

Chapter 8: Investigating Pre-Service Teachers' Inquiry into Indigenous Perspectives

Abstract

The concept of Indigenous perspectives is multi-layered and complex; it is greater than teaching content and requires cultural and values knowledge about one's self and others. With this in mind, teacher educators created a highly structured but content-free learning environment for secondary pre-service teachers to inquire into embedding Indigenous perspectives across the curriculum. This chapter presents an innovative project whereby secondary pre-service teachers inquired into Indigenous perspectives in an online learning environment. Through this online collaborative initiative, these pre-service teachers had the opportunity to engage with their peers, practicing teachers, teacher educators and other educators to explore their questions, address their assumptions and gain insights into how to design and facilitate learning that honours Indigenous perspectives in all discipline areas.

Introduction

Within Australia and in many other nations there is a mandate for teachers to embed Indigenous perspectives in the teaching of all curriculum areas. Indigenous populations have deep, rich and diverse traditional knowledge and ways of working linked to their identity and communities. In the past, the Queensland curriculum required Indigenous perspectives to be embedded into teaching and learning to increase the awareness of both students and teachers of Indigenous perspective and to improve the learning outcomes for Indigenous students. The new Australian curriculum includes Aboriginal and Torres Strait Island histories and cultures as a cross-curriculum priority. In particular, it focuses on identity 'through the interconnected

aspects of country/place, people and culture. Embracing these elements enhances all areas of the curriculum' (Australian Curriculum, Assessment and Reporting Authority, n.d.).

Indigenous Perspectives

Perspectives are ways in which people see the world and the way they interact with the environment. It involves the perceptions they have with regard to themselves, their culture and the way they see others (Department of Education, Training and Employment, 2013). In terms of Aboriginal or Indigenous perspectives, this is not easily defined given the diversity between Indigenous groups or nations of people. Butler (2000) argues that 'the diversity of Aboriginal experience provides an ideological minefield for many teaching professionals' (p. 97). Yet, she noted that it must be acknowledgement that Aboriginal diversity is a key element of Aboriginal perspectives. Indigenous perspectives are 'multi-layered and diverse', according to Ottmann and Pritchard (2000), 'there are some common threads in Aboriginal philosophy (this including spirituality) and practice that contribute to a broad definition of Aboriginal perspectives' (p. 6). They go on to say that, 'Indigenous peoples have a different history and experience with learning and education' (p. 39) and this results in a range of perspectives rather than one Indigenous perspective.

Coming to understand what is meant by Aboriginal or Indigenous perspectives requires spending time exploring and developing an appreciation of the complexity, diversity and multi-layers involved in the interweaving of such items history, language, culture, and experiences has in shaping a perspective. It also requires an appreciation that '[p]erspectives are not limited to a particular way of viewing or experiencing the world from one specific group or cultural perspective. Individual and collective identities contribute to the various perspectives we hold' (Department of Education, Training and Employment, 2013).

Indigenous Perspectives in Teacher Education

Within teacher preparation programmes, pre-service teachers need to develop an understanding of world views and perspectives, and how they influence the way students learn and interact with their world. How a teacher views the world, may be different from the various students in his/her classroom, this difference is not to be feared, but rather embraced in how topics are taken up and appreciated by all learners in the classroom. Donald (2010) argues that educators need to understand that ‘peoples from other cultures might think differently from them and construct the world in ways appropriate to their familiar cultural context and values’ (p. 6). He goes on to note that this thinking differently is grounded in their ‘values and ethics derived from functional and viable, but distinct, world views’ (Donald, 2010, p. 6).

Reconceptualising curriculum that embodies diverse perspectives, such as Indigenous perspectives, requires a shift in the role of the teacher. In Donald’s (2010) discussion papers on Aboriginal Perspectives and the Curriculum, he states the following:

The consideration of diverse perspectives in curriculum will mean that teachers will be primarily interpreters of culture, rather than merely holders and managers of information. The task of interpretation is complex, multifaceted, and demanding. It requires that teachers be capable of speaking across disciplines, cultures, and boundaries so as to assert the interrelatedness of all beings and foster understanding. (p. 9)

Teacher educators ‘need to be aware of the values that student teachers hold, the manner in which they express those values and the way in which they respect views that are different from their own’ (Clarke & Drudy, 2006, p. 383). This occurs through designing learning experiences where pre-service teachers are challenged to interrogate their world view and to deeply inquire into other perspectives. It is through scaffolded learning

experiences that pre-service teachers will be ‘encouraged to practice culturally responsive teaching’ (Ottmann & Pritchard, 2010, p. 26). Culturally responsive teaching is grounded in the ‘development of certain dispositions toward learners and a holistic approach to curriculum and instruction’ (Pewewardy & Hammer, 2003, p. 1).

Australian Teaching Requirements

In Australia, there has been a greater emphasis on Indigenous perspectives through the re-conceptualisation of curriculum, along with the requirements to be met with teacher professional standards. The Australian Professional Standards for Teachers (APST), national accreditation of teacher education programmes, requires that all graduates can demonstrate the following two standards:

Standard 1.4: Strategies for teaching Aboriginal and Torres Strait Islander students: Demonstrate broad knowledge and understanding of the impact of culture, cultural identity and linguistic background on the education of students from Aboriginal and Torres Strait Islander backgrounds. (Australian Institute for Teaching and School Leadership, 2012)

Standard 2.4: Understand and respect Aboriginal and Torres Strait Islander people to promote reconciliation between Indigenous and non-Indigenous Australians: Demonstrate broad knowledge of, understanding of and respect for Aboriginal and Torres Strait Islander histories, cultures and languages. (Australian Institute for Teaching and school Leadership, 2012)

In addition, specific requirements indicated by the Queensland College of Teachers (2013) is that all teacher education programmes must demonstrate Aboriginal and Torres Strait Education including the English as a Second Language (ESL) dimension of work in settings where there are Aboriginal and Torres Strait Islander students. As such, teacher education programmes need to carefully design curriculum and provide rich opportunities for pre-service teachers to develop their understandings of Indigenous perspectives, along with the ability to design culturally responsive learning experiences for all students.

An Innovative Approach to Exploring Indigenous Perspectives

Teacher educators are being asked to produce graduates who are more suitably equipped to meet the demands of the modern workplace. Trying to do more with the same or less requires innovative approaches to curriculum for the purposes of enhanced learning and social outcomes. Innovation is defined by Rogers (2003) as ‘an idea, practice or object that is perceived as new to an individual’ (p. 137). He goes on to comment that innovation is

commonly required to solve an identified or perceived problem. The case study reported in this chapter describes an innovation implemented to create an authentic learning opportunity for secondary pre-service teachers to develop their understanding of Indigenous perspectives and to develop their knowledge and skill to design student learning that embraces Indigenous perspectives when the teacher is non-Indigenous.

‘Aboriginal and Torres Strait Islander perspectives need to be presented to all students ... Teachers can be overwhelmed by the extent of the possibilities ... recognising that their role is ‘the facilitator’, as opposed to ‘the expert’ (Department of Education and Training, 2011, p.30). The same can be said for teacher educators, who in response to the APST requirements need to be designers of learning where they facilitate culturally responsive learning opportunities for pre-service teachers to develop a sound understanding of Indigenous perspectives. In this case study, teacher educators are not modelling the role of expert. Rather, they are modelling responsive practice where pre-service teachers are given the opportunity to explore Indigenous perspectives as part of a secondary pedagogy and curriculum course where the learning is being facilitated and scaffolded by teacher educators, along with the support of Indigenous experts in the field.

The APST requirements provided a catalyst for the instructor to develop an innovative, authentic learning design for the pre-service teachers. The requirement to ensure pre-service teachers had exposure to a number of big issues in contemporary education, with Indigenous perspectives being one of them, was a challenge when the instructor was not an expert in the area. However, the ability to work with Indigenous experts was achieved through the use of digital communication technology. This allowed pre-service teacher to interact and explore the complexity of Indigenous perspectives and the influence this has on how they support their students’ learning. The interplay between digital technology and the way to solve the

problem (Rogers, 2003) resulted in an innovative learning design involving an international online project.

Lock and Redmond (2011) developed a dynamic online project that has been implemented since 2006. The design of this inquiry-based, cross-institutional project was 'used as a vehicle for sharing literature, multiple perspectives and pedagogical approaches related to diversity in today's classrooms' (Lock & Redmond, 2011, p. 19). The project started as a proto-type that evolved with minor modifications with the various iterations. Changes were made to reflect feedback from pre-service teachers and facilitator experiences.

Secondary pre-service teachers, teachers as experts, and teacher educators were engaged in a seven week online activity as part of a Middle Years curriculum and pedagogy course. Pre-service teachers enrolled in the online and blended course were in their second year of a four year teacher education programme or the first semester of a one year graduate diploma at a regional university in Australia. The online task was designed using a constructivist framework, in a highly structured but content-free environment, to provide pre-service teachers with an opportunity to inquire into real-world teaching and learning issues found in contemporary classrooms. Asynchronous and synchronous discussions played a critical role in the activity.

The pre-service teachers participated in three-phases which required them to engage in online discussion with their peers and with experts.

- **Phase One:** Pre-service teachers introduced themselves to their peers, read a stimulus novel related to one of the key themes (ESL and cultural diversity, bullying, Indigenous perspectives, and special needs) and then they worked in teams to provide an overview of the book and wrote inquiry questions focused on pedagogical implications.

- **Phase Two:** Pre-service teachers responded to inquiry questions related to the pedagogical implications they provided in Phase One. Pre-service teachers interacted synchronously and asynchronously with teachers and teacher educators (as experts) from Australia and Canada. The pre-service teachers' pedagogical questions drove the discussion with the experts.
- **Phase Three:** Pre-service teachers responded to an authentic scenario and reflected on the learning they gained through the activity and the learning processes they had engaged in during the activity.

For the Indigenous perspectives element of the project, pre-service teachers read the stimulus novel, *Jindah Murray: Wind Dancer* by Fiona Wirrer-George Oochunyang (2011), an Indigenous writer. The novel focused on Jindah Murray's self-discovery and expression of her Aboriginal identity. Throughout the novel, this teenager explored her cultural heritage and discussed the family dynamics. Further, it is through her love of dancing that she performed for an audience where her dance was a 'mixture of culture and mainstream way ... It represented how I saw myself and how I felt' (Oochunyang, 2011, p. 47). This stimulus novel was the catalyst that established the context for pre-service teachers to begin exploring what is meant by Indigenous perspectives and how those perspectives can influence the design of teaching and learning.

Conceptual Framework

The pre-service teachers' asynchronous discussions were analysed using the framework provided in the *Embedding Aboriginal and Torres Strait Islander Perspectives in Schools (EATSIPS): A guide for school learning communities to support change in schools* (Department of Education and Training, 2011). The framework 'describes a way to create a cultural space that is shared and rich in the histories of Indigenous peoples' (p. 9). The

following four action areas in the framework assist schools in developing a whole-school ethos about embedding Aboriginal and Torres Strait Island perspectives: 1) Professional and personal accountabilities; 2) Curriculum and pedagogy; 3) Organisational environment; and 4) Community engagement. The action areas are underpinned by personal histories, attitudes and perceptions (Department of Education and Training, 2011).

The *professional and personal accountabilities* action area requires an examination of each element separately. Professional accountabilities refer to the leadership required by teachers to ‘ensure that Indigenous perspectives are woven into the fabric of the school environment’ (Department of Education and Training, 2011, p.28). Personal accountability is about individuals unpacking and understanding their ‘cultural baggage’ and reframing all staff “attitudes and perceptions about Indigenous peoples” (Department of Education and Training, 2011, p.28).

The second action area, *curriculum and pedagogy*, refers to classroom ethos. It focuses on the planned learning environment, relationships, resources, and the ‘various instructional methods used in the learning and teaching process’ (Department of Education and Training, 2011, p. 29). ‘EATSIPS encourages teachers to develop habits for embedding Indigenous perspective into the day-to-day aspects of learning and teaching’ (Department of Education and Training, 2011, p. 30). It includes elements such as critical review of curriculum materials, understanding Indigenous protocol, understanding language use, planning, reporting and assessment.

The *organisational environment* area includes aspects such as school leadership, values, organisation, processes, resources, and physical environment. It refers to the impact of ‘day-to-day organisational structures and operations within the school’ (Department of Education and Training, 2011, p.30). These would include such items as flying flags, timetables, and professional development.

The final action area, *community engagement*, includes genuine partnerships between Indigenous and non-Indigenous peoples and also engagement with Indigenous peoples as ‘a source of institutional change’ (Department of Education and Training, 2011, p.32). Parding (2013) suggests that ‘to ensure that the local context and the local Indigenous people’s perspective do ‘shine through’ in decision making and, at the end of the day, in the everyday life in schools is through the true involvement of the local communities’ (p. 8) . Community engagement provides ‘teachers with opportunities to form personal relationships based on trust, but also empower community members to engage with schools from their own perspectives’ (Department of Education and Training, 2011, p.32).

Indigenous Perspectives as Perceived by Pre-service Teachers

In phase one of the project, pre-service teachers were to identify ‘big issues’ from the novel, *Jindah Murray: Wind Dancer*, that were relevant in today’s global society and contemporary classrooms. A number of major social and educational issues were identified. From the following list, it was evident that pre-service teachers began to unpack critical items such as identity and the impact of the past on the present:

- Indigenous acceptance and equality within society and the school community;
- Negative assumptions about Indigenous youth and culture;
- Identity: cultural identity; national identity; youth identity;
- Loss of Indigenous history and the preserving of Indigenous traditions;
- Impact of past events on modern lives of Indigenous Australians;
- Concept of Country or Place;
- Family and kinship relationships and values; and
- Socio-economic disadvantage.

From their overview of the novel and discussion of links to the curriculum, each group of pre-service teachers identified a number of inquiry questions that explored both Indigenous perspectives and related pedagogical issues. During phase two of the project, pre-service teachers' questions were used to trigger the inquiry and discussion where pre-services teachers began to explore issues related to cultural identity and ways to approach socio-economic disadvantaged in a respectful manner.

Also, as part of phase two, pre-services teachers had the opportunity to engage in online discussion with experts in relation to Indigenous perspectives. The experts were people who were Indigenous educators or non-Indigenous educators who worked closely with Indigenous peoples. Pre-service teachers and experts explored Indigenous perspectives and pedagogical issues through the sharing of stories, resources and asking of questions.

Table 8.1 provides an analysis of the online discussion between 28 pre-service teachers and four experts that occurred through phase two and three of the project, mapped against the EATSIPS framework. The average number of online posts per pre-service teacher was 12.7 over six weeks. There were 358 postings with some posts matching more than one indicator and other posts which had no indicator included.

Table 8.1: Pre-service teachers online posts mapped to the EATSIPS framework

Criteria: Framework Action Areas	Indicators: Framework Action and Implementation	Number of Posts Per Indicator
Professional and personal accountabilities	• Know and have an understanding of local Indigenous knowledges	17
	• Understand their own perspectives, beliefs and perceptions about Indigenous peoples (<i>personal and professional attitudes</i>)	60
	• Understand how and where to source information about local Indigenous cultures	1

	<ul style="list-style-type: none"> • Know and understand strategies to combat inappropriate beliefs, <i>language, preconceptions</i> and stereotypes by students 	13
	<ul style="list-style-type: none"> • Understand the shared history of the local area. 	5
	Total of criteria: 96	
Organisational environment	<ul style="list-style-type: none"> • Indigenous presence <i>is visible and</i> actively involved in most areas of school organisation 	4
	<ul style="list-style-type: none"> • School/teachers aware of likely sensitive issues and have appropriate strategies in place to deal with them 	3
	<ul style="list-style-type: none"> • A trusting, inclusive school environment established that ensures the Indigenous community is valued and appreciated 	4
	<ul style="list-style-type: none"> • Indigenous employees have access to a range of opportunities to support their professional development 	0
	<ul style="list-style-type: none"> • Processes in place to recognise and support intellectual property rights of Indigenous people working in schools and classrooms 	0
	<ul style="list-style-type: none"> • Protocols and processes in place to check whether Indigenous knowledge presented is culturally appropriate for the local area 	6
	Total of criteria: 17	
Community partnerships/ engagement	<ul style="list-style-type: none"> • School partnerships with Indigenous communities developed and maintained 	3
	<ul style="list-style-type: none"> • Protocols for communicating and collaborating with Indigenous people established 	2
	<ul style="list-style-type: none"> • Indigenous <i>school and</i> community events acknowledged and actively supported 	5
	<ul style="list-style-type: none"> • Local Indigenous people available to support curriculum delivery are known and registered in school contact list, and relationships established with them for that purpose 	5
	<ul style="list-style-type: none"> • Indigenous students involved in curriculum planning, delivery and evaluation 	1
	Total of criteria: 16	
Curriculum and pedagogy	<ul style="list-style-type: none"> • Curriculum units of work are culturally appropriate and connected to the local area and histories where possible 	51
	<ul style="list-style-type: none"> • <i>Inclusive classroom where</i> all learning styles and backgrounds are attended to in curriculum delivery and pedagogy and in assessment opportunities <i>and different perspectives are valued</i> 	3
	<ul style="list-style-type: none"> • Successes shared with community 	4
	<ul style="list-style-type: none"> • Aboriginal and Torres Strait Islander knowledges and perspectives are explicit in delivered curriculum 	4
	<ul style="list-style-type: none"> • <i>Wide range of</i> written, verbal and visual resources <i>are used and</i> critiqued to ensure distortions and stereotypes are not presented 	11
	<ul style="list-style-type: none"> • Local Indigenous stories and oral traditions are celebrated 	6
	<ul style="list-style-type: none"> • <i>Indigenous language valued and</i> Home language of Indigenous students valued and not seen as 'poor English' 	7

	• <i>Indigenous students have the opportunity to explore their identity</i>	23
	• <i>All students have the opportunity to explore their attitude in relation to Indigenous perspectives</i>	3
	Total of criteria: 112	
Other themes	• <i>Community of learners with strong pedagogical relationships</i>	20
	• <i>Social justice</i>	25
	• <i>Appropriateness of language</i>	20
	• <i>Teachers personal identity</i>	50
	Total of criteria: 115	

Modified from Department of Education and Training (2011, p.55). Items noted in italics are additional indicators.

It is evident from Table One that pre-service teachers had an opportunity to begin to examine their own perspectives, beliefs and perceptions about Indigenous people, as this was the most frequent indicator in the *Professional and personal accountability* action area. Further, they have begun to develop an understanding of local Indigenous knowledge. Statements such as the following reflect how the pre-service teachers have begun to develop professional and personal accountabilities for Indigenous perspectives: “need to educate ourselves first, so we are open to classroom opportunities”; “learning the local Indigenous history of the region I am teaching in”; “be aware of my own beliefs, personal experiences and opinions”; and “putting myself in their shoes attitude”.

The *curriculum and pedagogy* criteria received the largest number of posts (112 posts) in the four action areas, this was not surprising given the course was a curriculum and pedagogy course. It was in this category that pre-service teachers articulated curricular connections and the need for culturally responsive learning that makes connections to the local area and history. The following pre-service teacher’s comment acknowledged the need for authentic and respectful learning: “Tokenism and trivialisation can result in forcing

Indigenous perspectives into your teachings which do not honour Indigenous cultures”.

There was limited demonstration of knowledge or interest in *organisation environment* (17 posts) and *community partnerships* (16 posts) action areas which had the smallest number of posts.

It was in this discussion that pre-service teachers grappled with the uncomfortableness of addressing the diversity of ideas. With concepts such as dignity, acceptance, compassion and respect sitting beside those of racism, guilt, ignorance, and stereotyping indicating the wide range of views and experiences the pre-service teachers had. Through online discussion, pre-service teachers began to explore how they could take up the work in ways that honoured Indigenous perspectives. One person noted, “[D]ifferences would obviously be honoured and promoted” and another stated they would, “embrace differences”. Some pre-service teachers talked about inviting Elders into the classroom or “people that students consider to be role models to come and talk on behalf of their people.” Another person noted the need to “develop a rich and positive collecting of Indigenous resources of all kinds”.

In the *other* criteria category, a large number of posts addressed the need for strong pedagogical relationships, social justice, appropriateness of language, and teacher personal identity. Such issues speak to the importance of relationship and the development of pedagogical relationships that need to be fostered so that there is an openness, respect and trust in the learning environment. As noted one pre-service teacher there is a need to “establish and build relationships with all students so that there is trust.”

From their reflections in phase three, pre-service teachers spoke not only about what they gained through the activity but also from the learning process. In terms of what they learned about themselves and that of Indigenous perspectives aligns with much of what was shared in their online discussion. It was evident that they developed an appreciation of how diversity surrounds them. One pre-service teacher noted, “[O]ne of the main points that I

take away from this exercise is that diversity is an ever present challenge.” Another person commented, “I developed an appreciation for the fact that cultural diversity, ESL, Indigenous perspectives, inclusivity ... all are relevant to my development as a teacher and my emerging pedagogical practice.” As they developed this awareness and understanding of Indigenous perspectives and culture, they began to investigate how they would teach in ways that honours cultural diversity. They made statements such as the following: “I have considered how I would modify my pedagogy to connect with an Indigenous student”; and “as a teacher we must move our pedagogy to encompass all works of life we encounter in our classrooms”.

The innovativeness of the online project provided pre-service teachers with an opportunity to ask questions that may have been uncomfortable in a face-to-face environment as well as to use their questions and discussions to spark further inquiry. “I have many questions about Indigenous issues”, reported one pre-service teacher. Another one commented, “The forum posts stimulated me to pursue my own lines of inquiry and to consider issues from different viewpoints.” Further, it also provided a learning opportunity where pre-service teachers could observe how others engaged in the discussion and reflect on how they would respond in their own classrooms. The following is an example from a reflection that demonstrates how one pre-service teacher has interpreted the experience to inform her practice:

I was truly amazed by some of the responses of other collaborators on this topic, actually I think shocked is more appropriate. I must be prepared that some of my own students will also share these views (and their parents too) and formulate a pedagogy that can deal with these ideas in a tactful way.

Implications for Practice

The innovative learning design of the online project which aimed to foster greater understanding of Indigenous perspectives resulted in a number of outcomes. First, the authentic design of the learning where the pre-service teachers' inquiry and pedagogical questions drove the discussion with their peers, experts, and teacher educators in a content-free learning environment. It was their questions and issues that were explored and interrogated. Second, the use of the online environment provided a learning space that was not bounded by time and geography. Experts from Canada and Australia joined pre-service teachers and engaged in the discussions at times that were convenient to them and the diversity of location of participants gave a large range of ideas about Indigenous perspectives from a range of countries. Third, the asynchronous environment allowed individuals to read, research, and reflect prior to responding. Comments and questions did not need to be created in the moment as is the case in a face-to-face environment, although a framework and timelines for activity were provided. Participants could read responses, take time to research, reflect and compose a message or question before sharing it with others in the online environment. This resulted in a depth and breadth of dialogue which meaningfully contributed to the understanding of the pre-service teachers. Further, through the online environment, additional resources and materials were provided by the pre-service teachers and experts rather than static content provided by the instructor. The online environment became a wealth of personal inquiries, as well as, links to a range of information and resources.

Pre-service teachers have shared that, as a consequence of this innovation, they valued learning through the online collaborative experience rather than through a text or essay assignment with comments such as the following: "hardly felt like an assignment at all" and "discussion was informative, and it was personally enriching to hear real-life experiences on particular issues. It was great to have an opportunity to learn through other people's

experiences with topics surrounding inclusion, instead of just learning everything from a text book”.

Recommendations for Practice

From this innovative work designed to help pre-service teachers to develop an understanding of Indigenous perspectives and consider how to create culturally responsive learning environments, we put forth four key recommendations. First, there is a need to create a trusting and respectful online learning environment where pre-service teachers and experts can openly engage in conversations about Indigenous perspectives, history, social justice issues, and identity. In creating this environment, it requires careful facilitation and scaffolding of the discussions to foster deep, thoughtful dialogue. The creation of a trusting online environment can not be assumed. Rather, through intentional action will this be developed and fostered.

Second, the selection of experts who interact with pre-service teachers and their inquiries need to be open to the questions being asked by these novice teachers. The experts need to be able to respond in ways that help pre-service teachers to challenge their assumptions, to reflect on their understandings, and to be open to formulate new understandings that will influence their pedagogical practice. These experts need to share experiences, stories and resources that help pre-service teachers to understand the complexity and multi-layered aspect of Indigenous perspectives. At the same time, the experts need to help these future teachers discover ways in which they can create learning opportunities that acknowledge and honour Indigenous perspectives across the curriculum.

Third, teacher educators need to further explore the affordances of the online global classroom and innovation in pedagogical practice. Through the use of digital communication technology, pre-service teachers were able to interact with people and resources from around

the world. Designing authentic learning tasks supported through technology-enabled environments brings the world into the classroom and into the learning. To work within this online global learning environment that strives to foster knowledge creation requires innovation in the learning design.

Fourth, careful consideration must be given to the sustainability of innovation in education. The innovative design of this learning activity resulted from the problem that pre-service teachers required knowledge, respect for and skills in embedding Indigenous perspective across all areas of the curriculum; and the instructor was not an expert in Indigenous perspectives. The innovative design resulted in doing things differently, designing for learning in a very different and content-free manner, and getting a better result, with deeper engagement and improved learning outcomes for the pre-service teachers. Given this activity has now occurred over twelve semesters with different pre-service teachers and different experts it may be said that the learning design is a sustainable innovation in that it has continued over time and solves the problem that it was initially designed to resolve.

Conclusion

The innovative online project provided the opportunity to bring together a range of educators in partnership where all participant contributions (pre-service teachers, teacher educators, Indigenous experts) were seen to be valuable and to influence professional and personal accountabilities, skills and knowledge in curriculum and pedagogy and development of community engagement in addition to understanding the impact of the organisational environment, that is, the four action areas of the EATSIPS framework. Pre-service teachers were given the opportunity to question, research and inquire into what is meant by Indigenous perspectives, but also what this means in terms of their professional practice.

The innovative process described promoted pre-service teachers' inquiry, challenged their assumptions, and fostered knowledge creation rather than providing knowledge to be regurgitated in assessment. Working in a highly structured but content-free technology-enabled learning environment, pre-service teachers engaged in conversation and shared resources with others located in various geographic locations and across time-zones. It increased flexibility of the learning. Further, technology allowed access to others, both peers and experts, in addition to the instructor to engage in meaningful, robust learning; rather than hosting static content. The use of the online learning environment provided a vehicle for innovative design for learning in the evolution of education.

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