect deeply on my own language learning experiences.

As a child in the migrant area of Cabramatta in Sydney, entering pre-school with no English was quite traumatic. There were no language specialists and the assimilationist policies of the time very much supported the 'swim or sink' method of immersion language learning. I recall being overwhelmed by voices making incomprehensible sounds and people expecting me to understand what they were saying. We were expected to play games with clear instructions but I understood next to nothing of what was said. A deep-seated memory is one of sitting under a yellow slippery-dip, crying in confusion. I also remember a young boy, Ronnie (a stutterer), who came to reassure me in words I could not understand, that 'it was all okay'. His warmth and empathy with my difficulties in communicating remain a strong memory fifty years later.

I learned the English language quite rapidly and have succeeded first as a school teacher and now in the university. Career and acceptance in the Australian mainstream culture meant a lot of adjustments. While I maintain the capacity to speak my mother's and father's languages, Latvian and Lithuanian, they have remained essentially separate from my working life. There were times in my life where I rarely spoke these languages and I still have to make a special effort to seek out people with whom to speak them. The danger of not doing this is that I would lose the capacity to speak them, even though they have remained strong living languages on the other side of the world since the fall of the Iron Curtain and have been reinstated as national languages in the Baltic countries. My own children only speak a little (though they understand more) and my grandchildren speak only a few words of my mother's and my father's tongue, as I assimilated so well and their father was a mono-lingual English speaker.

So, some people reading this may have experiences of language-use compromises similar to mine. What I think is interesting, in reflecting on my own story, is how other languages can survive and be maintained alongside academic English success. I work with students from all over the world who bring their motivation to learn English to their career aspirations, but these students' experiences are very different from those students in Indigenous communities who are immersed in another language and essentially have to learn academic English as a foreign language.

Now in their third year of a teaching degree, *Therese* and *Melanie* daily negotiate multiple languages in their community as well as needing to adjust their own English language use to succeed as university students and future teachers in the Catholic Education system. Let's start with the early years of exposure to formal school learning. *Therese*, can you share some of your experiences about this so we can develop a deeper understanding of what happened in your learning journey?

Therese: Talking about my life and learning journey as an Indigenous person when growing up, I have had the experience and richness of both my culture and western world. There were several languages spoken to me. Also, I wasn't always a permanent resident in Nauiyu. My Dad did odd jobs such as with civil constructions. When a job came up, we as a family would move to another community for a couple of months. When I went to school in Wadeye, I had the pleasure of learning the local language, Murrinhpatha. As children, we learn so quickly and we adapt. I didn't have any troubles when trying to speak another language. You find the rhythm and make the transition quite smoothly.

Returning to the classroom in Nauiyu, we rarely spoke Australian Standard English. It was based more around our own language/clan groups. Francis Xavier Catholic School was never a bilingual school. The reason for that is that there were a number of diverse languages spoken. These are Ngan'gikurunggurr, Ngan'giwumirri, Malak Malak, Marri Ngar, Marrihiyel Marramaninjsji, Marri Tjevin alongside Kriol, Aboriginal English and Standard Australian English. In those days (1980-1990), we never had year levels; we were put in our clan and homeland groups. There were two clan groups in each class with two

Indigenous teachers who taught each group. By doing this, the clan children had a strong connection and a sense of belonging, as they were with their family. We learnt through a very formal “chalk & talk” system. Bush trips out to the homelands of each clan group were built into the timetable. This enriched our knowledge of who we are, what language group we belong to, which dreaming is ours and which country belongs to us. It strengthened our knowledge of our culture and passed it down to the next generation, which was me at the time. I was able to get the hang of what was expected of me, because I could understand the language and context.

My teachers were non-Indigenous, but we had Indigenous aides who took care of the cultural aspects of my learning. They also interpreted the Standard English spoken in the classroom. It felt like a safety net. It was a mixture of western standard and Indigenous literacy. What about your experience, Melanie?

Melanie: It is similar to yours in a lot of ways. My cultural language and knowledge were important to me as a student and still are as an adult. It's a lifelong learning knowledge. I learnt culture at home from my grandmother and at school when it was in clan groups. As you said, the school at Naiyu was grouped as language groups with an Indigenous clan group teacher in the early years. It made me feel proud to learn about the cultural knowledge and language, and I still use this knowledge as an adult.

In later years of primary school, I got a lot of information about English language and literacy. The teachers didn't understand my home language in class, so I had to separate the language and speak English to the teachers in class. I had to learn to code switch and speak one language for some conversations and another for different situations. The teachers didn't understand the shift in my literacy needs. I often felt uncomfortable and didn't want to get involved in most lessons.

For high school, I went away to boarding school at St Johns in Darwin. I started to understand what English literacy is about. There, all my formal learning was in English. I was immersed in speaking, reading and writing English. I was surrounded by local Darwin students. Instead of waking up and listening to my family speaking my language, I went to breakfast and spoke English. This was like a literacy immersion program, but not really structured. My own awareness of my culture increased in relation to other cultures. At boarding school, I had to adjust to a strange place that I had never seen or heard of in my life. I found that the behaviour in the classroom at home was not quite as strict as it was living in the boarding house and going to school. I got used to this and managed to achieve in academic English. Tell us about your later experience learning English, Therese.

Therese: Like you Melanie, my middle years of schooling were quite different to being in community. This was because all the literacy demands were more in the western mode and genre. Initially, it was like what any student would go through. I felt nervous, anxious and unsure of what was expected of me. I found the boarding schools down south improved my literacy skills and exposed me to a different literary and cultural world. As a result, I would say I have the best of both worlds: my culture and the understanding of my English literary texts. I would not be able to undertake a teaching course at Charles Darwin University without the exposure and knowledge of the western genre.

Now, as a teacher in a school, a lot is still important for children about identity and belonging. It is important that Indigenous children have and know their identity. In our culture, our stories, dance, identity, and most important of all, the clan/homeland, plays a vital role in our lives. We have a sense of belonging that makes us who we are. Without these components in our culture we have nothing. As our mentor and local elder, who was once our school principal, Miriam Rose Baumann said, “Not knowing which clan, tribe or language group they belong to, it is like losing loved ones, like losing our language and identity” (Ungunmerr, 1988).

I do think it is important for children to have strong English skills too, so they can cope with the outside world. How we deal with diverse needs in the classroom is to have focused sessions where we present the formal English ideas in English. I see it is difficult for a lot of the children to use this formal language, but I try to model my own ability to switch from Aboriginal English to standard Australian English. We, as teaching assistants and university students, are constantly moving, or as our previous speaker, Robyn Ober says, “slipping and sliding” (Ober et al., 2017) between the community and academic languages. At school, we have a space where we go and often talk to each other in our language, just to regain our balance with our identity. Sometimes we speak our language in class, because that is what the children

relate to the most, but this sometimes contradicts what the teacher wants. What do you think Melanie?

Melanie: During the ten years of being an Assistant Teacher at the Nauiyu School, I find that most non-Indigenous teachers are not from the Northern Territory and often from the big cities in different states. Many are unaware that in remote communities, life operates quite differently from western society. Some teachers see a pretty image of what our school or community looks like in their heads, but when they do come to our school, the picture is not what they have imagined and it is such a culture shock to them. Language barriers become difficult and teachers are frustrated when they are not able to communicate with the local students and teachers. I think that is why most teachers are not able to stay for long.

We try to keep our own language and culture going around these changes with each new teacher at the school. Our languages are shifting with the influences of media and the easy moving from place to place, but the common languages of children in the playground are still Aboriginal English, Kriol and some community languages. This has shifted a little since I went to school, but a lot is still the same for the community. The sad thing I find, is that we are losing students, as they are not able to understand what is required of them because of language difficulties. It's often too hard.

Therese: Yes, NAPLAN (Australian Curriculum, 2011) is often setting our Indigenous students up to fail, given the history of our students who clearly struggle. Our students find it just as difficult to make the cross-over in trying to speak Australian Standard English in a classroom as in an everyday situation. I would like to see greater acceptance of our students' languages in the school system. I hope that when we graduate as teachers, we have a chance to build understanding of language into our school curriculum. In doing so, the children in remote communities would understand a lot more and the non-Indigenous teachers would learn more from the Indigenous teachers.

Birut: Thank you so much for sharing your experiences and insights into the compromises and ideas of resistance relating to language use in academic learning and your own teaching. I think we can summarise the three main ideas in a conclusion.

Conclusion

This paper has reflected on experiences about language use and learning experienced by a university lecturer and two Indigenous student teachers. The introduction highlighted some of the historical factors that have impacted on the potential for classroom teaching in the local language. *Author 2* noted the difficulties encountered in deciding on a language in Nauiyu when she was a student at the school, and the fact that Aboriginal English is the main language for communication today. *Author 3* highlighted the importance of incoming teachers from other places acknowledging and showing respect for the children's lived language experience.

In a final list of suggestions, we would like to draw on three points, which echo the recommendations in the National Indigenous Languages Survey report (Marmion et al., 2014).

- Ensure that teachers coming to work in communities can empathise with the use of multiple languages and the practices of a community. This may be through pre-arrival training for that community.
- Extend language teaching practice based on evidence of what language activities work best for the interests of the community (Recommendation 2, Marmion et al., 2014).
- Aboriginal English speakers should be given support akin to bilingual language learning programs (Recommendation 8, Marmion et al., 2014).

We hope that our ideas resonate with the reader and that we have extended some discussion about improving this and other language learning and teaching situations in a way that may benefit and support Indigenous learners in the Northern Territory in the twenty-first century.

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Barriers to inclusion: Aboriginal pre-service teachers perspectives on inclusive education in their remote Northern Territory schools

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Abstract

Inclusive practices can be interpreted broadly as the ways in which we ensure that all students have an equitable education to optimise student learning outcomes, achievement and attendance. In this paper, Aboriginal pre-service teachers, all currently working towards their teaching degrees and all working as Aboriginal teaching assistants in Northern Territory (NT) classrooms, share their perceptions regarding barriers to inclusion for students in their schools and communities. The reflections were drawn from their university assignments in a unit on inclusive education, which focused on teaching all students including those with additional needs. Pre-service teachers were asked to name barriers to learning for their school-aged students and make suggestions about changes that would help students in/from their communities engage more successfully with school. This paper is intended to privilege the voices of this cohort of pre-service teachers who have significant insight into their schools, given many of them are working in the schools that they themselves attended as students. Using their assignments in the inclusive education unit as a basis for understanding their experiences with exclusion, identified barriers are examined along with their proposed solutions. This work calls for greater cultural inclusion of local languages and traditions. Inclusive and equitable education requires partnership with families and community members so that the education delivered, truly caters for students' diverse learning needs.

Introduction

When the term inclusive education is used, the term typically refers to special education, students with disabilities or students with additional needs. But if we consider inclusive and equitable education within a broader framework, inclusive education rightly refers to education that includes and meets the needs of Australia's diverse and varied student population. That is, all students, including those who come

¹ Co-authors are listed in the order in which their words or ideas first appear in the text rather than by relative contribution

from varied geographic locations, cultural backgrounds, and those learning English as an Additional Language/Dialect (to name but a few).

Equality in education means that everyone gets the same thing, that opportunities are equal, that educational curricula, resources and, by all intents and purposes, educational experiences, are similar if not the same. Australians are partial to ideas around equality and it tends to feed into national sentiments of fairness and a fair go. Equity in education strives for fairness and inclusion in all aspects of education. In practice, equity involves all students receiving what they need to be successful in their schooling. Equity respects differences and provides the support students need to achieve their educational potential. In other words, classroom adaptations, changes in school processes, and student accommodations are fully supported so that all students can access a relevant and appropriate education.

While equality and equity are often used interchangeably by the Australian populace because they sound alike, they are not the same thing. While equity now reigns in education policy documents, equality is still the term used in much public discourse and thinking. It harks back to Australia's deeply ingrained egalitarian principle of ensuring a fair go for all. This is evident when we look back to the 1970s when the Australian Federal Government first adopted the policy of multiculturalism. It was characterised by the then Minister for Immigration, Al Grassby as "equal opportunity for all – a goal which no right-thinking person could dispute" (Grassby, 1973, p.1).

Though equity means fair based on an individual's needs, pre-service teachers often present with an unshakeable belief that equality of opportunity or providing all students with the 'same' is the fairest principle. While all students benefit from language rich classroom environments, empathetic teachers, and evidence-based pedagogies, classroom teachers who provide their students with equitable opportunities to learn, tailor their instruction and scaffolds to meet their students' individual learning needs so all the students can achieve their potential.

Collaborative approaches to education that value Aboriginal and Western languages, cultures and knowledges equally, have generally not been supported by Australian education systems to date (Bat & Guenther, 2013). To provide an example in the Australian education context, we might consider whether Aboriginal students are receiving an equitable education, regarding the inclusion of their languages in early education (Freeman & Staley, 2018). We know that few attempts are made to connect the two major influences on the multilingual child's early learning. Firstly, the home language and cultural experiences that remote Aboriginal students bring to the task of learning, and secondly, the assumptions of English language and Western cultural norms, which underpin the standards, practices and values of Australian schooling and indeed, the Australian curriculum (Perso & Hayward, 2015).

Many Aboriginal education scholars (Nakata, 2007; Marika, 2000; Yunupingu, 1993) have argued that for education to be truly meaningful, relevant and inclusive for their young learners, it is not simply about valuing Aboriginal languages and knowledge in the early years, only as a stepping stone towards a more 'valuable' tradition of colonial language and Western knowledge (Nakata, 2001). Nakata (2001) believes that the starting point to developing educational policies, curriculums and teaching approaches which are more suited to the needs of Aboriginal learners is overcoming the notion of transition that pervades the discourse of Aboriginal education. Currently, Aboriginal learning experiences are thought of in terms of transition from home language to English language (Perso & Hayward, 2015), or from one set of cultural experiences to another (e.g. school).

Equitable education would value both Aboriginal and non-Aboriginal languages and knowledges. Aboriginal students often receive an equal education to Australian students: same curriculum, same classroom set up, same age-based learning expectations, same schedules. This is despite a myriad of cultural and contextual differences that are overlooked and underserved. As such, school performance measured by the same assessments, present students in a deficit light (Klenowski, 2016). Marika (2000) states that the practice of National literacy benchmarks is 'doubly discriminatory.' Firstly, because they only value Western literacy and Western knowledge and secondly, because they ignore that Aboriginal language speaking students are on a different learning pathway to monolingual English-speaking students as English language learners. Marika (1999) contends that "our job as educators is to convince the people who control mainstream education that we wish to be included" (p. 9). This paper rises to this challenge by sharing Aboriginal educators' perceptions regarding current barriers to school education.

Multicultural education: A framework for considering Aboriginal students and inclusive education

To expand our thinking regarding the broader issues of equity and inclusion in Australian education, we drew on the scholarship around multicultural education established in Great Britain and the United States. Multicultural education scholarship grew out of issues surrounding race relations and the unequal representation of students from diverse backgrounds in curricular content. In the United States, some of the earliest multicultural scholars wrote about the rights of African American students with concerns that parallel the rights of Australia's Aboriginal learners. They argued that education is often a form of subordination, a way to control and restrict opportunity, and to colonise the mind. Born out of the Civil Rights movement (Banks, 2004), the earliest rendition of multicultural education was known as ethnic studies. This approach sought to develop teaching materials based on African American content and history, insisting on the consideration and presence of varied (non-white) viewpoints in educational texts.

Scholars in multicultural education (for example, Banks & Banks, 2004; Howard, 2010; Ladson-Billings, 2009) pursued an agenda of equity in education, calling for a system that respects and responds to difference to better serve the needs of all students. Banks and Banks (1995) defined multicultural equity pedagogy as "teaching strategies and classroom environments that help students from diverse racial, ethnic, and cultural groups attain the knowledge, skills, and attitudes needed to function effectively within, and help create and perpetuate a just, human, and democratic society," with the goal of "helping students become reflective and active citizens" (p. 152). Although the emphasis has been on race and racism, multicultural education also focuses on the experiences of linguistically and ethnically marginalised populations, females, the Lesbian, Gay, Bisexual, Trans and Intersex (LGBTI) movement, and/or people with disabilities (Sleeter & Grant, 1987).

Sleeter and McLaren (1995) explained that "multicultural education frames inequality in terms of institutionalized oppression and reconfigures the families and communities of oppressed groups as sources of strengths" (p.12). Multicultural education scholarship calls for the consideration, recognition of, and respect for students and teachers of varying backgrounds, lived experiences, and racial and ethnic identities in ways that secure the academic success of students in schools and, consequently, in the larger world (Banks & Banks, 2004). This strengths-based approach contrasts with seeing multicultural students as a problem to be fixed, or a gap to be closed, as is present in much of the discourse around education for Australian Aboriginal populations. The pre-service teacher authors here present underrepresented perspectives in the literature and this work goes toward ameliorating this situation.

Critical multiculturalism takes its' tenets from critical pedagogy (McLaren & Kincheloe, 2007) and combines this with the intent of multicultural education (Sleeter & McLaren, 1995), which aims to move to a place that promotes an interrogation of the structures and situations that create inequality, in small and large ways. This occurs while simultaneously advocating for social, political, and educational change, justice, and equity (May & Sleeter, 2010). For critical scholars, such as Kinloch (2011), the crux to a curative transformative education is supporting students and teachers to recognise local and global educational inequities, and to actively use their knowledge of community, language and literacies to create meaningful change in their lives.

At the heart of multicultural education is pluralism: multiculturalism, multiple perspectives, and multiple voices as important components of the work. Multicultural education promotes justice, equity, and cultural democracy as fundamental tenets (Banks & Banks, 2004, p. xi). It is premised on the belief that culture, which is multifaceted, complex, changing, and never neutral, is a major contributing factor to issues of schooling (Gay, 2010; Howard, 2010; Lee, 2007). The perennial underachievement of culturally diverse students is an ongoing concern for educators at all levels (Howard, 2010).

Adopting a multicultural framework lens moves the discussion away from the 'binary' discourse that constructs Aboriginal learners as 'failures' or different from 'normal', a dichotomy which has plagued Australian education for the last 40 years (Osborne & Guenther, 2013). To move forward, the dialogue and the conception of a 'good education' needs to be reframed so that it matches the conception of the 'good' that is founded on Aboriginal perspectives, beliefs and aspirations (Nakata, 2001; Osborne & Guenther, 2013) rather than simply adopting 'mainstream' standards, pedagogies and curriculums for all

learners.

The voices of the Northern Territory's Aboriginal teacher workforce are under-represented, yet essential for the broader conversation about equity in NT schools. Critical multiculturalism provides a platform for considering their points of view and honouring their positions as educators in their classrooms and communities. The principles of multicultural theory are notably in line with the United Nations rights-based documents which Australia has signed up to. As you will see below, these are the documents which were appealed to when discussing the barriers to inclusion experienced in communities.

Methods

Situating the authors

In 2016 the group of authors and their colleagues met at Charles Darwin University in Darwin. Bea was the lecturer for a week-long intensive unit on Inclusive Education. Bertram, Kial, Melanie, Edwina, Rachel, Marcus, Nikita and Anthony were pre-service teachers working in schools as assistant teachers and taking the unit as a part of their studies towards a *Bachelor of Education*. Leonard joined the authorship team to help with the analysis and writing. Leonard was also a teacher in one of these communities and taught some of these pre-service teachers when they were in primary school. Many of these pre-service teachers work at schools they themselves attended, and therefore have unique insights into the educational, language, and cultural context of these schools and the aspirations of their students and communities.

During time together in Darwin, we read and discussed the policy documents that shape inclusive education in Australian schools including those mentioned above. We reviewed example case studies and discussed students who were experiencing exclusion in the communities and schools in which these pre-service teachers worked. As a group we generated and discussed issues based on observed and lived experiences.

As a part of the unit requirement, pre-service teachers completed two assignments. One of these assignments asked them to identify barriers to learning for students in their community. We defined inclusive education broadly to include all student groups that were not being served well within the current system. The assignment required pre-service teachers to consider the Australian policy documents that would support more inclusive practices and justify their proposed solutions. This paper was written as a co-constructed work between the primary authors and the pre-service teachers. Not all pre-service teachers chose to be co-authors. Some selected instead to sign a talent release to approve use of their work in this paper. The identified barriers to inclusion and solutions presented in this paper come from the collection of completed assignments.

Analysis

Assignments were imported into NVivo and analysed thematically (Pinnegar & Hamilton, 2011). Codes were developed iteratively, by highlighting key quotes, ideas and themes and revising, and solidifying or expanding categories with each read through. Coding was conducted in a manner similar to that of a constant comparative method (Glaser & Straus, 1967). The assignments included in this analysis revealed the following major themes (in order of frequency): Attendance, hearing impairment, culture, speech and language issues, and lack of resources.

These themes will be explained and expanded on in the results section. These themes do not appear in the text in order of frequency; instead they are presented in a way that best supports the connection of ideas across the themes because the themes are intertwined. For example: students might spend more time out bush as a solution to issues of attendance, but to do this there is a need for better access to resources (e.g. new school buses).

An initial draft of the paper was completed by Bea and sent out to co-authors for review and feedback. Revisions were then made by Bea and Leonard.

The communities

Growing Our Own is a collaborative partnership between Charles Darwin University and Catholic Education NT, which is designed to support Aboriginal teaching assistants in acquiring their teaching degree. Each of the pre-service teacher co-authors work in one of four communities: Bathurst Island, Katherine, Daly River, or Santa Teresa. These communities are locally distinct, with different population sizes and histories, as well as varying cultural heterogeneity, practices, and languages.

Wurruymiyanga is a community on Bathurst Island, which is one of the two Tiwi islands north of Darwin. The community has a population of around 1,500 people (ABS, 2016), and was described as 85% Tiwi and 15% non-Tiwi people.

Katherine, has a population of around 6,300 people (ABS, 2016) with a mix, predominantly, of Aboriginal (~25%) and non-Aboriginal and Defense Force families. There are various languages spoken in the community, including Malay, Sri-Lankan, Nepalese, Aboriginal English and Kriol, as well as many others.

Nauiyu in the Daly River area has a population of 450 people where 86% are Aboriginal (RAHC, 2010). St Francis Xavier school was established in 1956 and the area has a history of Catholic missionaries.

Santa Teresa, 80 kilometres south-east of Alice Springs, has a population of 500 people, of whom 90% are Aboriginal (ABS, 2016). The community is very proud of the home language which is Eastern Arrernte. There are two qualified Arrernte teachers that teach the language to each class for two hours a week.

Results: Barriers to inclusion

Attendance

Attendance was the most frequent issue raised as a barrier to educational inclusion for Aboriginal students in these discussions and the subsequent assignments. Attendance is a broad umbrella category for the more specific concerns brought up in pre-service teacher assignments. Two main attendance issues were identified. First, students did not show up at school for a variety of reasons; and second, school policies relating to behaviour result in a high frequency of school suspensions for some students. Most of the assignments focused on how to address the second issue.

In defining the issues of attendance in one community, several factors that impact school attendance were listed. These included:

- Students not getting up early enough for school.
- Students often don't have food options at home, and because food is not available throughout the day at the school canteen, students go to the local take-away when they are hungry, making them late for school or missing class.
- When students fight in the community during out-of-school hours, this impacts on their willingness to come to school the next day because they feel safer at home where they do not have to see the individuals they are fighting with, who will likely be at school.
- When students "misbehave badly" they get suspended from school, which decreases attendance and a student's ability to get an education.

Several pre-service teachers discussed the way teachers and administrators often deal with behavioural issues by using suspension or exclusion from special activities, such as bush excursions and school trips, to discipline students for their behavior at school. The United Nations Convention on the Rights of

the Child states that “all children have the right to a primary education, which should be free. Discipline in schools must respect children’s dignity and their rights” (United Nations Child Rights, 1989, Article 28), this quote led pre-service teachers to question and discuss whether the current practice of regularly excluding some students respects those students’ right to access education.

Another pre-service teacher noted, “we have three main [school] rules: Stay Safe, Learn Every Day, and Respect Everyone. These are good rules. The learning every day rule is about student’s learning every day. But why do we punish students by taking away their learning?” It was suggested that instead of suspension, students could be sent to detention after school and not be excluded from everyday classroom activities.

Another difficulty around attendance concerned a situation where one school had established a room for children with special needs. This was defined as a “safe and engaging place for students needing inclusion support.” However, the space was so enticing that students began to request and demand to go there, and they sometimes misbehaved in the hope of being sent there. The use of this classroom as an alternative ‘chill out’ or ‘time out’ space for students needing behavioural support had become a much-coveted destination. It was proposed that there be a serious revision of the curriculum to ensure that students are interested in engaging with the learning occurring in the mainstream classroom. Further, the special education room was perceived as being an inappropriate destination for students who were misbehaving.

The pre-service teachers writing about this topic were extremely concerned about the impact of poor attendance on learning. It was suggested that perhaps mental health problems related to community-wide issues, may be impacting on students’ ability to attend, and fully engage with their schooling. This pre-service teacher recommended more teacher training to help specialise some of the learning programs, making sure the creation and implementation of Individualised Education Plans promoted “maximizing academic and social development, consistent with the goal of full inclusion.” Another of the pre-service teachers proposed, more broadly, that reducing staff turn-over would support solid teacher-student relationships and increase community and family involvement in the school. This would be another way to support overall student well-being and help to address the wider issue of attendance.

Overall, the pre-service students presented thoughtful solutions to a complex problem. The issues described around attendance, behaviour, suspension and expulsion are complicated and necessarily balance the well-being of the individual with the well-being of the school community. But the themes in the solutions were clear: students might be more willing to come to school and have greater motivation to remain in the classroom if their education was more interesting and perhaps more culturally relevant to their lives.

Further, student behaviour should not be dealt with by expelling or suspending students. The solution will likely be found at the intersection of school and community interests and come from robust relationships between educators and community members committed to the well-being of the community. Pre-service teachers resoundingly suggested that families need to be incorporated into planning to address issues of student attendance. It was noted that, “community and family involvement ... will help support and benefit the students learning abilities and eventually will help with their behaviour; especially when you have elders coming in and working with the students with their wellbeing and giving them some sense of belonging.”

Culture

Culture barriers are discussed after attendance because three of the four papers that addressed culture and raised concerns about cultural exclusion did so in tandem with concerns about attendance. The acknowledgement of local culture and the appropriate consideration of culture in the classroom are themes that thread their way through every assignment, although the assignments shared in this section were quite explicit about their concerns as related to educational exclusion. For example, one of the pre-service teachers stated,

Some students don't know much about their culture because of their learning too much English and not much of Tiwi in school...our students seem to forget who they are. We need to focus our student's learning and what subject they can understand that relate to culture.

Reportedly, Aboriginal students are not being encouraged to use language and customs of their family while at school as the language spoken is not understood by most staff. Also, that there are issues with teaching staff (non-Aboriginal teachers or outsiders) not understanding skin groups and cultural issues that play out in classrooms when teachers are grouping students. For example, mixed gender groupings can be a significant issue when students are over 15 years old, due to complex family/community relationships that are often overlooked. Issues of modesty and respect that impact the teacher-student and teacher-community relationships are imperative for optimal learning in the classroom.

Assignments were rife with concern about cultural transmission in the community. For example, "the school should include more Tiwi culture because, as far as I'm concerned, we are starting to lose our language, dance, dream-time stories, sacred sites and not knowing where our traditional country is located."

There were calls from pre-service teachers for increased cultural training of new teachers to their community, both around specific cultural knowledge (e.g. skin groups) and local language knowledge. To justify their arguments, they pointed to documents including the United Nations Declaration on the Rights of Indigenous People, which stated "Indigenous peoples have the right to revitalise, use, develop and transmit to future generations their histories, languages, oral traditions, philosophies, writing systems, and literatures" (United Nations General Assembly, 2007, Article 13.1, p. 7).

Recommendations also included a call for more arts, music, drama and science, including student learning about nature and the local environment. These suggestions intuit that culturally and locally relevant pedagogical activities will bolster students' cultural awareness and knowledge; increase the level of interest in learning for some students; and make school a place where students want to be, and thus improve attendance.

Access to resources

Access to resources was identified as a major barrier to inclusion for Aboriginal students in one of the assignments and was listed as a minor theme in several other assignments. One example of this form of exclusion concerned teachers requiring students to complete their homework using the internet. This was viewed as a barrier to inclusion because many students did not have internet access after school hours:

Students who don't have the privilege of having accessible resources at home are being disadvantaged, in particular those students who speak English as their second language, students who live away from home (boarding), and those students whose parents/guardians aren't equipped with the educational resources required to help their child.

Although the issue of access to resources was less explicit in the assignments compared to other themes, several solutions were posited. These included: better educational programming and accountability with the resources necessary for all students to succeed. It was also suggested that an after-school homework centre located in the school might provide a solution to the issue of students accessing resources to complete their homework. Other assignments alluded to the need for a new school bus or new sports equipment for more participatory activities such as time out bush. Once again, it was suggested that these types of activities might help encourage students to come to school and participate in learning experiences and thus they would have a positive impact on attendance.

Hearing impairment

Hearing impairment and the subsequent impact on student learning was the second most prevalent topic presented in this series of assignments and was raised by pre-service teachers in three of the four communities. Like the issue of attendance, there was variability in this category, but the concerns were primarily focused on the high rates of hearing impairment in Aboriginal populations, and whether hearing impairment was being addressed at a school and/or community level. It was notable that pre-service teachers drew on quotes and ideas from a large variety of policy documents that supported their ideas about inclusive learning for students with hearing impairment.

The issues brought forth in the assignments regarding hearing loss as a barrier to inclusive education included:

- Better identification and early treatment of otitis media to mitigate the impact of ear infections on student's emergent language and literacy skills. As well as regular hearing tests held at least once a year.
- Teachers need additional training to design learning programs specifically for learners with hearing impairment.
- Teachers need to consistently use the technology available in classrooms, for example, the Frequency Modulation (FM) system, which amplifies the teacher's voice for students with hearing impairment as this would enhance the auditory experience for learners.
- A culture of acceptance around hearing impairment needs to be nurtured to ensure students don't feel ostracised by their hearing impairment or having to wear hearing aids.
- In the same way that teachers should not regard using the FM system as optional, students should view their hearing aids as mandatory and must always be encouraged to wear their hearing aids.
- There is a need for better communication between families, the education system and health teams to make sure the school is supported to work with students who have hearing loss.

Speech and language issues

Speech and language issues were another theme that appeared in these assignments in relation to exclusion, and very often in relation to students with hearing impairment. However, it was noted that many students at these schools are learning Standard Australian English (SAE) as a second language, and only have exposure to SAE at school. This impacts students as there are difficulties in navigating a curriculum when the student is still learning the language of instruction.

The United Nations Convention on the Rights of the Child, which states that "children have the right to learn and use the language and customs of their families, whether or not these are shared by the majority of people in the country where they live, as long as this does not harm others" (United Nations Child Rights, 1989, Article 30). Further, The United Nations Declaration on the Rights of Aboriginal People also stated children are "to have access, when possible, to an education in their own culture, provided in their own language" (Article 14.3, p. 7). Reportedly, some schools make provisions for students to learn their home language but not across the entire curriculum (e.g. local language is not used in Math or Science) which impacts student learning, particularly when students have special needs or hearing loss. However, most schools in the NT adopt an English only approach, with an English-speaking curriculum taught by English (only) speaking teachers (Freeman & Wigglesworth, in press)

Recommendations to address the barrier of speech and language issues included:

- Resourcing and support (including professional development) for teachers delivering programs to Aboriginal students who speak English as an Additional Language/Dialect (EALD).
- Professional development about working with EALD learners, as well as cultural immersion and accelerated literacy programming.

- Teaching teachers some simple words and phrases in the local Aboriginal language before they start teaching children. This would help to support the inclusion of students who do not yet understand English.
- Teaching literacy in both English and Aboriginal language so students are not just bilingual but biliterate.
- Training more Aboriginal language speakers as quality teachers.

Discussion

This paper has presented issues that appear to apply to NT schools generally, such as attendance, and the degree to which Aboriginal language and culture are included and used for learning in the classroom. Attendance was the prominent topic and perhaps this reflects the frequency of the issue in the contemporary public discourse. Educational authorities often cite poor attendance rates as the primary reason why so many Aboriginal students do not achieve the same learning outcomes as non-Aboriginal students (Osborne & Guenther, 2013). While recognising the common sense in their argument that regular attendance is vitally important to receiving the full benefits of what schools have to offer, Lee, Fasoli, Ford, Stephenson, and McInerney (2014) assert that school attendance “is not, and never will be, the whole story” (p. 184). Proponents of ‘poor attendance’ as the sole determinant of poor outcomes tend to assume that the goals and aspirations of Aboriginal communities mirror the values of urban mainstream society and that they aspire to achieve the same formal (Western) education and employment outcomes (Osborne & Guenther, 2013).

Nakata’s (1991, 2001) position is that governments, policy makers and researchers should not view Aboriginal learners as a homogeneous group, and that it is crucial for Aboriginal education policies, curriculums and teaching approaches to reflect the positioning of the individual Aboriginal learner’s needs. Further Nakata (2001) believes that policy makers must recognise that Aboriginal students are positioned within the education system on a multiplicity of socio-cultural markers, such as socio-economic, geographical, language, historical and other intersections of the learner’s background, and that these are rarely predictable or predetermined. This article presents the views and educational experiences of remote Aboriginal pre-service teachers in an effort to expose inequity, in the hope that future programs and policies are better tailored to meet the specific needs of these Aboriginal learners.

Nakata (2001, 2007) contends that the linear view of transitioning Aboriginal learners, which currently dominates educational policies and practices, positions the teaching of local Aboriginal knowledge as part of simple early learning experiences. Therefore, as Aboriginal students’ progress through their schooling and higher level skills are acquired, the current education system “moves Aboriginal students away from their life learning context and students lose interest, parents and communities worry about cultural maintenance and outcomes” (Nakata, 2001, p. 7). These same concerns emerged in our discussions and assignments about barriers to inclusion for Aboriginal learners. Nakata (2001) states that he is not saying that an appropriate curriculum and pedagogy for Aboriginal learners should be determined solely by its proximity to the lifeworld of the Aboriginal learner. Instead, it should “begin there and extend the Aboriginal learner in the intersections with non-Aboriginal ways of knowing, ways that will produce comparable outcomes, useful and relevant to their present and future but able to maintain the continuity with the past” (Nakata, 2001, p. 8).

The primary goal of multicultural education is to implement a model of education that accommodates the various skill sets, talents, and knowledge that learners bring with them into classrooms (Lee, 2007). Doing so means that educators openly provide all students with ample opportunities to learn, to acknowledge their agency (Lee, 2007), to attain academic achievement (Howard, 2010), and to question inequitable, and oppressive educational structures (Gay, 2010). This work calls for greater cultural inclusion of local languages and traditions, and for education to be prepared in partnership with families and community members to ensure the education delivered truly caters for students’ diverse learning needs.

Conclusion

A multicultural society is founded on the principles of respect and tolerance of difference. The pursuit of equal outcomes (equality) views difference negatively, and students who don't conform to the standards as problematic. Critical multicultural education fundamentally values difference. It is one possible lens for considering teaching and learning practices with diverse student populations. It is also a mindset for engaging learners and drawing their attention to the power and autonomy they must create positive change in their communities.

When we approach remote education using a critical multicultural education lens, we reveal the multifaceted needs and strengths of individual students. With this awareness we can truly start to ask the right questions and begin the provision of inclusive education in partnership with communities, to work towards shared educational aspirations.

This work is not intended to suggest that the issues raised are simple or easy to fix. Indeed, they are complex, and reflect an enduring history of institutionalised racism. The barriers and proposed solutions presented in this paper simply provide insight into the thorny issues of providing inclusive education when faced with the constraints and reality of schools, administrative processes and remote communities. We are appealing for a move away from simple problematization and urban-centric approaches to education that currently predominates.

It is important to recognise that marginalised students, whether they have been excluded from school because of their behaviour or missed important learning due to a significant hearing impairment, need to receive a more equitable education so they too can flourish. If our research and teaching practices are interwoven and designed around our students, then our teaching and learning should reflect how people grow, learn, and change in sociocultural spaces that support critical thinking, diversity, difference, multilingualism, innovation, and authentic literacy engagements, to create “pedagogies of possibility” (Kinloch, 2010, p.192). This should even be the case for those students who challenge us with their words and actions. This should even be the case for those who come to our classrooms with a myriad of underserved needs, whether developmental delays, chronic ear infections, or other issues likely to impact on their educational journey.

This paper is a call for Australian educators to nurture, promote and develop the myriad of talents and possibilities our students bring to the classroom. Valuing diversity and difference as positive attributes, means the outcome of success, or excellence (as aspired to in The Melbourne Declaration, 2008) looks different based on our students' individual abilities, strengths, challenges and aspirations. We are championing equitable education for all. We urge educators and politicians to respect, privilege and harness difference, to truly give our students a fair go.

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Both-Ways science education: Place and context

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Abstract

This paper presents a Both-Ways place-based science education initiative, which situates Indigenous and western science knowledge traditions together as official curriculum knowledge, within a *Bachelor of Education* science education unit. This program is delivered in-situ to preservice teachers who work as Aboriginal Teaching Assistants in school classrooms. The program, known as *Growing Our Own*, is established in Indigenous communities in the Northern Territory (NT). This initiative has engaged Indigenous preservice teachers in border-crossing pedagogical practices as a way to recognise the legitimate use of the Indigenous concepts of place. It has also contextualised the teaching of school science as described in the Australian curriculum. This Both-Ways approach privileges the voices and knowledge of local Indigenous peoples and creates a bridge to the curriculum of science in a place-based contextually relevant methodological manner. Such modifications realise a meaningful cultural and place contextualization, which values and enables border-crossing between local Indigenous science knowledge, language and western science. The paper presents pedagogical discourses of place-based and contextual approaches in five NT Indigenous communities to demonstrate how the teaching of science has been reconceptualised. The authors and the preservice teachers use Indigenous perspectives intertwined with the science of the Australian curriculum. Such approaches have provided meaningful border-crossing opportunities for preservice teachers in the *Growing Our Own* program.

Introduction

This paper presents a Both-Ways (B-W) narrative by two non-Indigenous university lecturers working in communities with Aboriginal (Indigenous)¹ preservice teachers employed as Aboriginal Teaching Assistants in their community's school. Both lecturers have previously taught in schools with Indigenous students: one in North West Queensland; and the other in Central Queensland. However, both were "strangers in a strange land" (Heinlein, 1961), a metaphor from the science fiction novel of the same name, where a human raised on Mars arrives on Earth and takes a journey to adapt to, and understand, earth humans and their culture. This metaphor is at the centre of a B-W journey in which preservice teachers and their lecturers, cross borders through the legitimised use of Indigenous place.

These lecturers promote a space for a B-W crossing of borders through the reconceptualisation of aspects of the Australian science curriculum. Such a space, a third space (Bhabha, 1994), a space of hybrid borders where curriculum reconceptualisation exists, will necessarily include already forged alliances between Indigenous preservice teachers, young children, community members, and Elders. This is a pedagogic discourse of recontextualisation in which Indigenous knowledge of place is legitimised, using preservice teacher and community meanings related to their local context of place and science, through the pedagogic device.

1 Aboriginal from the Latin meaning from the beginning and other such Eurocentric words are used because we understand that there is no Indigenous word that refers to all Aboriginal people in Australia. The more appropriate terminologies are the Indigenous Australian people/s, Aboriginal people/s, Aboriginal person, Torres Strait Islander people/s, or Torres Strait Islander person. The more appropriate terms stress the humanity of Aboriginal and Torres Strait Islander people (Flinders University, 1996). In this paper, we use the term Indigenous.

Both-ways place-based science education

The overarching aim of this paper is to present particular aspects of the border-crossing pedagogic device objects, which were developed through collaborative discourse between two university lecturers and Aboriginal preservice teachers. This paper presents a B-W place-based science education initiative that situates Indigenous and western science knowledge traditions together as official curriculum knowledge within a *Bachelor of Education* science education unit.

B-W education (sometimes referred to as Two-Ways²) is an approach that “brings together Indigenous Australian traditions of knowledge and Western academic disciplinary positions and cultural contexts” (Batchelor Institute, 2007, p. 8). The B-W approach privileges the voices and knowledge of local Indigenous peoples to create a bridge to the curriculum of science in a place-based contextually relevant methodological approach. In this narrative, we use the term B-W science education. The use of this term provides a focus for lecturer and preservice teacher to engage in pedagogical discourse that integrates both science and Indigenous knowledge traditions.

The Indigenous preservice education students provide the cross-border pedagogic examples in this paper. They are employed as Aboriginal Teaching Assistants (ATA) and work in school classrooms located in remote Indigenous communities. They are enrolled in the *Bachelor of Education*, where their journey crosses the border from ATA to Registered Teacher as part of the *Growing Our Own (GOO)* program delivered in-situ to these Indigenous preservice teachers. The crossing journey is constituted in the socio-cultural knowledge and practice of an ATA; this knowledge is legitimated in, and by, their culture. The crossing can be seen in the different complexities of responsibility and interactions within the school, and the status of Indigenous science knowledge in the official school curriculum documents. In sum, their learning journey involves crossing the border from the ATA's culture into the teacher's culture.

Border crossing

The concept of borders and border-crossing brings notions of specialised fields of knowledge bound within the social divisions of labour within the school (Bernstein, 2000). The preservice teachers have specialised knowledge fields that have been defined in language, culture and community. This border is evident in all the remote participant schools where the ATA preservice teachers work.

Borders are also evident between the official school science knowledge represented in the Australian curriculum, and local place-based Indigenous knowledge. The culture of the Australian science curriculum represents science with little or no engagement in Indigenous knowledges, let alone place-based knowledge of the saltwater, freshwater and desert Indigenous peoples of Australia. Science, in the participant schools, represents a strong classification and science borders are insulated from other school disciplines and from everyday community knowledge.

Through the preservice teacher's pedagogical discourse, there was a recognition that Indigenous place-based knowledge and western science knowledge could develop a more permeable border by using local contexts. Such border permeability developed through the preservice teachers' realisation and recognition that “their place knowledge” could be legitimised in a recontextualised curriculum. This ATA discourse provided a cultural crossing between the world of school science and Indigenous world views, thus creating a more inclusive meaning to school science within the community. The cultural crossing presented in this paper demonstrates a B-W learning for preservice teachers and lecturers in connection with the living landscapes of the community.

2 Both-Ways and Two-Ways both consider their origins in a story recollected by McConvell (1982), in which a Gurindji (NT) man, Pincher Nyurmiyarri, advocated ‘two-way school’ rather than ‘one-way school’ or ‘only kartiya (European) way’, heard by McConvell as early as 1975.

Pedagogy of place

The construct, '*Pedagogy of Place*', is implicitly associated with Indigenous culture, Indigenous perspectives in science, and B-W pedagogical discourse. Barnhardt and Kawagley (2008) advocated that successful science education, curriculum and programming for Indigenous people should involve Pedagogy of Place or "learning through culture" (p. 113). Such a view of place and culture provided a pedagogical discourse that moved "from teaching about local culture to teaching through the culture as students learn about the immediate places they inhabit and their connection to the larger world within which they will make a life for themselves" (Barnhardt & Kawagley, 2008, p. 113). Culturally responsive pedagogies in science education using "place" have been gaining momentum with Indigenous people around the world.

In 2011, Aikenhead and Michell reported that recognition of place-based knowledge and contexts provided an opportunity for the coexistence model of Indigenous ways of knowing and the western-based school science curriculum. Studies have found that a sense of place is "a key factor to learning science in the Indigenous context. In fact, the significance of place is becoming a predominant theme in Indigenous science education" (Sutherland & Swayze, 2013, p. 179). They also suggested that creating relevant learning environments using Indigenous local place in science will contribute to student engagement, motivation and validation of their knowledge. Ezeife (2003) and McKinley (2005) argued for science education in Indigenous communities all over the world to be relevant, and not dominated by pedagogical devices devoid of the place or local environmental knowledge. Ezeife (2003) also acknowledged the lack of direct relevance of knowledge to Aboriginal peoples' place and, as Sarra (2011) emphasised, the place is people's immediate environment, to which they are deeply attached psychologically, physically, and spiritually.

Increasing collaboration with local community members (Schott, 2005), and developing a sense of place, is pedagogically critical for the discourse of *Growing Our Own* preservice teachers. Educators need local Indigenous people as resource people in their classrooms (Linkson, 1999; Michie & Linkson, 1999; Michie, 2002) and they also need to embrace Indigenous leadership (Hyde, Carpenter, & Conway, 2014; Sarra, 2007). Rennie (2006) corroborated and encouraged educators to use community resources to complement those based in the school. Local Indigenous peoples from remote communities increase the variety of stimuli and sources of information, and thus increase the likelihood that preservice teachers will want to engage in more meaningful learning. *Growing Our Own* preservice teachers are daughters, sons, mothers, fathers, aunties and uncles who are integral to the community and their classroom. Such positioning enhances opportunities for the pedagogical discourse of curriculum recontextualisation.

Bernstein (2000) called such legitimisation processes "pedagogic recontextualisation" in which new meanings of the official curriculum knowledge emerge, relevant to the community. It is also important to understand that place-based knowledge is not useable for everyone; that cultural rules apply. Cajete (2000) cautioned and indicated that "particular places are endowed with special energy that may be used, but must be protected" (p. 70). Therefore, an inbuilt spiritual curriculum construct for us as lecturers, involved considering the status of the intellectual knowledge tradition of the Australian curriculum constructs. Our border crossing represents a reconceptualised curriculum, partly invisible, valuing preservice teacher Indigenous knowledge traditions, while incorporating the realms of western science, yet challenging aspects of the western science cloak of objectivism.

Method: Narrative with case studies

This paper presents five case studies from our lecturing experience with Indigenous tertiary students using the B-W approach. Each of the case studies considers the potential conflicts through engagement with the two knowledge traditions. A narrative inquiry methodology is used. According to Connelly and Clandinin (1990), "The study of narrative...is the study of the ways humans experience the world" (p. 1). This method is particularly useful when based in the lives and work of teachers (Goodson, 2008; Webster & Mertova, 2007). Each of the unique case studies is a narrative, or story, about how the author implemented the B-W approach in their classroom. The case studies also reflect on student participation in the relevant approach. The narratives provide a foundation for the ensuing discussion, which focuses

on successful strategies for engaging with western and Indigenous constructs in science, and on gaining a deep understanding about how each group of students' wrestles with the issue of B-W knowledge.

Pedagogic recontextualisations from the Northern Territory, Australia: legitimisation of place

The preservice teachers in the following case studies work in the classrooms in one of five remote Indigenous community schools in the NT where the *Growing Our Own* program is being delivered. The preservice teachers' work is also associated with the border crossings previously outlined. As border-crossers on a journey, preservice teachers recognise the importance of using place-based and contextual pedagogical approaches in their teaching of science teaching.

This section of the study presents examples of a pedagogical discourse around place-based Indigenous perspectives in the science curriculum delivery. Here, there is a shifting of a strongly classified science discourse towards a B-W discourse of legitimisation and validation of Indigenous science knowledges. The preservice teachers present Indigenous perspectives that historically preceded western views because, to them, culture matters. For the lecturers, there was, and continues to be, a deliberate post-colonially intended shift towards a pedagogical discourse of local traditional contextual approaches, using local ways of living and knowing first. The Indigenous values, their traditional perspectives, and knowledges were acknowledged as a major contributor to the unit delivery. We first aspired to be presenting a culturally affirming environment for the Indigenous preservice teachers. Western school science was re-contextualised in a B-W approach to provide a border crossing, which connected the Indigenous and non-Indigenous worlds in a shared knowledge understanding and common language. The following examples provide a snap-shot view of a place- based B-W approach of curriculum recontextualisation.

1. The Tiwi Islands context: Local traditional sugarbag (bush honey or *yingwati*)

Locally significant, traditional sugarbag (honey or *yingwati*) collection occurs near bodies of water on the Tiwi Islands, located 80 kilometres north of Darwin. The collection happens during the season known as *Kumunupunari*, or the dry season of fire and smoke (June-July-August). The *yingwati* is emblematic, not only because it provides nature's best organic chewing gum—a yellow part of the beehive can be chewed—but it also plays a strong role in the wellbeing of the community. Preservice teachers aspire to teach Tiwi children where to locate local native bees and *yingwati*. The Tiwi peoples usually prepare damper—an early European settlers' bread, tea, and the *yingwati* delicacy is accompanied by roasted possum, to add flavour.

Yingwati is a living thing for the local peoples and has spiritual significance (Moria, personal communication, November 2016). For instance, after collecting it, the person is not allowed to wash their hands in the nearby lake because the *Rainbow Serpent* could come out and harm them (Mammy, personal communication, November 2016). Also, preservice teachers would not discuss the taboo subject of *Pukamani* stories related to bees with the Tiwi children. The gatherer would always ask permission of Elder ancestors to collect *yingwati* as they entered the bush and prepared to cut the tree for honey collection. If this protocol was not followed, the community would be disgruntled and resentful. Moria advised that "We also need to discuss with the students how to use the stem of the fan palm leaf to collect the precious liquid gold resource" (Moria, personal communication, November 2016). The tool required for this cultural activity is known as the *pandanus* spoon.

The role that bees play in their colony, and throughout the Tiwi landscape, is also important for Tiwi people. For example, larger bees are the colony's protectors and must be respected (Batchel, personal communication, November 2016). *Yingwati* is only consumed on the spot, in the bush where people find it, otherwise it may bring community discontent and misfortunes to the collector (Batchel, 2016). The Tiwi tradition also stipulates that if the collector does not consume all of the discovered honey in one sitting, the beehive must be covered with certain types of leaves in order to protect and keep it fresh for weeks (Mammy, personal communication, November 2016). *Yingwati* is placed on the skin as an armband, as part of a custom during ceremonies; it is also used on the face of a teenager as they become men (Motram, personal communication, November 2016). The iconic *yingwati* enlivens border-crossing and,

as Bernstein (1990) suggested, using this pedagogic discourse as a recontextualising principle, brings together Indigenous place, mathematics and science knowledge of the Australian curriculum.

Australian curriculum content descriptors and elaborations: Tiwi Islands (open- investigations)

Local and national science curricula content descriptors work in a complementary fashion in a B-W approach on the Tiwi islands. The approach values the local Indigenous preservice teachers' knowledges and their Tiwi bush curriculum includes the locally iconic subject, Tiwi *Yingwati*. This subject relates to the 'content descriptors and elaborations' contained in the local place-based curriculum, while also being a culturally significant object to the Tiwi peoples, as discussed above. In the western science curriculum 'content descriptions and elaborations' define what is to be taught and what students are expected to learn. There is a distinction between the local Indigenous content descriptors, which are mandatory to pass on to the next generation, and the western content descriptors and elaborations of the Australian curriculum, which "are non-mandatory components but are provided to suggest contexts through which to explore the core Science content in both depth and breadth" (Australian Curriculum, Assessment and Reporting Authority, 2018, p. 7).

Primary school teachers of Tiwi children may want to conduct a place-based, local, open investigation (work scientifically) to reach some of the outcomes of the western curriculum. This could be achieved by collecting data, visually presenting data and analysing results related to local sugarbag (*yingwati*). Planning and conducting are favourable *Inquiry skills* to promote investigative scientific skills from the Australian curriculum. In Year 5, for instance, the teacher is encouraged to cultivate inquiry skills by helping children to decide variables to be changed and measured in fair tests; and observe, measure, and record data with accuracy using digital technologies, as appropriate (AC SIS087). Two elaborations could be possible when preservice teachers are working out bush with the children: (1) discussing in groups how investigations can be made as fair as possible, and (2) using tools to accurately measure objects and events in investigation and exploring which tools provide the most accurate measurements.

The Australian curriculum has four sub-strands in Science. The Chemical sciences strand proposes one Year 5 content descriptor: *Solids, liquids and gases have different observable properties and behave in different ways* (ACSSU077). One elaboration of this descriptor explores the way solids, liquids and gases change under different situations such as heating and cooling. Another sub-strand (Year 5 Biological sciences) recommends one content descriptor: *Living things have structural features and adaptations that help them to survive in their environment*; and the supporting elaboration suggests: *Describing and listing adaptations of living things suited for particular Australian environments* (ACSSU043).

Inquiry questions might include:

- Why has the beehive been attached to a particular local tree species for many millennia?
- How do the Tiwi bees compare with the larger and more aggressive European bees?
- What are the characteristics of each type of bee?
- Investigate the recent invasion of Asian bees in the Top End (NT) and discover why they have adapted to the Top End climate.

The next section presents outcomes of the preservice teachers' recontextualisations of the science and mathematics curriculum contents as part of the reconceptualisation discourse.

Details of Tiwi open investigation plan using yingwati

A cohort of eight Indigenous Tiwi preservice teachers were introduced to the open investigation planner (working scientifically), which was an opportunity to engage in the pedagogic discourse to select the problem and the methods of investigation. It was suggested that an open investigation could be conducted with children out bush based on western constructs such as viscosity, or a study of liquids' properties, or characteristics and movement of particles. A 'dirt wall' was the most appropriate method for children and

preservice teachers working out bush and would allow them to explicate the western constructs of fluidity and viscosity, for example during honey races, then students could brainstorm variables. This method was chosen rather than using the 'word wall'.

Our initial question for investigation was about working scientifically with the velocity of liquids: the rate of the flows. The question: *Would traditional yingwati travel faster than European honey in a race?* The prediction: *yingwati* is watery, runny and will be faster than the European honey because the particles don't hold to each other so tightly. Elders would accompany the Tiwi preservice teachers and children for the honey gathering excursion. There were a considerable amount of possibilities in terms of variables, and in terms of extension work for investigations. For example: What about altering the temperature of the honey, as a potential variable to investigate? Can heating *yingwati* on the fire in a billy help it race even faster against the unheated European honey? What if the European honey is heated instead of *yingwati*? Would it arrive first at the finishing line? What about a race with both honeys heated or not heated at all?

For the Tiwi people in the Top End of Australia, the crocodile is culturally significant, and the consumption of the reptile's tail is considered a delicacy. Knowing this about the target group of students, preservice teachers on Tiwi Islands were encouraged to use the mnemonic C-M-S (**C**roc, **M**oves, **S**ilently) with Tiwi children to help them learn the types of variables. C means Change only one thing—Independent variable. M means Measure/Observe what would the change affect? — Dependent variable. S means Same: Which variables will you control?—Controlled variables. Only one variable is changed at a time to make it a fair test, as required in the accredited university course materials.

C: change one variable: heating. Place *yingwati* in two containers but only heat one of the containers of *yingwati*.

M: measure the time in seconds travelled by the liquids over a 1 metre distance on a recycled plank of wood with a rock under one end to produce a slope, and observe which liquid wins.

S: same distance travelled (one metre), same amount of honey (thirty mL) partaking in the race, same container to pour the honey from, same departure line, same arrival line, same distance each time between the two liquids racing at starting time, same honey (*yingwati*), same angle or slant of the board, and so on.

2. Both-Ways example from Wadeye: science and mathematics

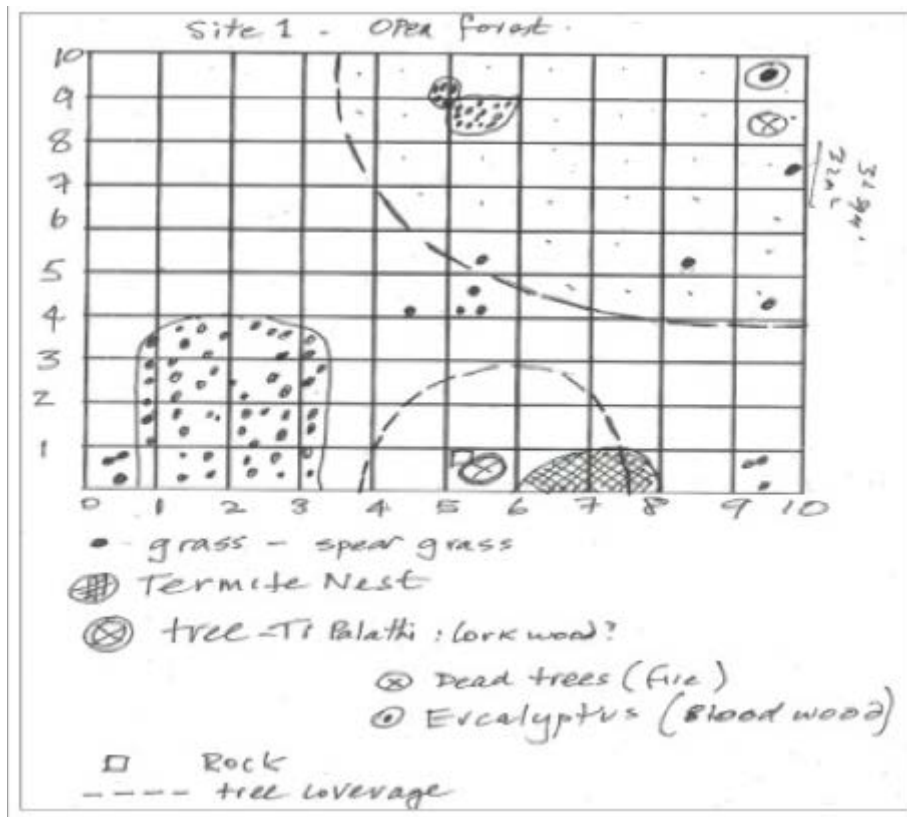
Thuykem is a culturally significant place for the Wadeye community located 420 kilometres south west of Darwin. *Thuykem* is a flat top hill rising above the flood plains. The locals also refer to it as "Airforce Hill" because, during World War 2, this place was used as a Royal Australian Air Force Radar Station due to the commanding view of the Bonaparte Gulf and the Timor Sea in Northern Australia. *Thuykem* is a culturally significant place that presented a real-world opportunity for a problem-solving investigation that crossed the disciplines of science and mathematics. The university curriculum for the *Bachelor of Education* included the requirement for a Fermi problem solving approach within the primary mathematics curriculum. Fermi problems are based on the selection of real-world context- specific problems that engage students in estimation and rough calculation with the collected data (Peter-Koop, 2005). The science curriculum required the use of Science Understanding, Science Inquiry and Science as a Human Endeavour within the sub-strands of Chemistry and Biology. The lecturer perceived a space for B-W crossing of borders through the reconceptualisation of aspects of the Australian Science curriculum.

A cohort of five Indigenous preservice teachers were presented with an opportunity to engage in the pedagogic discourse to select the problem and the methods of investigation. Bernstein (1990) provided a working definition of the pedagogic discourse, as a "recontextualizing principle which selectively appropriates, relocates, refocuses, and relates other discourses to constitute its own order and orderings" (p. 184). In this example, the pedagogic discourse brought together Indigenous place, mathematics and science knowledge.

The collaborative process between the students provided context and direction. *Thuykem* was the

starting point and the Gas Plant Road Cycad forest was the end. These places were chosen as they were significant to the community. Permissions for biology field work were granted from the Elders responsible for the land. The investigation began as a comparative quadrat study, but with further discussion on the purpose of the study, the project morphed into a business venture: a cycad forest was surveyed to determine the viability of selling cycads to Darwin. The following excerpts from the student's work illustrate the approach used in this study.

Figure 1: Map of plant distribution data, *Thuykem*: 100 m²



Source: Student A permission granted

Figure 1 represents the plant life in the area and the different trees such as the Corkwood (*Thuy Palathi*), Eucalyptus (Bloodwood), and dead trees that looked like Corkwood. There was also plenty of spear grass and a rock (Student A). Table 1 below indicates the estimated area covered by living and non-living things in the 100 metre square area (each square is 1 m²).

Table 1: Estimated Coverage

Plant/Life/Objects	Area coverage: Estimate (m²)
Spear Grass	13
Termite Nest	2
Tree – Thuy Palathi (Corkwood)	9 (including branch coverage)
Dead tree	1
Eucalyptus (Bloodwood)	34 (including branch coverage)
Rock	1

Source: Student A

The collected data provided the opportunity to develop Fermi investigation skills. Further demonstrations of understanding of the place can be found in the comments of Student A, presenting a biological perspective by suggesting that:

The conditions on the flat hill top make it an environment more suitable for resistant plants to grow. It would always be windy, which would blow away the unprotected soil, revealing more rock than dirt. The area is a flat hill top; the rains would wash away the soil downhill. Plants are scarce and there would not be much shade for more variety of plants to grow as the leaves would be hot and dry from the sun without shade. We even found that younger plants would have bigger leaves to create more shade and to catch rain. One type of eucalyptus grows in this area, Corkwood trees and lots of spear grass. These trees have rough bark that protects them from bush fires. (Student A)

A glimpse of the paleo world: uncovering history

On the walk back down the hill, travelling through a cutting, the upper sedimentary rock changed to white limestone. Investigations of the 'white rock' revealed brachiopod fossils and questions about how they got into the rock ensued. Under a tree half way down the hill, the world of millions of years ago unfolded, with the realisation that the hill and the surrounding flood plains were previously under the sea and most likely comprised a coral reef. The geology of this area was laid down under the shallow sea of the Carboniferous Period (Ahmad & Munson, 2013).

This was a western science story based on science evidence from a flat top hill towering above the flood plains. The preservice teachers had no cultural stories of such geological changes, but there were stories of oil and gas exploration on their ancestral lands, including their clan Elders' displeasure about these activities. They went to the Elders to find stories, but there were none other than creation stories, which they did not give permission to write. Nonetheless, the lecturer promoted the space for B-W crossing of borders by the reconceptualisation of aspects of the Australian Science curriculum. Recontextualisation involved the legitimisation of Indigenous knowledge of place. B-W used preservice teacher and community meanings related to their local context of place together with western science, through the pedagogic device.

The Cycad forest

The comparison site, Gas Plant Road Cycad (*Macrozamia* sp.) forest, produced data and the opportunity to demonstrate Indigenous knowledge of the plants, different soil and their learned knowledge and skills of quadrat survey and estimation. After mapping a 100m² quadrat, the students used Google maps to find a satellite image for the Gas Plant Road and the surrounding area to estimate the total area. Then the students estimated how many cycad trees were in the study area. Figure 2 provides a representation of the Cycad forest area. The area was calculated by using estimated shape as a rectangle and a triangle.

Figure 2: Cycad forest.



Source: Google Maps

The area of the Cycad forest was calculated from the estimate data and found to be approximately 12 km². The next step involved using cycad tree density from the quadrat study to calculate the estimated number of *Macrozamia* sp., which was 12 million. So, what of the plan to dig them up and sell them in Darwin? All the students said “No”, as the Cycad forest had specific cultural significance to both males and females of the community and should be left untouched.

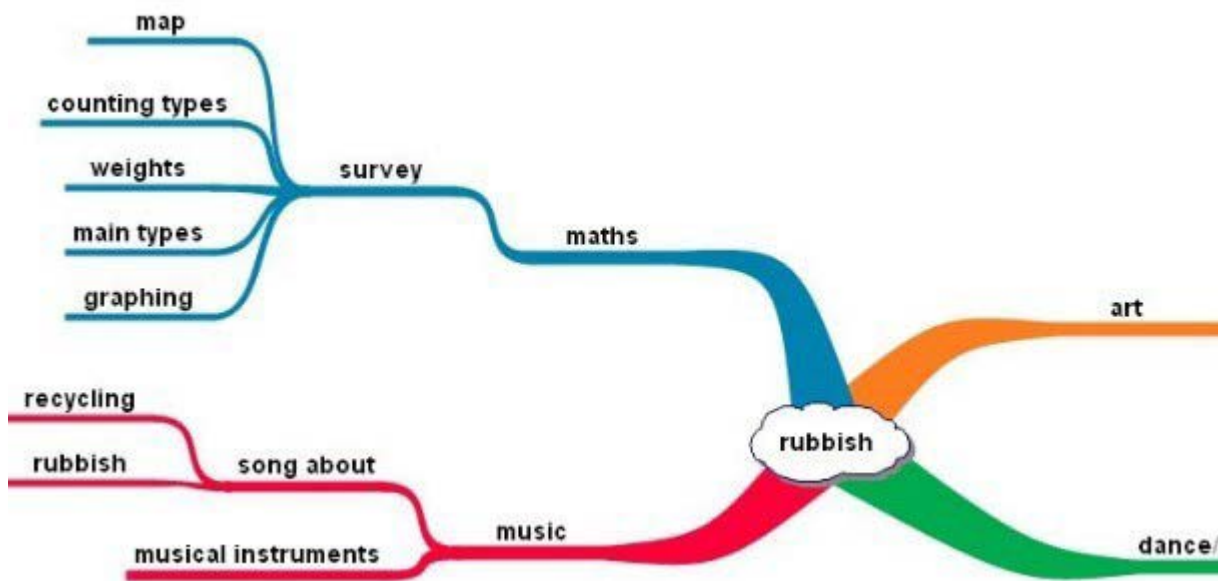
3. Concept mapping of Both-Ways knowledge

The following concept maps present another example of a *B-W place-based* science education initiative that situates Indigenous and western science knowledge traditions together as official curriculum science knowledge of a unit. This section presents outcomes of the preservice teachers’ recontextualisations of the science curriculum content that is required in the accredited university course materials. The outcomes are presented as concept maps. The concept maps used in the context of this study demonstrate Indigenous preservice teachers’ emergent understanding of Indigenous place-based knowledge and its place in the official curriculum. They also demonstrate the integration of Indigenous and western knowledge, which is a consequence of using the B-W approach.

Rubbish planning

The student cohort, seven preservice teachers from an island community in the NT, decided that it would be important to focus on a local community problem to develop a teaching unit. They decided to ask their friends and relations about the community problem of rubbish, since this was a significant concern to them because rubbish lay everywhere in the community. The preservice teachers wanted the school and their students to be involved in solving this problem. The concept map, *Rubbish Planning* (Figure 3), presents the final representation of the group's plan. This map presents a border crossing object developed by the preservice teachers for the community. It presents mathematics in a meaningful and relevant context, while linking to music, art and dance/drama. This plan was implemented across their classes in the school.

Figure 3: Rubbish planning

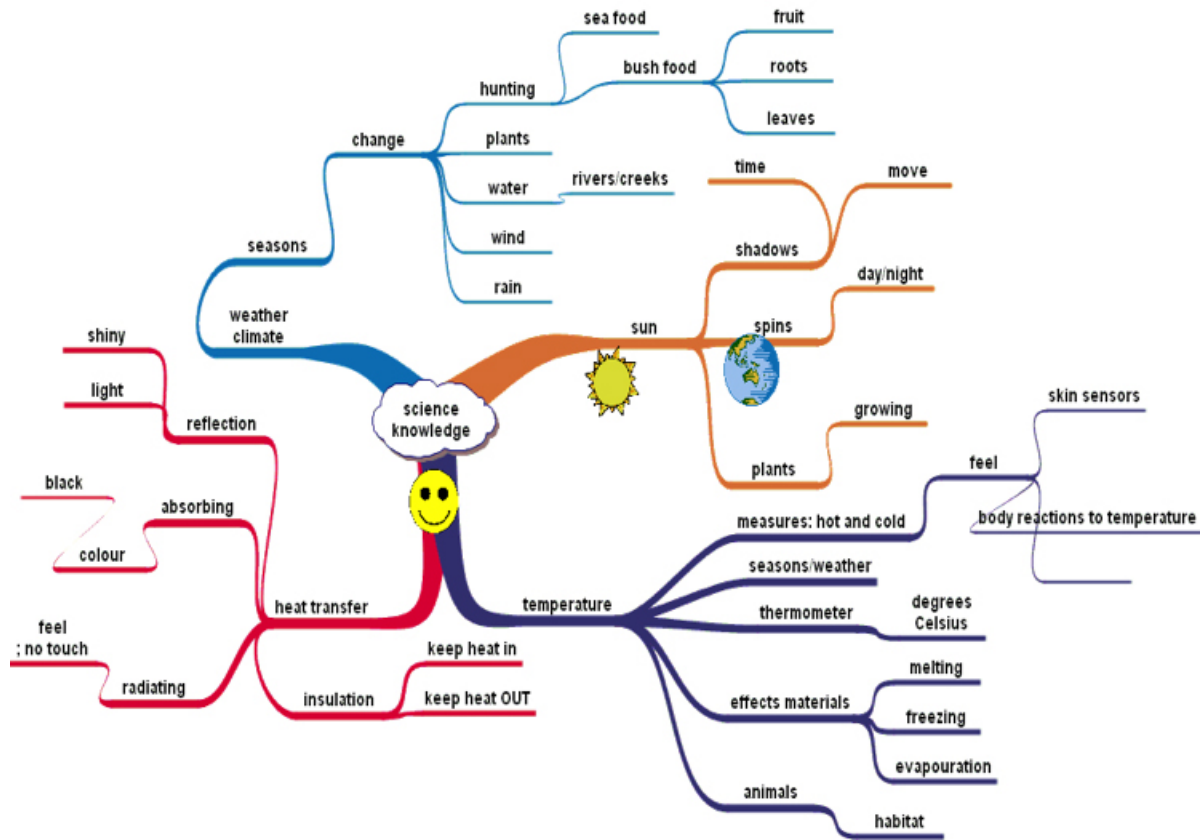


Source: Preservice teachers in NT island community

Solar science

The next concept map, *Solar Science Knowledge*, was developed by a preservice teacher student cohort from a freshwater community south-west of Darwin. The activity with these students was to design, construct and test a solar device. Having completed this task, the students were then asked to collaboratively develop a concept map to demonstrate the solar knowledge that they thought important in teaching solar concepts to their students. Figure 4 presents science as the central idea, and the preservice teachers' conceptions of the necessary knowledge.

Figure 4: Solar science knowledge



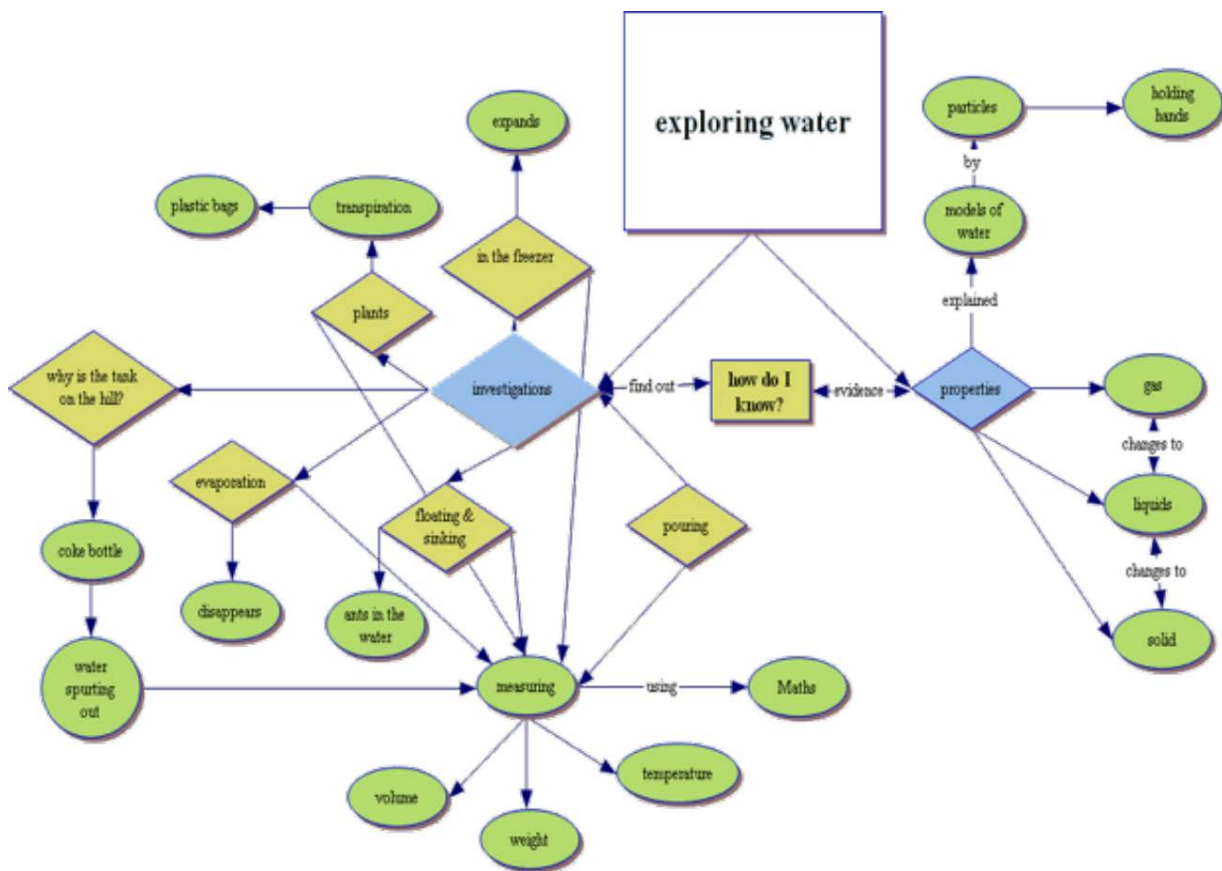
Source: Preservice teachers in freshwater community

The Solar Science Knowledge concept map demonstrates the official knowledge from the curriculum, but more importantly brings to the fore Indigenous knowledge of the land as a valuable knowledge component to the concept of solar. The inclusion of seasons, change, animals and plants represents a border-crossing reconceptualisation event that incorporates what is important to school science education in their community.

Exploring water

The last two concept maps (Figures 5 and 6) are placed in a desert community situated south-east of Alice Springs. The Indigenous preservice teacher students in this community decided that water was a problem for the whole community. They were planning to use water exploration as the place-based context for their teaching of science. The *Exploring Water* map (Figure 5) presents water as an inquiry with the central question: 'How do I know?' and it also includes the associated ideas for investigating this question.

The investigations presented in this concept map are from the preservice teachers' everyday experiences. There is a clear link with their everyday observations. The daily activities within their local community provide the context and generate relevant topics for investigations in science and mathematics. The properties, the modelling of water as particles, and the "holding hands" role play were part of the Explore - Explain phase of their learning within the science unit.

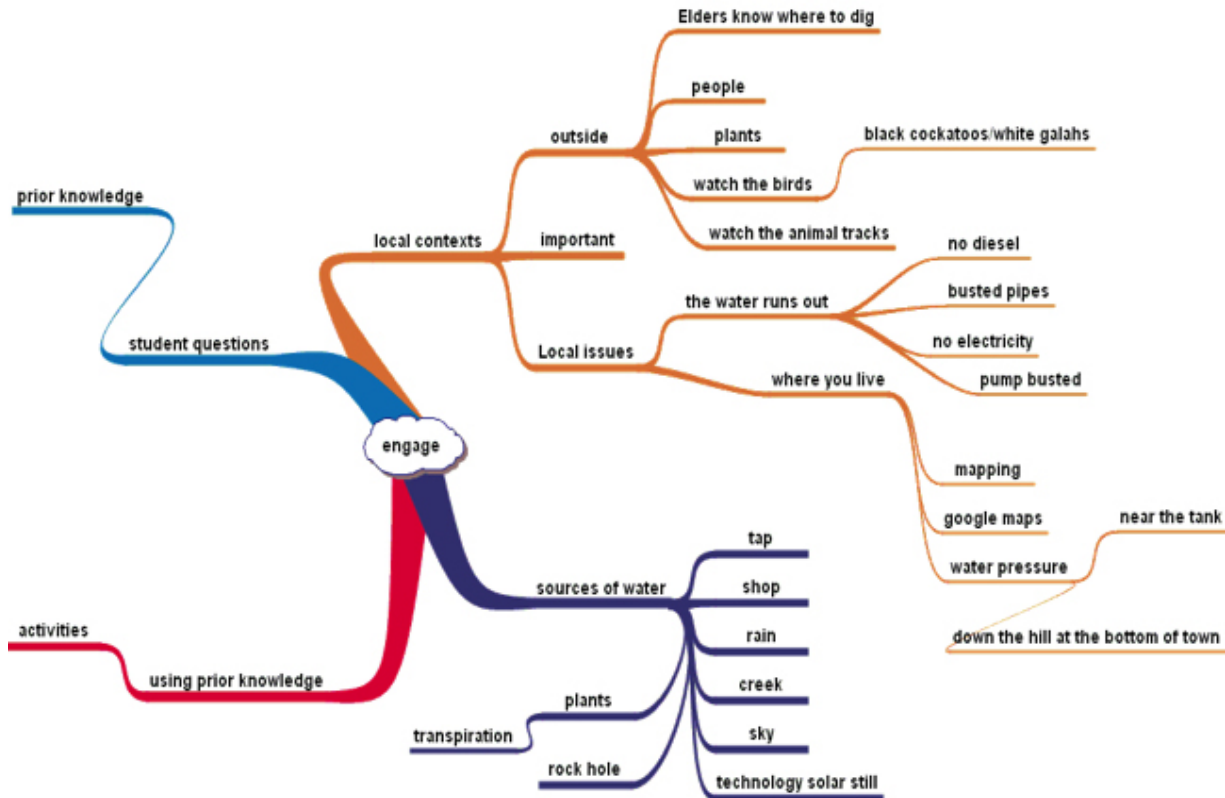
Figure 5: Exploring water

Source: Preservice teachers in desert community near Alice Springs.

Engage phase

The next concept map (Figure 6) presents preservice teachers concepts for the engage phase of the 5E's pedagogical approach (Bybee, 2009). The map uses place as a resource to engage in the topic of water. In this map, there is recognition of local issues, such as where you live, and when the water runs out. The preservice teacher students who developed this map demonstrated Indigenous knowledge from the outside (classroom) in the 'sources of water' branch.

Figure 6: Engage phase



Source: Preservice teachers in desert community near Alice Springs.

Discussion

Pedagogical reconceptualisation discourse by the preservice teachers has been a generative border crossing with “ongoing creation and re-creation of the webs association” (Davis, Sumara, & Luce- Kapler, 2015, p.81). This reconceptualisation requires a pedagogical approach that encourages conscious re-working of the schemas of the official school curriculum knowledge. This re-structuring of official knowledge develops new personal, collective and culturally constructed meanings (Bernstein, 2000).

These meanings, as demonstrated in the above examples, redistribute the knowledge and practice of what counts as valid knowledge and practice in school science. The B-W examples above are fortified by the construct of inclusion in which both Indigenous and western knowledge appear in the curriculum. What has emerged in the B-W approach is a new official curriculum constituted in a place- based pedagogical discourse that reconceptualises and recontextualises what counts as valid knowledge and pedagogical practice.

School science on the Tiwi Islands was re-contextualised in a B-W approach to provide a border crossing that connected the Indigenous and non-Indigenous worlds in a shared knowledge, understanding and language. The example with the *yingwati* or bush honey, demonstrated how a place-based B-W approach of curriculum recontextualisation operated in this community context. The concept maps from Indigenous communities (Figures 3-6) provided evidence that preservice teacher students were able to apply internal models of curriculum to blur the borders between Indigenous and non-Indigenous science. These pedagogic devices, which were externalised through visualisations and webs of association, highlight connections in the individual and collective understandings of the official curriculum knowledge. We consider that these are good examples of reconceptualisation discourse.

For lecturers, the *Growing Our Own* program provided an opportunity to embed a uniquely Australian science perspective into the science curriculum. Our examples present a pedagogical discourse that

has developed classroom focused activities, which ensure that Indigenous cultural and school scientific integrity are upheld. The classroom activities validate preservice teachers' knowledge as part of the Australian science curriculum through a B-W place-based recontextualisation. For the preservice teachers, their local place is intended to enrich and bring to life the content descriptors of the western curriculum.

Conclusion

For Indigenous preservice teachers, the western academy often continues to impose a colonial view, language, and a foreign educative framework onto Indigenous peoples in science education, rather than using their local context. This paper provides examples of a pedagogical discourse in which Indigenous place-based knowledge and B-W school science are reconceptualised across the discipline boundary. The school science border is constructed through rules about knowledge and pedagogic practices based in the culture of western science. Similarly, the Indigenous place-based border is based on knowledge and pedagogic practices from Indigenous cultures. The Indigenous preservice teachers have demonstrated B-W cultural border-crossing in the development of these border-crossing objects.

There is a crossing over at the curriculum border. This happens because Indigenous perspectives on place and their environment relate to including Indigenous knowledge in the curriculum, particularly in this case: the science curriculum (Michie, 2002, 2015). B-W teaching goes beyond knowledge and provides for a pedagogy that is "based on a tradition of real-life and problem-solving approaches to learning" (Ober & Bat, 2007, p.80). This study offers insight into the pedagogic possibilities that emerge within a discourse that enables participation, engagement, and the valuing of Indigenous preservice teachers' knowledge. Local knowledge traditions, the place and local context are critical to lecturers in bridging cultures, and the B-W concept provides the framework for this to occur.

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Beyond perspectives: Integrating local Indigenous knowledge/s into humanities and social science education

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Ngan'gi culture is still one in which people are highly connected to the plants and animals of their land. This isn't a choice; we rely on plants and animals to sustain us both physically and spiritually. (Miriam-Rose Ungunmerr-Baumann, 2013, p. 5)

Abstract

The importance of including Aboriginal and Torres Strait Islander histories and cultures in mainstream education is highlighted in the current Australian Curriculum. Through inclusion as a cross curricular priority, policy makers and authors of the curriculum aim to address two needs. First, to ensure that Aboriginal and Torres Strait Islander students see their cultural identity and knowledge reflected in their school experiences; and second, that all students can engage in reconciliation, respect and recognition of the world's oldest continuous living culture (ACARA, 2014). These aims are addressed across states and territories through their branding of the curriculum, often with an emphasis on Aboriginal and Torres Strait Islander perspectives for the various learning areas (ACARA, 2014). How these curriculum aims are translated into classroom practice and educational opportunities is as diverse as Aboriginal and Torres Strait Islander cultures, histories and perspectives across Australia.

Aboriginal and Torres Strait Islander cultures and histories fall clearly within the domain of the Humanities and Social Sciences (HaSS) curriculum, which has a historic and contemporary focus to the study of human behaviour and interaction of social, cultural, environmental, economic and political context (ACARA, 2014). The focus of the following paper is on integrating Aboriginal and Torres Strait Islander histories and cultures and HaSS education as outlined in the Australian curriculum in the context of a remote community in the Northern Territory (NT) of Australia called Nauiyu.

Walking and talking

The context for writing the paper is the Growing Our Own project where the authors have worked together to learn and teach HaSS education within an Indigenous cultural context. In the process, both authors had roles as teachers and learners due to their different cultural backgrounds, experiences and perspectives. Author 1 was a lecturer and Author 2 was a pre-service teacher. Ultimately, Author 2 gained HaSS curriculum and pedagogical knowledge that enabled her to effectively design and develop successful learning experiences for Indigenous students. Author 1 gained insight into the culture and history of Nauiyu and also received guidance on integrating Aboriginal and Torres Strait Islander histories and cultures into units for pre-service teachers in a respectful and authentic way.

In keeping with this shared learning, the writing of the paper followed the authors in a journey around Nauiyu as they talked about working together on the HaSS unit. It started with a walk close to the banks of the Daly River.

It was a dry season day in Nauiyu and we were retracing our steps along the banks of the Daly River. On our last walk here, one of us had been student and the other teacher; this time we were co- authors discussing the importance of two ways learning.

Church, previously the largest structure in the community, now overshadowed by the sports building across the oval. We looked towards the river and talked.

Author 1: We have been here before, when you were looking at different parts of the community for the history and geography assignment.

Author 2: Yes, I remember we talked about the river and the soil.

Author 1: This time we are talking about why learning about these things is important for the children here.

Author2: Yes, why they should learn both ways, traditional and western knowledge.

Figure 1: Nauiyu community



Source: Amander Dimmock, 2018.

Country, language and culture

Nauiyu is located on the banks of the Daly River, 225 kilometres south-west of Darwin in the NT. As we stand at the river, we are surrounded by the traditional country of the Malak Malak people, an area described as “wonderfully diverse” (McTaggart, Yawalminy, Wawul, Kamarrama, Ariuu, Kumunerrin, Kanintyanyu, Waya, Kannyi, Adya, Tjifisha, & Wightman, 2014, p. 11).

The community itself is surrounded by small hills and bushland, with floodplain, **kuderri** billabongs and creeks close to the community. In the near distance, the **ninmumggurr** escarpment dominates the landscape. It is less floristically diverse on the sandstone than much of the surrounding country, with *Malgin spinifex* dominating, except for the rainforest pockets at the base before the land turns into open plains.

The open country is **ngityirr tyikmempi** black soil planes, areas rich with eucalypts, **Yerrsya** cycad, **Yerrgi** and **Yerrisyng** **miyerrmi** types of pandanus, **Merrepen** sand palms, commonly used for weaving, and **Wurrmuy** spear grass, important for signalling that bush foods are ready to be harvested. Introduced plants and animals also prevail, some, like **Miwatypala** Rosella, are named from the word **watypala**, which means “food from white-fellas” (McTaggart et al., 2014, p. 193).

Figure 2: Merrepen sand palms



Source: Amander Dimmock, 2018.

Language

Traditionally, there are ten different language groups within the Daly River region. However, in 2018 most people spoke Kriol¹ or Aboriginal English, and only a few people were speakers of Ngan'gikurunggurr and Ngan'giwumirri, two language groups that are collectively named Ngan'gi (McTaggart et al., 2014). Ngan'gi is described as a “rich language with a highly complex grammar and elaborate vocabulary” (Reid, 2018, p. 1). Data from the *Second National Indigenous Languages Survey* (Marmion, Obata, & Troy, 2014) indicated that most people in the community speak either Kriol or local traditional languages at home, however, the language of formal education in the local schools is predominantly English. This is due to the “first four hours in English” approach, established in NT schools in 2008 (van Gelderen, 2017), and the fact that relatively few local Indigenous teachers have been employed in remote Indigenous schools.

1 Kriol is a creole language that is a language resulting from abrupt colonisation processes (Dickson, 2016).

While country, language and culture are important parts of everyday life for local people in Nauiyu, there is concern about the general wellbeing of youth in the community. The high rate of youth suicide and substance abuse have been recognised problems (Miriam Rose Foundation, n.d.). Lack of success at school is considered a contributing factor to this decline and there is a need for strategies that enable children to grow strong in culture while accessing education that will enable them to compete for employment in their local community (Miriam Rose Foundation, n.d.).

The character of language and culture has been shaped considerably by ongoing colonisation processes, including the prevalence of visiting teachers who generally speak in English rather than using the local language. Overall, the history focuses on stories of settlement, farming, mining and missionaries but a few of the written reports include detail of bloody exchanges between the Malak Malak people and local miners in the late 1800s (Miriam Rose Foundation, n.d.).

Settlement history

The area was discovered by Europeans under the direction of Boyle Travers Finniss, the first governor of the proposed settlements in the NT in 1865. The river and surrounding area were named after Dominick Daly, the then governor of South Australia. The area was farmed for **Puliki** cattle, **Miyerrkadi** peanuts and sugar until the early 20th Century and a cattle station still remains in the area today. Copper mining was established in the 1880s and this brought violent interchanges between the miners and local people. Many of these incidents were reported in the South Australian Weekly chronicle between the years 1884 and 1886. Most of the reports concerned “natives murdering men” associated with the mine (South Australian Weekly Chronicle, 1886b). In 1886, the murder of three miners allegedly led to an indiscriminate and disproportionate massacre of local Aboriginal people (Elder, 2016) but the newspaper reported that “there is no evidence to prove that any natives were killed” (South Australian Weekly Chronicle, 1886a).

The dissonance of reported history is important for HaSS education, since local oral histories can be in discord with recorded events. A reminder that a range of perspectives are required when reviewing history and culture for education purposes and for an understanding of people’s lives.

This history is important since, not long after the reported massacres, around 1886, the Jesuits set up a mission across the river from the copper mine. They wanted the local people to be away from the “evil influence that the white people had” on them (Diocese of Darwin, 2017, p. 1). At that time, the local people were living a traditional hunting and gathering lifestyle, but the missionaries worked to introduce Christianity and farming practices. The Jesuits abandoned the mission in 1899 after a large flood washed away buildings and also because of failing crops, sickness and general lack of interest from the local traditional people of the area.

Settlement from commercial ventures followed and local people started to work with Chinese and European settlers who were farming **Miyerrkadi** peanuts, **Nugitin** tobacco and other crops. By the early 1950s, many local people were living at a place called Bob’s Yard and at a cement block near the Bulbul bridge. At that time, welfare authorities were sending local children away to school in Garden Point on the Tiwi Islands. This caused great sadness to the local people. As a measure to keep the children closer, the local Elders approached Bishop O’ Laughlin in Darwin and asked for help to set up a health clinic and school for the people of Daly River (Diocese of Darwin, 2017). In response, the Bishop worked to establish a mission on the Daly River at a place now called Nauiyu. The school and associated dormitories were looked after by the Daughters of our Lady of the Sacred Heart and the Missionaries of the Sacred Heart.

Nauiyu now

Within this setting, with its rich traditional culture, history and lived experience of colonisation processes, the learning and teaching of history and geography is an ever-present concept. Standing on the **dirrkuri** river bank, we remember working together to study HaSS content knowledge and pedagogy for units within the *Bachelor of Education*. The place where we were standing was a study site for a Geography

project.

The sand is red where the ants have dug nests; the other soil is black, sandy and loose on top but very compact underneath. In western knowledge, the red soil indicates the presence of iron oxides and the black colour suggests high organic matter within the soil. We had previously had a conversation about the soil, plants and the river.

Author 2: Why is the soil red do you think? [Pointing to an area where the ants have dug a nest and red soil has spilled onto the surface]

Author1: It tells us that the soil has iron oxides in it, when it is exposed to air and moisture, it appears red. In science it is because of oxidation processes. Does the colour of the soil mean anything to you?

*Author 2: The colours are used for ceremony and art; the red and yellow ochre soils are important for this. Everything in nature is important to the community, it connects to our culture. We look for signs in nature to tell us different seasons. [points to trees and the river as examples] **Yeninggisyi** red kapok tree flowers in **Ngunuwe** mid-build up. This tells us that it is time to go and collect fresh water crocodile eggs. In **Wurr begin derripal** early dry season, the dragon flies tells you that the Barramundi are ready.*

Afterwards, we both comment on the different perspectives of our knowledge, the western system focused on factors about the soil while the local knowledge moved from the soil to seasons, trees, animals and explained relations between one and other. This holistic approach is an important aspect of Indigenous knowledge (Christie, 2016), which differs from the reductionist and analytical approach of western science and geographic terms.

Relationships in the environment

As we stand close to the river, talking about different knowledge systems, we ponder on the benefits of learning from each of these different ways of knowing, for all children as well as local. From a western perspective, we recognise the rich opportunities for learning geography and history in this place. Within our sights are features of the four earth spheres, lithosphere, biosphere, hydrosphere and atmosphere²; each would provide excellent examples for geography learning and teaching. We also stand next to the church, a symbol of the historic path to development of the community as it is today. This would be an excellent place to start a historic inquiry. In conversation, we explore the importance of local children understanding both ways of knowing about the world.

In Aboriginal culture, understanding the relationships between animals, plants and the environment is important because of the constant messages about bush tucker, bush medicine and the wellbeing of the environment. Understanding the balance helps local people identify when changes are occurring. Questioning these changes and observing the interactions of plants, animals and the earth helps identify and monitor problems. This is particularly important, since the impact of both global and local problems can be monitored. In the global west, where this understanding of connectivity has become the realm of professional ecologists, the art of understanding has been removed from everyday life and people are disconnected from their environment. Consequently, changes and issues can go unnoticed.

While Aboriginal knowledge is important for holistic understanding of the earth, there are also advantages to Indigenous children having a solid understanding of western knowledge systems since they are more likely to engage with employment if they can understand western perspectives. We discuss the advantages of all children understanding Indigenous knowledge to some extent.

Author 1: Do you think non-Indigenous children, even in cities around Australia, would benefit from learning about Aboriginal knowledge?

Author 2: It is good for them to have another way to look at the environment, to learn about other cultures and different ways understanding.

Author 1: There is a strong spiritual connect in Aboriginal culture, do you think it is important for non-Aboriginal people to understand this?

Author 2: Yes, by understanding this they will know more about how changes to country through mining and other things affect Aboriginal people.

Author 1: Do you think this is something that could be part of geography education?

Author 2: Yes, it would just be part of it with learning about culture, land and places.

Author 1: Who could teach children these things, could it be their teacher?

Author 2: Yes, but only if they are Aboriginal.

In this short interchange, we recognise there will be limitations to the extent that a non-Indigenous teacher can integrate Aboriginal and Torres Strait Islander knowledge into their learning and teaching experiences. This will be discussed further on in this paper.

At the river crossing

We drive on to the river crossing, passing the new bridge to Peppimenarti and Wadeye on route. We talk about them extending the bitumen so that the road becomes easier for people to drive between the communities. There is still a long way to go before the drive from Nauiyu to Wadeye becomes easy and most of the dirt track is impassable in **Wurr wirribem dudutyamu** mid wet season and **Wudupuntyurrutu** late wet season. Flooding is common in the area and people from Nauiyu community are often evacuated at some point during the wet season.

Figure 3: Daly River Crossing



Source: Amander Dimmock, 2018.

The river crossing is busy with visiting fishermen in their small boats weighed down where they sit at the back with the motor. It is a surprising sight, since this is a river with many **awarrapun** saltwater crocodiles (*Crocodylus porosus*). Despite this, local children commonly swim at a certain point in the crossing; a point where the river course is rocky, water is clear and **awarrapun** and other animals would be easily spotted. It requires understanding of the river and constant vigilance to ensure safety.

Author 1 remembers passing over the crossing in a troopie³ with GOO pre-service teachers and a few women Elders from the community at another time. The women Elders became concerned when they saw a European family swimming with two young children directly across the river from where local people were swimming. The Troopie was stopped while the women Elders called frantically in language. Their gestures were enough for the family to quickly get out of the river, particularly when the women pointed to where a crocodile lurked not far from where they were swimming.

There is much to learn for children in this community; traditional knowledge that helps them thrive and survive in their traditional culture and country of thousands of years, and then there is western knowledge, which will help them thrive and survive in the culture of the global west that is evident in 21st Century Australia.

Building a resource package

Not far from the river crossing is **Yermanggi** Itchy Grub tree (*Barringtonia Acutangula*) the focus of a resource package developed by Author 2 as part of her primary education studies for a science unit.

Figure 4: Itchy Grubb tree roots and leaves



Source: Amander Dimmock, 2018.

The nature of the resource means that it provides rich holistic knowledge and information that will link to several curricula learning areas, including HaSS and the Aboriginal and Torres Strait Islander Cross Curriculum Priority (ACARA, 2014). The assignment called for development of a resource for teachers to demonstrate application of an Indigenous technological solution to an everyday problem, a task that opened a conversation about perspectives.

Author 2: It starts with a problem?

Author 1: Yes, it asks you to look for a technological solution to that problem and then create a resource.

Author 2: What kind of problem?

Author 1: Maybe like a need for food, medicine, heat, light – should we brainstorm ideas?

3 Troopie is a colloquial name for Toyota Troop Carrier

Author 2: But everything does more than one thing! There is not one solution or one problem!

Author 1: Do we need to look at it differently? Should I give you time to think?

Author 2: Yes.

Author 1: Tell me when you are ready.

Author 2 sits thoughtfully looking through the book co-authored by her Grandmother Kitty Kamarrama. After sometime she calls out to let Author 1 know she is ready to discuss the assignment.

*Author 2: I want to talk about the **Yerrmanggi** itchy grub tree, it is the solution to many things. It gives Woomera, spears, nesting for turtle food, leaves for cooking*

Yerrmanggi itchy grub tree is the technological solution to many problems. Weapons are made from the branches, the roots provide nesting area for short neck turtles, which make excellent food, and the leaves provide tenderising agents for the cooking of the turtles. The fact that Indigenous knowledge systems tend to be more holistic than western knowledge is reflected in Author 2's approach to the assignment. The obvious technological solutions on the list are woomera and spears, but ultimately the focus of the assignment was on turtles, tenderising leaves and the cooking process since this was women's business rather than men's business.

Integrating Aboriginal and Torres Strait Islander knowledge

It is important to understand the relationship in Indigenous culture between knowledges and the right to knowledge. Australian teachers are required to integrate Aboriginal and Torres Strait Islander history, culture and perspectives into their learning and teaching programs, but the curriculum documents do not explore the many layers of complexity inherent in this requirement. Questions arise about whose history, culture and perspectives should be included; what knowledge the teachers have the right to discuss; and how teachers can access what they need to know in order to provide authentic and respectful learning experiences.

Beyond perspectives

The need to integrate Aboriginal and Torres Strait Islander history and culture and western knowledge systems in school education is evident in communities like Nauiyu, since it is essential for the children's physical and spiritual wellbeing (Ungunmerr-Baumann, 2013). It makes sense to integrate local culture, knowledge and practices with western education during the school day. It is well recognised, through research and practice, that children learn best when taught in their mother language (Simpson, Cafferty, & McConvell, 2008). However, the formal language of education in all NT schools is English⁴, and education in remote Indigenous schools is often facilitated by non-Indigenous teachers from other parts of Australia.

St Francis Xavier Catholic School in Nauiyu is different because it employs three teachers who identify as Indigenous, two of whom qualified through the GOO program. These teachers are well placed to integrate local Indigenous history and culture in HaSS education while reducing language barriers in the school environment. They can provide leadership in Aboriginal and Torres Strait Islander history and culture education within their community. There are also benefits in this situation for non-Indigenous teachers. Firstly, non-Indigenous teachers can harness the benefits of working in a remote community setting where language and culture are strongly integrated into the school work. Secondly, they will learn

⁴ In 2008, the Northern Territory Government with support from the Commonwealth Government determined that the first four hours of schooling must be in English, this had significant impact on the Northern Territory bilingual education program in remote communities (Simpson, Cafferty, & McConvell, 2008).

the principles of integrating this cross-curricular priority respectfully and authentically and be able to provide leadership for other teachers when they return to mainstream Australian communities.

A perspective from Nauiyu

We sit in the cool of the GOO study room at St Francis Xavier school reviewing the Australian Curriculum and discussing the different perspectives and priorities.

Author 1: What do you reckon, is this an important thing for all students across Australia to learn?

Author 2: Yes, this has value for kids here on community but also important for kids in Darwin and other cities. They should know this, no matter where they come from, so they can understand why country is so important to Aboriginal people and why what they do on country affects us so much. People who live in Australia should know what it was like before they came here and what happened here, to help them respect and understand.

Author 1: What about the spiritual connection to land, do you think it would help people understand this, so that they would know the effect of things like mining and fracking on Indigenous people?

Author 2: Yes, very much. It affects us very personally, deeply. They should understand this, it is important, and they should know about sacred sites. Just as important that students here know the western knowledge though, so they can understand about western ways like mining and fracking and be able to discuss with people.

Author 1: We agree that it is important to teach both ways, western and Indigenous about country and culture but who should do this? Should it be a teacher?

Author 2: Yes, but only if they are one of us (Aboriginal or Torres Strait Islander)

Author 1: But who should teach this when there are no Indigenous teachers?

Author 2: That is a problem.

Conclusion

In this paper, we argue that considering how Indigenous people would like their history and perspectives integrated into Australian education is essential for effective teaching and learning in all educational settings.

In the context of Nauiyu, there is a history of rich cultural story-telling in the teaching of HaSS through which the country, culture and history comes to life. This is possible in this community with local teachers but the question is, who should teach this information elsewhere? This paper has posed the problem of teachers with limited resources being required to integrate Aboriginal and Torres Strait Islander histories and cultures authentically and respectfully, according to the Australian Curriculum. We also have concerns that the Australian curriculum suggests that teachers invite local Aboriginal and Torres Strait Islander people to present their history and culture to a classroom of students without payment because educational funds are scarce in many areas.

We remember where we started this discussion, when we talked about the soil and laughed at our different perspectives. We shared our knowledge systems and ideas for integrating these different perspectives in educational settings. We conclude that all teachers can learn and teach HaSS but there needs to be many more Indigenous teachers to integrate these particular cross curricular priorities effectively, respectfully and authentically.

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