

## **Educating for Sustainability in Remote Locations**

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### **Abstract**

*At a time when social, economic and political decisions, along with environmental events, challenge the viability of remote communities, educators need to better prepare young people in these communities to work towards sustainability. Remote locations can be defined by their inaccessibility rather than just distance from the nearest services, while the sustainability construct encapsulates a range of community needs: environmental, social, cultural and economic. This paper describes experiences that involve innovative approaches towards educating for sustainability in remote locations in six diverse countries: South Africa, Scotland, Canada, United States of America, Pacific Island Nations, and Australia. For each, the nature of what constitutes a “remote” location, as well as the detail and challenges of the innovation are presented. Readers should consider how they might more suitably educate the next generation to protect, showcase and learn from/with the local knowledges and capacities of the people and environments in remote locations.*

### **Introduction**

As social, economic and political decisions, along with environmental events, challenge the viability of remote communities, educators need to better prepare young people in these communities to work towards sustainability. What innovative approaches have been taken towards educating for sustainability in remote locations and what are the challenges faced? This paper describes experiences involving innovative approaches towards educating for sustainability in remote locations in six diverse countries: South Africa, Scotland, Canada, United States of America, Pacific Island Nations, and Australia. The discussion of each includes: contextual meaning of ‘remote’, detail of how the innovation is educating for sustainability, and challenges addressed.

### **Sustainability in Remote Locations**

A popular view of sustainability derives from the perspective of sustainable development as meeting “the needs of the present without compromising the ability of future generations to meet their own needs”

(Brundtland, 1987, p. 15). Previously, sustainability has focused more on environmental conservation to better preserve valuable natural resources for future generations. This view of the construct sustainability is now internationally recognised as too narrow. Global sustainability needs to focus on three important pillars: social sustainability, environmental sustainability, and economic sustainability and is achievable only if there exists agency within local communities that are “economically, environmentally, and socially healthy and resilient” (Institute for Sustainable Communities, 2019). This is more achievable through integrated solutions than fragmented approaches that meet one goal at the expense of another. Communities must drive innovation but not compromise way of life to be sustainable.

Communities exist in a wide variety of locations and circumstances. This paper focuses on remote communities that are smaller than their urban counterparts and lack the economies of scale that assist in achieving sustainability. Communities are labelled as remote for different reasons, mostly involving access difficulties, which are often

geographic, such as mountain ranges, thick vegetation, bodies of water or just vast distances from more populous areas. However, historical, social, cultural, economic or political divisions can also make communities remote. One example is refugee groups or Indigenous peoples who find themselves living in locations where the dominant culture holds very different values from their own, creating a sense of cultural remoteness, perhaps physical, spiritual, or emotional. Another example is groups whose religious or political values differ significantly from those of the dominant culture. Thus, what constitutes the nature of ‘remote’ is as much an identity, values, religious or political construct as it is geographic.

### **Educating for Sustainability**

Education plays a key role in helping communities work towards more sustainable solutions: environmentally, socially, culturally, and economically. Educators need to move away from teaching and learning approaches that compartmentalise sustainability as a specific subject or discipline, and towards incorporating sustainability within and across curricular strands. Unfortunately, even when sustainability is designated as a cross-curricular feature, teachers do not always have the skill to reflect this in their teaching. For example, research with Australian teachers involved in an initiative focused on utilizing real data about renewable energy did not demonstrate a cross-curricula approach (Barnes, Moore, & Almeida, 2018), despite sustainability being an Australian cross-curricula priority. To provide better direction for teachers the equivalent Finnish cross-curricular theme articulates five dimensions of sustainability: ecological, economic, social, well-being, and cultural (Uitto & Saloranta, 2017).

To support teachers in incorporating sustainability ideas and values into all aspects of education, Notel (2016) provided detailed teaching and learning approaches that promote a sustainability worldview, supported by encouraging critical thinking and systems thinking amongst students. Using practices based on understanding how environmental, economic, social and political realities are interconnected can lead to more holistic, critical and creative solutions to growing global challenges.

Solutions to real-life problems are often generated through the development of learning partnerships that value local knowledge and support

capacity development. For example, in Uganda, sustainability schools (not real physical schools, but social networks) have been organised around real problems, often involving illegal or impending displacement, e.g., oil governance and large plantations (Westoby & Lyons, 2017). This real-problem focus encouraged global thinking but local actions, increasing awareness of available choices to enact change. Another example, in Australia, saw “effective” school-community learning partnerships for sustainability built upon: setting student outcomes around sustainability as a priority, addressing a local need that involves a range of partners, and securing leadership commitment (Wheeler, Guevara, & Smith, 2018).

This paper describes six innovative experiences that address local (real) sustainability concerns by focusing on partnerships that value local knowledge and capacity building. These were initially shared during an International Interactive Panel at the fifth International Symposium for Innovation in Rural Education (ISFIRE 2018).

### **Indigenous Language Sustainability: Using Local Languages in South African Schools**

Nine of South Africa’s eleven official languages are first languages for 79% of the population (Statistics South Africa, 2012). After third grade, Indigenous students mostly learn in languages other than their own, and this positions them as linguistically remote in terms of access to education. It is regrettable that, post-apartheid, Indigenous languages continue to be marginalised in education. The difficulties of learning in a language other than one’s first are widely acknowledged in education research. South African scholars propose learning activities that draw on students’ first languages to enhance student engagement (see Madiba, 2012; Makalela, 2015).

Language is inseparable from identity and culture (Odeh, 2016). For contexts such as South Africa, language decisions in education need to be made with due consideration of socio-cultural justice, access and success. Students who learn in a language other than their own, are often ‘outsiders’ in the learning space because the languages that they are proficient in are recognised as neither languages of learning nor academic languages (Madiba, 2012; Makalela, 2015). Monolingual teaching in a multilingual context endangers those languages that are treated as secondary (Odeh, 2016). Students are

marginalised by the very idea that their languages, and hence their identities, are not recognized as valid for education. Additionally, the approach erroneously presumes that the language of teaching is the language in which all students think and learn. Monolingual teaching constrains meaningful participation, and that is often misinterpreted as lack of interest and/or poor academic ability. Teachers are best positioned to recognise and draw on students' multiple language abilities, to promote learning and to salvage the languages from impending extinction.

The resilience of South African languages—surviving more than three centuries of colonial domination—represents a window of hope for the survival of Indigenous knowledges, identities and cultures. Education researchers are playing an important role in promoting the sustainability of these languages. Three examples are cited here.

The first is the use of multiple languages to facilitate academic development in multilingual education contexts (Madiba, 2012). Countering the commonly cited argument of having to first intellectualise Indigenous languages before classroom use, Madiba advocated for development-through-use by drawing on students' multiple language abilities for learning. This translanguaging approach is consistent with student-centeredness, recognising, valuing and building on communicative repertoires that Indigenous students already have (Makalela, 2015).

The second example is helping to dispel educators' fears that learners may not engage meaningfully with content when discussing in languages other than the language of teaching. Msimanga and Lelliott (2013) observed a tendency in high school students to switch from English to Indigenous languages during group discussions. The students meaningfully discussed Chemistry content in three Indigenous languages, code switching and transliterating in the process. Madiba (2012) and Makalela (2015) reported similar findings with university students. In all cases, the use of Indigenous languages enhanced students' understanding. When educators formalise the use of Indigenous languages, they acknowledge students' language of thought and learning, and therefore enhance engagement and enrich learning experiences. In addition, academic use of Indigenous languages can contribute to their safeguarding.

The third example is about valuing Indigenous languages in research among rural communities. Khupe (2017) proposed the recognition of Indigenous

languages in promoting decolonised research methodologies. Using research frameworks that include Indigenous languages are respectful of Indigenous cultures, contribute to meaningful participation and facilitate the generation of authentic data.

Efforts by South African researchers to include Indigenous languages in education are not necessarily coordinated. Greater collaboration could help in the development of contextually relevant teaching and learning resources. Indigenous languages have the potential to broaden participation and success in education. Using Indigenous languages in consultation processes can increase the quality of community input in local level curriculum decisions.

Drawing on students' Indigenous language is not without challenges. English is acceptably the language of opportunity locally and globally, and parents and educators in South Africa struggle to find balance between recognition of Indigenous languages and preparing students for the world outside their villages. Consequently, the rewards of preserving local languages are often outweighed by the need to fit with global demands. Besides, educators who do not speak an Indigenous language face constraints in assisting students who may not be proficient in English. There is currently little teacher support to address the complexity of language issues in South Africa. Even pre-service teacher education is yet to move past assumptions of monolingualism.

### **Rural Community Sustainability: School Communities as Agents of Social Capital in Scotland**

Rural schools in Scotland play a key role in the sustainability of their communities and often act as hubs to support the development of social capital in the community. Ulva Primary School, on the western Atlantic seaboard of the island of Mull in remote western Scotland demonstrates that role. In 2016 the eight pupils at the school won the Scottish Social Enterprise in School Award for the development of a community café. The Principal Teacher in the school worked with the Social Enterprise Academy Scotland to develop pupil skills in enterprise and employability. The café was introduced to run over three months in 2016 but was so successful it continued and is now an established part of the local community. The pupils plan and run the café, taking turns at different roles: writing invitations, creating posters, report writing, reading and writing monthly

minutes, counting money, working out profit and loss, and researching healthy snacks to make and sell. The local community members come along and share their expertise with the children and other community members, including music, knitting, book writing and sewing.

Ulva Primary School is one of many one-teacher primary schools in rural Scotland, where keeping a school open is seen by communities as indicative of the sustainability of the community as a whole. The Commission on Rural Education (Scottish Government, 2013) noted that the threat of closure to any rural school threatened the ‘wellbeing’ of the community and that schools were viewed as part of the ‘capital’ to support local regeneration. The establishment of the community café is one part of the sustainability narrative in that community that led to substantial regeneration between 2011 and 2018.

Ulva Primary School was threatened with closure due to falling school enrolment in 2011, and the community successfully campaigned to keep the school open. This led to the formation of the Ulva School Community Association (USCA) “to give the people in and around Ulva Primary School a say in the future plans for the area” (USCA, n.d.). The aims of the association include: support for the school, community development and community land management. This association supported the development of The Ulva Ferry Housing project, which built social housing next to the primary school. The completion of the housing brought two new families to the area, who enrolled their children in the school. The housing project won a SURF award for best practice to create affordable housing from Highlands and Islands Enterprise in 2017. In May 2018 another local organisation, the North West Mull Community Woodland Company won a grant of £4.4 million from the Scottish Land Fund to purchase the Island of Ulva, a short ferry journey from the primary school, and take it into community ownership.

The narrative of Ulva Primary School and its local community illustrates the complexity of sustainability and the possibilities of regeneration in rural Scotland. There is no research evidence that demonstrates connections between the retention of a local school and the sustainability of communities, but there is evidence in national policy that the people living in those areas enact the links established through social capital and believe “that school closures would have a very debilitating effect on the local community” (Scottish Government, 2013, p. 30). Between 2000 and 2011 eleven petitions

were made to the Scottish Parliament to prevent the closure of rural primary schools. These petitions led to the Schools (Consultation) (Scotland) Act 2010, which legislated for a presumption against the closure of schools and provided guidance designed “to reduce conflict and provide clarity for communities” (Scottish Government, 2013, p. 50). This act has reduced the number of rural schools closed and introduced ‘mothballing’ where the school is shut until the number of children in the area rises again, and the school can be re-opened.

The retention of a rural school as a publicly owned facility is a key part of the sustainability of the community. More than half of Scotland’s non-public land is owned by individual families or overseas trusts. The Land Reform (Scotland) Act 2003 introduced rights and grants for communities to purchase land in their area. A local school, as a public asset, is often a key part of the sustainability of these projects and brings new families into the area, just as Ulva Primary School, with only eight pupils, was at the heart of the re-development of north west Mull between 2011 and 2018.

### **Cultural and Environmental Sustainability: Onikaniwak Offering Land-Based Indigenous Leadership in Canada**

A land-based leadership course, *Onikaniwak: For those who lead*, held on the traditional territory of the Opaskwayak Cree Nation in Manitoba, Canada, is offered for university and professional credit. Onikaniwak was sparked through an alliance between a settler scholar from rural Saskatchewan, and an Indigenous woman “from the bush” in Manitoba. Despite disparate cultures and life experiences, their personal ties to rural/remote/northern places affirmed the need to create space for reconciliation between Indigenous and settler societies (Truth and Reconciliation Commission of Canada, 2015).

Onikaniwak fosters cultural and environmental sustainability by building the capacity of educators and system leaders to support culturally relevant teaching and learning focused on the experiences of First Nations and Métis peoples (Wallin & Peden, 2014). The success of the course is due to the fact that Onikaniwak affirms rural, remote and northern spaces by: providing hands-on engagement with experiential pedagogies of place; co-creating an environment of inclusion and respect for diversity;

and acting as a model for transformative learning and reconciliation.

From the time that Christopher Columbus used the Doctrine of Discovery to deem terra nullius the land that eventually became Canada, the relationship between settler societies and Indigenous peoples has been bound by a preoccupation for land and place (Mahoney, 2016; Miller, Ruru, Behrendt, & Lindberg, 2010). The drive for westward expansion and resource extraction is at the heart of Canadian colonial practices that displaced Indigenous peoples from languages, ceremonies, and land (Fenge & Aldridge, 2015; Simon & Clark, 2013; TRCC, 2015). The severing of Indigenous people from the land caused significant disruption to Indigenous ways of knowing and being, because all aspects of tradition, language and culture are interconnected with the land (Hansen & Antsanen, 2016).

The findings of the Truth and Reconciliation Commission of Canada (2015) recognized that reconciliation between Indigenous peoples and settler societies in Canada will be achieved by confronting the truths of Canada's past and building meaningful relationships for the future. Because cultural and environmental sustainability are inherently connected in Indigenous epistemologies and ontologies, reconciliation must begin with land-based pedagogies that recognize the interconnection between people, culture and place.

Onikaniwak develops knowledge and capacity in Indigenous history, worldviews, culture, and pedagogies for those who will be leaders for reconciliation (Wallin & Peden, 2014). The land-based, experiential learning opportunity incorporates the teachings of Elders, knowledge keepers, academics, community members, and institutional partners to deliberately unsettle "whose knowledge counts" in Euro-Canadian institutions. Each year, innovations that support land-based learning and Indigenous worldviews are added to the course, including a family culture camp, cultural programming, and the incorporation of land-based sustainability discussions related to resource-based extraction in the north.

Although there is no single definition of "remote" that encompasses understandings of this term vis-à-vis its relationship to space and access to services, this camp setting, at 54°N latitude, is six to eight hours removed from population centres larger than 10,000 people. The northern landscape has shaped the independent spirit of the people who are proud that this northern lifestyle has enabled them to

maintain traditional lifestyles related to hunting, trapping and fishing. The land is replete with traditional medicines, rock paintings along the waterways, and beautiful, but potentially dangerous, wildlife such as bears, lynx and moose. The language and traditions of the local Indigenous people reflect their relationships to the land, as well as the sacred responsibility to take care of the land, and each other.

The remote northern location underscores the necessity for reciprocity and relationality between those who live in the camp, along with how dependent humanity is on the land for our existence. The juxtaposition of northern beauty and environmental harm (clear-cutting, pollutants in the water, decline in traditional plants and animals) become hard lessons to learn once participants move from seeing the site as a "camp" to an understanding that they are guests on the ancestral home of Indigenous peoples who have been differentially affected by environmental harm brought about by profit-based interests. Over the duration of the camp, its focus on relationality, respect, reciprocity and responsibility (Kirkness & Barnhardt, 1991) transforms participants cognitively, physically, emotionally and spiritually. They leave with new "lenses" and become leaders for cultural and environmental sustainability in their local settings because they cannot "unsee" what they have learned at camp. Place/land has been the site of struggle in the relationship between Indigenous and non-Indigenous peoples in Canada. Onikaniwak is successful because it centers land/place as the site of learning for sustainable change.

### **Educator Workforce Sustainability: Relational Leadership for Educator Recruitment and Retention in Rural America**

Many rural schools in America struggle to find and keep qualified educators. These problems are especially acute in remote rural areas (Showalter, Klein, Johnson, & Hartman, 2017) where low salaries, lack of adequate housing, and social isolation figure prominently. Recruitment and retention in remote locations is a sustainability issue not only as it pertains to providing a high quality and equitable education for students, but also to the very existence of rural communities. This phenomenon is well illustrated in Montana where population density is 6.8 people per square mile, and most school districts are rural with many being rural, remote. To some, Montana's small rural communities may seem

somewhat alike without many features distinguishing one from another. However, every rural community claims a unique heritage and socio-cultural traditions all their own (Williams, 2017); and often, the school system is symbolic of community identity. In late fall, local farmers exchange seats in their tractors for seats in the local high school's gymnasium to cheer on their neighbours' children in basketball games against a rival school. While the primary purpose of rural schools is to educate students, they also serve as the community hub and gathering place for entertainment, social gatherings and community celebrations (Williams, 2017).

Consequently, when schools in Montana, and elsewhere, cannot recruit educators, it sounds a death knell threatening school and community sustainability. Lacking qualified educators, educational quality is compromised, causing families to move to larger communities promising greater academic and social opportunity. As student numbers dwindle, so too do the basketball games, concerts, and school pageants enjoyed by the community. Hence, occasions for community gatherings decline, people grow apart, and the vitality of rural communities, their traditions and cultures—the very identity of people and place—can disappear.

Seeking to positively affect school and community sustainability in remote places, Montana State University (MSU) enacted a process to improve educator recruitment and retention by leveraging relationships across the academe and with rural leaders. Influenced by literature discussing perceived socio/political divides between rural America and higher education (Williams, 2017), decisions were made to abandon typical, hierarchical leadership where university personnel assumed primary decision-making roles, in favour of a flatter structure, enabling all partners—university faculty, students, rural school partners—to be equally engaged in the development of relationships and connections among people to ensure success of the process. Uhl-Bien (2006) described this organic collaboration between groups of people seeking a common goal as Relational Leadership Theory (RLT), a social influence process where relationships create both the outcome and context for action (Uhl-Bien, 2006).

Using RLT tenets, university faculty, along with former MSU students, now practicing school leaders, co-constructed a process to provide MSU's pre-service teachers contextualized clinical practice in rural, remote communities. The MSU Rural Practicum partnered with seven remote, rural schools

450 miles from the MSU campus to place pre-service teachers in week-long, intensive clinical practice opportunities. Not only did pre-service teachers experience rural school teaching and mentor/mentee relationships, they also gained insights into the cultures of rural communities, patronizing small businesses, enjoying outdoor recreation opportunities, and interacting with long-time residents. Gathering nightly for debriefing sessions, MSU preservice teachers shared their observations of rural schools and students, examining new realities that challenged prior beliefs and bolstered professional confidence. This experience created the conditions for continued exploration of rural clinical practice.

Although providing pre-service teachers with experience in a rural context was the primary objective, it was evident that program sustainability would be difficult without greater widespread financial support. Project partners were compelled to design a process to promote mutually beneficial relationships between university personnel and rural schools. They determined that sustainability was dependent on partners' skills in relational relationship development across all sectors of the P-20 educational experience. University faculty were intentionally invited to leverage their expertise to recruit practicum students and determine the logistics of the experience. To further relational leadership opportunities, faculty logged thousands of miles driving across the state meeting school administrators to co-construct the process that would enhance recruitment while providing contextualized clinical practice. Finally, rural school partners closed the loop by leveraging their professional networks, securing teaching placements for Rural Practicum students.

The success and positive trajectory of the Rural Practicum was borne out of the relational leadership framework envisioned by university and rural school partners. Each group's unique contribution showcased the possibilities inherent when university and rural school partners utilize their relational influence and professional expertise, championing recruitment and retention initiatives and enhancing sustainability for America's rural schools.

### **Environmental Sustainability: Action Competence Approach in Remote Pacific Island Nations**

The nations of the South Pacific region are largely small island states separated by large areas of ocean and comprise three major island groups: Polynesia, Micronesia and Melanesia. These island

nations are generally small and extremely remote. For example, the tiny island nation of Nauru, which is the world's smallest republic, is just 23 kilometres round with a population of 11,000, and is over 1,000 km from the Solomon Islands and almost 2,000 km from Kiribati.

In the South Pacific region ecosystems, both marine and terrestrial, are very fragile and nations like Tuvalu, Kiribati and Tokelau, which comprise atolls with a maximum elevation of a few metres, are extremely vulnerable to sea level rise. Furthermore, the adoption of aspects of Western culture, such as a high consumptive lifestyle, the introduction of plastic bags and bottles, and quite rapid increases in population, mean that South Pacific nations are facing significant environmental challenges, particularly given their limited land masses. These challenges include: the disposal of solid waste, limited supplies of fresh water, damage to coral reefs, and destruction of mangroves important to local subsistence fisheries. While governments have a significant role to play in addressing these problems, in the long-term education will be needed, particularly Education for Sustainability (EfS).

Research in EfS argues that it is extremely detrimental to present children with a series of environmental problems, particularly as phenomena like climate change are out of their control. This can lead to 'action paralysis' where they become so overwhelmed they do nothing (Uzzell & Rutland, 1993; Ballantyne & Packer, 2005). Furthermore, simply teaching children about the environment does not necessarily engender positive behaviour change or encourage students to become advocates for the environment (Fien, 2003).

The best practice for producing behaviour change is referred to as the Action Competence approach (Jensen & Schnack, 2006). This often involves students undertaking small-scale, achievable environmental projects in their local communities, for example, planting mangrove seedlings and taking ownership by caring for them. However, students can also take less direct action, such as advocating to the government to have plastic bags banned. So effective EfS generally involves spending some time outside the traditional learning environment, or engaging in activities such as advocacy that are not normally mainstream in the Pacific.

The main challenge in the South Pacific region is that many teachers are untrained or have minimal training. Through no fault of their own they are often unaware of good pedagogy in EfS, and how it might

be integrated across the curriculum by including EfS activities in specific subjects, for example calculating Ecological Footprint in Mathematics. Another significant challenge facing teachers are the highly examination-driven education systems that encourage 'teaching to the test'. Consequently, teaching is often highly didactic with extensive use of the blackboard even in practical areas such as EfS.

Teachers therefore require support in the form of ongoing professional learning to improve their Pedagogical Content Knowledge in EfS. In the Pacific this is extremely challenging in terms of cost and logistics. For example, Fiji has about 300 islands so getting teachers access to professional learning has traditionally been extremely problematic and costly. Furthermore, even when good professional learning is provided, it often has limited impact on teachers' practice due to constraints such as the examination systems.

However, there have been two significant developments. One of these has been the excellent work, done by national and regional NGOs in the Pacific, providing EfS resources in formal and non-formal education. The other has been examination system reform. Fiji previously had seven national summative examinations over 13 years of schooling but that has been reduced to three with a move to more continuous assessment. Other Island nations are following this model.

Perhaps the real promise will be through creative use of the internet to provide effective professional development and resources to teachers even in quite remote areas. In Tuvalu the internet has been extremely poor but has improved significantly in 2018, and Australia is funding a cable that should allow good quality internet reception for Vanuatu. Furthermore, teachers in Nauru regularly use the internet to find suitable activities and resources to support their teaching. So, although there are challenges in terms of protecting the environment and improving EfS in the South Pacific region there are some interesting approaches to educating for sustainability already being taken and promising developments ahead.

### **Partnerships in Social, Cultural and Environmental Sustainability: Educating 'On Country' with the Spinifex Rangers**

A partnership between the Indigenous Ranger program and a remote community school represents a unique example of innovation in education for social,

cultural, and environmental sustainability. Situated in the small remote community of Tjuntjuntjara participants utilize local resources and people to realize important social and environmental goals within the context of a traditional community and the non-traditional western school. While there are a number of social and environmental determinants that may threaten the community sustainability, this partnership provides an opportunity for learning that emphasises the interrelationship between social, cultural and environmental sustainability. Participants in the project are the Spinifex Land Management Rangers (Spinifex Rangers) and the Tjuntjuntjara Remote Community School (RCS).

The Tjuntjuntjara community is one of approximately 274 remote communities in Western Australia and is located approximately 1300 km east of Perth in the Great Victoria Desert. The people of Tjuntjuntjara are known as Pila Nguru, meaning “from the spinifex plains”, or Spinifex People, and are recognised as the traditional owners and custodians of this country. Unsurprisingly, it is acknowledged through oral narratives that the Spinifex families of Tjuntjuntjara go back at least 600 generations (Paupiyala Tjarutja Aboriginal Corporation, 2016).

The Tjuntjuntjara Remote Community School (TRCS) caters for students from Kindergarten to lower secondary, with an enrolment of 35 students all of whom are Indigenous. The school staff include the Principal and five teachers all of whom live in the community, however all are non-Indigenous. Whilst community members speak a dialect of Pitjantjatjara language, standard Australian English remains the language of instruction used predominantly at the school. Negotiated community priorities for the school include maintaining traditional culture whilst preparing their children for a rapidly changing world. The school works closely with the community to address this important dimension of social sustainability with one approach being the school’s partnership with the Spinifex Rangers.

The Spinifex Rangers program, the name given to the Indigenous Ranger projects based in the Tjuntjuntjara community, was initially funded by the Australian Government in 2007 with the broad aim of creating meaningful employment, training and therefore career pathways for Indigenous people in land management (Australian Government, 2018). These projects typically support local Indigenous people to combine their traditional ecological knowledge (TEK), with conservation training to

protect and manage their land and therefore their culture. Activities undertaken by the Spinifex Rangers include: organizing opportunities for community members to visit country; continuing intergenerational knowledge transfer of cultural practices; re-introducing traditional burning practices; protecting important cultural landscape features; managing endangered/introduced flora and fauna; and managing remote community safety infrastructure. Globally there is recognition of the value of TEK held by Indigenous people and the role TEK plays in the contemporary management of natural resources (Butler, Tawake, Skewes, Tawake & McGrath, 2012).

Another important role of the Spinifex Rangers is the development of partnerships with research, education, philanthropic, and commercial organizations. The partnership between the Spinifex Rangers and the TRCS leverages local TEK to achieve a number of the community and educational goals. Firstly, the partnership with the Spinifex Rangers provides a meaningful context for the school to address the Australian Curriculum cross curriculum priority of sustainability. “The Australian Curriculum places emphasis on sustainability as a priority for study that connects and relates relevant aspects of content across learning areas and subjects.” (ACARA, 2016). The on-country learning that takes place enables students to participate in environmental activities related to issues of sustainability in their community. These activities include monitoring frog populations in seasonal wetlands, monitoring and removing invasive plant species, and locating endangered native fauna. Furthermore, the on-country excursions provide an impetus for learning across other content areas in school including: science, literacy, numeracy, and art.

Secondly, the partnership with the Spinifex Rangers allows the school students and staff to access, learn about and maintain the relationships between culture, country and language. Through the Spinifex Rangers program, community members, accompanied by school students are afforded the opportunity to reconnect with country. The stories and knowledge associated with the country are shared with the school student which over time, facilitates the intergenerational transfer of language and culture. Interactions during learning between the Spinifex Rangers and community members typically utilises Pitjantjatjara language and a less formal non-western education setting. Placing equal emphasis on traditional and western learning is inherently



engaging for Indigenous students, with the staff and students learning together from, and with, the Spinifex Rangers.

### Conclusion

From geographically remote locations in farmlands or scattered islands, to culturally remote Indigenous peoples, these six experiences demonstrate the diversity of remoteness and of the sustainability construct. Educating for sustainability may focus on one pillar of this construct, such as addressing: environmental issues in the South Pacific; cultural issues with South African Indigenous language learning; or social capital issues in Scottish community resurgence. However, many experiences are multi-focal, such as addressing cultural and environmental issues concurrently in the Canadian land-based leadership program and in the American

educator recruitment and retention, or social, cultural and environmental issues concurrently in the Australian Indigenous ranger program.

Clearly educating for sustainability is contributing to making remote communities more resilient. Depending on the remoteness and the sustainability challenges, the educational effectiveness in enabling sustainability can be optimized by: taking cross-curricula approaches, addressing real problems, forming partnerships, making use of community capabilities, centring land/space as the place of learning, and, importantly, training educators to engage with the process. These six experiences have been reported to encourage educators and researchers to expand their perspectives on the two constructs of remoteness and sustainability and to consider how to best educate the next generation for a sustainable future.

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## Suggested Citation:

Reading, C., Khupe, C., Redford, M., Wallin, D., Versland, T., Taylor, N., and Hampton, P. (2019). Educating for sustainability in remote locations. *The Rural Educator* 40(2), 43-53. <https://doi.org/10.35608/ruraled.v40i2.849>