The importance of including Indigenous knowledge in pre-service teacher education

Thesis for the degree of Doctor of Philosophy (PhD)

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Declaration

This work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.

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Abstract

Indigenous voices and knowledge are excluded from the Australian education system creating limited learning environments where many Indigenous students disengage. For many, the disengagement leads to social exclusion and further disadvantage. Deficit approaches label and externalise this as the ‘Indigenous problem’. NAPLAN results and work conducted by Indigenous academics such as Rigney (2002), Pascoe (2011) and Buckskin (2015), as well as developments in 2012 such as the More Aboriginal and Torres Strait Islander Teachers Initiative (MATSITI) Project (2012), Behrendt Review (2012) and Moreton-Robinson’s et al. (2012) work about Initial Teacher Education (ITE) preparation of teachers catering for Indigenous students, show that the Australian education system is inadequate. It reinforces assimilation, honouring western ideals. Changing this inadequate system requires respect for Indigenous culture, and understandings about Indigenous knowledge.

This research was designed to listen to Indigenous educators to potentially improve the system using Indigenous knowledge. The research design was Indigenous with Indigenous women’s standpoint theory as methodology considering inclusion of Indigenous knowledge in the education system – Is it important to include Indigenous knowledge in pre-service teacher education? If so, why? What should be included? Semi-structured interviews were used for data collection and Indigenous women’s standpoint was operationalised with thematic analysis to consider what the responses revealed about the possible gap of knowledge in the Australian education system and pre-service teacher education.
The data was analysed and presented through an Indigenous lens. So that interpretation did not mute the voices seldom heard in the field of education. These voices provided new knowledge and strong statements about a way forward, to ultimately improve the lives of Indigenous people through an improved education system.

Understandings about identity and the impacts of education on Indigenous people are key themes explored in this body of work. The thesis confirms the importance of including Indigenous knowledge in pre-service teacher education defining what should be included, to ensure that teachers learn significant concepts and understandings for teaching Indigenous learners. This thesis also reveals the importance of Indigenous educators as custodians of Indigenous knowledge.
Acknowledgements

I would like to acknowledge the participants of the research, and the strength of the Indigenous people in Australia who continue to strive for equity and justice. I would like to thank every student that I have ever taught because they have brought me great joy in a profession that I chose while still a primary school student myself. I would like to acknowledge that this research was inspired by the struggle of Indigenous students, who all deserve a bright future. I hope that the completed work will improve educational outcomes for Indigenous students and contribute to creating an inclusive Australian education system.

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1. INTRODUCTION

To justify your...starting point, you need to tell the story of how you got to be where you are and what you’re hoping to achieve. Where you come from is an important determinant of how you see things, how you are already involved, how you go about your research, and the authority you can claim (Dunbar & Christie, 2013, p 6).

1.1 Introduction

Following the way that Indigenous people introduce themselves to each other and make connections to people and place, I will begin by introducing myself. I am a local, in that I am born in Darwin. However, my Aboriginal family come from central Australia. I am a Warumungu Luritja woman. My grandfather was from Tennant Creek and my grandmother was from Finke. I know who I am and where I come from. Darwin has been a great place to grow up, surrounded by many, many Indigenous people. We have grown up with our cousins and family around us. I believe that growing up this way builds both a sense of belonging as well as strength of character. My grandmother was a strong Luritja woman who did not suffer fools lightly. I think that she would be proud of my efforts in this research endeavour to take an Indigenous positioning in investigating the education system for the benefit of Indigenous people.

In this introduction chapter, I outline the research topic, state the research questions, and explain the purpose and relevance of the research in the context of
urban Indigenous education in the Northern Territory from the perspective, or standpoint, of Indigenous educators participating in this research study. Early developments in thinking are described. Foundational concepts such as contemporary Indigenous identities and Indigenous knowledges are introduced; limitations and delimitations of the research study are explained.

1.2 The research study

Educational engagement, participation and positioning have been problematic for many Indigenous Australians since colonisation. An ongoing story is the way that Indigenous students are positioned as a problem within our western system of education. The resulting underachievement when assessed within this system is touted as evidence of poor attendance and inability to engage with the learning.

This research study has been designed from an Indigenous standpoint, particularly following Moreton-Robinson’s (2000) work on positioning of Indigenous people in Australian society but considering an Indigenous woman’s standpoint as both an overarching methodology as well as contributing to methods for analysis of data. (See the conceptual framework diagram at the end of this chapter.)

1.2.1 The research questions

The research questions are designed specifically from my standpoint as an Australian Indigenous woman with over 25 years of knowledge and experience in education. The first question is designed around culture. I have sought to find out if Indigenous educators see culture as a factor in changing the education system for the
benefit of Indigenous people. Other research has had a similar focus in listening to Indigenous educators (Keddie, 2014; Reid & Santoro, 2006; Santoro, Reid, Crawford, & Simpson, L., 2011) but has not necessarily been situated in the Northern Territory, and considered our context where at least 30 per cent of the population are Indigenous. The research questions have not necessarily been the same, and the analysis has not been by an Indigenous researcher. My standpoint, as an Indigenous woman, has been used to shape and analyse the data.

The first question that I chose to ask, and answer was ‘Is it important to include Indigenous knowledge in pre-service teacher education?’ This question seems deceptively innocuous. It also seems to be a basic yes or no answer. This is not true. For an Indigenous person, this question is about culture, educational knowledge, positioning of Indigenous people within the education system, and about teacher professional performance. It is about Indigenous student engagement and academic success. It is a question that requires deep thought. The answer may have been ‘yes’ or ‘no’, but the second question invited each of the Indigenous educators to explain their answer and the thinking behind it. So, the thinking time was allocated before then asking the second question which was ‘If so, why?’ Each Indigenous educator participating in the research explained their thinking in detail and from their own Indigenous standpoint, or positioning. The position should be noted because it gives insight into Indigenous thinking and opinion also described as ‘Indigenous voice’.

Indigenous voice was engaged further in the third and final research question ‘What should be included?’ Here Indigenous educators described and explained the
information that teachers need to know about Indigenous people and then how to
better relate to and connect with Indigenous students and their families. The
information is considered as specialist knowledge (ACDE, 2017) and required of training
providers to meet the Australian Professional Standards for Teachers 1.4 & 2.4
(Accessed at https://www.aitsl.edu.au/docs/default-source/apst-
resources/australian_professional_standard_for_teachers_final.pdf).

1.2.2 Specialist knowledge

Specialist knowledge known by Indigenous educators is needed within the
Australian education system. However, the complication is that the relatively small
numbers of Indigenous people in the total Australian population (ABS, 2016), the
relatively small numbers of Indigenous educators (MATSITI, 2012; Partington, 2002),
and the fact that Indigenous people are positioned as a minority group within the
dominant white culture in Australia, have all contributed to Indigenous culture being
‘othered’ or seen as different or ‘specialised’ and Indigenous voice being marginalised
in education. “By talking about individuals or groups as other, one magnifies and
enforces projections of apparent difference from oneself. Othering practices can, albeit
sometimes unintentionally, serve to reinforce and reproduce positions of domination
and subordination” (Johnson et al., 2004, p. 254).

In this research study connections have been made between the Australia's
western education system and Indigenous knowledge keeping in mind Moreton-
Robinson’s (2000) statement that “The cultural differences of ‘Others’ are subordinated
to ...white academic values” (Moreton-Robinson, 2000, p. 183). In response to the literature review findings, Indigenous voice has been used to add to the knowledge in the field and contribute little known thoughts and opinions of Indigenous educators to create suggested recommendations for improving educational outcomes for Indigenous students. These suggested recommendations have the potential to improve teacher education.

1.3 Situating the researcher in the research

Situating the researcher in the research involves insider/outsider reflections. This piece of work is the realisation of a journey and the development of professional understandings about educational practice. The effort to conduct this research and answer the research questions is only the beginning. It represents a granting of permission, to operate within the academic structures, which are highly westernized, and forward the cause of Indigenous people to find parity in education. Parity is an interesting word and perhaps one that others would not choose to describe the struggle that many Indigenous people seem to have with academic achievement in Australia. However, it is a starting point leading to equity.

...investigation into the health, wellbeing and education of Aboriginal and Torres Strait Islander children aged 0 to 17 years has presented confronting evidence about the failure of the education system to improve the educational outcomes of the vast majority of Aboriginal
I have been an educator for over 20 years and spent much of that time 1992 – 2013 teaching in schools; including Early Childhood, Primary, and Secondary. Since 2013 I have been a lecturer at Charles Darwin University lecturing in teacher education. As a local Aboriginal woman, having first been a student within the same public education system, my successes as an educator have also been the successes of my family.

Teaching has always been a passion and something that I have pursued in my life. I have a love of teaching because I get to interact with and help students every day to learn something new. The feeling of being able to encourage and support someone to reach their full potential is a driving force in the day to day practice of any teacher. It has been a driving force for me. The fact that I happen to be Aboriginal is another string to my bow. I have understood and been successful as a student in the westernised education system, then I have gone on to learn about how to successfully teach it.

This means that I can use my technical knowledge about teaching and learning to then have conversations with other Indigenous people and be able to relate and connect with an Indigenous viewpoint about the education system. By positioning myself within the research, this viewpoint is of course underpinned with my own Indigenous women’s standpoint and attitudes about the way that the education system has been used to exclude, restrict and control Indigenous Australians for many years.
since colonisation. This research is an effort to change that positioning by the dominant culture and to instead reflect on the system that is meant to cater for the education of all Australians.

The initial interest in this topic is a direct result of my own experiences in education. The reflections are shaped by my life experiences as an Aboriginal woman living in urban areas of the Northern Territory. The resulting concerns are about Indigenous education. The Northern Territory’s higher proportion of Indigenous people often places a spotlight on Indigenous issues. Indigenous women’s standpoint theory as methodology (Moreton-Robinson, 2000) enables me to take advantage of the Northern territory context to work with and highlight the experiences, knowledge and opinions of Indigenous educators.

1.4 The research as Indigenous

This research study was Indigenous with Indigenous participants, an Indigenous researcher, and Indigenous women’s standpoint theory as a methodology, and a part of the method of analysis. Indigenous women’s standpoint theory was used to offset the dominant positioning of the westernised Australian education system, and to highlight this established on the evidence presented in the introduction and the literature review chapters. The focus of the research was to use an Indigenous strength-based position to explore the potential of improving education by including Indigenous knowledge in pre-service teacher education.
Dunbar and Christie’s (2013) shared epistemology model guides the ethical practice in researching with Indigenous people. There is a transdisciplinary aspect, which applies directly to the topic of Indigenous education and the issue of Indigenous knowledge and culture situated within the western educational paradigm.

A consideration of this process was to state the goal that was important for the Indigenous community involved, which was to improve the educational outcomes for many urban Indigenous students who have been annually reported to underperform in the National Assessment Program for Literacy and Numeracy (NAPLAN) assessments. The use of Indigenous educator voice, to suggest recommendations for change, places Indigenous people in a position of strength as knowledge holders.

There is a double accountability for an Indigenous researcher because in the research has ultimately been for the benefit of Indigenous people. As an Indigenous person and an Indigenous researcher this is a given and should be made explicit. Something else that should also be stressed is the empirical nature of the research, centring on interviews with Indigenous educators who are from the local area and have practical experience living the issues that are explored in detail. This is significant for the community of Indigenous educators participating and is also a main consideration expressed in the shared epistemology model (Dunbar & Christie, 2013). Through semi-structured interviews and journaling, Indigenous voice comes through loud and clear and the research results come from experience rather than theory or belief.
1.5 Early developments in this research study

At the beginning of the research process, the research question and overall methodology suited to the initial question was very different. The question was specifically about student feedback, as part of the teaching and learning cycle (Hattie & Timperley, 2007) and querying the ability of non-Indigenous teachers to connect well enough with their Indigenous students to provide effective feedback, enabling learning to take place.

I was fortunate to attend the Indigenous research summer school at Melbourne University, which enabled the processing of thoughts and conversations with many other Indigenous researchers and academics. This was a vital first step to shaping the subsequent research. My thinking at the time can be explained through my own reflective journaling.

*...presented in ways that make it clear how the researcher’s own experiences, values, and positions of privilege in various hierarchies have influenced their research interests, the way they choose to do their research, and the ways they choose to represent their research findings.* (Harrison, MacGibbon & Morton, 2001, p. 325).

I have included the following journal excerpt to show the progression from initial ideas, to more developed educational and cultural concepts throughout the rest of the thesis.
I am conducting this research to apply the findings and add to the body of knowledge that will ultimately improve the educational outcomes of urban Indigenous students.

Broadly, I am interested in looking at the educational experiences of urban Indigenous people. We all know about the negative historical evidence of the exclusion of Indigenous people from education here in Australia. Current concerns include the poor academic achievement of Indigenous students in comparison with non-Indigenous peers. The education system that we have is a result of colonisation and a representation of ‘Western’ ideals. It is a system and structures that values non-Indigenous knowledge.

Within this education system there is a teaching and learning cycle. In this cycle, new knowledge builds on what is already known. Gaps in prior knowledge can hinder later learning. This teaching and learning cycle are where the teacher can have the second greatest impact on student academic achievement; only preceded by the students’ own attitudes and the influence of the home environment (Hattie, 2003). If the home is an Aboriginal household also perhaps with negative intergenerational educational experiences, then there may be some difficulties.

The way that the teacher can counter difficulties, according to Hattie (2003), is by using effective feedback. Not all teachers know how to provide effective feedback.
There can be a hit-and-miss situation depending on the skill of the teacher.

Interestingly, there is some research around the distinction between novice teachers, experienced teachers, and expert teachers. If Indigenous students are lucky enough to have an expert teacher, there is still a mismatch with the knowledge (system) valued in the classroom.

Receiving feedback requires active listening and motivation. It can be quite confronting; hence the importance of the **student-teacher relationship**. A large amount of research has already been conducted in this area, investigating the benefits and requirement of relationships for positive academic achievement (Hughes & Chen, 2011). Some researchers have stressed this point by coining the phrase ‘building relationship capital’ (Hamre & Pianta, 2006).

So, how do Aboriginal people relate to each other? This ability is embedded in an Indigenous Knowledge system. It is something that we learn as Aboriginal people and is evident whenever Aboriginal people get together. (We have seen in practice this week with everyone connecting.) Martin (2003) explains this concept as ‘**relationality**’. This is how one Aboriginal person positions them self to another Aboriginal person. It is how we create a comfortable connection and indicates the respect to be shown.

**AND?**

Do non-Indigenous teachers (need to) know about relationality? If they did and attempted to implement it would the academic achievement of underperforming and disengaged students improve?
Methodology and Methods –

To investigate the issue in detail, I intend to use Indigenous standpoint theory, Aboriginal research methodologies, and the guiding questions as proposed by Dunbar and Christie (2013) as a framework. A mixed methods approach will be implemented including surveys and then targeted interviews.

These strategies reflect the ethical considerations of consulting and working with the Aboriginal community to empower Aboriginal staff and students. Some further considerations will be around the autonomy of children/students and the Aboriginal community to participate.

Conclusion –

For all the hardship that some Aboriginal students go through which can have a longstanding impact, imagine if it is just this small thing that needs to be tweaked and highlighted!

The purpose of this research is to investigate and highlight the issue of Relationality for Aboriginal students in the current mainstream education system. The intended result is that the focus shift from a deficit model, to create an awareness of the importance of Indigenous knowledge in the classroom, to possibly create a resource.
After attending the summer school, the research focus was discussed and revised. It was decided that the focus was too narrow. Although there were changes, the overarching emphasis of improving the educational outcomes of Indigenous students was still the driving force. Urban as the context reflects my own background and represents my knowledge as an urban educator, and as an Indigenous woman who was born in and grew up in Darwin. The knowledge about how to relate respectfully and effectively to Indigenous students may be demonstrated in classrooms and schools but begins with teacher training. Therefore, the research scope was adjusted, and the research question was reformulated.

The merit of focusing on teacher education was supported by the 2014 Teacher Education Ministerial Advisory Group Final Report. “The evidence is clear: enhancing the capability of teachers is vital to raising the overall quality of Australia’s school system and lifting student outcomes. Action to improve the quality of teachers in Australian schools must begin when they are first prepared for the profession” (Craven et al., 2014, p. viii).

The idea that improved teacher education (Partington, 2002) has the potential to improve the overall quality of Australia’s school system, places an emphasis on the process of creating systemic change in the education system as new teachers come through. Teacher education is a promising site for change, where research recommendations could be easily actionable.
1.6 The purpose of this research study

The reasoning behind this enquiry was the mounting evidence of Indigenous academic underperformance in the Australian education system, such as that reported annually in the National Assessment Program (NAPLAN) results. The following quote by Ford explains the need for further attention and continued work in Indigenous education. “Since the introduction of National Australian Program in Literacy and Numeracy (NAPLAN) in 2008, results continue to show very poor educational outcomes for Indigenous students, especially in the NT” (Ford, 2013, p. 81).

As a teacher for over 20 years in the public Australian education system and seeing firsthand the experiences of struggling Indigenous students, the inequity became apparent. Even at these initial stages my thinking was focused on the inability of the education system to meet Indigenous needs, rather than taking on the western lens of blaming Indigenous people. This positioning was instinctive in choosing not to be portrayed as a problem, and not to have Indigenous students be portrayed as a problem.

Moreton-Robinson (2003) discussed the ability of Indigenous people and particularly Indigenous women to understand challenges differently than non-Indigenous people. In conducting this research, the focus was on the education system from teacher training to practical implications of Indigenous knowledges in the classroom. The research presented education from an Indigenous perspective. Therefore, enabling Indigenous people to provide information about identity and
culture, suggesting recommendations for successful Indigenous participation, turning on its head the attitude of Indigenous education as a story of deficit, and creating the new knowledge in the field of education necessary to optimize Indigenous academic success through improved teacher education.

This aligns with the use of Indigenous women’s standpoint as methodology because Moreton-Robinson’s (2000) work is about Indigenous people choosing to position themselves differently than the way that we are positioned by white Anglo-Celtic dominant Australian society. This research study has been designed to turn instead and investigate the Australian education system and classroom practice, and the preparation required for teachers to successfully teach Indigenous learners.

1.7 Relevance

It is taken for granted that urban Indigenous people benefit from the support and attention given to everyone who lives in these larger centres. Much funding for Indigenous education in the Northern Territory is rightly invested in remote schools according to socio-economic disadvantage, Aboriginal status, Aboriginal concentration at the school, remoteness of school and distance education. These are key criteria in funding formulas (Department of Education, 2017). What is not considered enough though is that Indigenous people living in urban settings have their own unique set of issues and concerns. Urban Indigenous people contend with the continued colonisation and assimilation daily. There is a need to draw attention back to urban Indigenous issues and experiences. While it should be stated clearly that not all Indigenous people
need support to successfully engage with and access education effectively, many Indigenous students do struggle to achieve the standards set out in the Australian public education system.

The themes that arise when considering the academic achievement of urban Indigenous people, along with those already mentioned in this chapter as engagement, participation and positioning, also include identity, and belonging. These themes have been evident in my experience as a teacher over an extended period. The relevant literature indicates a lower engagement of Indigenous people across all areas of education (ACDE, 2017; Department of the Prime Minister and Cabinet, 2018; MATSITI, 2016). While there are some understandings about the engagement of Indigenous people in education and associated fields such as teacher education, Indigenous academics indicate that identity and connectedness, or ‘relationality’ are key components of Indigenous knowledge for consideration (Martin, 2003; Moreton-Robinson, 2006; Price, 2015). Following this line of thought, an understanding of relationality at least is required when considering urban Indigenous students who may be experiencing educational difficulties. The components, or concepts are compatible with Moreton-Robinson’s (2014) Indigenous women’s standpoint theory as methodology and contribute to this methodology being suitable for this research study.

Indigenous academics (Martin, 2003; Moreton-Robinson, 2006; Nakata, 2007) have provided definitions of Indigenous knowledges, as relevant to their own diverse identities. An understanding of Indigenous diversity is informed by an understanding of
the ‘warts and all’ of Australian history; a history that involved the colonisation of a proud people and mechanisms designed to assimilate and nullify.

The Australian education system was created as a mechanism of colonisation with the express purpose to achieve the goals of colonisation - control and assimilation (Brady, 1997). What followed were racism, social exclusion, humiliation and inequity (Beresford & Partington, 2003). “The British invasion and subsequent colonisation of Australia began the process whereby whiteness became institutionalised” (Moreton-Robinson, 2000, p. xxi). The impact of colonisation changed Indigenous identity forever and created an attitude of distrust of the education system for Indigenous people.

Understanding Indigenous identity is necessary for understanding Indigenous engagement with education.

In summary, key themes for Indigenous educational success are engagement, Indigenous identity, relationality as part of Indigenous knowledge, and belonging. These themes are connected to create a deeper understanding of Indigenous students.

Figure 1 - Key themes for Indigenous educational success
1.8 A contemporary understanding of Indigenous identity

Indigenous identity and resulting Indigenous standpoint are fundamentally linked. Factors creating identity shape the person’s perspective of the world. This perspective provides a pivot point for understanding other people’s actions and opinions. Reflexive thought and behaviours help people to learn, change and adjust their own standpoint over time, and even their own identity. To understand one’s own identity, you must first understand the factors that impact and influence. In this way of thinking, identity is not fixed. It is a process of constant change and adjustment. Even if this is the case, Indigenous identity begins with Indigenous knowledge as seen in the diagram below.

Descriptions of Indigenous people by academics such as Harris (1990) include “while still distinctively Aboriginal and still relating in an Aboriginal style through an Aboriginal worldview, is not effectively fighting for the maintenance or restoration of traditional ways” (Harris, 1990, p. 3). The second part of the category description defines urban Indigenous people as “depressed and psychologically overwhelmed” (Harris, 1990, p. 3). This positioning of Indigenous people, by a non-Indigenous person is negative and limited as it conveys Indigenous people as passive and appears to lack a depth of understanding about contemporary Indigenous identities. Understanding Indigenous people and their distinct reality is necessary for understanding Indigenous engagement and academic achievement. A representation of the complexities of contemporary Indigenous identities can be seen in the following diagram.
Although the most recent changes to education have to do with the curriculum and the thinking behind what Australian students need to learn, the focus of this research is mainly educational pedagogy, not only curriculum content, and how Indigenous knowledge impacts on pre-service teacher education based on the voices of urban Indigenous educators in the Northern Territory. It distinguishes my body of work from others. The overall goal of this research study is to improve the academic achievement of Indigenous students in the Australian public education system by understanding how teachers could be better prepared to teach Indigenous students.
Existing research indicates lower participation rates of Indigenous people in all areas of education including teaching (ACDE, 2017; Department of the Prime Minister and Cabinet, 2018; MATSITI, 2016; MCEETYA, 2009). Improved participation and success in education is thought to be the key to decreasing Indigenous disadvantage, improving Indigenous health and closing the gap between Indigenous and non-Indigenous life expectancy (Department of the Prime Minister and Cabinet, 2018).

As stated earlier, the research is specifically looking at urban Indigenous students and settings. Why this group? It is relevant to consider how Indigenous knowledges impact on identity, connectedness or relatedness affecting motivation, and engagement with education. It is relevant to question whether Indigenous knowledge is a factor in urban Indigenous students (and teachers) being successful in the westernised education system.

1.8.1 Teacher identity and discourse

Teacher education begins with the pre-service teacher, and the forming and development of a *Teacher Identity*. Becoming a teacher includes self-doubt. Even when university has been completed and the graduate teacher is *doing* the teaching, there is a steep learning curve happening for the new teacher. The teacher gets focused on the job of being professional. All the while there is an internal conversation about the level of professionalism being achieved. Research in this area describes *teacher identity and discourse* as a battle outside of ones’ comfort zone. “Alsup poses this dilemma as one of discourse, usually in the form of an unthought desperation made from feeling that
one has to choose between personal selves and professional selves” (Britzman, 2006, p. x).

While Indigenous educators may struggle with the development of their teacher identity, they may also struggle with how their Indigenous identity fits within this western construct of the Australian education system. Alsup describes a transformative discourse that enables the personal and the professional to positively impact on the development of teacher identity. “It is at the discursive borderlands, and by association at the borders of various subjectivities or senses of self, that preservice teachers can discover how to move from being students to being teachers and can learn how to embody a workable professional teacher identity without sacrificing personal priorities and passions” (Alsup, 2006, p. xiv).

Is this what Indigenous teachers are challenged by; the thought and feeling of sacrificing their personal priorities and passions? There have been studies about the invisibility of Indigenous students in schools and curriculum (Malin, 1994). Is this also an issue for Indigenous teachers? Classifications, definition and assumptions have caused difficulties for Indigenous Australians.

1.9 Indigenous knowledge

What is Indigenous knowledge in this thesis project? The Indigenous knowledge in this research project encompasses a modern Indigenous identity and culture. The Indigenous knowledge in this research project is defined and understood by the Indigenous educators participating in the first instance and in other instances I refer to
Martin’s (2003) definition. Specifically, it is the ontological beliefs of the Indigenous educators participating in this research study. It is the unique Indigenous character and core understandings that make an Indigenous person ‘Indigenous’, as defined by Indigenous educators participating in this research study.

The distinction between ‘traditional’ and ‘non-traditional’ Indigenous knowledge is an area to be explored further. Nakata et al. (2007) describes a difference in definition when considering intellectual property and the storage of Indigenous knowledge in libraries. This distinction is not explored further in this research study.

Connecting with the previous concept of ‘Indigenous Identities’, there are multiple ways of being Indigenous and multiple understandings of how to be Indigenous. In this research, it is accepted that every Indigenous educator has Indigeneity at the core of who we are, and that our understanding and definition of the term ‘Indigenous knowledge’ is respected and based on our own understandings of who we are. These definitions were not judged, changed or corrected. In this way, Indigenous educator definitions of Indigenous knowledge have been a part of, but not the focus of, this research. What has been a major focus is the Indigenous educators’ perceived use of Indigenous knowledge in the context of urban classrooms in the Northern Territory.

1.9.1 The Northern Territory context

This research explores education in the Northern Territory as a part of the Australia public education system. The research specifically looks in detail at the
effectiveness of the Australian education system to meet the needs of many Indigenous people. The lens used is an Indigenous perspective. This is necessary to cut through the ‘white normativity’ (Walton et al., 2016) of Australian society and the societal systems, such as the education system.

*Australian schooling needs to engage Indigenous students, their families and communities in all aspects of schooling: increase Indigenous participation in the education workforce at all levels; and support coordinated community services for students and their families that can increase productive participation in schooling (MCEETYA, 2009, p. 16).*

The Northern Territory Indigenous education review, ‘A share in the future 2014’, carried out by Bruce Wilson, conceded in his opening letter to the Education Minister that there are cultural considerations required for reform. *“The issues are not merely technical. For many people, the resolution of the barriers impeding progress in Indigenous education [in the Northern Territory] is as much moral and cultural as educational”* (Department of Education, 2014d).

Educating Aboriginal students has been a complex matter in the Northern Territory for many years. Aboriginal people, our identities and experiences have been shaped by our contact with mainstream society through the colonisation process. Colonisation has added complexity to the diverse cultures of Aboriginal Australia (Bourke & Bourke, 1995). This complexity has been caused by the intergenerational impact of practices such as dispossession and assimilation.
In the Northern Territory Aboriginal people come from many diverse backgrounds. Many Aboriginal people speak several languages and live in remote communities and very remote homelands. However, the reality is that most Aboriginal people live in towns and capital cities (DEWR, 2009). The resident population statistics (ABS, 2016) diagram below illustrates this.

**Estimated resident Aboriginal and Torres Strait Islander population, Remoteness Areas, 30 June 2016**

<table>
<thead>
<tr>
<th>Remoteness Areas</th>
<th>Aboriginal and Torres Strait Islander %</th>
<th>Non-Indigenous %</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Cities</td>
<td>37.4</td>
<td>72.7</td>
<td>71.6</td>
</tr>
<tr>
<td>Inner Regional</td>
<td>23.7</td>
<td>17.8</td>
<td>18.0</td>
</tr>
<tr>
<td>Outer Regional</td>
<td>20.3</td>
<td>8.0</td>
<td>8.4</td>
</tr>
<tr>
<td>Remote</td>
<td>6.7</td>
<td>1.0</td>
<td>1.2</td>
</tr>
<tr>
<td>Very Remote</td>
<td>11.9</td>
<td>0.5</td>
<td>0.8</td>
</tr>
</tbody>
</table>

(Available at http://www.abs.gov.au/ausstats/abs@.nsf/mf/3238.0.55.001)

For years, the Northern Territory Government’s attention has been directed at remote schools. However, the focus of this research project is aimed at urban Aboriginal students who live in the towns and cities and attend urban mainstream schools.

*Urban Aboriginal identity in Australia, although inspiring an emerging academic interest, is still largely an under-researched field of study. Finding appropriate tools to teach students about the concept of urban Australian Aboriginality, in its many and varied contexts, and particularly at a local level, is a continual challenge (Lumby & McGloin, 2009, p 27).*
1.9.2 Foundational thinking

The reason for discussing Hattie’s (1999, 2003) work in this research study is twofold. Firstly, Hattie’s work highlights the influence of the teacher in academic success. Secondly, Hattie provides commentary on what constitutes best teaching practice in a western educational setting. One of the criteria of this ‘best practice’ is student-teacher relationships and another is content knowledge. In the context of this research study, I posit that the knowledge that would enable teachers to influence and enable more Indigenous students to achieve academic success, Indigenous knowledge, is missing. Including Indigenous knowledge in the Australian education system has the potential to provide more opportunities for success.

How the teacher provides feedback to their students impacts on learning. So, it is not only the content of the curriculum that is important and needs our attention. It is the pedagogical approach that is significant; how teachers teach for learning to occur. Pedagogy is a focus in this research study to consider how pre-service teachers learn how to teach Indigenous learners to achieve academic success.

Supporting my early thinking is the work of Martin (2003) who described relatedness as part of Indigenous knowledge, and Malin (1990, 1994) who highlighted cultural differences in educational expectations, showing that the urban classroom could be detrimental to Aboriginal students. This type of research in conjunction with Hattie’s expert teacher traits is a starting point for considering the expertise of
Indigenous educators and the importance of including Indigenous knowledge in pre-service teacher education.

1.10 Terminology

In this thesis document, the word Indigenous is used to be inclusive of both Aboriginal and Torres Strait Islander peoples. For the purposes of this research, the word Indigenous has been used interchangeably with the word Aboriginal. Both terms are not ideal, and I understand that many of us would prefer to be known by our language group. This is not possible due to the diversity of Indigenous Australians and the number of language groups that would need to be repeatedly named in this research study. The word Indigenous is used for convenience of explanation or reference.

In this research study the term pre-service teacher education refers to what is also termed Initial Teacher Education (ITE). Pre-service teachers are students studying ITE to become teachers.

The following terms and the links with the research topic are explored further Chapter 2 Literature Review. The reason for highlighting these terms is that they can be expressed as part of Indigenous knowledge and add to the transdisciplinary attributes of this research.

Epistemology – the theory of knowledge; knowledge and understanding. Philosophy – knowledge and the known, ignorance (lack of knowledge), and how knowledge is classified. Changes to knowledge can be seen in discourse.
Ontology - a philosophical term describing the study of being and existence. Including -
What is existence? What things exist?

Axiology – the study of nature; of values and value judgements especially in ethics.

Indigenous knowledge - defined as three areas (Martin, 2003) – Knowing (epistemology), Being (ontology and axiology), and Doing.

Clear understandings about ontology are important for knowledge sharing. It is necessary for defining and explaining concepts. Having a shared understanding, allows for effective communication (Gruber, 2009). This is significant in this research study as it requires the research to be understood as it applies to Australian public education across knowledge systems by Indigenous and non-Indigenous people.

1.11 Limitations and delimitations

Limitations included a small response to participate which may have impacted on the variety of responses given. A wider variety of responses may have been given by a larger number of participants. Delimiting the impact of this occurred through the analysis of each participant answer in detail during coding and when assessing responses for repeated themes.

Each Indigenous educator participating provided priori coded information to enable the answering of research questions, but they also provided additional information when answering the final interview question, which was deliberately open-ended. This additional data gathered has been called emergent data or emergent information for the purpose of this research study. Not all the answers revealing
emergent information were in the scope of this research study. The focus was on inclusion in pre-service teacher education. Some of the emergent information deemed as outside of the scope of this research study represents possibilities for future research.

Australian Indigenous academic literature has been prioritized in this research study. This was deliberate, in recognition of the unique realities and resulting standpoint of Indigenous Australians. Non-Indigenous academic literature has been included mostly where there is limited Indigenous commentary, where the author has an empathic positioning, or where the literature included educational documents and policies. A local focus is discussed first and foremost, then national and international. With regards to representation of a global Indigeneity, Canada and New Zealand have been given preference over other country comparisons due to commonalities in colonisation and regional association.

The selection of literature could be considered a limitation of the research. I choose to consider it as strength in that it furthers the cause of ‘paying attention to and hearing Indigenous voice in the field of education’. Added to this is the acknowledgement that Indigenous educators participating in this research study represent Indigenous educators in urban classroom settings in the Northern Territory, which is the intended scope of the research.
Indigenous Women’s Standpoint Theory as methodology – turning the gaze back on to the westernised education system.

**Literature Review – Key themes**
- Engagement, Indigenous identity, relationality as part of Indigenous knowledge, and belonging.

**Data Collection**
- Semi-structured interviews
- Participant journaling

**Data Analysis**
- Priori coding
- Thematic analysis
  - Indigenous women’s standpoint theory as method to determine through an Indigenous lens what the responses are saying about the education system.

**Instrument Development**
- Development of summary tables about Indigenous knowledge and what teachers should know.

**Application**
- Development of suggested recommendations and implications for stakeholders.
  - Teacher checklist for inclusion of Indigenous knowledge.

Future research to test the application of the knowledge and tools developed.
1.12 Conclusion

This research study follows the format of introduction, literature review, methodology and method, data and analysis spread across two chapters, discussion, and conclusion. In this Introduction chapter I have outlined the research focus, explained the research as Indigenous, provided necessary background information, and explained the purpose and relevance of this research study to add knowledge to the field. The context is the Northern Territory, where Indigenous people constitute a third of the overall population. The participant voice belonged to Indigenous educators speaking about Indigenous knowledge in urban school settings.

The next chapter is the literature review, which will explore and deconstruct the literature in the field exposing the gap in knowledge and elaborating on the research themes further.
2. LITERATURE REVIEW

The varied geographical, educational and cultural issues that influence the delivery of ITE create challenges for providers. Specialist knowledge and resources are needed to address Indigenous education issues. ...while the MATSITI project has created an awareness of many issues there remains a need for systemic measures to be put in place to address the learning needs of both non-Indigenous and Indigenous pre-service teachers. Indigenous education in ITE has been identified as a specialist area requiring further support and development (ACDE, 2017, p. 18).

2.1 Introduction

The literature under review in the field of research is Indigenous education within the Australian Education system, and how teachers are prepared to best cater for the learning of Indigenous students. The focus is on Indigenous voice in the areas of Indigenous academic achievement and engagement. Where possible the literature chosen is written by Indigenous academics, firstly in the local and national context, then more widely as part of an International Indigeneity. This is an added strategy to include as much Indigenous voice as possible, and to ensure that Indigenous views are respected and presented.

In this chapter I communicate key themes of the research. Knowledge in education will be defined and discussed with reference to both Indigenous knowledge
and Western knowledge (as seen in the Australian education system). Conclusions from the literature reveal an underrepresentation of Indigenous educators, continued underachievement of Indigenous students despite repeated efforts, and the lack of inclusion and understanding of Indigenous people and knowledge in the education space. Appropriate methodologies to conduct the necessary research will be considered.

As the literature was reviewed it became evident that there was a gap in the field of knowledge. This gap required research that would provide an opportunity for Indigenous educators’ expertise to be expressed and understood, filling the gap of Indigenous educator representation and voice about Indigenous knowledge in education.

2.2 Existing theory and research

Education funding (in the Northern Territory in particular) is primarily for Indigenous students in remote and very remote areas where provision of general services is limited, as reflected in the Northern Territory Department of Education Indigenous Education Strategy (Indigenous Education Strategy - Department of Education, 2018). This focus on a marginalized group, shapes the way that non-Indigenous Australians understand and define Indigenous identity. A misconception is that most Indigenous Australians live in the bush. This misunderstanding unfortunately enforces colonial attitudes of excluding Indigenous people from town centres, with their appropriate place being out past Boundary Road (Condon, 2010). History and the
treatment of Indigenous Australians is still foremost in the minds of Indigenous people. Condon (2010) reminds us that even something as seemingly inconspicuous as a street sign can hold meaning. He does this by providing a quote by the American writer Logan Pearsall Smith (1865-1946) ‘Our names are labels, plainly printed on the bottled essence of our past behaviour,’ (Condon, 2010, para. 4).

Indigenous people did not accept the limits placed on them by the dominant society and it should be realized that outdated generalizations about Indigenous Australia have meant that urban Indigenous people are largely invisible. It also means that understandings about urban Indigenous students may not be considered necessary. “Indigenous people are invisible, as people, in conceptions of everyday Australian life and often appear only as stereotypes” (Atkinson, Taylor & Walter, 2010, p. 321).

The harsh realities of colonisation leave a very unpleasant taste for non-Indigenous and Indigenous people alike. The truth is that a policy of assimilation has resulted in Indigenous lives and identities being irrevocably altered. Indigenous Australians have different realities.

In colonial times, and residually in so-called postcolonial times, the knowledge of Indigenous peoples occupied the realm of the ‘primitive’, an obstacle to progress along the path to modern civilization and was largely ignored or suppressed; and in many
places, because of dislocation from our land and way of life, much of it was lost (Nakata, 2002, p. 281).

Indigenous people lived throughout Australia. When the British came and began the process of colonisation, sovereignty was not ceded (Moreton-Robinson, 2015). Indigenous Australians still live everywhere throughout the country, including larger urban centres (ABS, 2016). In the Northern Territory there are many government schools in remotes areas, government money and energy ‘assist’ remote community schools that have many Indigenous students. Researchers continue to work with these schools to create culturally enhanced western educational programs. When this is done with respect for culture, the programs are heavily based in the local language and custom. This specialization of programs is beneficial for the students and schools in community for many reasons, but it is still working within the western parameters of education and continues to be assessed against the NAPLAN standards. The academic results continue to enforce the deficit view of Indigenous achievement.

Adding to this long and drawn out story of Indigenous education is the fact that it would be very difficult to implement specific models of Indigenous community educational pedagogy in other Australian schools and classrooms, particularly without access to the Aboriginal language experts from these communities. The brilliant work being done by the community people to include culture, knowledge and language cannot and does not impact (Bat & Shore, 2013) on changing the Australian education system for all Indigenous Australians. The perceived repeated and annually reported underperformance also dissuades non-Indigenous Australians from wanting to
implement a seemingly unsuccessful program or approach that is not seen as creating academic success or adding value to a western system.

Urban Indigenous students, although part of the mainstream classrooms of the Northern Territory, also contribute to the annual negative NAPLAN results. However, they are not considered as a group with needs. Needs would attract funding and attention. The attention that some urban Indigenous students unfortunately attract is about crime and terrible mistreatment in the juvenile detention centres. Although outside of the scope of this research project, the instances of crime and detention, as reported in the media, have been readily available for the rest of Australia to see, requiring a Royal Commission. As noted by Anthony (2016, par. 5) “The proportion of Indigenous children in penal detention centres in the NT is higher than in any other state or territory: 97% of children in NT juvenile detention centres are Indigenous”.

The situation with regards to lower academic achievement, contributing to social exclusion (Klasen, 2001; Malin, 2002) and lack of opportunities for a positive future, can be considered a factor in “The [Northern] territory’s youth detention rate... six times the national average” (Anthony, 2016, par. 6). The focus of this research on urban Indigenous educational engagement and how to improve teacher ability to cater to the learning of Indigenous students is warranted.

Through this research project, a unique group of urban Indigenous educators (teachers and pre-service teachers) had an opportunity to potentially contribute to national change; a system wide change. Changes shaped around the definite needs of
urban Indigenous students could also be incorporated into every classroom in Australia to create a more respectful, holistic and inclusive system. The Indigenous educators participating in this research have experience (in urban settings) in the Australian education system, as well as educational and cultural knowledge. The participants have epistemological privilege. Indigenous educators also have a cultural affinity with their Indigenous students (Malin, 1994). This group of educators is in the perfect position to recommend change to a system, enabling the education system to be more inclusive of Indigenous Australians and further create the ideal environment for Indigenous students to not only succeed but to thrive.

The Northern Territory has the greatest percentage of Indigenous Australians as part of the overall population (ABS, 2011). It is the perfect setting to consider how to best cater for Indigenous learners. It is also the ideal place to understand the importance of including Indigenous knowledge in the Australian education system. This national system is geared around Standard Australian English (SAE) and assessment. The system can present challenges for Indigenous students. “…the teaching practices of an overwhelmingly monocultural and monolingual teaching profession privilege the dominant White majority in ways that are simply taken for granted” (Santoro, 2006, p. 6).

The Northern Territory, because of this high percentage of Indigenous students, repeatedly underperforms in the National Assessment program (NAPLAN). While the microscope is on student achievement, it is teachers who are judged with regards to student underperformance. To affect change in education, it makes sense to target
teacher education; particularly pre-service teacher education. This change can then filter down through schools and impact directly on student academic achievement, where other national programs have made little impact. For example, the MATSITI Project 2012-2015 targeted increasing the numbers of Indigenous teachers to impact positively on Indigenous student academic success. However, in the 2016 final report it was revealed that “Growth in the number of teachers was ...unevenly distributed between jurisdictions, with NSW public schools accounting for the greatest increase” (MATSITI, 2016, p. 10). National goals were not achieved, and the report recommended further effort was required.

The unique situation of Indigenous educators in the Northern Territory can impact on national change by revealing specific skills and knowledge in catering for a larger Indigenous student cohort, and by taking the lead to inform others about what is required rather than the other way around, waiting to be informed. I posit that the strength of the data indicated in this research study indicates that this could be the case for other Indigenous educators. Considering geographical and contextual differences, experiences and realities, Indigenous educators may feel that they have similar experiences or thinking. The beauty of this research study is that Indigenous educators are describing exactly what is needed to improve Indigenous academic outcomes.
2.3 Research publications

During this research study I wrote two publications, a journal article and an article published as part of the conference proceedings. They have been included as part of the thesis because they were written as part of the work done in completing the research study.

The purpose behind including the two publications as whole texts within this thesis is that they represent and explore the reality of Indigenous education, explaining concepts at different levels within the thesis questions. The first is the journal publication that explores the key overarching themes broadly as Indigenous educational inequity, Indigenous knowledge and what that can be described as in the Australian context, the importance of Indigenous educators, and western concepts of education connecting to teacher standards. These themes are introduced, developed and then concluding statements are given, which are fundamental in shaping the research methodology by valuing and presenting Indigenous voice. The research is empirical.

The second publication, a conference publication, unpacks literature and thinking about Indigenous academic engagement at a classroom level. It specifically explores the classroom as a site of educational change. The article assists the reader to make connections with western held beliefs about good teaching practice, linking Hattie’s (2003) work with the idea of how a teacher could be deliberate in incorporating Indigenous knowledge or employing an Indigenous pedagogical
approach. Incorporating both publications in their entirety presents a more comprehensive linking of concepts and ideas as well as showing the reader the thinking and synthesis of knowledge that has taken place through the review of existing literature in the field. The next paragraph presents the first publication.

The journal article resulted from a presentation at the Indigenous Content in Education Symposium at the University of South Australia in 2015. As the beginning of the literature review process, the article forms the foundational thinking behind this research project. Themes explored in detail within the article are educational inequity for Indigenous people, the National Assessment Program (NAPLAN) as evidence of continuing systemic failure, teachers as drivers for change, the importance of Indigenous teachers, Indigenous people and the strength of their Indigenous knowledge, commonly held assumptions about Indigenous people and education, divergent knowledge systems, education as a western construct, the Australian Professional Standards for Teachers as a tool to link knowledge systems, effective student teacher relationships and relatedness, and future directions incorporating Indigenous knowledge and Indigenous teachers. These themes are strongly evident throughout the research study, and the resulting positioning which incorporates the outlined Indigenous women’s standpoint formulates the methodology.

For publication the article went through the peer review process. The importance of this process for the Journal of Australian Indigenous Issues is that the editorial board was comprised of many renowned Indigenous academics in the education space, providing a sounding board for the content and scope of the
proposed research. The article is called ‘Indigeneity – a skill-set for teaching’ and begins on the next page.
2.3.1 Indigeneity – A skill-set for teaching

*Indigeneity is a key to ending educational disadvantage in Australia. Efforts to correct inequity have been unsuccessful within the structure of western academia and the societal constraints imposed by colonisation. Whilst Indigenous academics and consultants have been tasked with assisting to bring about change, they have been contained within western expectations, limitations and structures. It is time to think outside of the western box, reframing this issue as opportunity and connection with the use of Indigenous knowledge. Martin’s (2003) definitions of Indigenous knowledge provide a framework to compare Indigenous values and beliefs with those of the western education system. The purpose is to create connections and encourage more Indigenous people to become teachers. Connectedness and purpose are the way forward with a specific Indigenous solution.*

Introduction

Achieving equity in Australia’s education system is a matter of respect. Indigenous people have suffered because of low educational expectations. These attitudes began with the falsehood of Terra Nullius where Indigenous people were seen as uncivilized and lacking in intelligence and ability. Although the situation has continued to slowly change and improve, many Indigenous Australians have found it extremely difficult to break free from these attitudes, values and beliefs, and past experiences (Anderson
Australian schooling needs to engage Indigenous students, their families and communities in all aspects of schooling: increase Indigenous participation in the education workforce at all levels; and support coordinated community services for students and their families that can increase productive participation in schooling (MCEETYA 2009, p. 16).

This paper will present the issues, outline important initiatives, discuss assumptions and relevant concepts such as knowledge systems, and then propose a strategy for using the Australian Professional Standards for Teachers to find common ground and continue the pursuit for equity and improved Indigenous educational outcomes. The situation continues to require our undivided attention directed towards the area of greatest impact resulting in a paradigm shift for appropriate and effective change.

Why is this an important issue?

Solutions to the educational disadvantage of Indigenous students have continued to elude the problem-solvers, despite money, policy and specifically designed programs. The many Indigenous education reviews and other academic assessment tools such as National Assessment Program – Literacy and Numeracy (NAPLAN) highlight this failure and inequity.
Melbourne University professor Patrick Griffin was reflecting on the apparent flat-line of the results since NAPLAN inception in 2008. Pressure is placed on teachers "If you want to change student performance you actually have to change teaching" (Smith, 2015, para. 9). Results have ‘flat-lined’, including those of Indigenous students. If more of the same effort has just achieved more of the same results, we need to think about how to provide some different solutions - some Indigenous solutions. The assessment of the situation provides us with ‘teachers’ as a point of focus. Teachers are guided by teaching standards.

Two key developments in recent years have been the More Indigenous and Torres Strait Islander Teacher Initiative (MATSITI), and the Review of Higher Education Access and Outcomes for Indigenous and Torres Strait Islander People Final Report (Behrendt, Larkin, Griew & Kelly, 2012). Both initiatives state the need for more Indigenous people to become involved in education.

The MATSITI project (2012 – 2015), now in its final year of implementation, is a Government funded initiative designed to increase the number of well-trained Indigenous teachers who could then work to improve Indigenous student engagement. Senior Indigenous educators have led the project.

The main objective is that “Increasing the number of Indigenous and Torres Strait Islander teachers is a key factor in fostering student engagement and improving educational outcomes for Indigenous students” (MATSITI 2012, p. 5). It aligns with
national reforms and associated with Council of Australian Governments’ (COAG) Closing the Gap targets that address Indigenous disadvantage.

In 2012, when the MATSITI project began Indigenous teachers comprised, “approximately 1% of the teaching community compared to Indigenous students (who comprise 4% of the total school student population)” (MATSITI, 2012, p. 5). These results represent a minority in comparison to 99 per cent of non-Indigenous teachers.

High attrition rates have impacted on Indigenous teacher numbers and on teacher education (MATSITI, 2012). This issue resulted in reporting about higher education trends. One such report is the Review of Higher Education Access and Outcomes for Indigenous and Torres Strait Islander People Final Report (Behrendt et al., 2012).

The Review of Higher Education Access and Outcomes for Indigenous and Torres Strait Islander People Final Report, 2012 is another Federal Government project conducted by Indigenous academics. The findings of the final report were that the participation rates of Indigenous and Torres Strait Islander people were below parity with the overall population (Behrendt et al., 2012).

Recommendations included the need to increase Indigenous student numbers, with the goal of parity in education. Increasing the numbers of Indigenous professionals will have the flow on effect of improving Indigenous educational outcomes in schools, contributing to the further Closing the Gap in Indigenous
disadvantage. The fields of study to focus on should be those that will contribute directly to the areas of disadvantage. Teacher education is one of those focus areas.

A third document that comes into play is the Learning the Lessons (Moreton-Robinson, Singh, Kolopenuk, Robinson & Walter, 2012) which is a review of pre-service teacher training courses, and specifically how they prepare non-Indigenous pre-service teachers to teach Indigenous learners. The report provided a comprehensive analysis concluding that existing provisions were lacking. Non-Indigenous teachers were being ill prepared. This is yet another example of the importance of greater numbers of Indigenous people to become teachers.

The following statement is central to the review findings “The clear stress on history teaching, whilst welcomed as one palliative for decades of neglect of Indigenous and Torres Strait Islander cultures and histories, can be problematic in that an equivalent focus on the imparting of skills or effective pedagogical strategies in the teaching of Indigenous and Torres Strait Islander students is notably absent” (Moreton-Robinson et al., 2012, p. 12).

Teaching about what it means to be Indigenous or Torres Strait Islander should reflect the complexity and connectedness of Indigenous knowledge systems. The question remains about how this could be done better. The answer has been partly presented to us by the MATSITI project, and the reviews as discussed. The common message is that more Indigenous people need to be involved in and engaged with education.
More Indigenous people in education will mean greater participation in educational dialogue to a degree where we are no longer just the minority or ‘the other’ but partners in a more equitable future. The greater number of people involved will increase the opportunities to discuss and drive change processes resulting in the development of educational discourse that includes Indigenous values and beliefs. While the number of Indigenous people will still be a relatively small minority, the greater numbers of Indigenous people who are prepared to engage positively with education would be a further step in the right direction. Indigenous leaders in this space could then have more opportunities to mentor and model from positions of epistemological privilege.

Indigenous education has elements of the unknown. As with anything unknown, people often act on assumptions. Assumptions present barriers to the desired educational change. It is important to understand the following three assumptions and how they interact with Indigenous knowledge.

Indigenous people represent a problem to be solved by non-Indigenous people

Continuing poor academic performance is evidence of inadequacy of a system. This inadequacy exacerbates Indigenous disadvantage. Most people working within the education system are non-Indigenous. Therefore, it is most often non-Indigenous people who are tasked with the job of strategising, implementing and monitoring improvement strategies. “Power to effect change in education resides principally with the dominant Anglo-Australian majority” (Partington, 2002, p. 2).
Indigenous academics are engaged as consultants and are privileged with the job of undertaking such important work, as seen in the project and reviews discussed. Unfortunately, it is often the government and their views formed by the dominant culture providing the opportunity, resources and the agenda. Indigenous approaches to improving academic outcomes should be recognized and given the appropriate respect and attention, not necessarily just assimilated into the western structures already in place.

How can Indigenous knowledge be used to implement more effective educational change for Indigenous people? Nakata (1998) explains the importance of Indigenous thinking “...we understand our situation in ways that differ from the way non-Indigenous people view our difficulties” (p. 23).

Indigenous teachers are best for only teaching Indigenous students

Many new non-Indigenous teachers lack the knowledge and skills to effectively teach Indigenous students (Moreton-Robinson et al., 2012). This reflects the way that pre-service teachers learn about teaching Indigenous learners. Meanwhile, Indigenous pre-service teachers have an advantage.

While training, and once qualified, Indigenous teachers will have proven that they can navigate their way through Indigenous knowledge as an Indigenous person, as well as successfully navigating their way through western knowledge in completing their teaching degree. Therefore, Indigenous teachers have the western knowledge required and they have an extra element that further enhances their abilities. Their
Indigenous knowledge is a bonus, something extra that allows them to relate to students and staff differently.

Indigenous teachers can easily relate to Indigenous students because they share the commonalities of culture. This is a general statement when arguing the case for increasing Indigenous teacher numbers; that Indigenous students need Indigenous teachers. The reality is that all students (and non-Indigenous teachers) would benefit greatly from having Indigenous teachers. Instead, there are quite often feelings that Indigenous teachers are lacking in some way and unable or unsuited to teaching mainstream. Changes in attitude have been a long time coming. Partington (2002) reminds us that, “educational equality for Indigenous Australians is either not achievable, or if possible, only achievable over a long period of time” (Ministerial Council on Education, Employment, Training and Youth Affairs, 2000, p. 10).

Physically getting Indigenous students to the classroom will improve their learning

Physical engagement, the act of getting students on seats, is only one aspect of engagement. It is not meeting the needs of students or dealing with the whole picture about why attendance might be an issue in the first place. We shouldn’t forget that, “The difficulties created for Indigenous students by schools are related largely to issues of dominance and subordination” (Partington, 2002, p. 3).

The other aspects of engagement that should be addressed are social, emotional, and intellectual. The education of Indigenous students should address all aspects of engagement. For Indigenous students to be fully engaged there needs to be
a recognition and inclusion of content and pedagogy that is an Indigenous something that they can recognize of themselves. This visibility of the ‘Indigenous’ is essential for identity and self-esteem (Purdie et al., 2000). The elements of engagement required are represented in Indigenous knowledge. Indigenous people live and breathe Indigenous knowledge. Thus, we need more Indigenous teachers.

For many Indigenous people education has meant adversity however, my own experience has been different. I have experienced success in education. I know that I am a good teacher. I know the thrill that I get from teaching students. I want to share this knowledge and understanding with other people. I want more Indigenous people to know that education is something to thrive in and to love. It is important, and it improves lives. The recognition of Indigenous knowledge and then the shared understandings around education is a way forward.

I equate my own success with having an inner strength based on family and identity. In my life I have felt centred and would now explain that feeling as my Way of Being (Martin, 2003). I will explain this further as part of a standpoint, which is also underpinned with attitudes of post-structuralism and understandings about knowledge.

*The divergent knowledge systems*

Knowledge is defined in philosophy as a combination of conscience and intelligence; object + subject = knowledge. The existence of different philosophies in many countries around the world, and different writings, theories, beliefs and
understandings, including different discourse results in different knowledge systems. In
Australia, two types of knowledge systems are relevant. These relevant systems are
western knowledge, which is the foundation of mainstream education in Australia since
1788, and Indigenous knowledge, which has seen Indigenous people thrive in Australia
for many tens of thousands of years.

The Australian mainstream education system is western. In Australia the
government public education system is distinguished by western ideals and promotes
knowledge in the western domain. To explain these further, Indigenous academics
(Brady, 1997; Morten-Robinson, 2006; Porsanger, 2004) use the term ‘western’ to
describe the education system. Although other Indigenous academics have been
blunter in their appraisal referring to, white controlled education (Rigney, 2002). Non-
Indigenous Australians may be less inclined to use western as a defining term as they
struggle to deal with historical fact. This term highlights colonisation, anything negative
that it implies, and the ongoing impact on Indigenous Australians. Australia has its basis
in westernisation as a result of British colonisation. The British, who came from the
west geographically, used the education system as one of the social control
mechanisms (Brady, 1997). Being the coloniser and the control agent, the education
system is based on, and has been further shaped around, western ideals. The fact that
eminent academics have compared the western education system and western
knowledge to the Indigenous alternative substantiates its existence.

Western education is compartmentalised as opposed to holistic, individualistic
as opposed to communal, freedom of information as opposed to privilege, and
assessment based as opposed to practical opportunities for use (Barnhardt & Kawagley, 2005). Indigenous knowledge represents relatedness (Martin, 2003; Martin, 2009), inclusiveness (Torres, 2006; Dunbar & Christie, 2013), and communal values (Nakata, 2002; Nakata, Byrne, Nakata, & Gardiner 2007). Whereas “western” notions of knowledge represent abstract thought, segmented content, and individualized goals.

Figure 4 - The Area of Potential

**Educational Knowledge**

Education is not a foreign concept to Indigenous Australians. As with any other society, Indigenous people have their own thoughts, understandings and practices concerning education, the difference being the pedagogy behind the practices. Where western educational practice has resulted in a specific discourse to explain and categorise educational knowledge, the same could be said of Indigenous educational practice. This is evident in an Indigenous knowledge system, of which Martin’s (2003)
work is one example. If constructivism is to be considered literally and there is a finite way to learn, no matter which knowledge system you are using, then there must be an area of common ground in educational discourse. Though different words may be used, the same concept is being presented. This overlap and sameness are the area of potential where values and beliefs can be shared.

While other countries around the world may exist in a decolonization period, Australia’s unique experience is different. Therefore, a discussion of knowledge in the Australian context must reflect this difference. Indigenous people are still grappling with the structuralist tensions and post-structuralist theories about power and knowledge have relevance. Jorgensen and Phillips (2002, p. 13) make the following post-structuralist statement, “Truth is a discursive construction and different regimes of knowledge determine what is true and false”. In simple terms, in Australia western knowledge is true, and following this line of thinking, Indigenous knowledge is false or not relevant.

Knowledge is the foundation of culture and social mechanisms of control. Foucauldian theory about culture explores the notion that a group of people can exert their power as the ‘norm’ and ensure that they create and control knowledge. Knowledge is power. This is exactly what the British did in creating and implementing an education system, an institution. Fillingham (1993, p. 18) interpreted Foucault’s ideas as follows, “When an abnormality and its corresponding norm are defined, somehow it is always the normal person who has power over the abnormal.” This dominance can be transposed to education. Curriculum is created, taught, assessed
and repeatedly enforced. There may be development and changes over time however; it has still been the non-Indigenous group approving and making the mainstream system changes. The dominant, normal group retains the power and colonisation continues. Michael Apple explains this by stating, “The decision to define some groups’ knowledge as worthwhile to pass on to future generations while other groups’ culture and history hardly see the light of day says something extremely important about who has power in society” (Apple 2014, p. xx).

The frustrations of being the other can be explained in more detail with the use of Indigenous women’s standpoint theory. Moreton-Robinson’s (2003; 2013) interpretation of feminist standpoint theory, Indigenous standpoint theory, and then reformulating as Indigenous woman’s standpoint theory proposes that the sum of a person’s upbringing and experiences shape the way that information is received, interpreted, and conveyed. Therefore, it is imperative that I explain my own standpoint to provide the reader with a more in-depth understanding of what has shaped the body of work being posed.

This paper is written from an Indigenous woman’s standpoint and although the writer is not in the position of dominance, the author holds a position of epistemological privilege. This is not a common methodology used in academia. “There is a great deal of difficulty in trying to forge scholarship informed by an Indigenous woman’s standpoint to return the gaze on whiteness in a colonising society” (Moreton-Robinson, 2003, p. 75).
My own standpoint has two key elements. This is obviously an oversimplification, however, basically defines the relevance to the research. The first of these key elements is my own Indigeneity. The second key element is my knowledge as an experienced teacher within the Northern Territory Department of Education.

It is a combination of my experiences as a teacher, and my frustrations as an Indigenous Australian woman, that have created the need to find out why some Indigenous students continue to underachieve and seem to be unable or even unwilling to fit the western mould of success.

Having this type of knowledge and many years of educational experience, I am inclined to approach the issue of Indigenous educational underachievement by going straight to the root cause. The place to begin must be pedagogical approaches, which are clearly outlined in the Australian Professional Standards for Teachers.

2.3.1.1 The Australian professional standards for teachers

The Australian Professional Standards for Teachers are the values and belief statements of western knowledge. They shape and control the pedagogy of the mainstream education system in Australia. The national standards have replaced outdated collections of different requirements from each state. There are layers of complexity that add to the detail of structure and expectations. This complexity creates exclusivity and a sense of suspicion.

Educators were suspicious at the development of the teaching standards, with some suggesting a simplistic technical-rational attitude (Tuinamuana, 2011). Bloomfield
analysed that, standards are presented as “frameworks of professional guidance and statements of expertise”, but at the same time act as “technologies of control employed in the service of accountability”.

School leadership teams, in supporting the use of standards attached to practice and accountability, are supporting the control of staff and the education system as an institution. This adds to the reasoning that educational reform should begin with the teaching standards. As the latest standards are still a relatively new development, Indigenous educators should strike while the iron is hot and break through the technologies of control to enhance equity.

The Northern Territory Indigenous Education review, ‘A share in the future 2014’, Bruce Wilson conceded in his opening letter to the Education Minister that there are cultural considerations required for reform. “The issues are not merely technical. For many people, the resolution of the barriers impeding progress in Indigenous education is as much moral and cultural as educational” (Wilson, 2014).

New Zealand leads the way with their Practicing Teacher Criteria, including an overarching statement that immediately allocates respect to Māori culture and knowledge, “The Treaty of Waitangi extends equal status and rights to Māori and Pākehā. This places a particular responsibility on all teachers in Aotearoa New Zealand to promote equitable learning outcomes” (Teachers Council, 2015). The Australian Professional Standards for Teachers overarching statement says no such thing. In fact,
Indigenous education and the improvement of Indigenous educational outcomes are represented in isolation from other statements about classroom practice.

The Australian Professional Standards for Teachers (Australian Institute for Teaching and School Leadership, 2017) 1.4 and 2.4 are specifically about how to teach Indigenous students which implies that Indigenous students are not being catered for by the other standards and need special mention. This is concerning but adds further weight to the argument for future Indigenous educational reform to begin with the standards. One notable aspect that many may not have realized is that both 1.4 and 2.4 are about knowledge – know the students and how they learn and know the content and how to teach it. Knowledge at the graduate level is very broad and thus superficial. It supports the continued practice of Indigenous people being content and a subject to know about. As already stated, and earlier supported by Moreton-Robinson et al. (2012) pedagogy and the deeper understandings about Indigenous people are lacking.

Importantly, the purpose of this paper is not to diminish any work done by Indigenous people involved in the consultation processes (ACDE, 1998) or the development of standards 1.4 and 2.4 in the first place, but to look more closely at the use of standards overall, and to further examine their potential as a tool for change.

The first step in investigating this potential is to undertake a critical analysis of the professional standards through the lens of Indigenous knowledge. Using an insider/outsider lens provides a different perspective on the purpose and effectiveness of the standards. This requires an analysis of the discourse. The following analysis will
involve the description and interpretation of one of the standards at the graduate level, available on the AITSL website http://www.aitsl.edu.au/australian-professional-standards-for-teachers/standards/list.

An overview is required first. As mentioned earlier, Martin (2003) created an explanation of Australian Indigenous knowledge. This explanation can be used as a framework to consider the overlap of knowledge systems. The correlation allows for connections to be fully valued between systems.

Surprisingly, the teaching standards are already organized into three distinct areas, which can be mapped to areas of Indigenous knowledge.

*Knowing* (epistemology) and Professional Knowledge were an obvious choice to be paired. Both relate to what is known, why and how.

*Being* (ontology and axiology) required some more thought in the matching process. One of the concepts that made this linking easier was ‘relationality’ or relatedness. *Being* is about relationships, connections and behaviour. This paired more readily with Professional Practice, behaving ethically and responsibly.

*Doing* was considered last due to the simple fact that Knowing and Being inform our Doing. Similarly, a teacher’s knowledge and practice inform how they engage with the profession and what other professional development and learning is needed. *Doing* matches with Professional Engagement.

For this exercise, we will look at key concepts represented in the Professional Practice section of the teaching standards. This section aligns with Indigenous
Knowledge about Being. It is the second section of the professional standards. This section has been chosen to investigate closely because of the importance of relationships in teaching.

Being is informed by our Knowing. Being is about relatedness. For an Indigenous person it is about our place in the world. The relatedness is what keeps us centred (Martin, 2009). Being is about identity and feeling connected and strong. It is how to ‘be’.

The Indigenous sense of Being is closely aligned to the Professional Practice aspect of the Teaching Standards. Both instruct an individual about proper conduct. There are expectations, guidelines, and responsibilities. However, where the Indigenous knowledge has the key concepts of relatedness, reciprocity, shared experience, and ethical conduct; the teaching standards espouse preparedness, effectiveness, creativity, consistency, formality and judgment.

This ‘western’ aspect is primarily about planning and implementing learning activities, the appropriate learning environment, and assessment of learning. The language is quite formal and explains a structure within the prescribed process of teaching and learning. In this instance, this is where the two value systems (Indigenous and western) differ.
The Indigenous knowledge is primarily about relationships. It is about the people, the teacher and the students. Being is about how to connect appropriately and respectfully. This connection or teacher-student relationship then would enable effective teaching to take place. In educational terms, an Indigenous teacher may develop strong professional relationships that are student centred and about the whole child. This is a skill that should not be understated and is an advantage to Indigenous
teachers and to Indigenous people wanting to be teachers (Santoro, Reid, Crawford, and Simpson, 2011).

Research confirms the connection between effective teacher-student relationships and improved academic outcomes (Hughes & Chen, 2011; Hambre & Pianta, 2006). It makes sense that more Indigenous teachers are needed, not only to teach Indigenous students but also for the improvement of educational outcomes for all students. Instead of ‘Indigenous’ seen as a problem, perhaps ‘Indigenous’ is the answer, the solution, the epiphany. It is important to acknowledge inclusion and understand that an alternative approach to teaching and learning is required. An Indigenous teaching and learning model are an alternative model to the western system and the dominant educational practices in place in Australia.

Future directions

Indigenous knowledge and the mainstream education system values and beliefs in Australia are not worlds apart. Of course, this analysis only represents a general overview of the language used in Martin’s (2003) text, and those used by the people involved in consultations and ultimately the team responsible for formulating the wording of the Australian Professional Standards for Teachers (ACDE 1998; AITSL 2015).

The national teaching standards (AITSL, 2014) impact on all areas of education in Australia and are the assessment tool used to determine a teacher’s quality and ability. They are a structure of values and beliefs that are determined as necessary for successful schooling. Although Indigenous people are Australia’s first people, there is
little representation or acknowledgement of Indigenous educational values and beliefs. It is not unreasonable that Indigenous people may feel like outsiders within the education system. There is a need for everyone involved to have a deeper level of understanding of the teaching standards. This informed view and understanding of the connections between Indigenous knowledge and the teaching standards could add to the level of confidence, identity and belonging as a teacher within a western framework.

Isn’t there a moral obligation, at the very least, to make a space for this shared knowledge? If so, how can the professional standards be utilised to recognize and acknowledge the Indigenous presence? There are various examples of Indigenous people working together to incorporate Indigenous knowledge into education (Yunkaporta & Kirby, 2011; Dusseldorp Forum, 2013; Pridham et al., 2015). However, these examples do not focus on the teaching standards. This is an area that needs further attention.

One example of a relevant text is *Strong Teachers* (Murphy & Railton, 2013), a record of ‘strong teaching’ practice and pedagogy in a remote Indigenous context and organized within the National Teaching Standards framework. The book documents the triumph of remote Indigenous teachers to meet the standards required to upgrade their teaching qualifications. The text is detailed and specific, in the way that it investigates down to each sub-section of each key standard. Standards language is intertwined with descriptions of Indigenous skills and cultural relevance in each sample of evidence.
Murphy and Railton’s (2013) work is specific to Indigenous teachers teaching in remote areas of the Northern Territory, and to teaching Indigenous students, having a wholly Indigenous education focus. It makes connections between knowledge systems and adds to this greater understanding of what is expected in schools.

There are even more examples of remote educators striving to improve educational outcomes. As part of the MATSITI project, research was conducted into the opinions, educational development, and publications of the Yolngu people located in North-east Arnhem Land (Bat & Shore, 2013).

Within this article, the Yolngu have explained how the education system needs to work to best cater for Yolngu. The complexities within the Yolngu ideals of education are in many ways unique. There is a strong Yolngu voice for Yolngu. Yolngu and other remote educators have spent a lot of time and effort in this area of thinking already and the work done is very specific to regions, language groups, and people.

This paper is proposing that most Indigenous people reside in urban areas and access the mainstream public education system. Perhaps this is a reason for the Grey Literature effect. Out of sight out of mind. Any work done needs to impact on the whole Australia-wide education system.

The added value of Indigenous knowledge to the mainstream education system is not only a question of curriculum content. The question today is the valuing of an Indigenous person’s Knowing, Being and Doing. Understanding that Indigenous people can have great success in education, both as students and teachers because of who
they are and what they do. Indigeneity is not a problem but an advantage. Indigeneity could be a skill set for teaching.

It is healthy to question longstanding assumptions about Indigenous people and the Australian mainstream public education system. This includes in-depth investigation of the values and beliefs espoused. It is not the intent to imply that all Indigenous people have difficulties with education, or that all Indigenous people need convincing to become teachers.

However -

- Indigenous knowledge has definite links and connections with education.
- Indigenous people, with their Indigenous knowledge, could find connections, strengths and add value to the western education system.
- Indigenous knowledge should be valued and utilized in the education system, in order to create an improved education system.
- With the similarities in values and beliefs, there are also differences that should be acknowledged as part of the considered and balanced approach to any future reform.

Conclusion

The basis of this paper is to acknowledge the cultural strength that Indigenous people bring to the field of education by highlighting commonalities in values and
beliefs between Indigenous knowledge and western knowledge, in the Australian Professional Standards for Teaching. We should consider the place, or space, for this within the Australian westernized education system.

The analysis of the professional standards within the framework of Indigenous knowledge is a practical method for increasing Indigenous participation in education. This should begin with teacher education courses.

An increase in Indigenous teacher numbers would not only be a benefit to Indigenous students but to all students and non-Indigenous teachers and colleagues. This would be a positive step forward in reversing the ingrained negative attitudes, about Indigenous people and education in Australia. Here is an opportunity to engage, identify and make the necessary changes to the Australian mainstream education system to ensure that academic outcomes are more equitable. Australia needs even more Indigenous teachers.

The importance of Indigenous teachers, their vital role in understanding Indigenous knowledge and being able to explain the connections to the Australian education system is underestimated and underutilised, proving Reid and Santoro’s (2006) description of Indigenous teacher identity in education as “White northern European culture over the pre-existing Indigenous culture that it covers and smothers” (p. 144).

Indigenous knowledge and best practice in teaching are terms not often linked. In fact, education and specifically teaching as a profession has social stratification considerations. Due to the educational inequity in Australia for many Indigenous people, social hierarchy determines that low socio-economic status follows. Indigenous people experiencing success in education and the resulting social mobility up the social hierarchy are breaking the mould. It is necessary for Indigenous people to be taken seriously in education and for Indigenous educators to be seen as the professionals that they are. If Indigenous knowledge is understood as important for Indigenous people, and relevant to the Australian education system, changes are required.

Indigenous knowledge is ‘lived’ by Indigenous people. Indigenous people can explain their Indigenous knowledge to others. Indigenous people are central to incorporating Indigenous knowledge into the educational context – whether that is curriculum or pedagogy. Indigenous knowledge can enhance the learning experience by improving educational engagement and providing a more inclusive learning experience (Yunkaporta, 2009).
The next article adds to the review of literature by exploring further possibilities of Indigenous knowledge as best practice. The article explicitly refers to the classroom as the venue for educational change. The educational imperatives to develop student relationships, provide effective feedback, and to know the curriculum content well, are explained in terms of both western and Indigenous knowledge.

The second publication, the conference paper, begins on the next page.
2.3.2 Creating the ideal classroom environment to ensure success for Indigenous students

This paper presents an educational paradigm, which focuses attention on academic achievement for Indigenous students. The paradigm has been created as the result of an educator’s Indigenous perspective, curiosity as a PhD student, and over 20 years of practical experience spanning all the sectors – Early Childhood, Primary, Secondary and Tertiary. Educational corner stones (Feedback, Subject Content Knowledge, and Relationship Building) have been used in conjunction with Hattie’s (2003) expert teacher traits to reconsider best practice as it applies to improving Indigenous educational outcomes. Although dated, further analysis of Hattie’s expert teacher characteristics, and practical application within the framework of the outlined ‘corner stones’, can be used to connect Indigenous knowledge with the westernized Australian education system. This reimagining highlights the importance of Indigenous knowledge for effectively engaging Indigenous students in education. Martin’s (2003) definition of Indigenous knowledge is a foundation publication and provides the definition for the purposes of the paper. Making plain the place of Indigenous knowledge in education enables a shift in thinking to alternative practice and the need to provide more inclusive Australian classrooms.
Indigenous education in Australia

Since 1788, Indigenous education has been characterised by exclusionary policies, practices, and low expectations. Over time, attitudes have changed to include Indigenous students and their families (Cadzow, 2007). While positive changes have been attempted at inclusive educational practice, the issue of equity and respect for cultural difference has been an area of slow development (Partington, 2002). The dominant mode of education in Australia is a product of western epistemological beliefs (Keddie, 2012). Indigenous students are assessed against these expectations. The lack of Indigenous representation in the education system is a hurdle which perpetuates the perceptions of comparatively low Indigenous educational outcomes (Apple, 2014; Bishop, 2010; Partington, 2002). As a result, Indigenous education in Australia has been a concern for successive governments.

All Australian governments have recommitted to the Closing the Gap targets under the National Indigenous Reform Agreement between the Australian Government and state and territory governments. These targets include a focus on access to education; school attendance; improving reading, writing, and numeracy; and finishing school (‘Indigenous Schooling | Department of Education and Training’, 2016, para 2).

The educational outcomes of Indigenous Australians are inextricably linked to colonisation (Brady, 1997). McWhinney and Marcos (2003, p 20) explain this further by stating that “Education is always programmatic, designed to produce a specific social
outcome for the particular populations that it serves. Education is never politically neutral; it leads pupils to accept its assumptions about power, reality, morality, and the formulations of knowledge that the curriculum imbues.” In Australia, western knowledge (WK) shapes our education system (Brady, 1997; Moreton-Robinson, 2006; Porsanger, 2004). Indigenous knowledge (IK) is not represented in Australian education. This is shameful. IK is important to Indigenous people. It is central to identity and well-being (Martin, 2003).

Indigenous Australians do not necessarily align with the formulations of the western style education system. In fact, there are distinct knowledge systems at play. This could be argued as the reason why some Indigenous students are not engaging with education. That is not to say that there is no common ground. “Indigenous knowledge should be valued and utilised in the education system, in order to create an improved education system” (Woodroffe, 2016, p 17). The aim should be to achieve parity within the Australian education system.

To precipitate the journey to parity, there should be a practical starting point. In order to monitor and measure progress, the work done should be observable. Within our current western system, to improve the educational outcomes of students, teachers need to have a positive influence (Hattie, 2003). Teachers and classroom practice are an ideal starting point. The way to achieve positive influences, with Indigenous students, is a matter of IK. Indigenous people live and breathe IK. This is what should be seen at school. As explained by Martin (2009), “It is our relationality that sustains us.” Purdie, Tripcony, Boulton-Lewis, Gunstone and Fanshawe (2000)
confirm that for Indigenous students to be positive about education they need to see Indigeneity within the school setting.

Hattie (2003) espouses that the greatest area of influence is through teacher feedback. The crux of the matter is whether the Indigenous students are receptive, for any feedback to be effective in the first place. This reinforces the importance of student-teacher relationships (Hughes & Chen, 2011; Hambre & Pianta, 2006) but does not go far enough in expressing the importance of relatedness for Indigenous students. Is this why many Australian Indigenous students have not experienced success, and why Indigenous people may choose not to engage with the western education system?

An Indigenous understanding of relationships or relationality is an important part of IK. It forms the ontological beliefs of Indigenous people and understandings about ‘Being’ (Martin, 2003). If a teacher is unaware of the Indigenous interpretation or expectation of a relationship, surely, they are at a disadvantage when it comes to relating to and educating Indigenous students (Bishop, Berryman, Wearmouth, Peter, & Clapham, 2012). It raises questions about the importance of including IK in pre-service teacher education.

*Indigenous knowledge as educational best practice*

WK has been refined and compartmentalised to demarcation lines that clearly define what knowledge should be learnt in schools. This is the situation in Australia, where WK is taught and assessed. Barnhardt and Kawagley (2005) highlight the
differences between WK and IK. WK is compartmentalised, individualistic, freely available, and assessment based. IK is holistic, communal, privileged, and practical.

There are different knowledge systems and expectations. Malin (1994) found distinct and identifiable cultural beliefs about good teaching. Although the research is dated, there is limited work in the field that indicates these definite cultural preferences. It is important to realise that Australian Indigenous people have different expectations of the teacher. Indigenous people also identify more readily with someone who displays the expected behaviours. Thus, Indigenous people relate more readily with Indigenous teachers. A main point of contention highlighted was the way that each teacher spoke to the students. The Indigenous teacher, as noted by the Indigenous parents, spoke to the students as if they were respected and equal; on the same level. The non-Indigenous teacher was perceived by Indigenous parents as speaking down to the students; being disrespectful.

If perceptions are understood, action can then be taken to determine either how to change perceptions, or how to adjust practice accordingly. Although there are differences in educational expectations, it is the similarities between systems that are areas of potential for improving educational outcomes. Martin’s (2003) definitions will help those familiar with western expectations to also understand the Indigenous equivalent.
Building relationships - *ways of being*.

*Western-*

Hattie (2003) reminds us that expert teachers create the optimal classroom climate, have a complex understanding of classroom understandings, and have a high respect for their students. In Australia this is achieved through a majority non-Indigenous lens. Behaviours of the teacher will be in line with western cultural norms because most teachers in Australia are non-Indigenous. The non-Indigenous teacher may have very little idea or understanding about *Being* as defined in IK. There would most likely be no thought or understanding at all of relationality, or relatedness. That is unless perhaps there has been some reference to educational theorists such as Piaget and Bruner, and constructivism or Vygotsky’s social constructivism. In general, these approaches are about the human aspect of learning, and the social interactions that enable learning to happen. It is thought that much learning can be collaborative. (Mutekwe, 2014)

*Indigenous-*

In explaining the *Being* part of IK, Martin uses the following key statements. They are philosophical and provide us with an understanding of scope. “We are part of the world as much as it is part of us, existing within a network of relations amongst Entities that are reciprocal and occur in certain contexts” (Martin, 2003, p. 10).

*Being* and relatedness is most readily seen when Indigenous people meet each other, particularly for the first time. Conversations generally begin to determine family
name, language group, and then wider connections. “We immediately set about establishing identities, interests and connections to determine our relatedness” (Martin, 2003, p. 11). This is an exercise in allocation of respect. “In these circumstances, we draw upon what we know and have been taught from our Elders and family members as proper forms of conduct. Through this, our Ways of Being shape our Ways of Doing” (Martin, 2003, p. 11).

Some key concepts of Ways of Being are relatedness, reciprocity, making connections with prior knowledge, and demonstrating ethical conduct. Teachers should understand and utilise this to build and maintain effective student-teacher relationships with Indigenous students and families.

Feedback - ways of doing.

Western-

Expert teachers anticipate, plan and improve as required (Hattie, 2003). Expert teachers are context-focused and attuned to student needs and progress. They engage students in self-regulation and provide appropriate challenging tasks and goals. These skills can be utilised when providing feedback. The importance of feedback is the part that it plays in the teaching and learning cycle. Timely feedback allows students to practise and improve. Therefore, it is very important for the student to receive effective feedback. Unfortunately, there are several variables to consider. Firstly, not all teachers are expert and secondly not all students are receptive to feedback. Teachers
should remember that, “To be effective it is important to develop rapport, mutual respect and trust between you and the learner” (McKimm & Swanwick, 2010, p. 43).

*Indigenous-*

According to Martin’s (2003) assessment, Ways of Doing are a synthesis and an articulation of Ways of Knowing and Ways of Being. This description links closely with feedback. Feedback is about demonstrations of knowledge, skills and understandings. During the teaching and learning cycle, of which feedback is one part, students are learning new knowledge and making connections with prior learning. They synthesise. However, as already stated, the teacher’s degree of deeper content knowledge (Ways of Knowing) and the strength of the teacher-student relationship (Ways of Being) will determine the degree to which feedback (Ways of Doing) is effective.

Assessment of individuals is a characteristic of WK. It highlights the competitive nature of the western education system. This is not necessarily an aspect of IK. Ways of Doing express individual and group identities, and individual and group roles. Behaviour and actions are a matter of subsequent evolvement and growth in individual Ways of Knowing and Ways of Being. (Martin, 2003)

Some key concepts of Ways of Doing are *synthesis, individual and group identity, and developmental learning*. Non-Indigenous teachers should know how to help students make connections in their learning as part of feedback. Feedback should be non-threatening. Learning opportunities need to include group activities. Learning
should be scaffolded when required and explained within a developmental framework that includes purpose.

Deeper content knowledge - ways of knowing.

Western-

Expert teachers understand teaching and learning in a more complex way. They are better decision-makers and know how to prioritise, are more automatic, and enhance surface and deep learning (Hattie, 2003). Technically Hattie did not list deeper content knowledge as part of the expert teacher distinguishing traits however; it was included as a very important characteristic of both experienced and expert teachers. It should be mentioned that knowing content well does not automatically mean that you know the best ways to impart this knowledge to students. It does mean though that you are able to explain the content in several ways including making connections to other knowledge and breaking the knowledge down to its component parts.

Indigenous-

Non-Indigenous teachers should know that IK is more than just information or facts, but is taught and learned in certain contexts, in certain ways at certain times. It is therefore purposeful, only to the extent to which it is used. If it is not used, then it is not necessary. Martin (2003) explains further that IK is gender specific and no one person or entity knows all. Furthermore, knowledge exists within a network of relationships. “Without this knowing, we are unable to ‘be’, hence our Ways of Knowing inform our Ways of Being” (Martin, 2003, p. 9).
Some key concepts of Ways of Knowing are *conceptual, purposeful, connected,* and *necessary.* For teachers to work effectively with their Indigenous students and for optimum learning to take place it would be wise to note these concepts and utilise them when teaching content knowledge. The teacher should truly understand who the students are and how IK plays out in everyday life.

The diagram below is a visual representation of inclusive best practice. By sorting and making connections, further links become obvious until what is left is a guide to improving the educational outcomes of Indigenous students. The diagram reveals links and the important connections between the traditional corner stones. These in-depth understandings help to complete the ‘best practice’ puzzle.

**Figure 6 - Inclusive Best Practice**

**Improving Educational Outcomes**
by Including Indigenous Knowledge
About the diagram

The goal is to improve the educational outcomes for Indigenous students. Teachers can achieve this by being positive influences on student achievement. This central ideal is supported by the outer layers; the mechanisms for change that guide practice about how to achieve the goal.

The second layer of the diagram, working from the centre out, is the overlapping sections. These sections portray the complexities of effective teaching. They also help to sharpen our focus. For example, Feedback and Subject Content Knowledge separately and in isolation are not enough. We must understand how they connect to ensure effective practice.

The outer areas to the diagram provide us with the links to IK concepts. Expert teachers are those who have positive influence on student academic achievement. As we build our knowledge and experience in teaching, we are striving to improve our skills and master the art. This will not be achieved until a teacher can cater for the learning of every student in their class. The paradigm represented in the diagram will support teachers in their journey to ensure academic success for Indigenous students.

Conclusion

Ensuring success for Indigenous students begins with creating the ideal classroom environment. This is totally within the sphere of influence of the teacher. All
teachers should know the importance of cultural expectations, and the potential areas of impact for academic achievement. If teachers can successfully transverse the bridge between knowledge systems, they will be able to better understand the expectations of Indigenous students and their families.

Relationships with students and the wider community are very important. Nakata’s work (1998) supports the need for non-Indigenous and Indigenous people to work together to improve educational outcomes by stating, that Indigenous people have specific understandings and perspectives about Indigenous issues. Therefore, Indigenous people must be involved in improving Indigenous educational outcomes through better representation of IK within the Australian education system. This is how parity will be achieved.

Both articles combined present themes of the literature and knowledge in the field. In summary, these themes are educational inequity for Indigenous people, the National Assessment Program (NAPLAN) as evidence of continuing systemic failure, teachers as drivers for change, the importance of Indigenous teachers, Indigenous people and the strength of their Indigenous knowledge, commonly held assumptions about Indigenous people and education, divergent knowledge systems, education as a western construct, the Australian Professional Standards for Teachers as a tool to link knowledge systems, effective student teacher relationships and relatedness, and future directions incorporating Indigenous knowledge and Indigenous teachers, Indigenous standpoint, possibilities of Indigenous knowledge as best practice, and the classroom as the venue for educational change.

Both articles discuss the need for a paradigm shift; a shift in the way of thinking about education. The usual approach to education in Australia and the way that
Indigenous education has been formulated must change. The reason for this is that the educational issues for Indigenous Australians reflect Australian society and the societal norms that define the education system to begin with. The change must be societal and system wide. Rigney describes the need for “a robust analysis and critique of educational systems, structures, and jurisdictions must be interrogated for their role in inequality” (2002, p. 77).

The changes required are about respecting Indigenous people, understanding the relevance of Indigenous knowledge to Indigenous people, and with finding a way of incorporating this into the education system under the guidance of Indigenous educators. The change should include an embracing of the diversity of Indigenous culture in Australia, and this begins by understanding and respecting Indigenous identity. The concept of identity underpins other aspects relevant to the research topic. It is important to explore the complexities of identity in education in more detail.

Themes represented in both articles could be broadly grouped into 3 categories – the education system, teaching, and knowledge.

Table 1 - Article themes as categories

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<thead>
<tr>
<th>Education system</th>
<th>Teaching</th>
<th>Knowledge</th>
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<tbody>
<tr>
<td>NAPLAN</td>
<td>Teacher as a change agent</td>
<td>Education as a western construct</td>
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<tr>
<td>Educational inequity</td>
<td>Professional standards for teachers</td>
<td>Importance of Indigenous knowledge; voice</td>
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<td>System failure</td>
<td>Classroom as a site for change</td>
<td>Paradigm shift</td>
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<td>Educational change</td>
<td>Importance of Indigenous teachers</td>
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</table>
Themes needing further investigation are identity, social capital, educational leadership, and social exclusion. These will be explored in the following paragraphs.

2.4 Identity

Teacher identity, defined by the Australian Professional Standards for Teachers, as outlined in the first article on Indigeneity, enforces the Australian identity as western, Anglo-Celtic and white (Santoro, 2011; Soutphommasane, Whitwell, Jordan, & Ivanov, 2018). Classroom practice informed by these standards creates an environment challenged by diversity; an exclusive space. It is a space that is not inclusive of the ‘other’. This creates a challenge for Indigenous students and for both Indigenous and non-Indigenous teachers. Identity may hinder some non-Indigenous educators if they lack knowledge about Indigenous Australians and cannot understand an Indigenous perspective. Indigenous educators can be challenged because of their Indigenous identity and perspective.

2.4.1 Teacher identity and discourse

Teacher education begins with the pre-service teacher and the forming and development of a Teacher Identity. Mostly becoming a teacher includes self-doubt. Even when university has been completed and the graduate teacher is doing the teaching, there is a steep learning curve happening for the new teacher simultaneously.
The teacher gets focused on the job of being professional. All the while there is an internal conversation about the level of professionalism being achieved. Research in this area describes *Teacher Identity and Discourse* as a battle outside of one's comfort zone. Alsup poses this dilemma as one of discourse, usually in the form of an “unthought desperation made from feeling that one has to choose between personal selves and professional selves” (Alsup, 2006, p. x).

While Indigenous educators struggle with the development of their teacher identity, they are also struggling with how their Indigenous identity fits within this western construct of the Australian education system. Alsup (2006) describes a transformative discourse that enables the personal and the professional to positively impact on the development of teacher identity. “It is at the discursive borderlands, and by association at the borders of various subjectivities or senses of self, that preservice teachers can discover how to move from being students to being teachers and can learn how to embody a workable professional teacher identity without sacrificing personal priorities and passions” (Alsup, 2006, p. xiv). Is this what Indigenous teachers struggle with; the thought and feeling of sacrificing their personal selves, priorities and passions?

2.4.2 Indigenous identity

Indigenous identity and resulting Indigenous Standpoint are linked. Factors creating identity shape the person’s perspective of the world. This perspective provides a pivot point for understanding other people’s actions and opinions. Reflexive thought
and behaviours help people to learn, change and adjust their own standpoint over time.

To understand one’s own identity, you must first understand the factors that impact and influence. In this way of thinking, identity is not fixed. It is a process of constant change and adjustment. If you follow this line of thought, then it makes sense that there is not only one Indigenous identity. There are Indigenous identities because of colonization, assimilation, numerous methods of removal or restriction of language and cultural practice, and geographical location. Even if this is the case, Indigenous identity begins with Indigenous knowledge. Understanding Indigenous identity, Indigenous people and their distinct reality is imperative for understanding Indigenous academic achievement and engagement. This emphasises the relevance of the thesis questions and the relevance of Indigenous knowledge in the Australian education system.

This complexity can be seen in the following Indigenous identity diagram. The diagram displays the component parts (Indigenous knowledge, influencers, individual and group identity) of Indigenous identity and illustrates the layering of factors (Knowing, Being and Doing, family and community, life experiences, internal and external influence) that shape and Indigenous reality. This can be seen in Figure 1 below, presented earlier in Chapter 1.
2.4.3 Indigenous teacher identity and social capital

Indigenous identity is linked with social capital in the way that our Indigenous knowledge defines both an individual identity and a group identity. Indigenous teachers have an individual professional identity and a group identity as part of the Indigenous cohort (students and teachers) of the school and wider system. Social group theory explains how groups form from commonalities of culture and emphasizes other groups as distinct and different. Indigenous educator networking caters to this need for a group identity.
2.4.4 Identity and Indigenous leadership

Indigenous people enact Indigenous leadership. Indigenous leadership is process focused, whereas non-Indigenous leadership can be explained as outcomes focused. Further distinctions that can be made about leadership depend on the context. Indigenous leadership in the educational context becomes Indigenous educational leadership. Existing educational leadership resources define and value leadership behaviours and attitudes. The behaviours and attitudes are part of the AITSL Australian Professional Teacher Standards website materials. They are an extension of the expected standards and are hierarchical. The levels of standards are progressive – Graduate, Proficient, Highly Accomplished, and then Lead. An example of this can be seen in the following statement from the AITSL website that implies that principals and some others lead. Still others aspire to it. “The School Leader Self-Assessment Tool assists principals, school leaders and aspirants to locate their practice within the Leadership Profiles” ("Leadership Profiles", 2017, par. 3). The western understanding of leadership seen within school and the Standards does not accommodate the Indigenous interpretation. School leadership is connected to experience over time. Indigenous educational leadership is connected to culture.

Indigenous leadership is significant for two main reasons. It is evidence of the resilience of Indigenous people to still exist in Australia and feel strongly about Indigenous rights, and secondly, it is evidence of the fact that Australian society still lacks equity for Australia’s First Nations’ Peoples. As long as Indigenous
people see injustices, we will express the need for Indigenous leadership

(Woodroffe, Fry & Gillan, 2017, p. 2).

Interestingly in 2008, there was a scoping paper commissioned by the Australian Council for Educational Research (ACER) which investigated the current activity leadership in Indigenous education in Australia. The authors defined the focus in two parts - as leadership for Indigenous education, and as leadership by Indigenous principals and teachers. Two key statements from the scoping paper were that there were limited current opportunities for recognition and professional development of Indigenous leadership, and that “it may be an even greater challenge to reach consensus on standards for leadership in Indigenous education” (Purdie & Wilkinson, 2008, p. 4).

The leadership in this research study is leadership by Indigenous educators, whether they are principals or not. The leadership is not that defined by leadership theory, but the leadership defined by the actions of Indigenous people in caring for Indigenous students and educating non-Indigenous students (and teachers) about Indigenous Australia. This over-simplifies the work of Indigenous educational leaders; however, it is a good place to start.

2.4.5 Identity as a minority - social exclusion

A schooling system that does not cater to the needs of all students creates social exclusion. Klasen (1998, p. 9) in his analysis of OECD data states that
...education can be a source of exclusion for children and thus carry with it the intrinsic problems this involves. This is particularly the case if, for some children, it fails to meet the standard called for in the Convention of the Rights of Children of ‘development of the child’s personality, talents, and mental and physical abilities to their fullest potential.’ It can also be exclusionary if the process of education fails to promote equal participation and access.

The on-going impact of a failing system has existing and ongoing impact on the students in the system. Klasen (1998, p. 9) suggests that such a system has a need to adjust their focus in order to make necessary change because “...the distance of the poorest performers to the average will now be of particular relevance, both for intrinsic and instrumental considerations.” This sounds like the rhetoric about Closing the Gap which is already a point of discussion in Australia. Unfortunately, past strategies for closing the gap between the poorest performers (Indigenous Australians) and the average have not been successful. Habibis and Walter (2011, p. 143) remind us that “Explanations of the educational inequality of Indigenous Australians are complex” but that factors linked to “historical poverty and social exclusion of Indigenous people within Australian society must be included.” The Australian education system excludes Indigenous people on numerous levels, unfortunately even “initial teacher education effectively excludes Indigenous teacher education students at almost twice the rate of all students” (MATSITI, 2016, p. 24).
Social stratification as it applies to a general Indigenous population categorized as low socio-economic, has implications for the credibility of Indigenous teachers. As explained by Reid and Santoro (2006),

_The dominant culture in Australian education has, from its inception, been programmatically designed to instil British cultural norms and values into the isolated colonial population. The recruitment of Indigenous teachers has only a relatively recent history, and prior to the 1960s, teaching was not a career open to Indigenous men and women (p. 148)._ 

Becoming a teaching professional would indicate social mobility but not necessarily changed attitudes towards Indigenous educational achievement or intelligence. This is evidenced in the final report of the MATSITI Project that states the project brought about a new awareness. “In many cases, ... project managers began to seek out, recognise, listen to and support their Aboriginal and Torres Strait Islander staff for the first time” (MATSITI, 2016, p. 15). This is further evidence that Indigenous voice has not been valued or heard.

2.4.6 Identity informing practice – educational pedagogy

Pedagogy is how an educator delivers the curriculum content. It is the teaching methods used to explain concepts and activities. It is the way for an educator to cater to different learners’ needs and to ensure that learning happens. If learning does not happen then the educator may have to rethink their strategies, and even change their
teaching approach or pedagogy. Pedagogy assists learning and is often based on learning theory and learning models.

Pre-service teachers learn about these Learning Theories and Learning Models in teacher training courses. They are often generic in the way that they cater to the same western knowledge and ideals as those that have shaped the education system. Educational pedagogy from a western perspective, as demonstrated in our public schooling system, is outcomes focused. The beginning point is the curriculum, then comes the teaching and learning, closely followed by assessment and evaluation. Education is formal and characterized by professional distance. The associated styles of learning are competitive.

Pedagogies that cater to the learning needs of Indigenous students have been described as different and termed as Indigenous educational pedagogies (Yunkaporta, 2009; Harrison & Greenfield, 2011; Harris, 1990; Nakata, 2002, 2011). It is important to understand the common ground in education – cultural (societal) expectations, a curriculum and pedagogy. What is suggested for teachers to be able to demonstrate Australian Professional Teacher Standards 1.4 and 2.4 is that they know Australian Indigenous curriculum content and pedagogy. To do this well, teachers also must know Australian Indigenous cultural and societal expectations. These understandings are a part of Indigenous knowledge. In the 2017 NADPE Report on Professional Experience in Initial Teacher Education (ITE), a review of current practice, recommended that “Indigenous education issues in ITE be recognised as a specialist area of study in Education and ITE” (ACDE, 2017, p. 19) that need further support and development.
2.5 Conclusion

The literature review indicates a gap in knowledge. This oversight is about the importance of Indigenous knowledge in the education system, and how to incorporate this knowledge. It requires Indigenous voice, which is also largely absent as indicated in the literature. “A brief summary of the development of the Australian education system begins and ends with a Western framing of what knowledge is, how knowledge is taught and learnt, what knowledge is taught and learnt in the different stages of education, and assessment of intelligence through English” (Woodroffe, Fry & Gillan, 2017, p. 2).

Indigenous knowledge is a main component of Indigenous identity and the fact that it is absent from the Australian education system indicates that it is not valued or considered important against western standards. Foucauldian theory explains this as the dominant culture and the ‘other’. This is relevant to Australian society and implemented as colonisation and assimilation processes and policies. Brady (1997) states that “One major disjunction between Indigenous and Western European teaching and learning is ‘what constitutes knowledge?’” (p. 414). There is a dominant knowledge deemed as important and used as discourse to further enforce the dominant culture within a society.

The key theoretical question in this research study is about knowledge in Education. It is about whether different knowledge systems can be incorporated within the Australian education system, and more specifically, whether the inclusion of
Indigenous knowledge can be used to improve Indigenous academic achievement. The review of literature reveals the need for more Indigenous participation and cultural inclusion in the Australian education system. The key reviews (Department of Education Indigenous Education Reviews, 1999, 2014; Learning the Lessons Qld., 2012; Lowe and Yunkaporta Curriculum audit, 2013, Higher Education Participation Review, 2012; MATSITI final report, 2016; NADPE ITE 2017 Report), educational resources (AITSL, ACARA), and the National Assessment Plan for Literacy and Numeracy (NAPLAN) all necessitate the need for change, and the texts defining Indigenous knowledge (Martin, 2003; Nakata, 2011; Moreton-Robinson, 2013; Yunkaporta, 2009) all explain the importance of Indigenous knowledge to Indigenous people.

The research enables Indigenous educators to express their knowledge and understandings about education and requirements in pre-service teacher education. The research establishes and explains the importance of Indigenous knowledge in the Australian education system and makes recommendations for implementation.

The research questions are designed to enable data collection to fill the gap in knowledge as discovered through the review of the literature. The next chapter describes the method best suited for investigating and finding the answers to the research questions.
3. METHODOLOGY

3.1 Introduction

This chapter describes the methodology and method used in the research study to investigate the identified gap in the literature. The methodology enabled the research questions to be answered. The purpose of the research study was to investigate the importance of including Indigenous knowledge in pre-service teacher education, calling attention to the key role of teachers in addressing the repeated underperformance of Indigenous students in the Australian education system, and to propose an alternative strategy for a way forward.

3.2 Research questions

The research questions – Is it important to include Indigenous knowledge in pre-service teacher education? If so, why? What should be included?

3.3 Methodology

The methodology employed was chosen to centre Indigenous voice and position Indigenous educators as experts on the use of Indigenous knowledge in education. This positioning was intentional and has meant that the wording of the research questions moves the focus and blame away from Indigenous people and back to a system (Kahakalau, 2004); in this case the Australian ‘western’ education system. The methodology used was my interpretation of Moreton-Robinson’s (2000) Indigenous
women’s standpoint theory as methodology, and to change the focus away from perceived Indigenous deficit and rely on Indigenous perspective as an analysis tool.

Indigenous educators participating in this study provided insight and knowledge, while voicing their professional opinions about the urban educational context. The research presents the Indigenous educators participating and their lived experiences and reality of being Indigenous in a system in which many Indigenous students are reported to fail to meet national educational standards.

The chapter outlines the methodological approach to be taken. Participants and contexts are introduced and explained along with the methods used for data collection and analysis. Each of these stages are linked to the concepts of the research.

Figure 7 - Linking of concepts

- Implications for stakeholders discussed.
- Findings used to formulate suggested recommendations for including Indigenous knowledge in pre-service teacher education.
- Semi-structured interview questions answered, research questions answered and additional information collected.
- Semi-structured interview questions and participant journaling. Analysis of data through Indigenous women’s standpoint as method by asking ‘what does this tell me about the system?’ Used in conjunction with thematic analysis.
- Research questions
- A gap in knowledge due to underrepresentation of Indigenous educators, to combat perceived continued Indigenous underachievement
- Theory: Use of Indigenous women’s standpoint theory to position Indigenous people as the knowers in the research.
- Methodology: Use of Indigenous educator voice to investigate the importance of including Indigenous knowledge in teacher education
- Findings used to formulate suggested recommendations for including Indigenous knowledge in pre-service teacher education.
3.3.1 Rationale for research approach

The research focus relates directly to the results of NAPLAN reporting and the fact that teachers are thought to be the source of the underachievement (Gable & Lingard, 2013). The literature confirms that teachers are influential for student academic success (Hattie, 2003), and that most Australian teachers are non-Indigenous and have many reservations and difficulties in knowing how to teach Indigenous learners (ACDE, 2017; Malin, 1995; Moreton-Robinson et al., 2012). Recognition of this issue flows through to the Australian Professional Standards for Teachers, as presented on the AITSL website as 1.4 and 2.4 that are specifically about knowing Indigenous students and how they learn, as well as know Indigenous content and how to teach it. The standards guide teachers and set expectations for their professional performance. Following on from this, providers of Initial Teacher Education courses must ensure that pre-service teachers access units of work that will enable them to cater for Indigenous learners. These expectations have not yet successfully changed the system in a way that positively impacts NAPLAN results for Indigenous learners. The research study interviews Indigenous teachers and pre-service teachers to gain an Indigenous perspective or Standpoint on the issue. This research, although beginning with an emphasis on facts and figures in standardized testing, is about people – the seemingly silent minority within the Australian public education system.

Due to the nature of the research questions, this research is a qualitative study. It is a study of society as seen from the point of view of the participants. For this
reason, qualitative research is ideal for this research study. The research suggested recommendations have the potential to make a difference to the education system by contributing to the content of Initial teacher education courses. The Indigenous educators participating in this research study have formulated how the findings could be used in education.

The study contributes to addressing the inequity for Indigenous people in the Australian education system. Indigenous Australians are in the minority with regards to the population and repeatedly underperform in the annual NAPLAN results. It is essential to reveal an alternative view and approach to improving a system. The two groups of stakeholders are Indigenous and non-Indigenous Australians. It could be said that these two distinct groups are emphasized by their academic achievement as different. There is something about the Australian education system that allows many non-Indigenous students to achieve and causes many Indigenous students to fail. This research investigates the importance of including Indigenous knowledge in teacher education so that it can be implemented in schools and classrooms. I have used qualitative methods to “stress the socially constructed nature of reality, the intimate relationship between the researcher and what is studied, and the situational constraints that shape inquiry” (Denzin & Lincoln, 2005, p. 10).

The current Australian education system is a western construct. Changes need to be expressed and implemented in a way that both Indigenous and non-Indigenous people can understand. This shaped the research methodology and considers both knowledge systems. Christie (2006) defines this as Indigenous Transdisciplinary
Research; an example of which is the shared epistemology model used in this research study as guiding principles for ethical practice.

_We could understand research, which remains dedicated to both Aboriginal and academic knowledge, as Indigenous Transdisciplinary Research. This is defined in two ways: as that part of an Indigenous knowledge tradition that is recognisable or legible from a Western research perspective, or, that part of the Western academic research tradition that is at the same time conceived, shaped, governed and understood within Indigenous knowledge traditions_ (Dunbar & Christie, 2013, p. 3).

As an Aboriginal person, woman, family member, mother, educator and academic, the methodology for this research must be Indigenous, or consistent with Indigenous epistemology. Indigenous researchers cannot stop _Being_ Indigenous while they research. It is necessary that the researcher clearly positions themselves in the research. Indigenous people conducting Indigenous research enables the research to happen with the community and for the community. Nakata (1998) expresses the opinion that Indigenous people understand Indigenous concerns from a unique position.

In the case of this study, the positioning of the research is Indigenous, but the context is non-Indigenous, the westernised (public) national Australian education system. This is a system that I am very familiar with after being a student in the system, and then an educator in the system for over twenty years.
The *Standpoint* is Indigenous and the *Experience and Knowledge* about the education system is western. Understanding across the cultural distinctions allows for the Transdisciplinary approach (Christie, 2006) through the shared epistemology model. The common areas of understanding are a starting point for further work to increase equity for Indigenous people in the western system. Indigenous people need western agreement for any change in the national education system to occur. Currently, the system is not jointly owned. This is evidenced by the lack of Indigenous voice, westernised curriculum and pedagogy, as well as the continued underperformance reported.

The westernized education system focuses on assessment of knowledge deemed important by western standards. Assessment as the end goal and a heavy focus on achievement of outcomes portrays education as a very technical process where standards contribute to exclusion. However, Atkins and Wallace (2012, p. 20) state that “...by its very nature, education is concerned with human beings; and human beings are not predictable or static in the same way that inert materials or fixed numbers are.” The place where this is most relevant is in the classroom. Within schools and classrooms, there is a hierarchy of knowledge where Indigenous knowledge is excluded and seen as ‘other’. For Indigenous people, Indigenous knowledge is central.

This creates an imbalance in how Indigenous students can engage with the education system (Woodroffe, 2016). The classroom is the place where teachers and students engage and develop positive relationships based on mutual respect. It is the ideal place for the hierarchy of knowledge to be collapsed and for teachers to be able
to make changes to the lives of Indigenous students through respectful, appropriate and inclusive education; education that is inclusive of Indigenous knowledge.

Interpreting policy documents, reviews and other relevant literature present a baseline of knowledge in Indigenous educational engagement. Interviewing Indigenous teachers and pre-service teachers and making use of participant journaling was a necessary approach in understanding what Indigenous educators think and know about being Indigenous in the system. Indigenous educators commented on both teaching and learning, providing insight not only about themselves but also about Indigenous students and the non-Indigenous school community all through an Indigenous lens.

3.3.2 Indigenous methodologies

The relevance of the different approaches combined and shaped to present and express uniquely Indigenous research which was a strength of this study.

3.3.2.1 Standpoint

Research divulges information about the character of the researcher and their frame of mind, particularly when considering methodology. Moreton-Robinson’s (2003, 2013) interpretation of feminist standpoint theory, Indigenous standpoint theory, and then reshaping into Indigenous woman’s standpoint theory proposes that the sum of a person’s upbringing and experiences shape the way that information is received, interpreted, and conveyed. Therefore, it was imperative that I explained my own standpoint to provide the reader with a more in-depth understanding of what shaped
the body of work being posed. Similarly, this body of work shed light on my identity, experience, learning, and the reasoning behind the research proposal presented.

This methodology had a feminist base in that it “takes difference seriously” (Moreton-Robinson, 2003, p 75). However, I was not be the position of dominance. Feminist standpoint excludes Indigenous women because we are not white. Feminist standpoint is the domain of white women (Moreton-Robinson, 2000). It represents the dominant white culture.

According to Moreton-Robinson (2014) “Indigenous scholars do not explicitly engage or deploy feminist standpoint theory” (p. 332). Feminist standpoint theory excludes Indigenous women. Feminism was created by those who are privileged in society “…both ontologically and epistemologically while being configured through the logic and capital in… everyday life including …relations to land as private property and the nation’s sovereignty” (Moreton-Robinson, 2014, p. 335). Also, rather than ownership of land, we as Indigenous people are connected to the land and are of the land. By conducting this research, I am asserting my sovereign right to benefit my community. I am Indigenous, questioning the adequacy of a system. This is particularly difficult in Australia where research suggests that Australians are portrayed as one homogenous Anglo-Celtic society (Cousins, 2005; Johnson, 2001; Australian Human Rights Commission, 2018). Research by Santoro (2014) goes further exposing views that real teachers are white Anglo-Celtic. For Indigenous researchers and educators, discussion of race is unavoidable in research about Australian education. Indigenous researchers need to broach the topic to join the conversation. Vass (2015) confirms
that “Race helps with explaining how and why power and influence are distributed in ways that privilege White interests, while concurrently and relationally discriminating against non-White interests” (p. 377). Understandings about Critical Race Theory assist in highlighting challenges in education (DeCuir-Gunby & Dixson, 2004), enabling researchers to then investigate practical solutions.

### 3.3.2.2 Shared epistemology model

Dunbar and Christie’s (2013, p. 6) shared epistemology model was used specifically for its inclusive attributes and ethical considerations. The model contained a set of operating principles for conducting research with Aboriginal people that guide the later practice.

The principles used were:

*Deep listening – actively hearing with your head and your heart;*

This occurred during all the interviews whether they were face-to-face or over the phone. The interest in the topic helped to focus my attention and to find out more about the participant’s thoughts. My experiences and background in education meant that it was relatively easy to make connections and understand specific educational examples provided. Listening in this deeper way also provided opportunities to ask clarifying questions. Further interviews to clarify initial responses were not required.
Deep listening with emailed responses was difficult. Deeper listening in this case meant reading the responses and interpreting them through the lens intended; that of an Indigenous standpoint. The nature of the responses was often cultural, for example expressing the importance of Indigenous knowledge, the need for more respect of Indigenous people and culture, and understandings about the use of Aboriginal language in the classroom. So, it was not difficult to empathise and understand what was being said. Empathy was important in quickly building and sustaining rapport for the duration of the interview. It helped to convey respect for the interviewee and develop trust. All of this was enhanced by the common cultural background of the interviewer and the interviewees.

*Integrity – honest expression about what, why and how you might work with the community;*

Integrity was an ethical consideration and addressed in the Ethics Application and subsequent approval. Integrity was addressed in several ways. Initially the research flyer was distributed and began the recruitment process stating the nature and purpose of the research. Integrity was addressed during oral presentations leading up to recruitment. It was addressed through emails and conversations with possible participants expressing an interest in participating. Integrity was addressed in the administration of the research study – as described in the Plain Language Statement and the Consent Form.
The researcher’s integrity began with declaring her cultural heritage and the reasons why the research study was so important.

*Responsibility and accountability – seek advice and agree about how the community would like you to operate;*

The community as defined in this research study was the community of Indigenous educators that requested to participate. In requesting to participate, they had agreed with the scope of the research study and the techniques used.

Accountability for confidentiality was the responsibility of the researcher. Accountability to complete the research study was also my responsibility.

*Deep respect for difference – ways of knowing, being and doing;*

The research topic and the fact that it was Indigenous research, by an Indigenous researcher of and for Indigenous people, reinforced a significant respect for difference. The research was about respecting, acknowledging and honouring Indigenous ways of knowing, being and doing. This is achieved by listening to, accepting and recording participant’s own definitions of Indigenous knowledge. This was also achieved through hearing each participant’s opinion about why and how Indigenous knowledge is relevant in education, and how these impact on teacher education.

*Reciprocity – acceptance of your privileges and understanding of the relationship that is offered;*
There was an exchange of information in each instance where participants were interviewed and contacted. There was a mutual understanding of reciprocity and the feeling of a shared journey.

Reciprocity was demonstrated by Indigenous educators during member checking of their own transcriptions, receiving updates of findings, and through an opportunity to co-create a resource as a practical application of the final research findings.

*Exercise patience – allow time for due process of the community members or for the cycles of engagement;*

Accessing research participants required patience. People wishing to participate contacted me if they wanted to participate in the research. Then, there was time between these initial expressions of interest and the actual interview process. Some people then decided to not participate. This choice was communicated. Some of the Indigenous educators participating expressed concerns about the time constraints of teaching and that it could impact on the level of participation.

Indigenous educators participating were given the option to complete phase 3 of the data collection, participant journaling. While the requirements were kept to a minimum of only 2 entries over a 10-week period, there were time constraints on participation.

*Reflexive practice – observe without judgment and check/clarify understandings;*
Member checking was used to ensure that responses were recorded correctly and were accurate. Updates were provided to Indigenous educators participating about the early themes presented at an international conference. Further updates were offered.

Agreement – ethics, community feedback, communication protocol and publications; and where possible, create employment and learning opportunities for the community.

The research was intended to have a participatory element. Indigenous research by, with and for Indigenous people needs to have a practical result. Indigenous educators were invited to co-create a product resulting from findings and recommendations of the research study. The shared epistemology model used promoted a shared understanding of the study context and findings.

3.3.2.3 Indigenist Research paradigm

There has been a very strong movement by Indigenous peoples globally to use decolonizing methodologies to conduct research. This empowers Indigenous peoples to legitimize methods different to those valued in western academia. This Indigenist research incorporates Indigenous identity, culture, and even language into the research undertaken (Smith, 1999; Rigney, 1999, 2003; Martin, 2003; Kahakalau, 2004; Moreton-Robinson & Walter 2009; Yunkaporta, 2009; Kovac, 2010; Moreton-Robinson, 2013). Existing qualitative methodologies are expanded as Indigenous peoples find their voice.
To begin this research study different examples of Indigenous methodologies were considered. One of these methodologies was Indigenous Heuristic Action Research, a method formulated by Kahakalau (2004), to research practice within the Hawaiian education system. Kahakalau’s research is based on heuristic methodology because “among all the Western methodologies (that I) examined, heuristics aligns itself best with native ways of learning and knowing” (2004, p. 21).

Educational action research methodology is used to shape and reshape teaching practice. The Indigenous Heuristic interpretation of action research differs in the way that it allows the researcher to be immersed and a part of the research, as well as incorporating Indigenous knowledge and practice to collect and analyse data. (Kahakalau, 2004)

Martin (2003) outlined “research from the strength and position of being Aboriginal and viewing anything western as ‘other’, alongside and among western worldviews and realities” (Martin, 2003, p. 205). In doing this Martin defines Indigenous knowledge in an academic format. This description of an Indigenous knowledge has been utilised in this research study.

An overarching guiding methodology from an Aboriginal person’s perspective was central to the research in this thesis. The research study was intended to benefit the Aboriginal community, the teachers and students, and make suggestions for change to teacher education courses thus impacting on the Australian education system.
3.3.2.4 Indigenous Standpoint Theory

The chosen methodology was an Indigenous standpoint theory. The Indigenous standpoint theory is a method of inquiry utilised by marginalised groups whose accounts or experiences are excluded or not taken notice of. Within the mainstream education system Indigenous knowledge, important to Indigenous people is disregarded. This exclusion or lack of notice justifies the use of standpoint methodology.

It is a distinct form of analysis.... It is not deterministic of any truth, but it lays open from which to launch a range of possible arguments for a range of possible purposes...People’s lived experience at the cultural interface is a point of entry for investigation (Nakata, 2007, p. 214).

The importance of gender in the construction of standpoint theory highlights the difference between Indigenous standpoint theory (Nakata, 2007) and Indigenous women’s standpoint theory (Moreton-Robinson, 2014). “...as Indigenous women our social location within hierarchical relations of ruling within our communities and Australian society also factor into our standpoint as researchers within the academy as does our different disciplinary training” (Moreton-Robinson, 2014, p. 339). Therefore, the methodology best suited to this research, and utilised was Indigenous women’s standpoint theory.
3.3.2.5 Indigenous Women’s Standpoint Theory

Indigenous women’s standpoint theory directs the focus specifically at a system, and away from blaming a group of people (Moreton-Robinson, 2013). This is relevant to study within the education system where Indigenous people are viewed as repeatedly failing. Despite efforts of government programs to increase attendance and hold Indigenous people accountable for their perceived failings, for example by withholding social security payments, Indigenous academic achievement continues to be an area of contention. Indigenous women’s standpoint theory was used in this research for the purpose of investigating the system in relation to how it could enable success for Indigenous educators and students.

The methodology used in this research project was based on Moreton-Robinson’s (2000) Indigenous women’s standpoint theory and my interpretation of that theory as a research methodology. Indigenous women’s standpoint theory can be used “as a methodological tool to be operationalised” (Moreton-Robinson, 2014, p. 332). In this project I have attempted to operationalise an Australian Indigenous women’s standpoint theory as a Warumunga Luritja woman. By declaring my Aboriginal heritage, I am acknowledging that “how we are socially and culturally constituted through discourse as subjects play a determinative role in our individual ‘choices’ of research topic and methodology” (Moreton-Robinson, 2014, p. 334). The following table illustrates how I have operationalised Indigenous women’s standpoint theory in this research study – theory, methodology, and method.
Table 2 - Operationalising Indigenous women’s standpoint theory

<table>
<thead>
<tr>
<th>Indigenous women’s standpoint theory</th>
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<tr>
<td>That Indigenous women’s positions in society and life experiences, provide them with an ability to understand the world from a unique point of view and positioning. As Indigenous women, it is important to speak our truth and express our reality, which is different to the point of view and reality of others.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>As methodology</th>
<th>As method (an analysis tool)</th>
</tr>
</thead>
<tbody>
<tr>
<td>An Indigenous woman as researcher.</td>
<td>To connect (through relationality) with Indigenous educators participating in the research study when conducting interviews, but also to use strength-based positioning when analysing and interpreting the data.</td>
</tr>
<tr>
<td>Expressing our reality means to understand the negative positioning by others and then to choose our own position of strength.</td>
<td>For example, in the case of this research study - considering what the participant responses are conveying about the Australian education system (as opposed to continuing the story of deficit aimed at Indigenous people).</td>
</tr>
<tr>
<td>Foremost are concerns about family and culture.</td>
<td>“Indigenous axiology, ontology and epistemology as integral components” (Moreton-Robinson, 2014, p. 337). Informed by the connection to country and living things.</td>
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</table>

3.3.2.6 Operationalising Indigenous women’s standpoint theory

The use of Indigenous women’s standpoint theory has been explored and defined by Moreton-Robinson (2000). The methodology of Indigenous women’s standpoint has been explained and used in a way that suited Moreton-Robinson’s purpose of providing a “framework for analysing whiteness as a dominant subject position” (Moreton-Robinson, 2000, p. xxii). While deserving mention in this research study in the context of the Australian education system being based on western knowledge and ideals, analysing whiteness is not the purpose of this research. Therefore, as an Indigenous woman, I have interpreted Indigenous women’s standpoint theory to suit the purpose of this research study.
Indigenous women’s standpoint theory is relevant because of the use of standpoint. It enables me to interpret Indigenous standpoint and to explain reality from my own standpoint and resulting understandings. As Moreton-Robinson (2000) explained, gender is a consideration, as is cultural heritage. So, I did not use feminist or Indigenous standpoint (Nakata, 2007). I used Indigenous women’s standpoint as a deliberate choice to emphasise on my own Indigenous women’s standpoint, concentrate on minority understandings, prioritise concerns about Indigenous culture and people, as well as turn the focus of deficit off of Indigenous people and place it on the education system instead.

Whiteness was not a main focus in this research however, it was a factor in explaining the differences in priority and the lack of inclusion of Indigenous people and culture in the Australian education system. The main focus was to discuss Indigenous knowledge in educational contexts and investigate the importance of including Indigenous knowledge in pre-service teacher education. Positioning of this investigation was a key concern in this research study and was achieved through enabling Indigenous educators to provide the answers to the research questions with their knowledge and experience informing opinion.

The shaping of the research began the operationalisation of Indigenous women’s standpoint theory. This was further enhanced through enacting the research design. Theory became methodology by positioning myself as an Indigenous woman and using my standpoint to recruit Indigenous participants, then to conduct the semi-
structured interviews; connecting with the Indigenous educators who chose to participate.

Indigenous women’s standpoint became method, as a tool for analysis, while I interpreted the interviews and journal data through my standpoint, potentially finding deficit within the western education system that advantages non-Indigenous people, while disadvantaging Indigenous people. If narrowing the focus to preparation of teachers and their ability to cater for Indigenous students, then the knowledge that is missing is Indigenous knowledge. Indigenous knowledge is the area of potential improvement for inclusion and engagement of Indigenous students. Leading to the resulting research questions – *Is it important to include Indigenous knowledge in pre-service teacher education? If so, why? What should be included?*

Realities are created by the language we use. In educational discourse and in the Australian education system overall, Aboriginal voices have been historically absent. The reasoning behind this negative positioning in society is expressed as a shared western unconsciousness, and this is what creates the concept of ‘other’. Noting difference can provide an opportunity through which to discuss and investigate deeper connections. Yunkaporta (2009) expresses this as “...when knowledge is deep, there are more similarities than differences between culturally diverse systems” (p. xvii). In this research and Indigenous educators search for connections between knowledge systems, to empower teachers to better cater to Indigenous students.
This section of the text has represented vital conceptual links that tie together the research process from inception through to the answering of the research questions and how this final step is linked back to the theory that is the foundation of the research.

Over the course of the research, various topics were mentioned as a way of connecting key research themes. The purpose of the research was not to explore and extend understandings of feminism. The purpose of the research was not to explore and extend knowledge and understanding of critical race theory.

The purpose of the research was practical. The purpose of the research design was to present Indigenous perspectives and increase Indigenous voice in education, resulting in suggested recommendations for improving teacher capacity to teach Indigenous learners and potentially improve Indigenous academic achievement, as measured within the westernised Australian education system.

3.3.2.7 Shared epistemology model

The shared epistemology model (Dunbar & Christie, 2013) guiding principles guided ethical and respectful research practice when working with the Indigenous people participating in this research study. The principles were used as an ethical framework to inform researcher practice while implementing the research method. The method for collecting and analysing data was qualitative; utilising semi-structured interviews and reflective participant journaling. These methods were chosen as a way for the researcher to connect with participants during interviews allowing for a sharing
that occurs during more informal conversation. The commonalities of culture and shared knowledge about being a teacher were considered important and informed the method selection process. Participant journaling also contributed to the deeper reflection in investigating the research questions and in examining the education system.

3.4 Research setting/context

As an Indigenous person, I was comfortable in being able to connect with the Indigenous educators. Sands, Bourjolly and Roer-Strier (2007 p. 355) contend that “interviewers with insider status in a particular culture are thought to have advantages” (p. 355) over cultural barriers, access to participants, and in creating a comfortable environment to speak freely.

Indigenous educators participating were invited to nominate a meeting location that they felt comfortable in or that was convenient for them. This was important for the Indigenous educators participating not to feel constrained about voicing their own opinions, and to be able to maintain anonymity and confidentiality. In inviting the Indigenous educators to feel comfortable, I was also anticipating that the questions would be answered fully and include more detail.

It was decided not to observe teachers in the classroom context as people change their behaviour when they know they are being observed (Sapsford & Jupp, 2006, p. 59), student learning may be disrupted, and teaching and subsequent Duty of
Care require the teacher’s full attention. This would not have been conducive to deep reflection.

The interview questions were about Indigenous knowledge in the education system – specifically about curriculum, pedagogy, and daily teaching practice. The data collected from the interviews described the occurrence and importance of Indigenous knowledge in the educational context, allowing for suggested recommendations to be formulated about future teacher training.

3.5 Research sample and data sources

3.5.1 Characteristics of sample

Participants were selected by the following criterion:

1. Indigenous educator based in the Northern Territory
2. Experience or knowledge about education in urban settings
3. Teacher, or pre-service teacher, with classroom experience

No other stipulations were given apart from a willingness to participate. The participant teaching knowledge and experience represented a range. Most participants were from the local Darwin/Palmerston region, with a percentage able to then contribute to further data collection through reflective journaling because they were situated within a classroom at the time.

Participants were mostly employees of the Northern Territory Department of Education and working within this public education system. The participant details can
be seen in the Respondent ID table below. This is an impersonal and typically western method of describing participants. I have also provided introductions for each person participating.

Table 3 - Respondent ID

<table>
<thead>
<tr>
<th>Participants</th>
<th>Location</th>
<th>Experience</th>
<th>Gender</th>
<th>Interview Questions</th>
<th>Journal Entries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jane</td>
<td>Pre-school, Darwin</td>
<td>1 Year</td>
<td>Female</td>
<td>Interview recording and transcription</td>
<td>Not requested</td>
</tr>
<tr>
<td>Helen</td>
<td>Pre-service, Arnhem Region (Brisbane)</td>
<td>Pre-service</td>
<td>Female</td>
<td>Interview responses completed and emailed</td>
<td>Not requested</td>
</tr>
<tr>
<td>Sharon</td>
<td>Pre-school, Darwin</td>
<td>16 Years</td>
<td>Female</td>
<td>Interview responses completed and emailed</td>
<td>Requested</td>
</tr>
<tr>
<td>Melissa</td>
<td>Primary, Katherine Region</td>
<td>20+ Years</td>
<td>Female</td>
<td>Phone interview</td>
<td>Requested</td>
</tr>
<tr>
<td>George</td>
<td>Primary, Darwin</td>
<td>8 Years</td>
<td>Male</td>
<td>Interview recording and transcription</td>
<td>Requested</td>
</tr>
<tr>
<td>Nerrida</td>
<td>Middle School, Palmerston/Rural</td>
<td>2 Years</td>
<td>Female</td>
<td>Interview recording and transcription</td>
<td>Requested</td>
</tr>
<tr>
<td>Phoebe</td>
<td>Office-based, Darwin</td>
<td>10 Years</td>
<td>Female</td>
<td>Interview recording and transcription</td>
<td></td>
</tr>
<tr>
<td>Trina</td>
<td>Middle School, Darwin</td>
<td>6 Years</td>
<td>Female</td>
<td>Interview responses completed and emailed</td>
<td>Requested</td>
</tr>
</tbody>
</table>

Jane was new to teaching, at the time of the interview, and excited about the opportunities to consolidate learning in the coming years. She was keen to speak well about her school and experiences of being new in that environment. Jane was in the
pre-school and spoke about student-centred experiences that could be utilised to shape the learning of the students. She described instances of teaching about Indigenous culture and encouraging student curiosity and hunger to learn. Jane had been teaching for 1 year and stressed that her experience in schools was mostly about working with this age group. Jane’s background included experience of living in community and of speaking an Indigenous language. She stressed the knowledge of living in the two different environments – remote and urban.

Helen, a pre-service teacher, also had experience of living in remote and urban settings, with her teaching practicum and learning experiences including knowledge of the urban classroom. Helen spoke about what she was learning as part of her teacher training and this added to her interview responses. She was interstate at the time but still keen to participate over the phone. Helen spoke very strongly about the understanding required of teachers about teaching EAL/D speakers and a respect for Indigenous people and culture. Helen related teacher knowledge to the needs of her own daughter.

Sharon, an experienced pre-school teacher, was very supportive of the research study. She thought it sounded unusual to be talking about Indigenous knowledge in the education space, when in her experience it was more likely to be called Indigenous perspectives. Sharon answered each of the first interview questions but chose not to add too much more detail in the final response about ‘anything else to add?’ Her answers were offered through email as there were time constraints on Sharon’s participation.
Melissa, the most experienced educator participating in the research study, gave an interview over the phone. She was at the time, living and teaching in a community school in the Katherine region. Melissa spoke from experience as a teacher but also having had experience in leadership roles within the education system. She thought that it was important to not only include Indigenous knowledge but to highlight the importance of Indigenous educators, particularly in schools with greater numbers of Indigenous students.

George was our only man participating. He provided insights as one of the more experienced educators. George had received teacher education with strong foundations in Indigenous culture and people. He felt confident in his own abilities but also in the way that his teacher training had enabled him to easily integrate Indigenous culture and people into his school environment, and to support other non-Indigenous educators in their endeavours to do so. While speaking positively, George still agreed that there was much more to be done. He spoke about other ideas and concerns.

Nerrida was relatively new to teaching and fit the image of the new and energetic teacher up to the challenge of a classroom full of potential. She came across as caring and told stories of students and their needs. Nerrida was very confident in her own identity and spoke about this as an advantage to her teaching knowledge and skills. She made connections between her own cultural knowledge and implementing the curriculum. Nerrida also spoke students and their wellbeing as a main part of her role as a teacher. This came with cultural responsibilities such as countering instances of racism. Nerrida taught Middle School students.
Phoebe had at least 10 years’ experience of working in urban schools. She was able to speak about a wide range of topics comfortably and was in an office-based position at the time of the interview. Phoebe, like two of the other Indigenous educators participating in this research study, had concerns that teachers didn’t know enough about teaching students who may not speak English as their first language. She was also concerned that Indigenous students were not being given the best opportunities for academic success. Phoebe seemed frustrated with aspects of the current education system.

Trina was teaching Middle School students in the Darwin Region. She was also in a position of leadership in supporting colleagues to program and implement the curriculum. Trina’s answers were provided with supporting evidence from the curriculum as examples of what was expected from teachers, as they teach Indigenous learners and teach Indigenous content. Due to time constraints on her participation, Trina chose to email her responses. She raised the topic of university lecturer knowledge and ability to teach pre-service teachers about teaching Indigenous learners.

Each of the Indigenous educators participating answered the interview questions from their own knowledge and standpoint. The additional information arising from the final open-ended question added depth to this research study.
3.5.2 Age range of participants

The age of participants was not as important as the amount of teaching experience because teaching is an art. Skills and knowledge learnt over time improve practice and confidence. It could be assumed that less experienced teachers will be less confident or even less skilled and perhaps less confident in expressing their opinion about aspects of teaching – classroom management, pedagogy, and curriculum. More experienced teachers cannot however be assumed to be confident or even highly skilled at teaching. Hattie (2003) has provided us the evidence with his categorisation of novice, experienced and expert teachers. However, there is more likelihood of experienced teachers being more confident in their opinions simply due to experience over time.

Why include a pre-service teacher in the sample? The Indigenous educator requested to be involved. This factor was a key consideration, but it was also assumed that pre-service teachers would have practicum experience and be familiar with what was being taught (or not) to them about teaching Indigenous learners. Also, that the pre-service teachers, being Indigenous, could also have recollections of being a student in the Australian education system.

3.5.3 Sample size and gender

The methodology used placed an emphasis on Indigenous standpoint theory, specifically Indigenous women’s theory. Considering that the context was education, the larger number of women was not surprising. This phenomenon has been noted by
the More Aboriginal and Torres Strait Islander Initiative (MATSITI). “Within the Aboriginal and Torres Strait Islander teachers’ cohort 77% were female, compared to the national average of 72%” (Aboriginal and Torres Strait Islander Teacher Workforce Analysis, 2014). If anything, the participant group were representative of the dominance of women in education in general. This aspect to teaching adds to the justification for using Indigenous women’s standpoint to theorise about the education system.

What the statistics above do not reflect are the statistics about Indigenous teachers and the relatively small numbers of Indigenous teachers, 1.2 per cent (Aboriginal and Torres Strait Islander Teacher Workforce Analysis, 2014) in the Australian education system. This fact has been presented previously in the review of literature (Chapter 2) and reinforces the need for this research to focus on the Indigenous understandings and opinions about how to improve Indigenous engagement and academic success. In this research, each participant’s responses were important. Qualitative methods were best used to highlight the details revealed by the data collected. The small number of Indigenous teachers overall affected the sample size.

What other factors may have impacted on sample size? The sample size and its relevance when participants are from a minority group within the overall population is a concept that should be considered in some detail. This is especially true when the reason for the research is the absence of ‘voice’ in the first place. Santoro (2014) has completed work about inequalities in the education system which posits that
Indigenous teachers and others from non-white cultural groups do not fit the ‘norm’ and are not really considered as competent or as ‘real’ teachers. In Santoro’s words “Australian teachers are respectable, conservative – and white”. Again, this reinforces the importance of this research in valuing Indigenous educators and identifying the place for Indigenous inclusion in the current Australian education system.

3.5.4 The question of saturation

My intention was to continue interviewing more and more participants until the answers became repetitive; a sign that no additional information would be reported. Saturation would be achieved when questioning has been exhausted as a means of data collection. Due to factors relating to the recruitment of participants and a smaller sample size, reaching saturation was not a realistic expectation, even after several strategies were employed to recruit participants.

Participants were given the opportunity to answer the research questions but also to add more information and enrich the research further with the final interview question; an open-ended question - *Is there anything else that you would like to add?* This additional information collected as data was also called ‘emergent information’ or ‘emergent codes’ highlighting the newness or unexpected nature of the responses.

The literature suggests that deciding when saturation has been reached can be difficult to gauge anyway (Denzin & Lincoln, 2011). In this case, saturation was achieved. The question of saturation became more obvious after the data had been analysed, where repetition of themes was evident. How much saturation is enough? If
each participants’ responses were important, then it could be argued saturation was not overly important.

3.5.5 Ethical considerations

Research began with ethical considerations and ethics approval. As a researcher, you are asked whether the research to be undertaken is Indigenous; of or with Indigenous people. These measures are in place to protect the rights and interests of Indigenous people. In Australia, research is firmly in the western domain and more than likely non-Indigenous people researching Indigenous people. This does not easily allow an Indigenous person to question or investigate mainstream society. Therefore, it becomes necessary to insist on an Indigenous orientation to research.

As stated earlier in the chapter, the methodology had two elements shaping this Indigenous research study - Indigenous women's standpoint theory as methodology and the shared epistemology model guiding principles. Both elements highlighted the need for respect of Indigenous people and culture. The shared epistemology model’s guiding principles went above and beyond the ethical expectations and requirements outlined in the ethics process. The shared epistemology principles impacted theory (methodology) and practice (method).

3.6 Data collection methods

The method for data collection was semi-structured interviews and reflective participant journaling. The responses from the Indigenous community of educators participating in this research guided and informed what followed, as stated in the
shared epistemology model guiding principles. In this instance, semi-structured interviews were used first as they allowed the researcher to, “...reach areas of reality that would otherwise remain inaccessible such as people’s subjective experiences and attitudes, “(Perakyla & Ruusuvuori, 2011, p 529).

The interview questions were created by the researcher to enable the research questions to be answered. The final question is open ended, which allowed participants to add more information, if they thought necessary.

3.6.1 Interview questions

Participants were asked 9 questions. Each of the first 8 interview questions was written to address part of the research questions. This was part of the research was expected. The responses were to answer the research questions. The 9th and final interview question enabled the Indigenous educators to add to the research with topics that they thought should also be considered as relating to this research study.

1. Have you heard of the term ‘Indigenous knowledge’?

2. What does it mean for you? What is your understanding?

3. How might Indigenous knowledge be seen in schools?


5. How is Indigenous knowledge important to students?

6. Do you think that it is important for pre-service teachers to learn about Indigenous knowledge and its possible application in schools? If so, why?
7. What Indigenous knowledge should be included in pre-service teacher education courses?

8. How are pre-service teachers being prepared to cater for Indigenous students?

9. Is there anything else that you would like to add?

Table 4 - Use of Interview questions to answer research questions

<table>
<thead>
<tr>
<th>Research questions:</th>
<th>Interview questions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is it important to include Indigenous knowledge in pre-service teacher education?</td>
<td>1. Have you heard of the term ‘Indigenous knowledge’?</td>
</tr>
<tr>
<td></td>
<td>2. What does it mean for you? What is your understanding?</td>
</tr>
<tr>
<td></td>
<td>3. How might Indigenous knowledge be seen in schools?</td>
</tr>
<tr>
<td></td>
<td>5. How is Indigenous knowledge important to students?</td>
</tr>
<tr>
<td></td>
<td>6. Do you think that it is important for pre-service teachers to learn about Indigenous knowledge and its possible application in schools? If so, why?</td>
</tr>
<tr>
<td>If so, why?</td>
<td>6. Do you think that it is important for pre-service teachers to learn about Indigenous knowledge and its possible application in schools? If so, why?</td>
</tr>
<tr>
<td>What should be included?</td>
<td>7. What Indigenous knowledge should be included in pre-service teacher education courses?</td>
</tr>
<tr>
<td></td>
<td>8. How are pre-service teachers being prepared to cater for Indigenous students?</td>
</tr>
<tr>
<td></td>
<td>9. Is there anything else that you would like to add?</td>
</tr>
</tbody>
</table>
3.6.2 Reflective journaling

Reflective journaling (Phase 3), allowed participants to reflect more deeply. Indigenous knowledge, as a concept, is a way to connect and consider the complexities of engagement with western education. Reflective journals enabled the researcher and participants to work through the complexity (Phelps, 2005). In this way participants contributed to interpretation and of the data.

3.6.3 The process

The participants should be involved in decision making and validating the outcomes of the research (Dunbar &and Christie, 2013). This made the process significant. Laycock, Walker, Harrison and Brands (2011) support this theory further by stating that “Research approaches that have the potential to empower research participants align with the Indigenous research reform agenda” (p 22).

The practicalities of understanding what is needed to be a teacher and how to teach effectively is one of the first hurdles for Indigenous people to become more engaged with education through teaching. Therefore, the participant group was Indigenous teachers and Indigenous pre-service teachers.

The Indigenous educators participating in the research came from two key areas, Charles Darwin University (CDU) and the Northern Territory Department of Education (DoE) located throughout the Northern Territory. To encourage the greatest amount of participation possible, more than one method of recruiting was utilised to
contact possible participants. The first contact was through email. The relatively small numbers of Indigenous people engaging with education meant that the number of responses was small.

There may have been a general resistance to participating in research for several reasons. For example, as employees of the Department of Education (DoE), participants may have felt unwilling or unable to speaking freely. This was taken into consideration and anonymity implemented carefully. The interviews and journaling allowed me to have access to, “material that is not directly accessible: perceptions, attitudes and values, matters which are difficult to obtain by alternative methods” (Partington, 2001, p 32). Building empathy, rapport and trust with the Indigenous educators participating allowed a certain level of comfort to be achieved, encouraging participation.

Table 5 - Data collection steps

<table>
<thead>
<tr>
<th>Data Collection – Phases, steps, and process</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phase 1</strong></td>
</tr>
<tr>
<td>Literature Review</td>
</tr>
<tr>
<td>Step 1</td>
</tr>
<tr>
<td>Step 2</td>
</tr>
<tr>
<td><strong>Phase 2</strong></td>
</tr>
<tr>
<td>Semi-structured interviews</td>
</tr>
<tr>
<td>Step 3</td>
</tr>
<tr>
<td>Step 4</td>
</tr>
<tr>
<td>Step 5</td>
</tr>
</tbody>
</table>
Initially, the research proposal and administrative processes were created and submitted. This was aided by the beginning of the literature review which formed the basis of a conference presentation and publication. Next was the confirmation of candidature presentation and the ethics application.

Ethics approval was given – H16082, and the preparation for recruitment followed. During the recruitment process, research project flyers were distributed at the 2016 Indigenous Leaders’ Conference at Charles Darwin University (CDU). Facebook’s ‘NT Mob – remote Indigenous educators’ group was used to invite participation as well as targeting relevant organisations such as the Education Union Northern Territory, Early Childhood Educators of the Northern Territory, and an Initial Teacher Education platform through CDU.

The content of the flyer was important, not only to present the research study as a clear and concise piece of work but also to present the researcher as an Aboriginal person with educational experience. These two elements contributed to credibility of the research study for any potential participants.

The Plain Language Statement (See Appendix Two) and Consent forms (See Appendix Three) were made available to potential participants. Willing participants...
contacted the researcher by email. Some participants requested the questions and completed the interview remotely.

Interview times and locations were organised, and interviews were conducted. One of these was a phone interview. Participants were asked each of the 9 interview questions. Interviews were recorded with a voice recorder. The phone interview was recorded using hand-written notes, and then transcribed.

Face-to-face interviews and the phone interview were transcribed word for word. A copy of the transcriptions was sent out to participants to ensure that the transcription was what they had said, as a process of member checking. Member checking or respondent validation can be vital for establishing credibility of research findings (Lewis-Beck, Bryman, & Futing, 2004).

Recordings were uploaded into NVivo. Using NVivo transcription software, recorded interviews were transcribed word-for-word. Transcriptions were saved as documents and then exported out of NVivo then emailed to Indigenous educators participating in the research for member checking. There were no changes requested. None of the transcriptions required correction or change. The data was then ready for analysis.

3.7 Data analysis methods

The data analysis methods incorporated 4 phases and a total of 7 steps.
Table 6 - Data Analysis Process

<table>
<thead>
<tr>
<th>Data Analysis – Phases, steps, and process</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phase 1</strong> NVivo Coding</td>
</tr>
<tr>
<td>Step 1 Descriptive coding of first 2 transcriptions to look for common themes.</td>
</tr>
<tr>
<td>Step 2 Themes scrutinised. Decision to recode.</td>
</tr>
<tr>
<td><strong>Phase 2</strong> NVivo Coding</td>
</tr>
<tr>
<td>Step 3 Priori coding on transcriptions against main themes of interview questions.</td>
</tr>
<tr>
<td>Step 4 Emergent coding of responses to final open-ended interview question into common themes.</td>
</tr>
<tr>
<td>Step 5 Themes scrutinized and accepted. Coding complete.</td>
</tr>
<tr>
<td><strong>Phase 3</strong> Indigenous Women’s Standpoint</td>
</tr>
<tr>
<td>Step 6 Participant responses analysed through Indigenous women’s standpoint by ‘turning the gaze back on the system’.</td>
</tr>
<tr>
<td><strong>Phase 4</strong> Tabling of themes</td>
</tr>
<tr>
<td>Step 7 Data themes tabled against –</td>
</tr>
<tr>
<td>a) Data sources</td>
</tr>
<tr>
<td>b) Research questions</td>
</tr>
<tr>
<td>c) Participants</td>
</tr>
<tr>
<td>Creating a visual representation of major and minor themes.</td>
</tr>
</tbody>
</table>

In Phase 1, data was coded using NVivo using the transcriptions. The themes and subthemes were developed. These early themes were - Prior knowledge of the term ‘Indigenous knowledge’, Definitions of Indigenous knowledge, Attitudes to student impact, and Attitudes to teacher use of Indigenous knowledge, Current school practice, and Current training provision of Indigenous knowledge, Importance for students, Importance for pre-service teachers to learn about Indigenous knowledge, Why pre-service teachers should learn about Indigenous knowledge, Possible teacher
use of Indigenous knowledge (personal), Possible teacher use of Indigenous knowledge (professional), Possible Indigenous knowledge implementation (general), Possible Indigenous knowledge implementation (specific), What should be included in pre-service teacher education, and Anything else. These themes and subthemes were initially developed through descriptive coding. In this process the researcher sorted the transcription information of first two interviews to find common themes, by finding the key words in the responses.

Then, it became apparent that some of the codes were repetitive, while others were too restrictive such as those dealing with attitude. This process was stopped.

In Phase 2, coding was restarted with a focus on how to answer the research questions, which is what the interview questions were created to do in the first place. The focus was adjusted considering the interview questions. The codes were formulated using key components of the interview questions. This was the logical approach because the interview questions had been developed to answer the research questions. Using questions 1 to 8, codes were listed as themes. These have been called Priori codes for the purpose of this research study. Participant responses were sorted into these themes.

In Phase 2, step 4, the final question was open-ended, allowing for additional information to be provided by Indigenous educators participating in the research study. The information provided is additional to that gleaned from the answers to the interview questions. It is information that the Indigenous educators participating have
deemed as necessary to add. As the information was new to the researcher and mostly unexpected, it has been called emergent information and sorted as emergent coding for the purposes of this research study. The information was sorted into these emergent codes and then noted as common themes.

In Phase 3, coded information was analysed further through an Indigenous women’s standpoint and lens. This phase also required knowledge and experience in the field of education.

Using my standpoint and knowledge I investigated the responses in more detail and made connections with the findings of the literature review as relevant to the Indigenous education context. My knowledge and experience were central to this process having both a cultural connection with participants and having educational knowledge and experience. I used my own Indigenous women’s standpoint as a lens through which to interpret the data, by operationalising that standpoint and interpreting what the data presented about the Australian education system. What does this tell us about the education system?

The use of Indigenous women’s standpoint theory as an analysis tool required the researcher to interpret the data, find connections with the literature review, and critique the system – the Australian Public Education System. Questioning focused the analysis - What does this say about the schooling system? How is this a part of the system? Where does this fit in the system? Looking back at the system is required.
In Phase 4, data themes were then tabled against the data sources, research questions, and participants. This sorting of data provided a visual representation of the major and minor themes from differing perspectives – data sources, research question responses, and participant emergent information. Where applicable, colour coding was used to highlight common themes across categories represented in each table to show consistency. The demonstration of consistency in research findings adds to the validity of research. The common term for this consistency and is triangulation. Primarily the research makes use of the literature, multiple interviewees, and participant journaling to access the research themes (Allen, 2017).

Triangulation was be achieved with the use of the numerous sources (Cohen & Crabtree, 2006) - review of literature, semi-structured interview responses from multiple interviewees, and participant journaling. The methods for analysis, Indigenous women’s standpoint, priori coding, and emergent coding all provide a rich, comprehensive and well-developed understanding of Indigenous voice in the field of education as it pertains to answering the research questions.

3.8 Validity and reliability

This research study was valid in that it filled a gap in the current field of knowledge with regards to Indigenous engagement, Indigenous voice, Indigenous knowledge and teacher training. It was valid as Indigenous research potentially improving the circumstances of Indigenous people. This confirmed internal validity which was about credibility as evidenced by the rich data collected, and the logical
analysis of this data. Member checking also provided an internal validity from the
Indigenous educators participating.

External validity refers to the adherence to the nominated scientific method of
research and the ability of another researcher to follow those same steps to achieve
the same result. The method of research as stated and approved by the Charles Darwin
University Human Research Ethics Committee (CDU-HREC) was adhered to, and the
steps have been outlined for other researchers to be able to follow. The same results
being achieved would depend on variable factors such as participant responses, and
the researcher positioning themselves as Indigenous and an educator with years of
experience. The participants would need to be Indigenous educators with knowledge
and experience of urban classroom settings. Findings could be similar with a similar
group of participants.

The research is about Indigenous people and their lived educational
experiences. The analysis of the research was specifically through an Indigenous lens.
Denzin and Lincoln (2011) posit that “The province of qualitative research, accordingly,
is the world of lived experience, for this is where individual belief and action intersect
with culture” (p. 2). Qualitative research is about detail and specifics of people’s lived
experiences. Following this line of thought, qualitative research is about individuals and
contexts. It is not necessarily about generalizability, so much as it is about
transferability.
Reliability has to do with interpretation of data. Reliability is evaluated according to the consistency of the approach used. Interpretation of the data in this research study was through Indigenous women’s standpoint. This was a consistent approach as planned. “Qualitative methods take the researcher’s communication with the field and its members as an explicit part of knowledge instead of deeming it an intervening variable. The subjectivity of the researcher and of those being studied becomes part of the research process” (Flick, 2014, p. 17).

Indigenous research explained by Smith (2005) is seen as an act of decolonisation and described as a space that Indigenous educators are making their own. Western constraints on Indigenous research are an area of contention. “Standpoint theory’s recognition of partiality and subjectivity brings together the body and knowledge production, which is in contrast to the disembodied epistemological privileging of ‘validity’ and ‘objectivity’ within western patriarchal knowledge production” (Moreton-Robinson, 2014, p. 333).

This may be the case however, declaration of the positioning of the lecturer, acknowledging any biases, and explaining the thought processes of analysis all added to the reliability and validity of the research. In the words of Smith (2005) “Most Indigenous researchers would claim that their research validates an ethical and culturally defined approach that enables indigenous communities to theorize their own lives and that connects their past histories with their future lives” (p. 90). Following this line of thinking, the research in this study is validated.
3.9 Summary

The research questions – *Is it important to include Indigenous knowledge in pre-service teacher education? If so, why? What should be included?*

The positioning was deliberate to enable the use of Indigenous women’s standpoint theory as part of the analysis process enabling the critique of a system, rather than blaming of Indigenous people for reported poor academic performance. The shared epistemology model was used to guide ethical practice in working with Indigenous people.

The methodology of this research study was qualitative. The research involved several phases and steps, for data collection and analysis as outlined in the chapter. The research was Indigenous – Indigenous researcher, Indigenous participants, and for the benefit of the Indigenous community. Indigenist methods are used to conduct the research and analyse the data. Interpretation of the data was through an Indigenous lens. The context was urban schools in the Northern Territory, and more broadly the Australian public education system, requiring that the presentation of findings and recommendations be understood by Indigenous people through Indigenous knowledge and by non-Indigenous people in a western frame. In this way, the research was transdisciplinary.

The sample size was small with 8 participants in total. Semi-structured interviews were considered an appropriate tool to collect data required to answer the research questions. Analysis tools include Indigenous women’s standpoint, priori
coding and thematic analysis. Representations are made using tables to investigate and reveal major and minor themes. Finally, validity and reliability of the research have been addressed.
4. DATA AND ANALYSIS FROM SEMI-STRUCTURED INTERVIEWS

Formulating and validating truths involves finding a negotiated solution to an identified problem. Dunbar and Christie explain this further by stating “So the research report needs to tell the story of the process, and at the same time justify and demonstrate something more than that” (2013, p 9). The solution should be practical, something that is seen to have changed or made a difference. The product of the research needs to be more than theory.

4.1 Introduction

The previous chapter discussed and explained the methodology and methods used to collect data for this research. This chapter describes and analyses the research data. Findings are organised and presented through the answers to the interview questions first, then extended further with analysis of the key themes for deeper analysis. Additional information provided by participants, labelled as emergent themes, and participant reflective journaling analysis are presented as a separate chapter; Chapter 5.

The literature review, Chapter 2, revealed a gap in the current field about the opinions and knowledge of Indigenous educators in the context of urban educational practice and engagement and the use of Indigenous knowledge. Information arising from the data and analysis could have implications for teacher education courses.
The purpose of this research study was to investigate the importance of Indigenous knowledge in teacher education, by exploring the use of Indigenous knowledge by Indigenous teachers and pre-service teachers in the Northern Territory, and to propose possible recommendations for teacher education courses. The researcher and the participants were all Indigenous educators, delivering a unique explanation and interpretation of current educational practice.

The research undertook to answer the research questions – Is it important to include Indigenous knowledge in pre-service teacher education? If so, why? What should be included? The chapter begins with data for the first 8 questions of the semi-structured interviews and then moves to the analysis. The examination of emergent information provided by the 9th and final question of the interviews is addressed in the following chapter (Chapter 5) along with the thematic analysis of the participant reflective journal provided by one of the participants (George), adding to the analysis and sharpening the focus of the research.

4.2 Data

In this first section 4.2, mostly data is provided in summary format with detailed analysis only beginning in the next section 4.3. The thoughts and comments are responses given by the Indigenous educators participating in this research study. Emphasis was shown in the data with provision of Indigenous educator comments. My commentary begins in 4.2 with the presentation of each of the responses but the analysis begins in detail in section 4.3.
4.2.1 The interview questions and participant responses

1. Have you heard of the term ‘Indigenous Knowledge’?

   Most of the participants knew about Indigenous knowledge. Only one participant (Sharon) stated that they had not used the term in the educational setting. Most participants could explain their own understanding of the term. It was not necessary to provide texts or readings to explain the term further.

2. What does it mean for you? What is your understanding?

   Individual definitions or explanations of Indigenous knowledge were provided by 7 of the 8 Indigenous educators.

   “My understanding of it is bringing in cultural understandings, but also stories and also some of the science behind what Indigenous people already know about the environment and about each other and people; people behaving” (George).

   “Is a process of education, learning about new things that directly relate to my culture. This could be from an Elder or family member. Normally it occurs informally for example sitting around a fire. It also represents the longevity of my culture. There are no history books just conversations with extremely wise people” (Helen).

   “Well, my understanding of Indigenous knowledge, particularly as identifying as an Indigenous person, is to do basically with relationships, families, with a background of my mother’s family from south-east Arnhem land, I sort of look at my own experiences
growing up as a child. Through to now, so a newly graduated teacher and looking at applying those key areas in my classroom” (Jane).

“Connecting! Like when we first meet another Indigenous person? Yes – first when you enter a room you look for black. Then you talk about where each of you come from, whether they know somebody, and family members. I look for features. I can tell where someone (Indigenous) comes from by looking at their features, and also through body language and hand signs” (Melissa).

“I always start with history. I guess first giving a little background knowledge about ancient Australia, who we are and where we came from. You know, Australia's identity.........When I think of Indigenous knowledges there is a whole complex array of things such as culture, identity, language” (Nerrida).

“What my understanding of it is - the way we do things as Indigenous people. The way we do things, things we know, the things that we innately know, and how we apply our understanding and knowledge of things” (Phoebe).

“My interpretation is that it is about how Indigenous people view their world – their unique ways of knowing and being based on their upbringing and education from within their own culture and world view” (Trina).

One response did not provide a definition for the term Indigenous Knowledge and stated that they were not familiar with that term in an educational context. The participant provided the following explanation for this.
“We talk about how to incorporate Aboriginal perspectives in the classroom but not Indigenous knowledge” (Sharon).

All participants agreed that it is important to include Indigenous knowledge in pre-service teacher education. However, opinions varied about how this should be done respectfully and effectively. Two key concerns were Tokenism (that important Indigenous understandings and content are delivered in a superficial, incorrect or inappropriate way) and Indigenous Standpoint (that Indigenous knowledge should be explained and delivered by Indigenous people). How can this then accommodate non-Indigenous educators? The many ideas and recommendations were provided through the answers to Question 9. This open-ended question allowed for extended conversations and recommendations to be made that further enriched the information collected with the first eight questions.

3. How might Indigenous knowledge be seen in schools?

All participants discussed in detail how Indigenous knowledge is important to both Teaching and Learning. In brief, it was thought that [Indigenous] teachers are empowered by Indigenous knowledge, and that Indigenous student resilience and confidence is enhanced by the inclusion of Indigenous knowledge. There were strong statements made about the importance of Indigenous knowledge in improving the educational practice for all – Indigenous and non-Indigenous.

There was an agreement among responses that Indigenous knowledge should be embedded and integrated, not tokenistic in that every now and then there is a one-
off activity. Indigenous staff should be visible in schools as role models and Indigenous culture should be held in high regard. Indigenous knowledge is important for making connections with Indigenous students and provides leadership opportunities for Indigenous staff.


This question and the previous one elicited specific examples of Indigenous knowledge in schools. The responses to questioning about the teacher’s role in using Indigenous knowledge, both personally and professionally, confirmed the need for Teacher Education providers to consider current practice and the importance of Indigenous Australia within the education system. This could apply to school settings but then also has implications for the higher education sector.

Personally, the Indigenous educators participating in this research study thought that Indigenous knowledge could be used in several ways. The examples provided were to strengthen identity when used continuously (cannot separate identity from practice), for sharing information about own identity and cultural background to make deeper connections with students, integrating and making use of firsthand experiences such as speaking an Indigenous language earlier in life has provided a perspective on ESL. Indigenous knowledge could be used to engage with Indigenous students, family and community, to share Indigenous cultural knowledge, to help non-Indigenous educators become culturally aware, and to encourage students to share and feel confident and proud of their own (Indigenous) identity.
Indigenous educators participating in this research study thought that Indigenous knowledge could be used professionally by a teacher to teach important content such as true Indigenous Australian history, would require more Indigenous educators, and could be used to add value to programs and links in curriculum; incorporating Indigenous ‘views and ways’. Indigenous educators in this research study thought that Indigenous knowledge could be used professionally to support non-Indigenous students to learn and become culturally aware, to integrate Indigenous culture into every day, and to provide a different pedagogy that is inclusive of all learners.

5. How is Indigenous knowledge important to students?

All the Indigenous educators participating in this research confirmed that Indigenous knowledge is important to students. Many examples of the importance were offered. A few themes were repeated such as identity, a unique connection between Indigenous teachers and their Indigenous students, and the importance of Indigenous knowledge to non-Indigenous students.

The other answers given to this question were that Indigenous knowledge was important to students because it strengthens student identity and confidence in knowing who they are. “Indigenous students need to know about themselves and Indigenous history from an early age, so that it is not a shock to them later in life” (George). It allows Indigenous teachers a unique way to connect with and teach
Indigenous students, and it is important for non-Indigenous students to understand the world that they live in.

Indigenous knowledge was thought, by Indigenous educators participating in this study, to be important to students because it had the potential to contribute to reconciliation by providing information to non-Indigenous Australians and allowing for respectful relationships, was a way to dispel negativity about Aboriginal people, Aboriginal issues, and Aboriginal kids, and had different benefits at the various stages of education. “This is our History, the Australian Culture. This should be taught in schools; this should be learnt. All countries should know their history and their first peoples’ culture. This will create a sense of belonging to our children and a sense of understanding from others” (Sharon).

Notably, Indigenous educators participating in this study thought that Indigenous knowledge was significant to students as it enabled any teacher to acknowledge the importance of their Indigenous students. The importance for students was thought to be connected to Indigenous teachers and our responsibility to maintain respect of Indigenous knowledge, culture, and beliefs.

6. Do you think that it is important for pre-service teachers to learn about Indigenous knowledge and its possible application in schools? If so, why?

All the Indigenous educators participating in this research study agreed that it was important for pre-service teachers to learn about Indigenous knowledge. This question and the subsequent responses addressed the many reasons why. These
justifications were significant to support the earlier question about including Indigenous knowledge.

The responses to this question were to cater for the high number of Indigenous people and students (in the Northern Territory), that it was fundamental, particularly for teachers coming from south with so many negative things to say, for all the reasons already given to questions 1 – 5, that it should not just be a perspective in the curriculum, teaching and learning about Indigenous Australia should be mandated, and to change Australia’s future by beginning with the children while decreasing the great divide.

Further responses included to provide information about Indigenous diversity, to understand that learning about Indigenous knowledge and culture is not just for Indigenous students, to know the true Indigenous Australian history, and to address the national curriculum.

7. What Indigenous knowledge should be included in teacher education courses?

More than one response stressed the need for teacher education courses to include ‘real’ Indigenous Australian history, revealing information about Indigenous treatment such as exclusion and assimilation. It was thought that pre-service teachers should learn about Indigenous culture to develop a cultural awareness and understanding of Indigenous world view.

It was suggested that courses should include information about how to teach Indigenous students but also acknowledge the importance of Indigenous teachers in
schools, particularly those schools with a great percentage of Indigenous students. It was stated by participants that only Indigenous teachers can convey an Indigenous perspective.

“I have created a picture for a presentation about educational Pedagogy. Family and culture should be at the centre of education. Parental input and cultural ideas are very important. There needs to be an understanding of the importance of parents and community input. Then the curriculum next, and finally in the outer circle is Indigenous teachers protecting Indigenous kids and families” (Melissa).

Finally, the point was made that pre-service teachers should learn about possible barriers to learning such as how to cater for students with English as a Second Language, mental health issues, wellbeing concerns, and how to create a sense of belonging for Indigenous students.

8. How are pre-service teachers being prepared to cater for Indigenous students?

The general response was that very little is currently being done to prepare pre-service teachers. Indigenous educators participating in this research study though that units were tokenistic, limited in number to 1 or 2 units, and sometimes only even as electives. The current situation was thought to need improvement with the number of units being increased.

Current learning was thought to be superficial. Indigenous educators participating in this research study commented that teachers who have been teaching for a while should get professional development to update their knowledge and skills,
while new recruits (particularly from interstate) need to be provided with enough knowledge and skills about teaching Indigenous students (in the Northern Territory).

There were thought to still be negative comments and attitudes in respect to teaching Indigenous learners.

**9. Is there anything else that you would like to add?**

This open-ended question was asked to allow participants to add their own interpretations and Indigenous perspectives about the research topic that may not have already been discussed. The answers here were diverse and lengthy. I have provided a brief summary, paraphrasing and using some participant quotes, for each of the key themes.

The following responses reflect the thoughts and opinions given by Indigenous educators participating in this research study.

It was thought that schools should be mandated to teach Indigenous knowledge, including the curriculum priorities and this could begin by each school identifying with a local Indigenous language group. Expectations should be reflected in curriculum planning and scope and sequence documents to sustain the practice, and for unfamiliar staff to become aware. It should not be the responsibility of the few Indigenous staff to drive and lead these activities, on top of their usual responsibilities unless, if this is the case, then there should be formal recognition of this leadership role and expertise.
Further comments included that Indigenous people’s rights, particularly to be educated in their own language, are not being observed. No recognition is being given for Indigenous students who have linguistic skills in an Aboriginal language.

“This framework from the Australian Curriculum looks good and sounds good in Canberra and that’s it. Under the current system my four-year-old daughter will go to school next year and be expected to learn in Australian Standard English (SAE) taught by a predominantly white teaching group. My daughter speaks six Yolngu languages, one Yolngu sign language, Australian Aboriginal English (AAE) and is learning SAE” (Helen).

It was perceived that Learning at university was a very condensed and quite a brief period, meaning that pre-service teachers study only one or two units about how to cater for Indigenous learners. One way to remedy the situation could be more networking experiences after graduation. This could be particularly advantageous for Indigenous pre-service teacher graduates.

It was expressed as necessary for Indigenous educators to support non-Indigenous colleagues to be confident in the way that they address Indigenous content and teach Indigenous students. This would improve the learning environment for the Indigenous students. Indigenous students need to be encouraged and supported to have a positive self-esteem.

“It is essential for pre-service teachers to have this knowledge because teachers can be the 'life-changing moment' for a kid. If they have negative experiences with teachers,
they are just going to fall and disengage and not be a part of the system. Then that sets us behind even more in achieving our outcomes for Indigenous kids who are already uncomfortable in coming to school” (Nerrida).

Indigenous educators participating in this research study thought that non-Indigenous educators, even those experienced and in the system for years, still have low expectations of Indigenous students. It was also thought that the Australian education system perpetuates the pattern of poor academic outcomes for Indigenous students through lack of understanding or change.

“Kids in our urban schools, who are born overseas, are given support through well-funded ESL programs, while Indigenous kids who are born here are unlikely to get the intensive ESL based support that they need” (Trina).

As described in the previous chapter, methodology and method, participant answers were collated and coded using descriptive coding first. This initial approach to identify the themes arising from the responses was helpful to begin with but there was repetition and overlap between topics which began to complicate the process. The method of semi-structured interview fit well with the process of Priori coding, as most of the interview questions were formulated to answer the research questions. So, priori coding was the approach taken and the codes are created using key components of the interview questions. This reorganisation using priori coding ensured the research questions would be answered because the interview questions were written to address the research questions. The final interview question was open-ended to allow for
emergent or new information than that expected from the first 8 interview responses to be revealed; called emergent codes or themes for the purposes of this research study.

The emergent codes provided more depth to the research. Priori codes represent a framework incorporating somewhat expected themes, whereas the emergent codes are connections and links made to the interview questions, and the research questions, solely by the participants. It was important commentary from the participants outside of the priori. Detailed information about the coding process and reasons behind coding choices have been explained in Chapter 3.

Indigenous educators participating in this research study and working in classrooms at the time of data collection, were given the option of contributing journal entries to add detail to the occurrence of Indigenous knowledge in the classroom, as part of teaching practice. This was explained to Indigenous educators participating as the second phase of data collection. 1 out of the 5 Indigenous educators who were working in classrooms at the time chose to participate in this second phase, and the journal was to be collected at the end of Term 3 of the 2017 Australian school year. George submitted his entries during Term 4. The timing had been an issue. The remaining 4 Indigenous educators in classrooms at the time working under similar constraints, chose not to participate in this part of the research.

4.3 Analysis of data - stage 1: semi-structured Interviews

The revised themes can be seen in the following code book.
4.3.1 Code book:

Table 7 - Priori codes

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Sources</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priori</td>
<td>Pre-established codes based on the questioning required to answer the research questions.</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Initial Teacher Education and Indigenous knowledge</td>
<td>Establishing whether there is Indigenous knowledge in Initial Teacher Education.</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Current practice of prep for teaching Indigenous students</td>
<td>Statements about the current inclusion of Indigenous knowledge in Initial Teacher Education.</td>
<td>8</td>
<td>22</td>
</tr>
<tr>
<td>Importance</td>
<td>Determine whether participants think that it is important to learn about Indigenous knowledge in Initial Teacher Education.</td>
<td>8</td>
<td>18</td>
</tr>
<tr>
<td>Recommendations</td>
<td>Suggestions for inclusion in Initial Teacher Education.</td>
<td>8</td>
<td>19</td>
</tr>
<tr>
<td>Knowing Indigenous knowledge</td>
<td>Information from Indigenous participants.</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Definition of Indigenous knowledge</td>
<td>Participant describe the depth of their understanding, allowing them to think more carefully about the context of the interview questions to follow, and allowing the interviewer to make decisions about when answers may have been exhausted.</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>Name</td>
<td>Description</td>
<td>Sources</td>
<td>References</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------</td>
<td>------------</td>
</tr>
<tr>
<td>Heard of the term</td>
<td>Checking for prior knowledge of the term ‘Indigenous knowledge’. This is important for the participant to be able to participate fully in the interview.</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Learning and Indigenous</td>
<td>Indigenous knowledge in relation to the students. Links to both Indigenous and non-Indigenous students and teachers.</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>knowledge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Importance</td>
<td>Determining the importance (or not) to students.</td>
<td>8</td>
<td>17</td>
</tr>
<tr>
<td>Uses</td>
<td>In establishing the importance (or not) of Indigenous knowledge, participants can provide examples of use in Learning.</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Teaching and Indigenous</td>
<td>Indigenous and non-Indigenous focus/implications</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>knowledge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Importance</td>
<td>Determining whether Indigenous knowledge is important for Teaching.</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>Uses</td>
<td>In establishing the importance (or not) of Indigenous knowledge, participants can provide examples of use in Teaching.</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>Personal</td>
<td>Personal aspects of Indigenous knowledge in Teaching.</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>Professional</td>
<td>Professional aspects of Indigenous knowledge in Teaching.</td>
<td>6</td>
<td>15</td>
</tr>
</tbody>
</table>
## Table 8 - Emergent codes

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Sources</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergent</td>
<td>Question 9 in the semi-structured interview allows for participants to further express their thoughts, opinions and understandings of the research topic. The nature of these themes is emergent.</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Anything else to add</td>
<td>Participants add to the range of data being collected. This enriches the data and enables further opportunity for Indigenous voice.</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>Australian Professional Standards requirements for 1.4 and 2.4</td>
<td>Another emergent node arising from interview questions.</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Community support and success</td>
<td>Many students are the first people in their families to study at university.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Educational Pedagogy</td>
<td>Indigenous perspectives in education</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Establish school connections</td>
<td>Specific example of Indigenous knowledge potential in schools.</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Indigenous Leadership</td>
<td>Although not labelled as such by participants, aspects of leadership were mentioned by all participants.</td>
<td>6</td>
<td>32</td>
</tr>
<tr>
<td>Indigenous network</td>
<td>Indigenous teacher’s network and opportunities required.</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
4.3.2 Priori codes

These are the themes established to answer the research questions.

4.3.2.1 Initial Teacher Education and Indigenous knowledge

Node descriptor - This first coding node is the key theme of the research and is primarily used to establish whether there is any type of link between Initial Teacher Education and Indigenous Knowledge.

Indigenous education is often on the radar for educators due to expectations from Government, ACARA and the National Curriculum, and from AITSL as custodians of the Australian Professional Standards for Teachers. Closing the Gap reports hold our attention as we are reminded that despite continuing efforts Indigenous students still
underperform (Department of the Prime Minister and Cabinet, 2018), and that Government targets are not achieved.

Highlighted in Government reports such as the Learning Lessons report (Moreton-Robinson, 2011) is the fact that the teaching profession is underprepared and not confident in effectively teaching Indigenous students. Most of the teaching profession in Australia is non-Indigenous (Santoro, 2014). The concern for lack of preparation and knowledge, negative attitudes, the lack of consideration for Human Rights, and the unprofessional teacher behaviour, are reflected in the participant responses when establishing whether Indigenous knowledge is currently utilized in teacher education.

George stated that he was aware of many teachers who have difficulties because they have no foundation in Indigenous knowledge. The teachers noted by George have been on the end of one shock after another in learning about and then having to teach Indigenous students, often only with the negative portrayal by mass media to shape their attitudes about Indigenous Australians. What George also alludes to but does not state outright is that these teachers have been employed from interstate, where they could have possibly lived their whole life without even knowing or having spoken to an Indigenous person. “I know a lot of teachers are not strong in sharing Indigenous knowledges because they don't have that foundation. They've had a shock when they've gone to university or they've had a shock when they've watched the TV, and maybe they've got that mass-media view of Indigenous people and it's not helpful when they're trying to teach it” (George).
Helen stated that being a pre-service teacher can be very distressing. Understanding the curriculum and the gaps and lack of respect for first Australians is overwhelming. One of the obvious areas of contention is that of Indigenous languages in Australia and their place in education. Aboriginal people were assimilated, and many were punished for speaking their own language. This has resulted in many languages having been lost and many Indigenous people having issues with their identity. Language groups are used to identify you to other Indigenous people. If you cannot speak the language, and you don’t even know the name of your language group, are you Indigenous? How can you connect with other Indigenous people without this information?

Helen went on to then introduce the issue of Linguistic Imperialism within the Australian education system. This is a major hurdle for many people wanting to live in Australia, but also for many people living in Australia today. In the Australian education system intelligence is measured only in English. “I end up in tears when completing most assignments. For example, reading a document titled – ‘Framework for Aboriginal and Torres Strait Islander Languages’ from the Australian Curriculum. It states: It is the right of Aboriginal and Torres Strait Islander peoples to have access to education in and about their own languages, as enshrined in the United Nations Declaration on the Rights of Indigenous Peoples. I could not believe what rights we have under the UN that are not recognised or put in play by the Australian Government” (Helen).

Nerrida described what she saw as a lack of empathy and understanding of Indigenous students’ life challenges. Growing up Indigenous in Australia can be very
challenging. “If they already have negative things going on at home, if they already have negative things going on at school or in their social environment, they are not going to have much of a chance to grow and come out of that” (Nerrida). A very real concern was raised about witnessing the unprofessional and unfair way that Indigenous students are treated and spoken to. Importantly, Indigenous teachers understand that this behaviour could also very well be directed at their own children. “When I hear some teachers talking negatively about students, I always think that I would hate for them to be talking about my child like that” (Nerrida).

Racism and stereotyping are uncomfortable topics of conversation but are the result of ignorance. In this case the knowledge that is lacking is an understanding of Indigenous history, culture and Indigenous knowledge. "This Indigenous kid did this. This Indigenous kid did this. Why can't they just say their name? I'm very particular. I pick up on things which is terrible, but you know it's always got to have a brand mark [Indigenous]” (Nerrida).

It would appear from the responses given that there could be strong links between teacher education and Indigenous knowledge, requiring further investigation.

4.3.2.2 Current practice of preparation for teaching Indigenous students

Node descriptor - Statements about the current inclusion of Indigenous knowledge in Initial Teacher Education.

In the Northern Territory there is provision for pre-service teachers to learn about how to teach Indigenous students. Charles Darwin University has at least one
core unit, and a few electives that students may take specifically about pedagogy and Indigenous knowledges.

Charles Darwin University (CDU) is the only university in the Northern Territory with the School of Education specializing in teacher education courses. Batchelor Institute of Indigenous Tertiary Education (BIITE) is also a facility in the Northern Territory that offers teacher education courses to Indigenous pre-service teachers only. Two participants completed their studies through BIITE, while the others studied at CDU. Comments about current practice were based on participant experience as a pre-service teacher and experiences seen within schools while observing other teachers and pre-service teachers on Teaching Practice. While these are the local options for study in the Territory, the teacher cohort may have attended many different universities outside of the Northern Territory.

George began by commenting on the dominance of English in the Australian education system. “Yeah, there are Indigenous people there, but education is about English and not everything else, where in my view I think it is” (George). The education system has a strong focus on Literacy and Numeracy outcomes and assessment of these. There is not the same kind of focus on culture or difference; with very little emphasis on Australia’s First People let alone Indigenous knowledge. Helen confirmed this sentiment. “The old saying ‘divide and conquer’ just came into my mind. Creating and widening a division through ignorance is our current state” (Helen).
Most of the Indigenous educators participating in this research study described
what they considered as a lack of adequate and effective preparation for teaching
Indigenous students.

Individual comments included -

“Unprepared - but maybe even just it's abstract to them. They don't know it's there”
(George).

“Not good enough yet” (Melissa).

“I don't think they are; at all” (Nerrida).

“Unfortunately, what I see happening in schools in my opinion is fairly superficial”
(Phoebe).

“Are they [prepared]?” (Sharon).

“Sometimes no, from a personal standpoint” (Jane).

Indigenous educators participating in this research study justified their answers
with the following examples -

4.3.2.2.1.1 Culture Shock

Node descriptor – specific example of why current practice is not adequate.

George has provided the incidents of culture shock as an example of why
current practice in teacher preparation is not good enough. This draws attention to a
cultural divide or a lack of inclusion of Indigenous culture and people in education.
“I don't think they are because it is still a culture shock for anybody going to a particular school where there is an Indigenous cohort. It's still a massive culture shock. So, I don't think there's much [preparation]” (George).

4.3.2.2.1.2 Lack of Awareness

Node descriptor – specific example of why current practice is not adequate.

As highlighted in the previous node, George continued with the explanation of educational shortcomings with pre-service teachers lacking awareness of how to include Indigenous people and culture into the school or classroom.

“I take pre-service teachers every year and I would ask them, as a teacher, while we are watching an assembly item where this is an assembly item and their doing an Indigenous performance 'How else do you think that this could be integrated in to school?’ They would just shake their heads and say that they don’t even know about it” (George).

4.3.2.2.1.3 Lack of Priority

Node descriptor – specific example of why current practice is not adequate.

Both George and Helen express a lack of priority as a reason why current pre-service teacher education is not adequate.

“So, if they're not learning it in their teacher training, the teachers who are getting four years training but especially those who are only getting two years training coming in from another profession. If they don't have that foundation, then they're not going to
embrace or teach anything that has Indigenous perspectives in it or knowledges” (George).

“There's electives I'm aware of that students can take. I'm not sure if it's a common unit or a unit that they must do in education; in the education training. So, to be honest I don't think that it is as effective…” (George).

“...there are a couple of units that surround Indigenous Australians. However, there could be a lot more. Without my own personal knowledge, I would struggle to be an effective teacher to Indigenous students. As an Aboriginal person, I am not satisfied with the level of knowledge that a non-Indigenous pre-service teacher would get from the same degree as me” (Helen).

4.3.2.2.1.4 Lack of Understanding

Node descriptor – specific example of why current practice is not adequate.

Nerrida had something to say about a lack of understanding about Indigenous social disadvantage and negative perceptions of Indigenous people as a reasons why current training is not adequate. People need to understand these concepts and learn about them before becoming teachers.

“I have had a lot of negative experiences in the university environment about already held negative perceptions of Indigenous people. A lot of that is around just the opportunities that Indigenous people have because of the disadvantages they've faced, again it is just understanding the history. Why are there exceptions in certain places for certain reasons and having a better understanding of that” (Nerrida).
“I think history, if it was made compulsory in all aspects of teaching especially Indigenous history, it would open up the eyes of a lot of people regardless of their home backgrounds...You know non-Indigenous kids already having these negative preconceived ideas from family and so forth. I think it would really open up the eyes of a lot of people” (Nerrida).

4.3.2.2.1.5 Little Understanding of ESL Needs

Node descriptor – specific example of why current practice is not adequate.

Jane was concerned about the lack of ESL training or basic knowledge about students speaking English as a Second Language needing longer thinking or processing time. More pre-service teachers learning this in teacher education would improve current practice.

“Particularly for people who are not aware of children who do not speak English as their first language, and not just for Indigenous [Australian] students but for students who may speak Mandarin or Greek. Sometimes there is a bit of a point where some teachers say ‘Okay - maybe we just need an answer to a question’ and, not allowing time for students to process the question in their own language first before they give their responses as well” (Jane).

4.3.2.2.1.6 Racism

Node descriptor – specific example of why current practice is not adequate.
Both Trina and Nerrida cite incidents of racism as a sign of inadequate pre-service teacher education. The incidents described infer larger issues with lecturer knowledge and cultural awareness as well as a blindspot in the wider system with regards to learning about Australia’s history of dispossession and assimilation.

“...another lecturer made disparaging and racist comments about kids living in Indigenous communities not wanting to learn ‘unlike kids in Africa who will sit under a streetlamp to study’!! I was disgusted” (Trina).

“A young 20 something girl from down south comes up and she said, ‘You know what I heard. There's white Aboriginal people up here.’ What do you say to that? ‘I’m one of them!’...She obviously has no understanding or knowledge of The Stolen Generation or diversity” (Nerrida).

4.3.2.2.1.7 The Need for Deeper Understandings

Node descriptor – specific example of why current practice is not adequate.

Phoebe was concerned that current practice was teaching pre-service teachers superficial knowledge, and that there needed to be more practical application as evidence of learning in pre-service teacher education.

“I think a lot of schools, or teachers, think that they can do an Indigenous dot painting with their students and they've incorporated Indigenous knowledge. Or, they learn and Indigenous dance and that's a tick off for Indigenous knowledge. It's a bit deeper than that” (Phoebe).
“I think it is superficial again where pre-service teachers can mention Indigenous students, they can mention the 8 Ways, but is there a real understanding there? It's great that we have something but there has to be more, and it has to be rich and it has to be real understanding. I know that superficial is a word that I am using a lot, but I just feel that that is what it is. Tokenistic? Absolutely. You can't be satisfied with – ‘I had 3 Indigenous students in my classroom, and I did some hands-on learning activities with them because they are kinaesthetic learners.’ No, really? You are really going to label everyone in the one group, are you? It's frustrating” (Phoebe).

Trina commented specifically about how this lack of preparation of teachers would impact directly onto Indigenous student learning. “I did a post-grad course – my training was severely lacking in the pedagogy of teaching to ANY student, let alone those with special needs or ESL” (Trina). Some Indigenous students come to school with needs. Without adequate preparation of teachers in pre-service teacher courses, Indigenous academic achievement is negatively impacted.

There was one positive comment about the 8 Ways of Aboriginal Learning which is an Indigenous pedagogy designed by Yunkaporta (2009). This pedagogy is integrated into one of the core units taught at CDU by the School of Indigenous Knowledges and Public Policy for the School of Education.

The other positive comment was regarding in-school training about using Indigenous mentors to enhance the practical experiences for pre-service teachers. “They paired me up with wonderful Indigenous teachers and role models... I was so
very fortunate to be a part of it. There was a significant Indigenous cohort that they were teaching. So, you feel very comfortable in the environment, but I have never throughout the duration seen explicitly taught lessons on Indigenous perspectives or history throughout my teachings” (Nerrida).

Interestingly, Phoebe and Trina included comments about the attitudes and abilities of lecturers, implying that not only course content determines the resulting pre-service teacher understandings but also the agency of the lecturer responsible for teaching the unit. Unit or course content are not the key concern but also the pedagogy of the lecturer. There were mixed feelings about lecturers as can be seen by the following comments.

“I am quite confident to say that people running these units where this outcome has to be met, I don’t think that they really care that it is not real understanding” (Phoebe).

“I had an amazing lecturer who went out of his way to teach us about Indigenous history and culture. Yet in the same course, another lecturer made disparaging and racist comments about kids living in Indigenous communities not wanting to learn…” (Trina).

One response provided a reason as to why some lecturers might be more capable than others with Indigenous content, perspectives or knowledge.

“I don't think that unless you are an Indigenous person you can genuinely have Indigenous knowledge to the extent that you can be able to respect it” (Phoebe).
Indigenous educators participating in this research were passionate in their responses about current preparation for teaching Indigenous learners; leading us on to the concept of importance.

4.3.2.2.2 Importance

Node descriptor - Determine whether participants think that it is important to learn about Indigenous knowledge in Initial Teacher Education.

All participants agreed that it was important to learn about Indigenous knowledge in Initial Teacher Education. To some degree, this response was expected. The voluntary aspect to research participation meant that participants were enthusiastic to contribute to research about – The importance of including Indigenous knowledge in pre-service teacher education.

What was highlighted here in participant responses was the degree of importance. Responses ranged from important, significant, very important, and highly important. There was a very strong emotional response from Helen who described praying for the inclusion of Indigenous knowledge in pre-service teacher education “with all my heart” (Helen). Some responses described the inclusion of Indigenous knowledge as undeniable, using words such as absolutely important, fundamental, and essential. This sentiment was clarified further by the following statements,

“Indigenous knowledges in teacher education should be compulsory before teaching” (Melissa).
“I think that Indigenous perspectives don't need to be just part of the curriculum, but they need to be mandated as part of what they're learning [as pre-service teachers]” (George).

Explanations for the importance of including Indigenous knowledge in pre-service teacher education were many and varied. Responses fell into the main themes of Northern Territory demographic, non-Indigenous lack of cultural awareness, to improve academic outcomes for Indigenous students, necessary cultural awareness for non-Indigenous students, develop more respect for Indigenous people, and to enhance the teaching of the national curriculum.

4.3.2.2.2.1 Northern Territory Demographic

Node descriptor – specific example why it is important to include Indigenous knowledge in teacher education.

George, Jane, Nerrida and Phoebe’s quotes have been used to illustrate the reasoning behind why the Northern Territory Demographic was a reason for the importance of including Indigenous knowledge in pre-service teacher education. The Northern Territory has a greater percentage of Indigenous people as part of the total population. This is different to other states and territories in Australia.

“The amount of Indigenous people we have in the many schools - in some schools it's 100 per cent Indigenous and in other schools it's 30 per cent. It's a huge part of what we teach and what they learn” (George).
“It is a big part for the Northern Territory because we have a high Indigenous cohort of people, students and new service teachers…” (Jane).

“…especially here in the Northern Territory as well as everywhere else but we have a different demographic and cohort of students up here” (Nerrida).

“If you look at the NT context, our stats show I think 50 per cent Indigenous students. I highly doubt that you would find a school in the Territory that doesn't have an Indigenous student, despite being told by pre-service teachers that they are unable to meet the Australian Professional Standards around working with Indigenous students because they don't have an Indigenous student in their classroom. Frustrates the hell out of me that one because I think – How could that be possible?” (Phoebe).

4.3.2.2.2.2 Cultural Awareness for Non-Indigenous Teachers

Node descriptor – specific example why it is important to include Indigenous knowledge in teacher education.

In the Northern Territory, when there is a shortage of teachers, teachers are enticed to come from interstate where Indigenous people are represented as lower percentages of the total population. Teachers are often required to move from a larger metropolitan area to a remote Indigenous community. Whether teachers are placed in urban centres or in communities, diversity of Indigenous culture is not necessarily known. There is most likely to be a lack of cultural awareness.
“If a non-Indigenous pre-service teacher had planned to teach in an Indigenous community, Indigenous Knowledge will be a vital component to becoming culturally aware. Thus, being used in your everyday life,’ (George).

“Without my own personal knowledge, I would struggle to be an effective teacher to Indigenous students” (Helen).

“…once you come out of uni you need to have that exposure, I suppose, but also that support from the department as well I think” (Jane).

“I can even say through my pracs, I've been confronted by a lot of people who were employed from down south and they have so many negative things to say. More so than positive, and that breaks my heart because kids are only human at the end of the day and they will be kids. I don't know if they take it personally. I don't know. We have the same problems everywhere. They live with rose coloured glasses of what it is supposed to be in a model classroom. Even the most challenged kid has the most wonderful things to offer in a classroom. And, if they can see beyond that before judging them......you know. So, if they had more of an understanding, yes, absolutely” (Nerrida).

“…we can’t assume that teachers know and understand the Indigenous history, culture and knowledges – previously Australian history has been taught with major gaps in the ‘truth’ and from the European perspective” (George).
4.3.2.2.3 Improvement of Academic Outcomes for Indigenous Students

Node descriptor – specific example why it is important to include Indigenous knowledge in teacher education.

Jane and Nerrida thought that the inclusion of Indigenous knowledge would contribute to the improvement of academic outcomes for Indigenous students. The areas of potential were pedagogy, classroom management, and student engagement.

“8 Ways, I think that's an important... So that's pedagogical knowledge, so how you approach things in the classroom” (Jane).

“They [non-Indigenous teachers from southern states] would be more mindful in how they teach, their teacher instruction. They would be absolutely more mindful in how they deal with behaviour. They would be more culturally sensitive, to how they talk, how they act and how they behave. Again, I will go back to that behaviour because ...I hear, ‘I had to sit up all night organising this and you just sit here in my classroom.’...again, it goes back to how a student feels; whether they want to come to school and if they want to be here” (Nerrida).

“It is essential for pre-service teachers to have this knowledge because teachers can be the 'life-changing moment' for a kid. If they have negative experiences with teachers, they are just going to fall and disengage and not be a part of the system. Then that sets us behind even more in achieving our outcomes for Indigenous kids who are already uncomfortable in coming to school” (Nerrida).
4.3.2.2.4 Cultural Awareness for Non-Indigenous Students

Node descriptor – specific example why it is important to include Indigenous knowledge in teacher education.

Phoebe provided some interesting insight into the fact that knowledge about Indigenous people and culture was something not just for Indigenous people. We already know a lot about it. She stressed that it was vital for non-Indigenous students to learn about Indigenous people and culture, because they were likely to know less. Also, classrooms with few or even no Indigenous students were the places where learning was needed the most.

“...just because you don't have an Indigenous student in your classroom (or you think you don't) doesn't mean that you shouldn't be teaching Indigenous knowledge in the classroom. In fact, all the more reason why you should be because at some stage these students need to get their understanding around Indigenous knowledges” (Phoebe).

“I argue often about having the Indigenous languages and culture stuff taught everywhere. A lot of people are still of the understanding that you want to be teaching Indigenous students for that, when we know, actually know! If you have non-Indigenous students, all the more better because these are the guys that need to understand this information” (Phoebe).

4.3.2.2.5 Development of Respect for Indigenous People

Node descriptor – specific example why it is important to include Indigenous knowledge in teacher education.
Sharon and George both felt it necessary to state the importance of including Indigenous knowledge in pre-service teacher education to improve and develop the respect for Indigenous people. Sharon addressed the positive and George addressed the negative.

“This will help teachers understand our ways, our culture a bit more. This may then create a bit more respect for our people” (Sharon).

“Stereotypes are often negative, and people often view Indigenous Australians as if they are all the same. They don’t respect or understand that there are many different Indigenous peoples” (George).

4.3.2.2.6 Enhancement of Teaching of the National Curriculum

Node descriptor – specific example why it is important to include Indigenous knowledge in teacher education.

“That [Indigenous pedagogy] could apply to a whole bunch of different settings it could comply with the curriculum as well but I'm just thinking in terms of different grade levels as well in terms of mapping out your plans” (Jane).

“Teachers need to be able to teach and find links in curriculum to meet the Cross-curricula Priority of Indigenous History and Culture – specifically [from ACARA]” (Trina).

What is described here is the way that Indigenous Culture and Histories was added into the curriculum. Due to the topic not being used or widely incorporated into teaching programs in schools, the name was changed by ACARA from a Perspective to a
Priority. This change to the name has not changed the knowledge and skills of the teachers in schools responsible for teaching the curriculum. In fact, content elaborations have had to be added to give teachers some idea of how they might even incorporate the Cross-curriculum Priorities. It could be argued that the Priorities do not have credibility because they are not considered curriculum and do not require assessment.

Cross-curriculum priorities are only addressed through learning areas and do not constitute curriculum on their own, as they do not exist outside of learning areas. Instead, the priorities are identified wherever they are developed or have been applied in content descriptions. They are also identified where they offer opportunities to add depth and richness to student learning in content elaborations. They will have a strong but varying presence depending on their relevance to the learning area. (Cross-curriculum priorities, 2014)

These responses are Indigenous educator views about the potential for using Indigenous knowledge to enhance the Australian education system, and ultimately improve student educational outcomes. There were many recommendations for how this could be achieved.

4.3.2.2.3 Recommendations

Node descriptor - Suggestions for inclusion in Initial Teacher Education.

Although looking for similarities and differences as part of the analysis process, each of the recommendations are valuable insights into Indigenous educator perspectives about how to improve a system and should be considered as such.
What should be noted here is the interchangeable nature of the terms Indigenous perspectives, Indigenous knowledge, and cultural awareness or understandings. This has come about by the varied definitions of the term Indigenous knowledge by the participants themselves. These definitions are shaped by their own identity and understandings of what it means to be Indigenous, as well as the potential for indigeneity to be embedded within the Australian education system.

4.3.2.2.3.1 Cultural Complexity

Node descriptor – specific example of how to include Indigenous knowledge in teacher education.

The first area of potential to be raised is that of cultural complexity and how educators could use these understandings to strengthen their curriculum goals.

“Indigenous perspective is a general capability, but it embraces so much - as to sustainability, relationships, and learning about their identity and who they are to strengthen their curriculum goals. It should be mandated that it is a perspective in everything that they learn. It's about embracing that and then getting some people to share that. It is also very complex and what I have to talk to my students about is that there are over 250 cultures. It's not one culture; not one language. There is one flag and there is one word 'Aboriginal’, but it is complex, and each community is very different” (George).
“I think also learning styles, of all students whether they are rural, urban, or remote. Understanding the area that they are working in particularly. Understanding the different (language) groups that they are working in, or that they’re going to come across. Understanding the challenges that they are going to be up against, so that they can plan and prepare for that maybe. Integrating and building on what students know and bringing them into the learning. Sharing their stories. Building on cultural identity, I think that that is fundamental and important in all aspects” (Nerrida).

“The importance of respect for all. The importance of welcome to Country and the importance of displaying ATSI Flags” (Sharon).

“At a minimum – the history of Australia and an understanding of issues, strengths, regional differences etc. We also need be taught how to teach Indigenous students – recognising that just because you are born here, doesn’t mean you understand English or can access the mainstream curriculum. How to find out about Indigenous student’s in their school – an appropriate means of obtaining information and supporting Indigenous students in the region” (Trina).

4.3.2.2.3.2 Required Learning

*Node descriptor – specific example of how to include Indigenous knowledge in teacher education.*

To achieve appropriate levels of understanding so that it could be applied in the classroom and school environment, the Indigenous educators participating in this research study suggested that learning is required.
“Even one course just being based on cultural awareness but not focusing on one individual Aboriginal culture, but the whole course is a cultural awareness course. Where they can really interact and really understand the true history and really understand the world view of Indigenous people compared to the western world view. If they can get a glimpse and understand some of it then they might have some sympathy to try to work and build on that and embrace Indigenous culture” (George).

“To completely understand Indigenous knowledge, education courses ideally would have topics such as but not limited to history (pre-invasion, invasion, and post invasion), culture (lore, language, art, dance, respectful interaction etc.). There are many more” (Helen).

“Really raw, uncut information about strong Indigenous history. First and foremost, real Indigenous Australian history. I think that is what's lacking. I know that when I was in school, they never taught it. I was very fortunate to grow up in the environment that I did. I have a very sound and comprehensive knowledge of it. Fortunately, it comes out in all my teaching, in every aspect. I don't sit there when I plan and think, "I'm going to integrate this because it is an Indigenous perspective." I naturally do it because I'm interested, and I want my kids to know more. That is fundamental” (Nerrida).

“I think the Indigenous language as well as the ESL needs to be catered and even for teachers to be aware that even those who have been teaching for a long time. I think that it is important to have a refresher course or some sort of reminders. I think that everyone gets caught up” (Jane).
“Courses should acknowledge Indigenous teachers first, as the key for a successful school. Especially in those schools that have larger numbers of Indigenous kids” (Melissa).

“I would like to see, and I understand that it does happen anyway, Indigenous perspectives. That unit that you teach... should be everywhere. What also should be taught is Indigenous perspectives, knowledge and understanding but I do believe that this needs to be delivered by Indigenous people. I would hate to see non-Indigenous people delivering Indigenous perspectives. I also think that it can be quite superficial when we ask students to produce an assessment task based on teaching Indigenous students or Indigenous knowledges or culture because a whole bunch of research doesn't mean that there is a real understanding. There needs to be practical application in every university on Indigenous perspectives, knowledge and culture” (Phoebe).

“The Australian history, assimilation, the importance of mental health and wellbeing as many of our children still to this day get taken away from their families” (Sharon).

“The importance of play-based learning and how this creates a sense of belonging while being good for ones’ mental health and wellbeing” (Sharon).

4.3.2.2.3.3 Credibility (status)

Node descriptor – specific example of how to include Indigenous knowledge in teacher education.
To stress the importance of such training, the universities or other teacher education providers would have to make the learning a core requirement for successful completion.

“I think that it should be a mandatory course, at least to have cultural awareness and then when you’re in school, it is up to the school to boost that up which the teachers need to take on board. And, especially the principals as well” (George).

4.3.2.3.4 Attitudes

Node descriptor – specific example of how to include Indigenous knowledge in teacher education.

Many of the recommendations not only have to do with formal compulsory training but also with a change in attitude. Attitude and perceptions are main considerations when deciding to include Indigenous knowledge in the first place. Implementing Indigenous pedagogy requires an attitude or mindset.

“Celebrating Indigenous Knowledge will help to heal the deep wounds and blood that lay on this country Australia. To change our (all Australians) future we must first begin with our children. They are our future” (Helen).

“...if you identify as Indigenous, I think that it is important for you to have those networks and those opportunities. NAIDOC forum was one that I went to with one of my friends this year (2016). That was interesting; it was good. Socially, I suppose, just trying to find out where you stand because it is different to having urban context rather
than remote, because I lived out remote for many years as well. Sometimes I find that a bit of a balance point as well; for myself” (Jane).

“...for just teachers to look at that knowledge and try to apply that in the classroom. Could it fit? Because there's all different things that you could do in terms of looking at the Australian curriculum and how that applies to science, you could do cooking, you could do weather, you could do a whole bunch of different things” (Jane).

“Indigenous people have only been included in [western] education for the last 50 years or so. Non-Indigenous people have been involved for a lot longer; about 200 years. This needs to be recognized” (Melissa).

“Don't have that deficit perspective. Look at all kids individually. Know, understand and help them also to believe that they are going to have a great future and achieve that future no matter their circumstance or who they are. I think that that is really, really important” (Nerrida).

“I would like to see this in every school and at all levels. For example, there is a misconception that Aboriginal studies is only for Indigenous students. It is actually for everybody. In-depth research topics provide a real understanding about the specific topics or area. The point I'm trying to make is the frustration behind people thinking that Indigenous knowledges, language and culture should only be taught to schools and classrooms with Indigenous kids in it. And, it shouldn't be” (Phoebe).

Recommendations for inclusion all stress the importance of Knowing and that further training may be required.
4.3.2.3 Knowing Indigenous knowledge

Node descriptor - Information from Indigenous participants.

The data showed that six out of the eight Indigenous educators participating in this research study said that they knew about ‘Indigenous knowledge’. The two participants who did not know about it made the distinction that they did not know about it in the educational context and that Indigenous perspectives was a more widely used term in schools and classrooms, in line with the language used in the national curriculum. Both these participants could make this distinction and then discuss their understandings and opinions about the topic.

Melissa made the following connections through a cultural context of Relationality or connectedness.

“...first when you enter a room you look for black. Then you talk about where each of you come from, whether they know somebody, and family members” (Melissa).

“I look for features” (Melissa).

Phoebe expressed frustrations about the use (or lack) of Indigenous knowledge in education.

“...there is an acknowledgement for Indigenous knowledge to be recognized” (Phoebe).

Further comment alludes to the improper use of Indigenous knowledge.

“It is actually something that frustrates me on the whole in a lot of aspects” (Phoebe).
If some Indigenous educators are not aware of the term Indigenous knowledge in an educational context, this could be interpreted in several ways. There is an absence of it in education, so to discuss it in this context is unfamiliar. The language used in educational discourse is something other than what Indigenous people may identify as Indigenous knowledge. There is confusion over what is defined as Indigenous knowledge in education. Finally, other terms may be used instead, such as Indigenous perspectives and Indigenous pedagogy.

If there is confusion, then there is also ambiguity. Clarity is required to ensure that uncertainty is not a hurdle to the inclusion of Indigenous knowledge in the education system. Indigenous educators are necessary in this process because their Indigenous lens enables them to identify areas needing clarity about Indigenous knowledge, and their expertise in education allows them to translate this into the educational context. Indigenous standpoint is fundamental for a way forward.

4.3.2.3.1 Definition of Indigenous knowledge

*Node descriptor* - Participants describe the depth of their understanding, allowing them to think more carefully about the context of the interview questions to follow, and allowing the interviewer to make decisions about when answers may have been exhausted.

When defining the term *Indigenous knowledge* in the context of education, participants used the following key words and phrases as reported in Chapter 3.
To frame the words and phrases into a familiar format that will allow further comparisons, the broader categories of Indigenous knowledge as Knowing, Being and Doing have been used.

BEING – “cultural understandings, stories, about people; peoples’ behaviour, to do with Indigenous relationships and families, Connecting! Like when we first meet another Indigenous person and find connections”.

KNOWING - science, environmental knowledge, a process of education, learning about new things that directly relate to culture, represents the longevity of culture, informal, from an Elder or family member, conversations with extremely wise people, recognising Indigenous features, and body language and hand signs, things we know and innately know, background knowledge about ancient Australia, who we are and where we came from.

DOING - particularly as identifying as an Indigenous person, experiences growing up as a child to adulthood (a process), applying experiences, how we apply our understanding and knowledge, the way we do things.

In more general terms, Indigenous knowledge shapes Australia’s history and identity. It also shapes Australia’s future and the history that is yet to be written. Indigenous knowledge is a complex concept that is more than just culture, identity and language. According to the definitions provided, Indigenous knowledge also influences the way we do things as Indigenous people. It is the basis of Indigenous Standpoint
because of the unique ways of knowing and being based on our upbringing and education from within our own culture and world view.

4.3.2.3.2 Heard of the term

Node descriptor - Checking for prior knowledge of the term ‘Indigenous knowledge’. 

This is important for the participant to be able to participate fully in the interview.

This was a crucial step in the research to ensure that participants would be able to engage fully in the interview process, but also be able to explain Indigenous knowledge as a part of their everyday reality as teachers and pre-service teachers; Indigenous teachers.

The term Indigenous knowledge is not necessarily one that Indigenous people are familiar with. An Indigenous person does not necessarily say to themselves, ‘I’m going to use my Indigenous knowledge today.’ However, because of the dominance of western culture in Australia, and in education, there may be a distinction made between a uniquely western way of thinking and doing something as opposed to a uniquely Indigenous alternative. Several responses either mentioned that they hadn’t learned the term Indigenous knowledge until studying at university, or that there is ambiguity about the use in educational contexts.

“I knew about that in the first few months of my education degree, and what it meant for teaching... This only really eventuated when I went through university, when I really learnt about it” (George).

“Yes, I have but only as a topic that people talk about” (Melissa).
“No. I have not heard this term before” (Sharon).

“I think it may mean different things to different people” (Trina).

Each participant defined the term in their own words. I only needed to provide one prompt and then was satisfied that the participants could complete the interviews. As a preparation for the project and because of my own experiences in learning about Indigenous knowledge, I did plan to provide reading materials if required – by Martin (2003) explaining Indigenous knowledge in terms of Knowing, Being and Doing. This was not required. I chose to honour each participants’ own definition. This relieved some of the stress of the wanting to get the answers correct during interviewing and for the participant completing the journal entries.

George, Helen and Nerrida’s comments expressed confidence and familiarity with the term Indigenous knowledge.

“Yes - so, I went through Batchelor Institute and was very happy to have my eyes opened there. We had a really good Indigenous approach to our teaching and learning, as well as our common units having high Indigenous perspectives. Our common units, even public speaking, had a high amount of Indigenous perspectives but everyone got to bring their raw emotions and knowledges to that” (George).

“This is a term I am greatly familiar with. I have grown up learning about Aboriginal knowledge every day. Currently the term Indigenous Knowledge is being used more frequently” (Helen).
“Yes. In the perspective of understanding Indigenous history, culture, identity, perspectives from all around Australia - ancient Australia and modern Australia, and how it has come to be” (Nerrida).

Importantly, George could recognize and understand the importance of including Indigenous knowledge in schools and teacher education because he could compare previous experiences of working in schools. George noticed the absence of Indigenous knowledge in schools, and the value of incorporating it into learning about curriculum and pedagogy.

“Working in schools before that, for a year and a bit, working in classrooms it wasn’t really a thing to have Indigenous knowledges. It was the activities for example, NAIDOC or Reconciliation, and other activities of doing boomerangs or flags. Which is still going on and is still really important but Indigenous knowledges is coming in” (George).

4.3.2.4 Learning and Indigenous knowledge

Node descriptor - Indigenous knowledge in relation to the students. Links to both Indigenous and non-Indigenous students and teachers.

Learning and Indigenous knowledge go hand in hand. As presented in the literature, Indigenous people have a knowledge system of their own that differs from western knowledge and the way that western knowledge is used in education. It could be argued that the two key differences in understanding the unique knowledge systems is the way in which the people prioritise what constitutes knowledge, and
secondly how knowledge is conveyed. Even in this simple explanation what becomes obvious is the way that knowledge can be categorised as Content or Pedagogy.

To make this plain and provide the context of the Australian education system, as with western knowledge, Indigenous knowledge could be represented in the actual curriculum content or as pedagogy, the way in which the teacher teaches – the *What* and the *How*. Participants readily provided examples of both.

4.3.2.4.1 Curriculum Content/What

*Node descriptor – specific examples of how Indigenous knowledge could be situated in the curriculum.*

Jane and Nerrida provided suggestions and descriptions for how Indigenous knowledge could be included as curriculum content with the following statements -

“...child initiated, not really themes but we run with what the children are interested with” (Jane).

“...two students at the end of term 3, the last few weeks of last term, they were interested and made pretend didgeridoos out of the not toilet rolls but the thick cardboard rolls. They started painting and decorating those and I thought well what can I do to try and extend and support that learning for those children but also for the wider pre-school group” (Jane).

“I think being able to run those amazing programs like our AIEW here, really bringing about NAIDOC and awareness of Sorry Day, like these really significant events in
history, and bringing elders in and having activities for all kids to be a part of...and then we get to focus on our Indigenous cohort as well, or 'young man's time' or 'young women's time’” (Nerrida).

4.3.2.4.2 Pedagogy/How

*Node descriptor – specific examples of how Indigenous knowledge could be pedagogical practice.*

Indigenous knowledge could be included as pedagogical practice. This has been mentioned in responses to the interview questions. Nerrida’s following comments provide more information about how this could be done.

“Not telling a student how something should or shouldn’t be done but learning with them and demonstrating” (Nerrida).

“You just see especially with a lot of our Indigenous kids, they’re confident and they come out and they talk about who they are and where they’re from, and they share their knowledges and their stories. That is what we integrate into teaching through History as well” (Nerrida).

“They build that, and they develop that, and they get comfortable to be able to share what is going on at home or just feel safe with you when they are with you or share their stories. I think relationship is really, really key, and we’re very good at doing that. And, like I said once that relationship is already there...especially identity, it all comes back to identity - who you are and where you're from” (Nerrida).
The nature of an Indigenous knowledge system includes Being as one of the key domains in conjunction with Knowing and Doing (Martin, 2003; Barnhardt & Kawagley, 2005). As stated in the responses above - Relationships, Sharing and Connecting all not only express a pedagogical practice, but also link directly to an Indigenous person’s understanding of how to Be. Learning and Indigenous knowledge are directly linked.

4.3.2.4.3 Importance

*Node descriptor - Determining the importance to students for including Indigenous knowledge in pre-service teacher education.*

While the importance of including Indigenous knowledge may be obvious to the participants, the responses were very passionate in a way to convince the ‘others’ that there is an obvious oversight in curriculum content, pedagogy, and in the content of Initial Teacher Education courses. Responses went straight to the heart of Identity, True Australian History, and Respect and Resilience in the face of Racism. There were positive comments about the way that Indigenous educators can use Indigenous knowledge to support Indigenous students.

4.3.2.4.3.1 Identity

*Node descriptor – specific examples of the importance of Indigenous knowledge to students.*

A positive self-image for Indigenous students and the role models that they see in Indigenous educators is one area of impact nominated by George, Nerrida, Melissa, Jane and Trina. Being able to share information about their own identity and
Indigenous knowledge is also important for contributing to the cultural awareness of others.

“I relate it just to identity. I think it builds upon them. So, you know we’re teaching them to all be equal and you know, no-one is better than anybody else, but you still need to challenge students to want to be better than they are or set goals and be higher. To understand Indigenous knowledges is to understand who they are and where they are from. And, it's not a short and brief history but it's the history of ancient Australia and present Australia. Them having that knowledge will help them feel stronger in the future because they don't learn about it when they're 20 something and going to university and get the shock of their life. They use that and embrace it now, and then when they're older they can use it and already have that understanding and foundations” (George).

“It starts with the kids and it starts with the students. If they see it's a part of their identity when they're kids, then they'll know how to use it and embrace it when they are older as well” (George).

“...particularly for me and for the young ones. I find that they are starting to develop socially, emotionally, physically. So, there are all these little things that are happening in their mind but time to nurture them in general as little people” (Jane).

“I noticed in general talking to the older kids, say from Transition/Year 1 or 2 that some of them are just starting to identify. ‘Hey Miss, are you Aboriginal?’ ‘Yes I am.’ ‘Well,
I'm Aboriginal too.' They're just trying to figure out who they are as little people, so I find that part important” (Jane).

“Indigenous knowledges are relevant to Indigenous kids. They need to see more Indigenous adults in schools as role models” (Melissa).

“When we are talking about topics, they get to share their knowledge, like last year about the Stolen Generation and other stories as well, all their languages, all their experiences of that” (Nerrida).

“It is fundamental for human growth and development, I think. Identity, language, who we are, and where we are from is a significant part. And, because there has been so much negativity around Aboriginal people, Aboriginal issues, Aboriginal kids...the concept” (Nerrida).

“...that Aboriginal and Torres Strait Islander students are able to see themselves, their identities and their cultures reflected in the curriculum of each of the learning areas, can fully participate in the curriculum and can build their self-esteem” (Trina).

4.3.2.4.3.2 True (Aboriginal) Australian History

Node descriptor – specific examples of the importance of Indigenous knowledge to students.

It was suggested by the Indigenous educators participating in this research study that true Aboriginal Australian history needs to be taught in schools. This implies
that it is not already happening in schools. The overall message from the responses given was that if students could learn about the truth of Indigenous people and culture before colonisation, then what was suffered by Indigenous people as a result of colonisation, transformative learning could contribute to understanding and empathy of contemporary Indigenous people and culture.

“So, that if they're working with Indigenous or even, they are not they can say this is what the world is actually like and what it is really like for Indigenous people. It's the real history and this is what we can embrace from that. They can be strong in sharing that” (George).

“I have always believed that education is key. If we as nation have genuine intentions of ‘reconciliation’ we must share the true story about Australia. Not just the white invasion. Indigenous knowledges will give non-Indigenous Australians a chance to be respectful to Indigenous Australians. Also, through gaining an understanding an amount of fear will be dispelled. Bringing all Australians closer together” (Helen).

“This is our History, the Australian culture. This should be taught in schools; this should be learnt” (Sharon).

4.3.2.4.3.3 Respect and Resilience in the face of Racism

Node descriptor – specific examples of the importance of Indigenous knowledge to students.

“It's just mainly helping them grow and be. That is one of the key factors at our school to learn resilience and respect” (Jane).
“You still get people who don't understand what Clontarf is for, and the negative connotations that come with that. People thinking that Aboriginal kids get privileges and then it starts forming that negative opinion. Kids see that, feel that, know that and they don't whine about it. They just carry it on their shoulders. Again, that is deteriorating who they are and how they feel as people. So, if they have teachers acknowledge them and let them know that they are just as important as any other kid in the class then that makes a significant difference” (Nerrida).

Clontarf is an Indigenous specific engagement program centred around encouragement for school attendance attached to the teamwork required in the game of Australian rules football. (See http://www.clontarf.org.au/about/)

4.3.2.4.3.4 Indigenous educators can use Indigenous knowledge to support Indigenous students

Node descriptor – specific examples of the importance of Indigenous knowledge to students.

Indigenous knowledge was important for a cultural connection between Indigenous students and Indigenous educators to strengthen student identity and resilience.

“Indigenous teachers use it when teaching Indigenous kids. The connections are important and mean that teachers can use different teaching methods or different ways to explain something” (Melissa).
“We care, and Indigenous kids need more Indigenous teachers” (Melissa).

“The most obvious point from an Indigenous teacher to an Indigenous student is being able to be relatable. I think also that we have responsibility as Indigenous teachers to our Indigenous students to maintain that respect for our knowledge, and our culture, and our beliefs” (Phoebe).

To complement the many examples provided to confirm the importance of including Indigenous knowledge in pre-service teacher education, the participants were then asked to provide specific examples of the use.

4.3.2.4.4 Uses

*Node descriptor - In establishing the importance of Indigenous knowledge, participants provided examples of use in Learning.*

Responses in this instance were mostly concerned with cultural difference and vulnerability of Indigenous children.

“To help particularly with non-Indigenous children who had come up with that idea” (Jane).

“...there's lots of kids from all different backgrounds with different understandings about what they know” (Jane).

“There are all of these different elements that intertwine. It's not one without the other. So, I really link into that cultural understanding as well. We also talk a lot about ESL, and how just because you don't know Standard Australian English it doesn't make
you less knowledgeable as a person. Actually, you are probably much more advanced in the linguistic area because you are a lot more advanced in a number of different languages” (Nerrida).

“Get these kids to.... yeah, you know they have a really strong...they're proud of being Indigenous and I don't think that they get to embrace that enough when they don't have that specifically in their classroom and given to them” (Nerrida).

“All countries should know their history and their first people’s culture. This will create a sense of belonging to our children and a sense of understanding from others” (Sharon).

“Indigenous kids being taught and respected in a culturally aware way, all student’s being taught about the culture and world view of Indigenous Australian’s and breaking down negative stereotypes about Indigenous people” (Trina).

This area of questioning began to explore the possibilities of non-Indigenous teachers being responsible for the care and wellbeing of Indigenous students, perhaps prompting the more generalized and wellbeing centred responses. This realization highlights the need for non-Indigenous teachers to have broader cultural understandings if Indigenous knowledges is to be used effectively to benefit Indigenous students and ultimately improve academic outcomes. This leads on to our next node about Teaching and Indigenous Knowledge. As the participants have answered questions in the past about their own knowledge and mastery in the classroom in utilising Indigenous knowledges, the question about Teaching and Indigenous
knowledge addresses the ‘elephant in the room’. Could non-Indigenous teachers advocate for the use of Indigenous knowledge in the classroom? Could they use it themselves? If so, how? If not, then what next?

4.3.2.5 Teaching and Indigenous knowledge

Node descriptor - Indigenous and non-Indigenous focus/implications

Discussion about the use of Indigenous knowledge in the classroom work from the premise that it would provide a more inclusive learning environment for all students – both Indigenous and non-Indigenous (Berryman, 2014; Yunkaporta, 2009). And, that it would stop Indigenous students from being excluded in the learning.

Something to keep in mind is that the Australian teaching workforce has most non-Indigenous members. “More Indigenous people need to be in schools” (Melissa). If there are not enough Indigenous teachers to relate best to the Indigenous students, how could the majority non-Indigenous teachers utilize Indigenous knowledge to benefit the Indigenous students? Teachers can use Indigenous knowledge to “(1) Add value to their programs and find links in curriculum to teach about Indigenous knowledges, and (2) Use this knowledge to guide their own teaching and learning to support Indigenous students” (Trina).

Participant responses were concerned mainly with curriculum content and the artefacts of culture that are easily visible for non-Indigenous teachers to see and understand. The underlying message though was for non-Indigenous teachers to be
expected to gain a deeper understanding of Indigenous culture in order to operate in a respectful way.

“Indigenous Knowledge needs to be a stand-alone subject. If we are serious about it. I believe we need to go back to the beginning and tell history from the perspective of an Indigenous Australian. Then move forward into present day. It needs to be a holistic subject and one that speaks the truth” (Helen).

“By incorporating ATSI culture into the classroom and schools. Books, stories, songs, flags, totem poles, Aboriginal arts arounds the school, crafts, posters and photos of Indigenous families’ involvement within the schools. Also, by having Indigenous staff on the grounds to share culture” (Sharon).

Some responses alluded to an attitude or pedagogical approach that could be taken with students. “I had a student really talk to me the other day about 'why are we learning about ancient Australia Miss, if you say that you don't push different cultures and religions on us?' And, I say well because 'What is a part of Australia's identity? Who was here first? Who were the first Australian's and what archaeological evidence is telling us that?' She clicked and had that ah ha moment and thought yes, that is a part of Australian identity. So, we start with the background knowledge and understanding first” (Nerrida).
“The first day of term, or in the first week we work on ‘Getting to know you’ activities and a significant part of that is doing the building blocks of what forms their identity and what influences identity. Then we learn about where people come from” (Nerrida).

“I had a couple of kids sent to my room because they were naughty. They saw my artifacts and said, ‘Miss we're Indigenous?’ I said, ‘Yeah. I am too.’ They're like, ‘Really?’ And, you know it changed and there was a dynamic that changed. They hadn't known me before, and then they'll tell their story and if they are playing up, they are truly sorry. And, they can reflect on that. Even when it comes to discipline about behaviour. I'm not a teacher who stands up there and says, "You've done this, this, and this wrong." It's about the way that we approach different relationships with kids and, "What's happening. What's going on? We all have rough days, that's okay. What should you be doing? Doing that reflection." And, they know. They understand” (Nerrida).

However Indigenous knowledge is to be used. It should not be taken for granted that non-Indigenous teachers will know what to do. One of the responses also reminds us that even qualified teachers may need to upgrade their ability to use Indigenous knowledge in the classroom. “I don't think there's enough done for teachers, but I guess that's because they're already considered professional. You would think - that they would already have it, but it would be essential, I think. Even people who think they know, don't!” (Nerrida).
There are numerous opportunities to improve the current practice with regards to including Indigenous knowledge in classrooms and the beginning point is to prepare teachers better when they are engaged in pre-service teacher education. If required, further professional development could also help to ensure that even experienced educators know how to use Indigenous knowledge to affect positive change in Indigenous academic outcomes.

4.3.2.5.1 Importance

*Node descriptor - Determining whether Indigenous knowledge is important for Teaching.*

Indigenous educators participating in this research study confirmed and described the importance of using Indigenous knowledge in Teaching. The resounding message was that Indigenous knowledge enhanced their abilities as teachers and adds further understanding to the curriculum that may otherwise be overlooked or not considered. “Add value to their programs and find links in curriculum to teach about Indigenous knowledges” (Trina).

“I think that having the Indigenous knowledges is a huge part that contributes to your professionalism, and your leadership skills and knowledges as well” (George).

“Aboriginal and Torres Strait Islander Histories and Cultures cross-curriculum priority is designed for all students to engage in reconciliation, respect and recognition of the world’s oldest continuous living cultures” (Trina).
“...as to how it fits into the classroom at different levels - at this stage I'm not sure because as I said I only focus just mainly on pre-school. As I get my teaching profession and experience, I will be exposed to different grades and different areas. So, then trying to look at how that could be applied in those parts” (Jane).

Still, the strongest message is about the importance of Indigenous knowledge to teaching pedagogy. “Indigenous knowledge is important for teachers to be able to get that connection with Indigenous kids” (Melissa).

Opposite to western educational rigid ideals of professional distance, teaching curriculum and then assessing the student progress, the importance of Indigenous knowledge is relationships, caring, connections and mutual respect. This shapes the way the teacher and student interact and creates a more inclusive learning environment that is student centred (Woodroffe, 2016).

“We talk about people and their different backgrounds in class, and when you use a pedagogy such as Yunkaporta's it is transferable to every single race that is sitting in a classroom” (Nerrida).

“I can honestly say that in this school I haven't been sworn at, whereas a lot of teachers would be like, ‘Oh. They haven't called you a white C, a 'this and that' or a mole?’ ‘No. I don't get that.’ It's a different style of teaching or way that I approach. I'm not authoritative. A lot of these kids get that at home and in their background. A lot of these kids are getting yelled at..., or their positive self-concepts are deteriorating. There is a lot going on at home and they need that positive reinforcement” (Nerrida).
“I think in my experiences as a teacher, I think I am quite effective particularly when teaching students from other cultures because they understand the significance of culture. It is quite relatable to their own culture, some of the things that we do and say, our beliefs etc. I think as an Indigenous teacher, we are very lucky in that sense because we know that when we share this stuff, we are really mindful to make sure it is meaningful and it's not superficial” (Phoebe).

4.3.2.5.2 Uses

*Node Descriptor - In establishing the importance of Indigenous knowledge, participants can provide examples of use in Teaching.*

If Indigenous knowledge is important because of the difference to established western educational beliefs and practices, then it would follow that the ways that Indigenous knowledge could be used in education would be ways that value and allow for this difference.

“Teaching about the Indigenous views in various subjects and the Indigenous ways of managing things (e.g. the environment, sharing etc., kinship, spirituality, history, storytelling, art)” (Trina).

“It means that I know their family, the community politics. I have an awareness of issues before kids even get to school; before kids get in trouble. I know the families and community, and if there may have been any trauma. This goes for (Indigenous) Assistant Teachers too” (Melissa).
“Indigenous knowledges to me in classes are that perspectives. Every class that do narratives in Term 1, all include creation stories or dreaming stories and say that this is the way that morals are learnt, or rules are taught. How people learn to look after each other and the environment. It's the Indigenous knowledges that I see in school now every day, but not at a deeper level” (George).

“We focus a lot on that as well, especially in middle school as adolescents. Perspectives - and I do use a lot of terms; I interchange between colonisation, invasion, and settlement. We look at those three different perspectives of things. We look at racial superiority and how that comes to be. It sounds a lot raw and we look at the darkest periods in history and how Australia has come to be so multicultural now” (Nerrida).

“Honestly, I think that we are more understanding, because we understand our own mob. We know our statistics. We know our demographics. We know the background of a lot of our kids without even knowing but understanding and taking the time to build that relationship with them. And, I think that because of that and if we have grown up like that ourselves. There is automatically an unknown connection that happens there where the kids are comfortable. That respect factor is already there” (Nerrida).

“Teaching non-Indigenous students, we need to be able to get our non-Indigenous students to understand the world that they are living in, the environment that they are living in and the people from that place. In order for them to grow up and have empathy and real understanding of what has impacted and how to maintain relationships with the Indigenous people” (Phoebe).
Students need to be able to make connections with everyday life and the curriculum content. Perhaps the importance of Indigenous knowledge is that it provides a context through which Australian students can truly understand their reality.

“So, get them to bring up something and get them to relate it, familiar with what they know, and you know, extend on that by saying how it has already been done for thousands of years” (George).

“In all aspects of my teaching, no matter what I am doing - whether it is well-being, English, and History, incorporating all aspects of Indigenous history and culture. I would like to do more, but the curriculum doesn't allow us to, which is unfortunate” (Nerrida).

If anything, a conscious effort to incorporate Indigenous knowledge into the classroom allows for more discussion about Indigenous Australians and an opportunity to normalize Indigenous content and pedagogy. “I said, okay, I identify as an Indigenous person. ‘This is my family connections. This is where my family grew up. This is the language that they speak etc.’ Even personally if I'm meeting new people, I do it anyway as something that I've grown up with. ‘My family is so and so. This is my family connections out there.’ Just so that they know where I'm coming from. I do it on a professional as well as a personal level” (Jane).

“Teachers need to be able to teach and find links in curriculum to meet the cross-curricula priority of Indigenous History and Culture – specifically (from ACARA):
“The Australian Curriculum sets consistent national standards to improve learning outcomes for all young Australians. ACARA acknowledges the gap in learning outcomes between Aboriginal and Torres Strait Islander students and their non-Indigenous peers. It recognises the need for the Australian Curriculum to provide every opportunity possible to ‘close the gap’” (Trina).

Despite the points of difference already mentioned, there are also similarities. “It sounds like the EYLF Early Childhood curriculum with Being and Belonging. I am an Early Childhood educator” (Melissa).

“Challengingly Indigenous Australians differ from tribe to tribe. Some differences are small, yet some are vastly different. This is where I stumbled to really consider this question. Then I considered that I was looking at the question from the wrong angle. Instead of focusing on our differences focus on our commonalities. In which we do also have many. Men’s business, women’s business, saying deceased persons names, appropriate body language and communication – to name a few” (Helen).

4.3.2.5.2.1 Personal

Node Descriptor - Personal aspects of Indigenous knowledge in Teaching.

Identity for Indigenous educators’ shapes perspective and behaviour. Indigenous knowledge as part of identity impacts an Indigenous educator personally, as well as having professional implications. As an Indigenous person, my Indigenous knowledge provides a strength of family and support, as well as a confidence in knowing who I am and what I believe. This is my sense of Being. Teaching with this
strength provides a platform with which to anchor my Indigenous standpoint. Standpoint allows for reflective practice; a necessity for teachers (Brookfield, 2017).

Speaking about the personal application of Indigenous knowledge enabled Indigenous educators participating in this research study to confidently speak about their own thoughts and opinions, coming from a position of strength and expertise.

“Only from my experiences at this school, we have had someone come in and teach Indigenous knowledges for two hours maybe a year, you know. And, that might be an event that we set up on reconciliation week” (George).

“What it looks like in a classroom to me is embracing it; taking hold of it and integrating it into every aspect of learning because it can be” (Nerrida).

“I use my Indigenous knowledge personally all the time. From what I’ve learnt growing up in my families, I apply it and teach my children just through my knowledge. And, it is just something that a part of who I am” (Phoebe).

“There are so many creation stories that tell us how to treat each other and how we should be going i.e. following paths and our journey in finding our identity and how much that strengthens us to go forward, to achieve. Even to set goals and better ourselves in our lives” (George).

The way that participants have expressed and explained this personal use demonstrates the value of the knowledge itself. For example, developing and maintaining connections and relationships. “Personally; engaging with Indigenous students and their families, engaging with the community i.e. Indigenous organisations,
health centres, youth groups” (Helen). And, “I always tell the students who I am and where I come from, especially my Indigenous bloodlines and where they are, and we talk about the language map and stuff like that. I think connecting your personal stories and experiences with the kids really gets them to open up and understand different perspectives as well. So, personally I share a part of me and allow the kids to do so” (Nerrida).

As you would expect, while discussing Indigenous knowledge and identity, the conversation includes comments about Indigenous languages. “I try to blend in my personal experiences particularly because I had a lot of language spoken to me when I was a child…I had an understanding of both of those aspects growing up and then having to speak mainly Standard Australian English (SAE) in school” (Jane). This comment is the participant making personal links to perhaps feeling a loss of opportunity to speak their own Indigenous language within the current Australian education system where the dominant language is English. The participant is also expressing empathy or shared understanding for Indigenous students’ whose own languages (and intelligence and ability in this language) are not valued. There is a frustration that teachers are not aware or prepared well enough to support Indigenous students in this area. The skill required is not only linguistic but also cultural understandings, and about student well-being. Self-image, self-identity and language are underlying issues for Indigenous Australians in the current system because of the historical contexts that are often not acknowledged as part of Australian history. This is seen clearly in Australian educational discourse. “Australian history textbooks continue
to portray Australians as white. Further work is needed to ensure textbooks adequately represent all Australians” (Moore, 2017, para. 29). Many participant comments continue to demand that ‘true Aboriginal history be taught as part of the Australian history curriculum. This area has been a topic of debate with politicians and Indigenous academics weighing in. Despite minor changes and the change of labelling for example, from Indigenous Perspectives to Indigenous Priorities, the National Curriculum is still sadly lacking. The Donnelly and Wiltshire 2014 Review of the National Curriculum stated that the curriculum should focus even more on the positive outcomes of colonisation. “More emphasis on our Judeo-Christian heritage, the role of Western civilisation in contributing to our society, and the influence of our British system of government” (Adoniou, Louden, Zyngier & Riddle, 2014, para. 5).

One participant commented specifically on how Indigenous knowledge should be used to benefit Indigenous students in the way that teachers could, “Use this knowledge to guide their own teaching and learning to support Indigenous students” (Trina). This comment connects directly with the idea of cultural links and common understandings. As outlined by researchers such as Malin (1990) and Partington et al. (1999).

Surprisingly, one of the participants commented on how non-Indigenous educators could and should also use Indigenous knowledge to their advantage. “Personally, I think that it just strengthens their identity, as who they are and where they are in the world. They can attach that to themselves. Have that Indigenous knowledges and personally I think that they might feel stronger, because it’s nothing
that's failed you know…… I guess personally that non-Indigenous identify themselves as being Darwinites or you know Territorians, if they learn anything about the nature that has already been learnt or practiced since before the territory, before federation, before colonisation, before all of that then I think that they need to attach that to identity and be proud of that. This is nothing new and it’s not something because I've come along and learnt it but something that I can pick up and share. When they share with other people, they can say ‘this is prominent to Indigenous people. I've learnt this and now I'm passionate about it’” (George).

This is an unusual comment because some of the participant comments have stated that non-Indigenous people cannot have an Indigenous perspective and could not teach using Indigenous knowledge with the appropriate amount of respect or depth of understanding. There are different attitudes and opinions expressed by the participant group about this concept. The participant making the comments is providing some professional opinion about how other non-Indigenous educators could also engage with and further support Indigenous students as outlined.

4.3.2.5.2.2 Professional

Node Descriptor - Professional aspects of Indigenous knowledge in Teaching.

This concept is of interest because it is where the proverbial line is drawn in the sand. This information outlines where Indigenous knowledge fits within a western frame. Participants work and study within the guidelines and expectations of employers and demonstrate their knowledge and abilities in line with the Australian
Professional Standards for Teachers. Teachers are measured against these expectations and must prove their professionalism in this way. This represents their Teacher Identity as described in the Introduction and explained further in the Literature Review.

Indigenous identity within the Australian education system is an area of contention with many Indigenous Australians choosing not to engage, while others’ attempts to engage are thwarted by poor academic results and repeated failure reported annually in national assessment processes.

The opinions of Indigenous teachers who have been successful in manoeuvring through the system as students and then as teachers are invaluable in understanding how an Indigenous identity may finally be authentically and respectfully represented within a system that is meant to cater to every Australian citizen. These opinions and recommendations given by successful educators who are also Indigenous can improve Initial Teacher Education.

Teaching and Indigenous knowledges uses are many and varied. The Indigenous educators interviewed listed specific areas of overlap and potential that can be broadly described in an educational context as curriculum, communication and pedagogy, and teacher career progression.

4.3.2.5.2.2.1 Curriculum

*Node descriptor – specific examples of personal aspects of Indigenous knowledge in Teaching.*
Participants discussed the relevance of language, mathematics, science, agriculture and the interconnectedness of systems in the curriculum and easily linked these with Indigenous knowledge, “...the farming and looking at the seasons and how each way the wind blows and each way the fruits come about. Throughout the year that's the Indigenous knowledges that we should share with everyone, especially the kids so that they can use that when they are growing up” (George). And, “...she incorporated the Larrakia calendar for students and she focused on that for most of the term. So, everybody regardless of their background, was learning the Larrakia words for the different parts of the weather and the different seasons. These were Transition/Year 1 kids. I think that worked really well” (Jane).

With regards to the curriculum, and any possible connections to Indigenous Australia, the need for an expanded and more truthful depiction of Australian History is a theme that is repeated such as, “Implementation of lessons on Indigenous Knowledge into the class room for example; to teach a broader scope of Australian history” (Helen). More accurately, participants state the need for an expanded version of Australian History that includes Indigenous perspectives and acknowledgement of the poor treatment of Indigenous people since colonisation began. Recognition of the gaps in Australian History in the current curriculum is required, “I do it in English and History. Ancient Australia for example is not an in-depth study which frustrates me. So, I spend a lot more than what I am meant to. I bring in elders to talk about things; we research dreamtime stories to Aboriginal artefacts. We do a lot of independent research of facts
and get the students to explore and then present those findings, and their significant belief systems” (Nerrida).

English and Social Studies, specifically persuasive text and cultural sensitivity, are also reported as areas of importance because of the direct link with Indigenous knowledge, “...we also touch on a lot of things such as persuasive speeches such as National Sorry Day - the apology by Kevin Rudd, or even a Vincent Lingiari biography that we can explore, and watching my kids in the first 5 weeks who have never learnt about the White Australia Policy or don't have much understanding about the Stolen Generation. Their world and their perspective are just changed” (Nerrida).

As part of health education, the curriculum also incorporates learning about mental health and well-being. Negative perceptions of Indigenous achievement make this key learning area even more important for Indigenous students and Indigenous educators having a particular insight allows them to understand this and place the required emphasis on the learning required to bolster student pride and improve self-image, “We talk about how we all don't get the same opportunities, or all have the same backgrounds and how that has come about; we don't judge people for that. I was really proud watching them today because we did the women's business and a lot of them were speaking out and tying in with NAIDOC” (Nerrida).

Overall, participants thought that using Indigenous knowledge in teaching enhanced curriculum and the resulting teaching programs. “Add value to their programs and find links in curriculum to teach about Indigenous knowledge” (Trina).
Links exist, and teachers should stretch their understandings of the curriculum and the world to create the best learning environment for all students. This expanded approach would be more inclusive of difference and possibility. “...maybe that could be extended and a bit more, I suppose, just celebrating the diversity in general because there's lots of kids from all different backgrounds with different understandings about what they know” (Jane). Schools could ensure that this approach is adopted by creating more appropriate Scope and Sequence guidelines for programming across the year levels and Key Learning Areas.

4.3.2.5.2.2.2 Communication and Pedagogy

*Node descriptor – specific examples of personal aspects of Indigenous knowledge in Teaching.*

While curriculum is prescribed and to a degree hinders flexibility, the way that teachers communicate and the approach that they take to delivery of learning can be accommodating of different approaches and styles. Teachers have their own preferred teaching styles and students have their own preferred learning styles. “Through gaining an understanding that Indigenous students learn differently to non-Indigenous Australians, a teacher can structure their pedagogy to be inclusive for all students” (Helen). Expanding on this, “...learning and understanding; different ways of learning and understanding such as ‘The 8 Ways of Aboriginal Learning’ pedagogy by Tyson Yunkaporta. We can connect this to how we see Indigenous Knowledge in schools” (Nerrida).
This is where many of the Indigenous educators participating in this research study felt that their Indigeneity and their Indigenous knowledge gave them a point of difference to other non-Indigenous educators; perhaps even an advantage in the ability to respond and make strong student connections. In this way, understanding and using Indigenous knowledge in teaching is invaluable. “Significantly, definitely - in the way that I communicate with students. So, whether it's gestures or whether it's facial and body language, I can do that across the oval. You know things like that I can use different comments, I know there are different languages but when you say something in an Indigenous language or Aboriginal English then kids connect instantly. And if you say that in the first weeks then you will probably have them doing whatever you want for the next six months because you've got that attachment and, that relationship too, especially with kinship” (George).

Making connections and sharing something of our ‘Indigenous’ selves is how we strengthen student-teacher relationships. “I think in my experiences as a teacher, I think I am quite effective particularly when teaching students from other cultures because they understand the significance of culture. It is quite relatable to their own culture, some of the things that we do and say, our beliefs etc. I think as an Indigenous teacher, we are very lucky in that sense because we know that when we share this stuff, we are really mindful to make sure it is meaningful and it's not superficial” (Phoebe).

This last statement and the next refers to sharing which is a more informal process allowing for deeper connections, “I actually asked my mother to come and talk
to the students about her experiences, language and talking about her stories that had been passed through. We've done 'Heads, shoulders, knees and toes' and 'Twinkle, twinkle little star'. It was probably a really small introduction for some of the kids but took about 20 minutes. That was just a brief little glimpse I suppose into that part, because there is so much that you could do with it, but it was something that I thought was simple” (Jane). However, we are still reminded of the professional distance expected in the western-style classroom. “Professionally, I really have to be careful how I can share that information with students to ensure that they understand and really respect that” (Phoebe).

4.3.2.5.2.2.3 Teacher Career Progression

*Node descriptor – specific examples of personal aspects of Indigenous knowledge in Teaching.*

George felt that his understanding of Indigenous knowledge provided him with an advantage in leadership opportunities and an area to excel in, creating pathways into senior roles and career advancement. “In the schools I feel a stronger identifying as Indigenous because I know it opens up doors for learning and relating it to Indigenous knowledges and some teachers will use you in that regard. And, also in senior roles as well. That sort of thing. If you've got those relationships with students, and you understand your work and curriculum and everything that would make you a better candidate, I guess, to have those senior roles” (George).
This was then further explained in an Indigenous perspective. “I think people see...traditionally with elders you know they're in a senior role. They have that respect. They're promoted to senior roles further and further along because the knowledges just keep building” (George). As a teacher with expectations of continued learning and professional development, promotion would be an expectation for many. Indigenous educators have a unique position of possessing an Indigenous standpoint and Indigenous knowledge. With so few Indigenous educators in comparison to non-Indigenous educators in the Australian education system, the demand is high on the few to perform leadership roles. It was stated that there should be recognition of this as a professional teacher. “Professionally, I don’t think that it’s just becoming an experienced teacher. It’s just becoming experienced and building on that. Going into senior teacher and AP it becomes about that path, not of expectation but of where you’re destined” (George).

The priori codes and responses overall were created to answer the research questions. Revisiting the questions and considering the answers given by Indigenous educators participating in this research study, there can be no doubt as to the importance of including Indigenous knowledge in pre-service teacher education. The types of knowledge have been outlined and contextual links have been made to both curriculum and pedagogy. This part of the research project was expected. Indigenous educators participating in this research study had contributed to a group effort. What the Indigenous educators participating in this research study thought relevant and necessary to add to the data next, with Question 9, was both unexpected and
interesting because of the unique opportunity for each participant to be heard more as an individual discussing something emergent.
5. ADDITIONAL DATA PROVIDED BY PARTICIPANTS

5.1 Introduction

This chapter contains the data and analysis of question 9 of the semi-structured interviews which was an open-ended question. Due to the nature of the question, new information about the research topic emerged. For the purpose of this research study the information was called emergent (codes and themes). The second phase of data collection is also included in this chapter which was participant journaling.

Question 9 in the semi-structured interview enabled Indigenous educators participating in this research study to further express their thoughts, opinions and understandings of the research topic. The analysis of the responses to the semi-structured interview questions 1 to 8 were sorted against codes created from aspects of the interview questions, with thematic analysis happening after that for deeper analysis where required. The analysis of question 9’s responses was only thematic. Indigenous educators participating in this research study added to the richness of data being collected, and more opportunity for Indigenous voice.

During the data collection phase, Indigenous educators participating in this research study were asked if they had anything else to add. This is how the coding began.
5.2 Emergent codes - anything else to add?

Node descriptor – examples of additional information that participants thought relevant to the research.

The insistence of the participants to raise further issues with the system highlights the shortcomings from an Indigenous perspective. In understanding and creating their own professional teacher identity, Indigenous educators are influenced by their own personal Indigenous identity and are disappointed or perhaps disillusioned by the failings of a system, and the limitations of professional standards that still allow Indigenous students to experience continued failure and underperformance.

The review of literature in Chapter 2 discussed the lack of Indigenous representation in curriculum and pedagogy, within the national curriculum and then within schools. George extended this view by then linking Reconciliation Action Plans as policy disconnected from what occurs as practice in schools. A lack of accountability within schools creates a difficult environment for Indigenous teachers. “Unless it comes from the Department, from the CE, the schools don't have to do it. And they won't make it mandate, but a school like xxxxxxxxxx we're not aligned to anything but mainly I'm the only one driving Indigenous perspectives as a whole-school approach. Not in every class. I won't go and tell a teacher they have to do it or anything, but I'll provide resources for teachers maybe during Reconciliation Week” (George).
Despite the daily challenges and the effort required to constantly lead by example, Indigenous teachers appear to have positive attitudes and valuable ideas. “My goal is to have, as much as we've got Indigenous curriculum revitalisation and maintenance of languages, there needs to be something for schools to take on... It’s things like acknowledging traditional custodians at the start of assemblies and at school council meetings and things like that; trying to make those policies in place where it's overarching; the whole school... It's the teachers doing it off their own bat. So, it's really hard but I would like every school to be connected to their Indigenous groups in one way or another, so they can share that with the kids. Deeper knowledge you know. That's the goal I think, to have that deeper knowledge” (George).

George had clearly defined views about how to make necessary changes so that schools become positively involved in Indigenous engagement and representation. The suggested change incorporates identity and belonging as well as connections to Indigenous language groups. It requires a commitment on behalf of the schools to create and sustain these Indigenous connections. “I believe in Darwin, Larrakia should be really connected with Larrakia language and sharing and teaching that. Wanguri should be really connected with the Wanguri clan. Malak should be really connected with Malak Malak. All those names of specific tribal groups are not just names, they need to be living and be promoted in schools. Our school doesn't have a language and I can't really connect with any sources yet that I know are Larrakia speakers. And the ones that I do know only know names of things and places, but not phrases. You know, like 'Hello. How are you today? This is a great day.' I've spoken to someone recently
and they're going to give me some contacts. I think maybe that should be a database for schools. To have contact with and say this is your school. ‘You’re a brand-new teacher. This is our Indigenous connections. This is what we do in a school; our curriculum map” (George).

The theme of policy not impacting on practice in schools continued with Helen acknowledging that although there have been positive changes in the treatment and inclusion of Indigenous Australians, there is still a long way to go. “I believe that I am from the ‘lucky’ generation within my family. My father was stolen, and his mother was stolen. Now I am at university. Once upon a time my grandmother was not allowed an education. So, I am doing this degree not just for me... Under the current system my four-year-old daughter will go to school next year and be expected to learn in Australian Standard English (SAE) taught by a predominantly white teaching group. My daughter speaks six Yolngu languages, one Yolngu sign language, Australian Aboriginal English (AAE) and is learning SAE” (Helen). There was a very strong feeling of disrespect or lack of understanding and acknowledgement of the intellect evident in Indigenous language skills and ability; evidence of continued linguistic imperialism within the Australian education system. “Imagine going to school on your first day only to find out your lessons would be in Japanese. How can you learn when you cannot understand the language? I cry because people from so far away in the UN value and respect us but the very people who stole our land do not have respectful actions towards us, just documents in Canberra” (Helen).
While schools may be a source of frustration in the way that policy change does not seem to impact school practice because of the lack of mandated change, universities are also held responsible for not representing Indigenous Australia within teacher education courses. “I think from a uni perspective, I think in the degree, you are condensing everything because it is such a short amount of time, with only maybe one (Indigenous) unit to look at” (Jane).

One way to increase or facilitate Indigenous representation was suggested by Jane as networking and collaboration opportunities. Safety in numbers springs to mind. “There may be an opportunity to have some networking with other Indigenous students or teachers, pre-service teachers, or graduate teachers at uni and say ‘Hey, I've been through this course. This is what's happening if you want to know about an Indigenous perspective’ or actually out in the field, having that networking opportunity. Even if it was via Facebook or CDU website or something” (Jane). This is where the lines between being a student at university and then becoming a teacher and an employee of a system become blurred. Whose responsibility is it to ensure a continuity of support? This could be an extension of the existing teaching schools’ program as a way of supporting graduates. “Once you get that piece of paper, for me there hasn't been any real feedback, apart from ‘Yes - we've graduated, and we have that piece of paper. We've had a ceremony and that's it. Off into the wide world we go’” (Jane).

The need for networking with other Indigenous pre-service teachers and graduates was evident despite feeling well supported in a school. “I'm lucky where I am at my school. They're quite supportive and it doesn't matter if I approach somebody
that might be in grade 3/4 or a T/1 teacher. People are always willing to help out. You know even if they say, ‘I don't know the answer but let's go find out from this person’” (Jane).

This realization adds another layer to identity – group identity. It is important for people to feel that they belong. In becoming a teacher, Indigenous Australians find themselves again as part of the minority. While working hard to build a professional identity and reputation, Indigenous educators also belong to this group of Indigenous educators. Then, they are not alone. “So, it's not as if I'm by myself” (Jane). After self-categorisation, what results is the Indigenous educators belonging to an ‘in-group’ with everyone else being a part of the ‘out-group’. Each group has a set of norms; internalized rules that exist in the group. Social identity theory assists in-group members to see their group and themselves in a positive light, improving self-image. As comparisons between groups are made, this can lead to the out-group as being seen in a negative light. (Chapter 3: How Groups Function, 2006)

The process of becoming a teacher, within the current system, is complex for Indigenous Australians. Perhaps more complex than they first thought it would be. The complexity seems to be embedded in the system – in the absence of Indigenous content and knowledge, comparisons made between in-groups and out-groups, and the default position of western relevance. Is ‘complexity’ a reason for Indigenous Australians to disengage with the Australian education system? I would argue, “No!” Complexity is not a reason for disengagement. Further responses from novice and experienced Indigenous educators present strong and confident views. The missing
piece of the puzzle that is stopping improvement of a national system, and improving academic achievement and opportunity for Indigenous Australians, is the lack of appropriate respect for the people and the lack of listening to their voices. Respectful and appropriate consultation is required to begin with, then Indigenous Australians must be included in decision-making processes about implementing change in the national education system. In the case of this research, changes should be made in teacher education courses to include Indigenous knowledge. A key point to state here is the fact that the people to be consulted should be those Indigenous people with the knowledge required – pre-service teachers, graduates and experienced teachers.

Melissa is a very experienced teacher, an assistant principal and someone with a very strong perspective about what changes should be made. Melissa spoke about the difference in prioritising different aspects of education and that this is a point of contention between Indigenous and western pedagogy.
In this first diagram you can see the significance of the Indigenous culture. It is central, and it is the basis for the education to follow. The people are most important, and the curriculum is secondary. The final comment is both interesting and distressing. The thought that Indigenous children and families need protection within the current education system says volumes about the lack of respect and sense of belonging. Melissa has provided an alternative view of Indigenous educational priorities and expectations, but also described how Indigenous educators interpret the system and their role within it.

This is a different approach to the western model prescribed in most standard Australian public schools, where curriculum is the starting point for education.
programs; teachers are assessment and outcomes focused. Students are taught in a formal setting and expected to progress at a similar rate through achievement levels, an example of which are the standards applied to the National Assessment Plan – Literacy and Numeracy (NAPLAN) assessment.

Figure 9 - Western Pedagogy

**Western Pedagogy**

There is a conflict between professional teacher identity, the expectations that come with being a competent teacher, and what Indigenous educators feel is required to best cater to their students’ learning and needs. “I’m a teacher who tries to integrate Indigenous knowledges and perspectives, maybe not as well as I would like to, or that
the curriculum allows me to. What I do in the process is trying to share my resources, especially in the area of Indigenous knowledges and perspectives” (Nerrida).

The lack of knowledge and understanding provided to teachers becomes an issue within schools to be able to educate students in Indigenous content, perspectives and history. Some non-Indigenous teachers are less inclined to teach Indigenous content, perspectives and history if they are not familiar with the material themselves. “I send them off in the hope that these teachers will be confident and able to deliver some aspect of teaching as simple as being a NAIDOC theme being Our Languages Matter” (Nerrida).

The burden for Indigenous education often falls to the Indigenous teachers. “... ‘I did all the research on all this and send this to your kids and look at the languages, this is the page and there are heaps of resources’. That is how I am trying to influence my way, helping teachers to feel more confident because there is a large cohort that don’t get that in different classrooms” (Nerrida).

There is no imperative for teachers to teach Indigenous content, perspectives or history. In the Australian curriculum, Indigenous matters are treated as one of the three cross-curriculum priorities (which use to be called perspectives). These are themes that may cross over many different learning outcomes in the curriculum. They are still generalized, and not mandated in any significant way that results in changes to teaching practice in schools. “It should be taught as a priority. Is it a priority or a general capability? General capabilities are meant to be across everything. I've seen
people just tick a box without any real depth or understanding. Then, all the kids are coming up to Years 7, 8 or 9 and have no idea about The Stolen Generation or about the real history of Australia, and that is why there is so much of a divide when Australia Day comes” (Nerrida).

The lack of knowledge about Indigenous people (content, perspectives, history) impacts negatively in that it creates an environment of ignorance. Indigenous teachers then feel responsible for providing the correct information, dispelling the ignorance. “I have a good group of two classes this year that I have been able to grow and develop. They have their say and when they see racism in the classroom, whether it's towards someone of a different colour, they jump on board straight away and they pull people up. It's been just phenomenal to see them grow in the last 5 weeks, but it's not a priority in the curriculum for us” (Nerrida).

Indigenous teachers know that the current system must change and agree about the importance of research, such as this project, to effect change on the education system, and on teacher education courses. “All the best! Great topic” (Sharon). One way to promote the need for change of the system is to align with the current Indigenous links such as the Australian Professional Standards for Teachers 1.4 and 2.4.
5.2.1 Australian professional standards requirements for 1.4 and 2.4

Node Descriptor - These are the standards that relate directly to teaching Indigenous learners. Pre-service teachers and teachers must provide evidence of their ability to satisfactorily meet these standards.

Both Standard 1 and 2 are about Professional Knowledge. The standards are in place to “contribute to the professionalisation of teaching and raise the status of the profession. They could also be used as the basis for a professional accountability model, helping to ensure that teachers can demonstrate appropriate levels of professional knowledge, professional practice and professional engagement” (ACARA, 2011, p. 2).

Standard 1 is about Knowing your students and how to teach them. Without an adequate understanding of Indigenous Australians, and the Indigenous knowledge that comes with that, how can teachers even attempt to demonstrate this standard, let alone demonstrate the standard to the necessary level? Truly knowing about Indigenous students may require a different pedagogical approach to learning and will require effective communication in the form of feedback as part of the teaching and learning cycle. There are examples for how to demonstrate the standards but where is the accountability for pre-service teachers and teachers to learn this knowledge in the first place?

Observing and noting demonstrations does not provide a deeper knowledge required to understand Indigenous Australia and all that that entails. This realization
results in non-Indigenous teachers avoiding teaching the associated curriculum. “I highly doubt that you would find a school in the Territory that doesn't have an Indigenous student, despite being told by my pre-service teachers that they are unable to meet the Australian Professional Standards around working with Indigenous students because they don't have an Indigenous student in their classroom. Frustrates the hell out of me that one because I think – ‘How could that be possible?’” (Phoebe).

This leads us to the next standard.

Standard 2 is about *Knowing the content and how to teach it*. As already stated in the literature review, Chapter 2, students will learn best from expert teachers. Expert teachers have an innate ability to know what their students need and support learning with a complex and deeper understanding of the content (Hattie, 2003). Expert teachers are adaptable and able to adjust their pedagogical approach to the student needs. Unfortunately, not all teachers are expert. Teaching is an art and takes time to develop skills and knowledge required to be an expert in the profession. Therefore, it makes sense to provide as much knowledge and skill development opportunities required for pre-service teachers to enter the profession with the confidence and ability to cater to not only for their Indigenous students but to provide non-Indigenous students with a comprehensive and correct education about Indigenous Australia.

“...just because you don't have an Indigenous student in your classroom (or you think you don't) doesn't mean that you shouldn't be teaching Indigenous knowledge in the classroom, in fact, all the more reason why you should be because at some stage these students need to get their understanding around Indigenous knowledges” (Phoebe).
Education is important to Indigenous people, contrary to deficit views about Indigenous education.

5.2.2 Community support success

**Node Descriptor - Many students are the first people in their families to study at university.**

Education is important to Indigenous people and successes are acknowledged and celebrated. However, Indigenous people are still trying to find their way into the system. Finding your way can be difficult when there are hurdles. A lack of Indigenous representation in the curriculum and in schools and institutions is a hurdle. This is multiplied if there are also preconceived expectations about poor academic achievement. Compounding this further would be an inability of educators to use an appropriate pedagogical approach required to ensure academic achievement.

5.2.3 Educational pedagogy

**Node Descriptor - Indigenous perspectives in education.**

Much could be learnt from Indigenous educators about how to incorporate Indigenous content in a way that enhances opportunities for different methods of delivery; using an Indigenous pedagogy. This would allow for a more inclusive learning experience for all students, not just Indigenous students (Woodroffe, 2016b). It would also mean that content is delivered with the respect required in situations, such as respecting the traditional owners and their language. “This is what we do in a school;
our curriculum map.’ Having that there would say – ‘Okay we’re doing this lesson.’ Let’s get somebody from Larrakia who knows about Art, and we’re going to do this activity. Let’s get someone in who knows about the language and teach them” (George).

This learning in the schools should be planned, programmed and have school commitment to incorporating Indigenous knowledge instead of incorporating tokenistic blasé approaches. Now Indigenous teaching and learning is happening on the fringes, as a response to Indigenous teachers instigating action.

While some Indigenous teachers continue to find their way into the system, others state very clear how the system should be adjusted. For Indigenous people to be included in the Australian education system, “Family and [Indigenous] culture should be at the centre of education” (Melissa). Schools are institutions for education – western schools impart knowledge valued in western culture. Indigenous people value and require Indigenous knowledge. For Indigenous people to be a central part of the Australian education system, Indigenous knowledge should be acknowledged and be sufficiently incorporated.

The current curriculum is lacking and not considered as central to Indigenous pedagogy. In fact, curriculum could be considered as a hindrance to effective teaching. “…not as well as I would like to, or that the curriculum allows me to” (Nerrida).

Low expectation and priorities placed on Indigenous content also means that curriculum may not be taught well. “I’ve seen people just tick a box without any real
depth or understanding. Then, all the kids are coming up to Year 7, 8 or 9 and have no idea about The Stolen Generation or about the real history of Australia…” (Nerrida).

The lament is that “it's not a priority in the curriculum for us” (Nerrida). Even though wording in the National Curriculum itself has changed from ‘perspectives’ to ‘priority’. Attitudes of those who use and implement the document may not have changed. Commitment from schools is necessary. According to Indigenous teachers, there are many opportunities for Indigenous knowledge to be part of daily practice that schools should commit to.

5.2.4 Establish school connections

Node Descriptor - Specific example of Indigenous knowledge potential in schools.

Revitalisation and the maintenance of Indigenous Australian languages is an area that schools could participate in. “...maintenance of languages, there needs to be something for schools to take on…” (George). Indigenous languages have been eroded by the processes of colonisation and assimilation. A commitment by schools to mandate the learning of Indigenous languages would be a positive beginning to changing school practice and outdated attitudes based on misguided government policy. “Unless it comes from the Department, from the CE, the schools don't have to do it” (George). Indigenous culture should be evident in every school. “...policies in place where it's overarching; the whole school” (George).

The 2017 National Aboriginal and Islanders Day Observance Committee (NAIDOC) theme of Our Languages Matter was the perfect platform for Indigenous
Australia to express and explain how important Indigenous languages are to Indigenous people. It is an ideal place to start making strong connections with Indigenous students, families and the wider Indigenous community. “I send them off in the hope that these teachers will be confident and able to deliver some aspect of teaching as simple as being a NAIDOC theme being Our Languages Matter. ‘I did all the research on all this and send this to your kids and look at the languages, this is the page and there are heaps of resources,’” (Nerrida).

In Darwin, many suburbs and schools are named after Indigenous language groups. This is an inspiration to Indigenous educators. “All those names of specific tribal groups are not just names; they need to be living and be promoted in schools... So, it's really hard but I would like every school to be connected to their Indigenous groups in one way or another, so they can share that with the kids” (George). For schools that lack the Indigenous teachers, or knowledge to facilitate the language learning, “...maybe that should be a database for schools. To have contact with and say this is your school” (George). Language is one component of Indigenous identity. Indigenous culture is so much more.

Deeper knowledge about Indigenous culture and Indigenous Australia would have to come from Indigenous people. The Indigenous people in schools whether they are teachers, AIEWs, in-class support staff, engagement program staff, or others are often too few to take on the responsibility of imparting deeper Indigenous knowledge and understandings which would take time and consider able effort. A lack of responsibility and ownership could lead to the allocation of responsibility for all
Indigenous matters to Indigenous staff. “I’m the only one driving Indigenous perspectives as a whole school approach” (George).

In this instance, Indigenous leadership could be considered a reflection of the poor executive leadership of schools. Not wanting to take anything away from the great work that Indigenous educators do (and if they didn’t do it who would?) however, considering the hierarchical nature of government departments, this is ultimately a reflection of poor executive leadership in a system. Indigenous people know the importance of education but also know the importance of participating in an education system that is inclusive of themselves and their culture. Indigenous people should not be the only ones ensuring that the embedding of Indigenous culture and knowledge happens in schools. This can be exhausting and very frustrating. The system now is still tokenistic despite the best efforts and leadership of the relatively small number of Indigenous teachers.

5.2.5 Indigenous leadership

Node Descriptor - Although not labelled as such, aspects of leadership were mentioned by all participants.

Indigenous teachers are driven by the need to support students to know and be proud of Indigenous Australia. This ‘drive’ often becomes leadership because the teachers take the lead where they see necessary. This is Indigenous educational leadership. This leading may also occur where others are either unable or unwilling to do the job themselves. This is Indigenous leadership. It fits with the loose definition
that Indigenous leadership is about supporting the needs of a group, rather than just about achieving goals and targets. Indigenous leadership is about community. This is an overly simplistic view when in reality,

Indigenous leadership is complex because it is shared amongst people who have different responsibilities for different matters. This is not necessarily well understood outside of Indigenous cultural contexts. There are important age and gender dimensions and it is hierarchical, based on accumulating valued knowledge and experience. Then not all leaders are equally powerful—some are more influential than others. This may depend on which family you come from. ("4.1 Aboriginal and Torres Strait Islander leadership | Indigenous Governance Toolkit", n.d., par. 5)

Indigenous educational leadership is part of Indigenous leadership, required contexts additional to the usual leadership that any educator, Indigenous or not, may demonstrate as part their job progression through pay scales and into senior teacher and executive roles. It is different because it is largely unrecognized and not rewarded monetarily. "The traditional forms of Aboriginal and Torres Strait Islander leadership are not as easily recognisable to outsiders as the more ‘visible’ leaders in organisations" ("4.1 Aboriginal and Torres Strait Islander leadership | Indigenous Governance Toolkit", n.d., par. 11). Western leadership is different in that it is recognized as individualistic (Basu-Zharku, 2011; Yu & Miller, 2005). When making a cultural distinction in leadership styles, the literature also refers to the terms individualism and collectivism (Hofstede, 2001). At the same time, Indigenous educational leadership is also part of
western leadership in that it happens within a formalized western governmental system.

**Figure 10 - Positioning Indigenous educational leadership**

Rather than being constructed as a leadership ‘type’ or ‘style,’ Indigenous educational leadership as ‘different’ may be better understood in terms of the enactment of leadership, which is located in and guided by Indigenous knowledge, values, and practices, in order to realize Indigenous educational aspirations (Hohepa, 2013, p. 619).

Indigenous educational leadership is unpaid leadership; unpaid added stress. It could be considered cultural responsibility, as well as a professional responsibility. Although not rewarded monetarily, the reward would be largely intrinsic, and the
effort could be noted and used in performance management forums in schools, especially to demonstrate achievement of 1.4 and 2.4 of the professional teacher standards.

Within the professional standards, the provision for demonstrating leadership is at stages of Highly Accomplished and Lead Teachers, not Graduate or even Proficient. So, you would assume that leadership is only expected from teachers who have been in the system for a while – experienced teachers. This is not necessarily true of Indigenous leadership. Also, the main document referenced regarding leadership skills is that oriented around Principal performance. Indigenous educational leadership does not necessarily fit with these comparisons. “A focus on leading education and schooling in order to bring about better outcomes for Indigenous students, ... requires an accompanying focus on Indigenous ways of enacting educational leadership” (Hohepa, 2013, p. 628).

Indigenous teachers are operating within a system that is not based on Indigenous Ways of Knowing, Being, Doing and Valuing. Indigenous teachers, while creating their professional identity as teachers are also guided by their Indigenous identity and Indigenous knowledge. These impact on teacher behaviour and on what teachers expect or believe might be teaching best practice. Often their ‘Indigeneity’ requires a leadership response. Hohepa (2013, p. 628) explains this in the Māori context, “Indigeneity concerns the right to conceptualize, articulate, and address Māori educational leadership differently—in ways that are distinctly Māori”. This is an important distinction about the way that Indigenous educators operate and should be
recognized for their abilities in this space. Indigenous educators participating in this research study also echoed these sentiments with regards to expertise in the field.

While still absent in Australia, an international example of cultural distinction in educational leadership can be seen in the 2010 publication *Tu Rangatira* - Māori *Medium Educational Leadership*. While not strictly fitting with the definition of Australian Indigenous educational leadership as defined in this thesis, the goal of the New Zealand document is to sharpen the focus on Māori learner success by creating a framework embedded with Māori culture.

The framework espouses a shared responsibility for leadership and is based on three key aspects of Te Aho Tapu (Focus on the learner), Whenu (Seven key roles of leadership), and Nga Aho (Seven key areas of focus). In the document each of these key aspects is described in detail with goals and implications for leadership practice. Underpinning all the detail and description are four guiding principles –

*Māori Potential* - All Māori learners have unlimited potential.

*Cultural Advantage* - All Māori learners have a cultural advantage in that they are Māori.

*Inherent Capability* - All Māori learners are inherently capable of achieving success as Māori.

*Mana Motuhake* - All Māori learners have the right to live and learn as tangata whenua of Aotearoa. (Ministry of Education, 2010, p. 11).
For the Māori, there have continued to be developments in this space and in 2017 there was further consultation and collaboration to release a leadership strategy in 2018 called the *Leadership Strategy for the teaching profession* and *Educational Leadership Capability Framework*. The strategy and framework are “relevant to every teacher across English and Māori medium settings...It is unique to Aotearoa New Zealand – recognising Te Tiriti o Waitangi, as well as the cultural distinctiveness of leadership...” Finally, it “provides a system-level approach to growing and developing leadership in education” (‘Leadership Strategy for the teaching profession of Aotearoa New Zealand and Educational Leadership Capability Framework | Education Council’, 2018, par. 6).

In Australia, Indigenous educators do not share equal footing in a formal bicultural agreement such as the Treaty of Waitangi because colonisation in Australia was achieved through a British legal determination of Terra Nullius (Ogilbey, 1993). Rigney (2002) wrote about the possible benefit of a treaty in education, by linking the education and civil rights. “A treaty, agreements and/or partnerships afford the possibility of legal and constitutional amendment to include self-government/management leading to an increase in Indigenous authority and jurisdiction over Indigenous with the Indigenous Peoples of Australia. Indigenous legal jurisdiction over education helps the weak move from a position of weakness to one of power” (Rigney, 2002, p. 29).

This is the point of difference between Australia and New Zealand. Indigenous educators and the Australian education system need a Leadership Strategy and
Educational Leadership Capability Framework that suits our distinct context, embedded with Indigenous culture, and outlined in a system-level approach. Indigeneity should be understood as potential and seen as an advantage, as described in the Māori guiding principles mentioned above.

It is Indigenous educators’ Indigeneity that privileges them. Indigenous educators have epistemological privilege. This positioning allows them to see the Australian education system, and their schools in a certain light. This ability or ‘unique standpoint’ allows the participants to also notice what is missing or what is needed, as mentioned earlier with taking on leadership roles. This Indigenous standpoint shapes their practice both in leadership activities and in the classroom.

Only Indigenous people can provide an Indigenous perspective. This places Indigenous teachers in a specialized position within schools. “In the schools I feel stronger identifying as Indigenous because I know it opens up doors for learning and relating it to Indigenous knowledges and some teachers will use you in that regard. And, also in senior roles as well. That sort of thing. If you’ve got those relationships with students, and you understand your work and curriculum and everything that would make you a better candidate [for promotion], I guess. To have those senior roles. I think people see...traditionally with elders you know they’re in a senior role. They have that respect. They’re promoted to senior roles further and further along because the knowledges just keep building. Professionally, I don’t think that it’s just becoming an experienced teacher. It’s just becoming experienced and building on that. Going into senior teacher and AP it becomes about that path, not of expectation but of where
you're destined. That's probably a bit muddled but there are ceremonies to go through when you are becoming an elder or a leader in the culture, so going through it in the western world or in teaching, you can sort of relate it to that. And, I think that having the Indigenous knowledges is a huge part that contributes to your professionalism, and your leadership skills and knowledges as well” (George).

It is important for Indigenous students to see Indigenous role models within schools and know that they could successfully navigate the education system. It is important that Indigenous teachers show Indigenous students that their Indigeneity is an advantage. It is an extra string to their bow. “They use that and embrace it now, and then when they're older they can use it and already have that understanding and foundations. So, that if they're working with Indigenous or even, they are not they can say this is what the world is actually like and what it is really like for Indigenous people. It's the real history and this is what we can embrace from that” (George).

Indigenous educational leadership and Indigenous knowledges are important for Reconciliation. “I have always believed that education is key. If we as nation have genuine intentions of ‘reconciliation’ we must share the true story about Australia. Not just the white invasion. Indigenous knowledges will give non-Indigenous Australians a chance to be respectful to Indigenous Australians. Also, through gaining an understanding an amount of fear will be dispelled. Bringing all Australians closer together” (Helen). Although work is being conducted in this area, the progress could be considered as slow. Indigenous educational leadership could provide the impetus in
schools to increase efforts. “I guess my point here is, yes there are documents for change however they are not making it to the grass roots level [in schools]” (Helen).

Supporting Indigenous educators in their Leadership are other Indigenous educators. Networking and mentoring strengthen the group as a community and bolster their resolve. “There may be an opportunity to have some networking with other Indigenous students or teachers, pre-service teachers, or graduate teachers at uni and say ‘Hey, I’ve been through this course” (Jane).

Indigenous educators find strength in their sense of self; in their identity. This sense of Indigeneity is at the core of our identity and Indigenous knowledge. It is how we ‘Be’ who we are. This is part of our ontological understanding and it is the strength within – what Hawaiian people may call Mana. Knowing how to Be is an Indigenous person’s inner strength, and so much more but it is difficult to explain to a non-Indigenous person. Similarly, “there is no English translation of mana that fully captures its meaning and significance from a Native Hawaiian perspective” (Crabbe, Fox & Coleman, 2017, p. 20). In general, for Indigenous people “Indigenous knowledge is about strong connections with Indigenous people, families and the community” (Melissa).

It follows that Indigenous educators possess both identity and knowledge resources that are the basis of their unique abilities in the classroom. The interaction between these concepts of identity and knowledge resources can be explained as Social Capital (Falk & Kilpatrick, 2000). Social capital is “the product of social
interactions with the potential to contribute to the social, civic or economic well-being of a community-of-common-purpose” (Falk & Kilpatrick, 2000, p. 103). Indigenous educators add Social Capital to the Australian education system in the form of Indigenous identity and Indigenous knowledge resources. These resources, while common understandings amongst Indigenous people, are not common understandings in the Australian education system or the national curriculum. They are lacking and because of this, Indigenous leadership is both required and invaluable. “More Indigenous people need to be in schools. Indigenous knowledges are relevant to Indigenous kids. They need to see more Indigenous adults in schools as role models” (Melissa).

Non-Indigenous educators can benefit from the Social Capital that Indigenous educators provide. “Indigenous knowledge is important for teachers to be able to get that connection with Indigenous kids” (Melissa). The issue is that this Social Capital is only possible through the uniquely cultural contributions of Indigenous educators. “[Teaching] Courses should acknowledge Indigenous teachers first, as the key for a successful school. Especially in those schools that have larger numbers of Indigenous kids” (Melissa).

The leadership discussed here is only possible because of culture. Here we understand culture as leadership. This culture gives insights into alternative pedagogical practice.
Nerrida explained Indigenous educational leadership in the context of her own practice. The detail situates Indigenous identity and knowledge in the western education system. See the following examples.

5.2.5.1 In the classroom – Key Learning Areas

Node descriptor – specific examples of Indigenous educational leadership.

This section (5.2.5.1) and the subsections describe Nerrida’s experience of Indigenous educational leadership in the context of our western education system.

“What it looks like in a classroom to me is embracing it; taking hold of it and integrating it into every aspect of learning because it can be. I do it in English and History. Ancient Australia for example is not an in-depth study which frustrates me. So, I spend a lot more than what I am meant to” (Nerrida).

5.2.5.1.1 Planning and Programming

Node descriptor – specific examples of Indigenous educational leadership.

Connections are made by Nerrida between Indigenous educational leadership and the teacher expectations of planning and programming.

“In all aspects of my teaching, no matter what I am doing - whether it is well-being, English, and History, incorporating all aspects of Indigenous history and culture. I would like to do more, but the curriculum doesn't allow us to, which is unfortunate.

I know that when I was in school, they never taught it [Indigenous History]. I was very fortunate to grow up in the environment that I did. I have a very sound and
comprehensive knowledge of it. Fortunately, it comes out in all my teaching, in every aspect” (Nerrida).

5.2.5.2 Pedagogy – Relatedness and Reciprocity

Node descriptor – specific examples of Indigenous educational leadership.

The following example demonstrates Nerrida’s strategies for using Indigenous knowledge as part of her teaching practice.

“I always tell the students who I am and where I come from, especially my Indigenous bloodlines and where they are, and we talk about the language map and stuff like that. You just see especially with a lot of our Indigenous kids, they're confident and they come out and they talk about who they are and where they're from, and they share their knowledges and their stories. That is what we integrate into teaching through history as well” (Nerrida).

5.2.5.3 Duty of Care – Student Well-being

Node descriptor – specific examples of Indigenous educational leadership.

Next is the example of Indigenous educational leadership applied to duty of care.

“That respect factor is already there [between Indigenous teachers and Indigenous students]. They build that, and they develop that, and they get comfortable to be able to share what is going on at home or just feel safe with you when they are with you or
share their stories. I think relationship is really, really key, and we're very good at doing that.

Don't have that deficit perspective. Look at all kids individually. Know, understand and help them also to believe that they are going to have a great future and achieve that future no matter their circumstance or who they are” (Nerrida).

Explicitly, influencing change in others’ attitudes and practice assists others to change their capacity and ability to teach Indigenous learners and creates an atmosphere of community, with mutual respect and support.

“When I hear some teachers talking negatively about [Indigenous] students, I always think that I would hate for them to be talking about my child like that. At the end of the day kids will be kids. We have all been naughty once somewhere down the line. But you also hear, ‘This Indigenous kid did this. This Indigenous kid did this.’ Why can't they just say their name? I'm very particular. I pick up on things which is terrible, but you know it’s always got to have a brand mark (Indigenous). I've even had, ‘Them bush kids.’ I said, ‘Hang on.’ You know. They are just not mindful.

People thinking that Aboriginal kids get privileges and then it starts forming that negative opinion. Kids see that, feel that, know that and they don't whine about it. They just carry it on their shoulders. Again, that is deteriorating who they are and how they feel as people. So, if they have teachers acknowledge them and let them know that they are just as important as any other kid in the class then that makes a significant difference.
I’m a teacher who tries to integrate Indigenous knowledges and perspectives. Maybe not as well as I would like to, or that the curriculum allows me to. What I do in the process is trying to share my resources, especially in the area of Indigenous knowledges and perspectives. I send them off in the hope that these teachers will be confident and able to deliver some aspect of teaching.

That is how I am trying to influence my way, helping teachers to feel more confident” (Nerrida).

5.2.5.4 Indigenous programs

*Node descriptor – specific examples of Indigenous educational leadership.*

Indigenous programs may be a springboard for Indigenous and non-Indigenous educators to make positive change in schools, by working together to include Indigenous people and content into schools and classrooms.

“I was on an Indigenous scholarship for the Department. They paired me up with wonderful Indigenous teachers and role models, at xxxxxxxxxx.

I think being able to run those amazing programs like our AIEW here, really bringing about NAIDOC and awareness of Sorry Day, like these really significant events” (Nerrida).

5.2.5.5 Pre-service teacher education

*Node descriptor – specific examples of Indigenous educational leadership.*
The link between pre-service teacher education and Indigenous educational leadership was made with the following statement by Nerrida.

“It is essential for pre-service teachers to have this knowledge because teachers can be the 'life-changing moment' for a kid. If they have negative experiences with teachers, they are just going to fall and disengage and not be a part of the system. Then that sets us behind even more in achieving our outcomes for Indigenous kids who are already uncomfortable in coming to school” (Nerrida).

Teachers have a responsibility to set students on a path for the rest of their lives. Indigenous students may be the leaders of the future. In the meantime, Indigenous educators enacting Indigenous educational leadership work to ensure that Indigenous student identity is strengthened, and resilience is promoted.

5.2.6 Indigenous network

*Node Descriptor - Indigenous teacher’s network and opportunities required.*

There has already been mention of networking as part of Indigenous educational leadership but what it also provides is a sense of community and the collective ‘knowing’ of education from an Indigenous standpoint.

The Indigenous educators can discuss their profession with each other; people who understand and share their views and critique. The critique aspect is important to acknowledge because Indigenous educators are currently the ‘others’ in a system that does not fully include them. This is another reason why networking is vital. Santoro
(2014, p. 69) explains this as “the vast majority of Australian teachers are White and of Anglo-Celtic heritage, the 'norm' from which all other positions are usually marked as different, or 'Other'. These constructions make it difficult for Indigenous people to be seen, 'naturally', as teachers and for an Indigenous child to see her teacher as someone like herself, or someone whom she is like.”

As Jane explained it “…if you identify as Indigenous, I think that it is important for you to have those networks and those opportunities. An opportunity to have some networking with other Indigenous students or teachers, pre-service teachers, or graduate teachers at uni and say ‘Hey, I've been through this course. This is what's happening if you want to know about an Indigenous perspective’” (Jane).

5.2.7 Low expectation and provision for Indigenous students

**Node Descriptor - Evidence of low expectations of Indigenous students to achieve academic excellence, resulting in lack of provision, e.g. secondary education in remote areas.**

While Indigenous educators involve themselves in the stuff of schools for the good of the Indigenous community, there are definite barriers to progress such as racism. Deficit views of Indigenous academic achievement and continuing evidence of underachievement undermine efforts to create positive learning environments with goals and high expectations.

“Recently I went to a remote community school, and the principal who was a non-Indigenous lady and here assistant principal who is also a non-Indigenous lady, are
leaving after this semester. After being in their roles for quite a few years. I asked them, “how come? Why are you leaving?” They said that they could access study leave but the principal also mentioned that her children were going into high school, secondary school and she wanted to give them more opportunities. It made my blood boil because I thought, ‘Wait a minute, this school that you are principal at is not good enough for your kids, but it is good enough for the Indigenous kids here?’.

The pre-service teacher was going to deliver a Math lesson. This young boy walked in and he goes, ‘Oh, are we learning about area? I love Math!’ And, I thought, wow! That's great. The delivery for their specialist areas in secondary is integrated, so you never get that delivery similar to an urban setting where you would get someone who teaches English, someone who teaches Math, someone who teaches Science. These guys get integrated learning, so they never get that real rich deep extended learning in that learning area. And, it really made me sad because this kid could become a scientist you know. If he had the opportunity given to him. It was almost to me, given the comments from the assistant principal whose children are almost getting to secondary also, and is leaving because, ‘Oh yeah, we are going into Darwin now’. It kind of highlighted for me that they had low expectations of their students, and then when I saw this student in the classroom, “I'm sorry buddy but there is no expectation for you to go on and do that subject area that you love, and to go on to higher education, and be a mathematician or a scientist, or whatever. So, that's what I wanted to add. The frustration that I felt from that real story” (Phoebe).
Frustration appears to be a commonly reported feeling amongst Indigenous educators participating in this research study.

5.2.8 More Indigenous study at university

*Node Descriptor* - *The units, courses and options for learning about Indigenous knowledge is limited and not adequate.*

Indigenous educators participating in this research study noted that the contents of teacher training degrees were lacking and not adequate in preparing people for teaching Indigenous students or for teaching about Indigenous Australia.

“...in the degree, you are condensing everything because it is such a short amount of time, with only maybe one (Indigenous) unit to look at” (Jane).

Added to this could also be stated that there was a sense of Indigenous teacher education students feeling some disconnect with expectations of teaching, education departments, or the profession. Hence, the need to network as stated earlier.

5.2.9 Special needs requirements

*Node Descriptor* - *Considerations that are specific to Indigenous students and families.*

Surprisingly, participants raised special needs as an issue and the inequality in service, as they saw it within the school context.

“Our education system needs to acknowledge the different experiences of learning and look for a better way to ‘close the gap’. Kids in our urban schools, who are born
overseas, are given support through well-funded ESL programs, while Indigenous kids who are born here are unlikely to get the intensive ESL based support that they need. Indigenous students may have major gaps in learning for various reasons and/or their parents may have major gaps and negative experiences in our education system” (Trina).

So, something to think about is the requirement for a student to be considered as needing Special Education support. Usually there are checklists or assessments that help to recognize or identify areas of need. There are also standardized assessments and trained professionals who are called in to observe and assess a student. Are Indigenous students given this individualized attention and the resulting care, or are they thrown in together with stereotyping under the one umbrella as an Indigenous education problem?

“My daughter speaks six Yolngu languages, one Yolngu sign language, Australian Aboriginal English (AAE) and is learning SAE” (Helen).

ESL is a real issue, and this does not only apply specifically to Indigenous languages as defined by an Individual’s geographical location but also to the more generalized Aboriginal English. This point raised by participants continues to the next topic raised about Standard Australian English as a barrier to academic success.

5.2.10 Standard Australian English (SAE) is a barrier

Node Descriptor - Indigenous languages are not held in high regard. Indigenous people’s intelligence is measured in English.
This topic raised by participants was very unexpected. Participants were concerned that even in urban settings, Indigenous students have difficulties because of their apparent lack of skill with using Standard Australian English. Indigenous educators strive to instil a sense of pride and achievement in Indigenous students. “We also talk a lot about ESL, and how just because you don’t know Standard Australian English it doesn’t make you less knowledgeable as a person. Actually, you are probably much more advanced in the linguistic area because you are a lot more advanced in a number of different languages” (Nerrida).

Australian Aboriginal English (AAE) is not poor English, as perceived by some non-Indigenous teachers. It is a recognized dialect of English and has been developed with distinct variations in different regions. Indigenous languages have been a casualty of colonisation, and the celebration and preservation of them is important. This may not be understood or communicated by non-Indigenous educators.

Responses from participants create picture of Indigenous teachers as determined, active, caring and capable. This professionalism is carried through into the data collected from participant journaling.

5.3 Analysis of data - stage 2: participant reflective journal

Data Collection Stage 2:

As an educator, reflecting on practice and then journaling or recording these reflections are commonplace. It is an effective way to monitor our own teaching and achieve our set goals. As Indigenous educators, journaling also allows reflection at a
deeper level, focusing on identity and practice. “Within both nursing and education literature there is little debate regarding the notion that reflection on experience contributes to understanding and learning about practice” (Jasper, 2005, p. 248). This is the second part of data collection for the research project.

Indigenous educators participating in this research study were asked to keep a watch out for two specific occurrences of ‘Indigenous knowledge’ in the classroom. They were to record these incidents after the event and include a date, time, and brief context. The context should include an explanation of how the event links to Indigenous knowledge. Links to Indigenous knowledge were to be based on their own interpretation of the term, as provided in the initial interview process.

Note that the description and context is only brief as the main point to this activity is to further investigate whether Indigenous knowledge is relevant and important for inclusion in teaching, and that it does indeed occur in the classroom or during a teacher’s day to day practice.

Only George, 1 out of a possible 5 participants situated in a classroom at the time of data collection contributed. This one contribution proved the relevance and evidence of occurrence of Indigenous knowledge in day-to-day teaching. Both examples explain the educational context and links to Indigenous knowledge.

| Date: 18/09 /2017 |
| Time: 12.50pm |
| Context: |
Focus - Discussion between pre-service teacher and myself (classroom teacher).

Activity - It was an interesting discussion firstly, around language and students use of Aboriginal English terminology during eating time (before lunch play) and secondly, around how Aboriginal knowledge and perspectives can be used in any learning activity during the day.

Links to Indigenous knowledge - This discussion links to Indigenous knowledge by ‘knowing your students’, an integral part of the teaching profession, the Indigenous knowledge provides a deeper understanding of the students, their backgrounds, their understanding of education and their language. The discussion links furthermore to knowing the content and how to best deliver content to Aboriginal students across all learning areas of the national curriculum.

Thematic Analysis –

This journal entry connects with several key themes raised in this chapter. Firstly, it should be noted that it is an example of leadership in that the participant is supervising a pre-service teacher, but more than that it is an example of Indigenous educational leadership as defined earlier in this chapter. The participant has seen need to engage the pre-service teacher in conversation specifically for the benefit on the Indigenous students. George has seen the need to explain student use of Aboriginal English, clarifying this for the pre-service teacher. Then, the conversation included the opportunity for using Indigenous knowledge in teaching and learning activities. Each of these aspects of the conversation will enable the pre-service teacher to better cater for
the specific learning needs of the Indigenous students. The journal entry also described
the connections to the Professional Teacher Standards 1.4 and 2.4 allowing the pre-
service teacher (whom we could assume to be non-Indigenous) to make meaningful
links and their own reflections in their graduate portfolio. As described in the literature
review, the Professional Teacher Standards can be directly linked to Indigenous
knowledge and are a useful tool to explain professional teaching identity and
expectations to Indigenous pre-service teachers and the relevance of Indigenous
knowledge to non-Indigenous educators.

| Date: 9/10 /2017 |

| Time: 10.45am |

| Context: |

Focus - Literacy lesson in Term 4. Unit focus is debate; ‘Can a literary text deliver a
more powerful message than an informative text?’

Activity - The class looked at two texts to start with, chosen by teacher, Yidaki (literary)
and What is a didgeridoo? (informative).

Links to Indigenous knowledge - As a teacher with ‘Indigenous knowledge’ and a yidaki
in the classroom it was important to share some key information about an important
part of Aboriginal culture and help guide any misconceptions. Indigenous knowledge
allowed many members of the class to share their strengths in culture – creating/
making, playing, painting the yidaki for cultural songs and enjoyment. This made
Indigenous kids respectful of Aboriginal culture and I feel proud to be relating cultural knowledge to mainstream learning.

**Thematic Analysis –**

This journal entry made the valuable point that Indigenous knowledge could be used throughout the curriculum and has more to do with pedagogical practice rather than just content. The style of the lesson was quite advanced for a primary setting highlighting two things 1) the high expectations that George had of the class, which we know from Sarra’s (2005) work is very important for the academic achievement of Indigenous students, and 2) the professional skills and ability of George to deliver the lesson in a way that the students would be able to understand and complete successfully. Indigenous knowledge was evident in the planning and delivery. Again, the journal entry demonstrated the George’s expertise at incorporating Indigenous knowledge into mainstream education and enhancing the teaching and learning experience both for the students and themselves. Although this may not have been the approach taken by a non-Indigenous teacher, the evidence realised in this research study was the need for Indigenous people to see more of themselves in what happens in schools. There is a need for greater representation of Indigenous people and Indigenous knowledge.

Scanlon et al. (2002) suggested that “reflection enables practitioners to tap into knowledge gained through experiences. The practitioner gains a deeper understanding
of the meaning of the experience by bringing to consciousness tacit knowledge” (p. 137). This is what George has done in his reflective journal entries.

There are reported to be 3 stages in reflective practice. “The first is the procedural stage, in which the teacher focuses mainly on techniques and materials; second is the interpersonal stage, during which the focus is on the feelings, roles and responsibilities of the teachers and students, motivation and classroom atmosphere; and the final is the conceptual stage, in which teachers arrive at their own personal meanings, explanation and interrogation of theory and practice” (Doyran, 2013, p. 162). I posit that the journal entries provided demonstrate a deeper level of thought and feeling, and that the entries are examples of interpersonal and conceptual reflection.

George used Indigenous knowledge in a way that was both practical and thoughtful; enhancing practice and the learning experience of the students. The considered approach was then effortlessly explained and used as part of the everyday practice as a teacher. In this instance the journal entries were examples of everyday practice of an Indigenous teacher. Importantly, George recognised and identified the Indigenous knowledge as he interpreted and understand the term. Without the identification and recognition provided by the George, it may have gone unnoticed and not defined as Indigenous knowledge. The point here, and stated throughout much of this chapter, is that it appears to take Indigenous teachers to recognise the Indigenous knowledge in their practice. Indigenous educators could use Indigenous knowledge in the mainstream ‘western’ education system, and the lens provided by Indigenous
standpoint to identify it. As Indigenous educators, we are important for mainstream education, and invaluable in the process of incorporating Indigenous knowledge.

5.4 Summary of the main thematic analysis from both Chapters 4 and 5

The major themes that have been uncovered through the analysis of data and have been presented visually in three tables of data. These were - research questions with themes, data sources with themes, and participants with themes.

This first representation focused on the research questions and the major themes that have developed specifically out of the interviewing process. There was unanimous confirmation that it is important to include Indigenous knowledge in pre-service teacher education, with some discussion about the term ‘Indigenous perspectives’ being most commonly used in educational settings. The important point here was that these terms were used interchangeably at different times by different participants, although the terms do not necessarily mean the same thing. There was no discussion or agreement between participants about terminology.

There were numerous major themes raised about why the inclusion of Indigenous knowledge is important. A hierarchy began to become visible with some of the major themes being explored in more detail – current training was thought to be superficial, and more learning was thought to be required, identity was an important theme, as well as improved educational practice, and Indigenous educational leadership.
The list of suggested recommendations for inclusion as Indigenous knowledge required learning was quite extensive - cultural awareness, understanding of Indigenous identity and barriers to learning, deeper learnings and respect for people, special needs such as ESL and resilience against racism, how to improve academic outcomes and enhance teaching of the national curriculum.

Table 9 - Research Questions with Themes

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Major Themes</th>
<th>Sub-themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is it important to include Indigenous knowledge in pre-service teacher education?</td>
<td>Yes – it is important.</td>
<td>Indigenous knowledge as opposed to Indigenous perspectives.</td>
</tr>
<tr>
<td>Is so, why?</td>
<td>Current training is superficial, and learning is required, identity, teacher empowerment, student resilience and confidence, improved educational practice, Indigenous people and culture visible and respected, unique connections with Indigenous students, Indigenous educational leadership, enhanced curriculum, Reconciliation.</td>
<td>Fundamental for teachers in the Northern Territory, true Indigenous Australian history, barriers to learning, low academic expectations of Indigenous students, racism, policy not translating into practice in schools, Indigenous teacher networking.</td>
</tr>
<tr>
<td>What should be included</td>
<td>Indigenous knowledge as it relates to cultural awareness, understanding of Indigenous identity and barriers to learning, deeper learnings and respect for people, special needs such as ESL and resilience against racism, how to improve academic outcomes and enhance</td>
<td>Cultural complexity, less superficial treatment of Indigenous content and pedagogy, more core units to increase credibility, change in attitudes, and effective communication.</td>
</tr>
</tbody>
</table>
In a broader understanding of the research thesis overall, a consideration of the major themes from the different data sources allowed us to understand the data from a distinct perspective. Importantly it allowed us to link the various sources and find the connections. Highlighting shows possible links. It is evident that themes link across the data sources indicating consistency. The major theme of ‘Failings of a System’ is really the purpose or need for the research in the first place. Deficit views about Indigenous academic achievement and the need to solve the ‘Indigenous Problem’ are the result of a failing system; a system that could be perceived to be broken. To investigate the failings of the system, it was necessary to employ Indigenous women’s standpoint theory as a methodology. This methodology shaped the research questions and the subsequent interview questions. In this way the data collection and analysis accomplish what was planned in the methodology and method chapter – Chapter 3.

Table 10 - Data Source with Themes

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Major Themes</th>
<th>Minor Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review of Literature</td>
<td><em>Failings of a system.</em></td>
<td><em>Indigenous deficit</em></td>
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<td></td>
<td><em>Repeated underachievement of Indigenous students.</em></td>
<td><em>Indigenous problem</em></td>
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<td></td>
<td><em>Underrepresentation of Indigenous voice in education.</em></td>
<td><em>Areas of common understanding in education.</em></td>
</tr>
<tr>
<td></td>
<td><em>Indigenous people ‘invisible’ in Australian mainstream schools and curriculum.</em></td>
<td><em>Professional teacher standards.</em></td>
</tr>
<tr>
<td>Interview Questions</td>
<td>Current teacher education is superficial and further learning is required.</td>
<td>Teacher empowerment, student resilience and confidence, Indigenous people and culture visible and respected, unique connections with Indigenous students, enhanced curriculum, Reconciliation.</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Indigenous identities (including professional teacher identity).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Improved educational practice.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Indigenous educational leadership.</td>
<td></td>
</tr>
<tr>
<td>Journal Entry</td>
<td>Improved Indigenous student academic achievement.</td>
<td>Curriculum content and pedagogy.</td>
</tr>
<tr>
<td></td>
<td>Relevance and importance of Indigenous knowledge.</td>
<td></td>
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<tr>
<td></td>
<td>Practical application in teaching.</td>
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<tr>
<td></td>
<td>Importance of Indigenous teachers.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Indigenous educational leadership.</td>
<td></td>
</tr>
</tbody>
</table>

5.5 Conclusion

While it was important to note the themes in the data, it was also important to acknowledge the individual responses and information provided. The responses were opportunities for Indigenous educators participating in this research study to speak their mind and for us to benefit from the experience and unique views presented.
Indigenous standpoint was portrayed reflecting the different Indigenous identities represented in the participant group. This was one of the main outcomes of the research – to draw attention to the voice of Indigenous teachers and pre-service teachers. ‘Participant responses as themes’ is attached as Appendix One. The next chapter, Chapter 6, will discuss these themes and findings further.
6. DISCUSSION

6.1 Introduction

In this discussion chapter the researcher makes connections between the results of the analysis, existing theory and the research outlined in the methodology and method chapter. These connections tell the story found in the data. Further to this, the researcher will reflect on material in the literature review, analysis of the research in this study and the theoretical frameworks that are developed in this research study, and how these complement each other. The main difference between research already completed in the field and this research study is contextual. This research empowers Indigenous educators participating in this research study commenting about urban classroom settings in the Northern Territory. Through this study we hear the voices of this specific group of people, Indigenous educators, who have a perspective seldom heard. The chapter ends with statements about how success in changing the education system could be measured.

Much of the knowledge already in the field is from other areas of Australia that do not necessarily have the high representation of Indigenous people in the population, are not focused on urban settings (may have a remote focus), the researchers may be non-Indigenous, and the collection and analysis of data is not through an Indigenous woman’s standpoint.
This positioning and standpoint call into question the Australian public education system and the suitability of it to meet the needs of the Indigenous people of Australia. The final MATSITI Report confirms the inadequacies of the current system and the need to lift its performance. “Lifting the performance of Australia’s education systems to achieve greatly improved outcomes for Aboriginal and Torres Strait Islander peoples will lift Australia’s performance in both national and international arenas” (MATSITI, 2016, p. 8).

6.2 Key Findings of this research

The results of the analysis were both surprising and empowering. As an Indigenous educator, the researcher felt justified in carrying out the work of the research study and assured by the knowledge and capability demonstrated by the research participants. The knowledge discovered is new in the way that more Indigenous voices can be heard, in the field of education, and does serve the purpose of filling the gap discovered during the literature review process.

The research questions have been answered and elaborated on further, above and beyond the expectations of the researcher. It should be mentioned that the limitations and delimitations described in the introduction chapter are factors for consideration when noting the research findings. Those limitations and delimitations included the small sample size, the favouring of Australian Indigenous academic literature for Indigenous voice, and context of the research as urban schools in the Northern Territory.
6.2.1 Answers to the research questions

6.2.1.1 Is it important to include Indigenous knowledge in pre-service teacher education?

This was a unanimous ‘Yes’. All the Indigenous educators who participated in this research agreed that it is important to include Indigenous knowledge in pre-service teacher education. The definitions of ‘Indigenous knowledge’ and then opinions about the way that it should be included varied. The agreement and then the different opinions about how this should be done were expected. It demonstrates both the unity and diversity of Indigenous Australia. Indigenous educators are united in the cause to increase the Indigenous content and pedagogy into the Australian education system. Part of this inclusion is about recognizing and respecting Indigenous ways of Knowing, Being and Doing – epistemology, ontology, and axiology.

Buckskin (2016) reminds us that [Indigenous] educators should be visible in creating a positive cultural identity in schools because this enables students to become stronger in their own confidence and identity.

Indigenous people should be acknowledged as the First Peoples of Australia and foundational to the learning that occurs in our Australian education system. The current system is still lacking, and Indigenous engagement and academic achievement continues to suffer. Not only that but the rest of Australia is also missing out on knowing, respecting and reconciling with Indigenous people. Education has lasting lifelong impact and many Australians are unaware of the true Indigenous history of
Australia, therefore lacking the contextual information required to understand Indigenous realities.

This takes us back to the original point; Indigenous realities are grounded in Indigenous knowledge. An interesting occurrence coming out of the research is that just as Indigenous academics have defined the term ‘Indigenous knowledge’ in ways that make sense to them, these definitions are not necessarily known or the same as each of the Indigenous research participants. Indigeneity provides a platform for Indigenous people to define Indigenous knowledge for themselves. Identification of Indigenous knowledge is intrinsic. Responses to the interview questions confirmed this for the Indigenous educators participating in this research study.

Denying participants, the right to define Indigenous knowledge for themselves would be like denying their Indigeneity. Recognising and defining Indigenous knowledge is a task that requires an Indigenous person. The Indigenous lens or perspective allows an Indigenous person to identify what they know as Indigenous knowledge. The process requires deeper understanding, which is where an area of contention has become obvious through this research.

Changes to the Australian education system and conversations about how this could be done with respect to increasing Indigenous content and pedagogy within the system focus on how teachers, the majority of which are non-Indigenous, could do this respectfully and adequately. Australian Professional Teacher Standards require teachers to do this as part of their professional duties in meeting standards 1.4 and 2.4.
The 2017 NADPE Report on Professional Experience in Initial teacher Education (ACDE, 2017) confirms that non-Indigenous teachers are still ill-prepared or incapable of adequately meeting these standards. This inability does not bode well for change to Indigenous academic achievement in the short term. Considering that it has been a long term and ongoing concern, it is time to take a different approach. It is time to listen to Indigenous voice that has been undervalued in the education space.

Indigenous educators participating this research had two key concerns that need reiterating about the use of Indigenous knowledge in education.

1. Tokenism - important Indigenous understandings and content are delivered in a superficial, incorrect or inappropriate way, and

2. Indigenous Standpoint - Indigenous knowledge should be explained and delivered by Indigenous people.

Where does this then leave the rest of the teaching workforce? We can answer this question, only after we explore and understand Indigenous educators’ (who participated in this research study) opinions and thoughts in more detail. Therefore, this research study is relevant. Following on from the thoughts and experiences of the Indigenous educators participating in this research study, would be to consider what this says about the thoughts and experiences of other Indigenous educators.

It could be assumed that Indigenous educators from similar contexts in the Northern Territory could have similar views as those expressed by the Indigenous educators participating in this research study. An extension of the work conducted in
this research study would be to explore compare the views held by Indigenous educators in urban settings outside of the Northern Territory.

This research may be the necessary step that has been lacking and that is required to change educational practice and transform a system. There are research papers where Indigenous educator knowledge and experience has been touched on in the past mostly by non-Indigenous researchers such as Keddie (2014), Malin (1994) Santoro (2006), Santoro et al. (2011) and Partington (2002) who have then interpreted and presented their findings through a non-Indigenous lens. The research in this study has been conducted by an Indigenous educator who has then collected and interpreted the data and presented findings through an Indigenous lens. It is necessary to emphasise this as Indigenous people understand Indigenous matters differently (Buckskin, 2016; Moreton-Robinson 2003, 2013; Nakata, 1998).

This leads us to the next research question about the reasons why inclusion of Indigenous knowledge is important.

6.2.1.2 If so, why?

All Indigenous educators participating in this research study agreed that it is important for pre-service teachers to learn about Indigenous knowledge and its possible application in schools. This point cannot be undervalued in the consideration of Indigenous culture in the Australian education system; a system that is meant to cater for the learning of all Australians. Each person presented examples of why it is important to include Indigenous knowledge in pre-service teacher education. The
Indigenous educators were enthusiastic, confident and persistent in expressing what they saw as irrefutable. What was not mentioned in enough detail was the basic human right to an education. This rights-based thinking is fundamental and outlined for everyone in the United Nation’s universal declaration of human rights (Youth for Human Rights, 2019). Early Childhood, Primary and Secondary education is provided by the Australian Federal Government for the benefit of all Australians. All people are born free and equal so why is there inequity for Indigenous people? Indigenous knowledge should be included in pre-service teacher education because it is the right thing to do to combat the inequity in educational success and possible social disadvantage.

The responses given by Indigenous educators in this research study included human rights considerations but also went beyond that to make other arguments for the inclusion of Indigenous knowledge. There was a strong cultural thread through these arguments which could be said to incorporate the United Nation’s declaration on the rights of Indigenous peoples. Article 14.2 (Australian Human Rights Commission, 2019) speaks about the right of Indigenous peoples to access education provided by the state without discrimination.

The reasons provided by the Indigenous educators participating in this research study specified that it is important to include Indigenous knowledge in pre-service teacher education because it would enhance both teaching and learning, empower teachers, contribute to resilience and confidence in Indigenous students, improve education for all – Indigenous and non-Indigenous, and would contribute to embedding
and integrating Indigenous people and culture into the education system. Indigenous knowledge is important because Indigenous culture should be respected, Indigenous staff should be visible in schools as role models and leaders. Indigenous knowledge is important for making connections with Indigenous students.

When analysing the individual responses as to why it is important to include Indigenous knowledge in pre-service teacher education, three specific contexts became obvious. These contexts are the Northern Territory, national, and cultural.

The Northern Territory context is relevant because of the high number of Indigenous people (and students) in the Northern Territory. It is fundamental, particularly for teachers coming from south with so many negative things to say that they learn about Indigenous people and culture. It is important that educators in the Northern Territory know about Indigenous knowledge.

Then, the national context also needs to be considered with being able to address the national curriculum. Suggested change required to the national curriculum could ensure that learning about Indigenous people and culture would not just be a perspective in the curriculum, teaching and learning about Indigenous Australia could be mandated. Educators need to learn about Indigenous knowledge to change Australia’s future by beginning with the children and decreasing the great divide. A starting point for how curriculum change could be begun would be for all Australian students to learn and know an accurate account of Indigenous Australian history, like that described by Bruce Pascoe (2011, 2019).
The third context relevant to this research study was cultural context. The context of this research as cultural has determined the methodology and the methods used to collect and then analyse the data. The cultural context is explicit and central. Indigenous educators participating in this research provided responses confirming the importance of educators to know about Indigenous knowledge in order to understand Indigenous diversity, and to know that understanding about Indigenous knowledge and culture is not just for Indigenous students.

The distinction that became clear was that pre-service teachers, who are mainly non-Indigenous, should *learn about* Indigenous knowledge. They should *not learn* Indigenous knowledge. Baynes (2016) highlights the confusion of (non-Indigenous) teachers about what Indigenous knowledge is. The areas of confusion are about Indigenous cultural knowledge, and Indigenous perspectives as opposed to Indigenous knowledge (Baynes, 2016, p. 82).

This leads us to the next research question about what should be included in pre-service teacher education.

6.2.1.3 *What [Indigenous knowledge] should be included?*

To find the answer to this question, it should be understood which Indigenous knowledge is used by Indigenous people in schools. This research has proven that *Indigenous educators participating in this research study* use their own Indigenous knowledge in educational contexts.

A summary of participant responses resulted in the following –
Indigenous educators participating in this research study confirmed that Indigenous knowledge is important for **Indigenous students**, and for non-Indigenous students. A consolidation of participant responses can be seen in the table below –

Table 11 - How Indigenous teachers use Indigenous knowledge

<table>
<thead>
<tr>
<th><strong>Indigenous teachers use Indigenous knowledge to -</strong></th>
<th><strong>HOW -</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Strengthen identity</td>
<td>Used continuously; cannot separate identity from practice</td>
</tr>
<tr>
<td>Make deeper connections with students</td>
<td>Sharing information about own identity and cultural background</td>
</tr>
<tr>
<td>Make use of firsthand experiences</td>
<td>For example, speaking an Indigenous language earlier in life can provide a perspective on ESL</td>
</tr>
<tr>
<td>Share Indigenous cultural knowledge</td>
<td>Engaging with Indigenous students, family and community</td>
</tr>
<tr>
<td></td>
<td>Support non-Indigenous educators to become culturally aware</td>
</tr>
<tr>
<td>Build student self-esteem</td>
<td>Encourage students to share and feel confident and proud of their own Indigenous identity</td>
</tr>
<tr>
<td>Enhance the teaching profession</td>
<td>Through collaboration and networking with more Indigenous educators</td>
</tr>
<tr>
<td>Teach important content</td>
<td>Such as True Indigenous Australian History</td>
</tr>
<tr>
<td>Add value to programs and links in curriculum</td>
<td>Incorporating Indigenous views and ways</td>
</tr>
<tr>
<td>Support non-Indigenous students to learn and become culturally aware</td>
<td></td>
</tr>
<tr>
<td>Integrate Indigenous culture into every day</td>
<td></td>
</tr>
<tr>
<td>Create a learning environment inclusive of all learners</td>
<td>Use an Indigenous pedagogical approach</td>
</tr>
</tbody>
</table>

Table 12 - How Indigenous students use Indigenous knowledge

<table>
<thead>
<tr>
<th><strong>Indigenous students use Indigenous knowledge to -</strong></th>
<th><strong>HOW -</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Strengthen identity and resilience</td>
<td>Through confidence in students knowing who they are</td>
</tr>
</tbody>
</table>
Indigenous educators participating in this research study stressed the importance for pre-service teachers to learn ‘about’ Indigenous knowledge. This can be seen in the following table.

Table 13 - What pre-service teachers should learn about Indigenous knowledge

<table>
<thead>
<tr>
<th>WHAT</th>
<th>HOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>An in-depth understanding of Aboriginal English and how to respectfully and professionally cater for the learning of Aboriginal English speakers mandatory for all mainstream classroom teachers.</td>
<td>By learning the linguistic knowledge and skills required.</td>
</tr>
<tr>
<td>Real Indigenous Australian history, including information about Indigenous treatment such as exclusion and assimilation.</td>
<td>By learning from Indigenous people. Participants confirmed that only Indigenous teachers (people) can have, and then convey their Indigenous perspective.</td>
</tr>
<tr>
<td>Indigenous culture to develop a cultural awareness and understanding of Indigenous world view.</td>
<td></td>
</tr>
<tr>
<td>How to teach Indigenous learners but also acknowledge the importance of Indigenous teachers, particularly in schools with a greater percentage of Indigenous students.</td>
<td></td>
</tr>
<tr>
<td>That it is necessary for non-Indigenous students to learn about and understand Indigenous Australians.</td>
<td></td>
</tr>
<tr>
<td>Possible barriers to learning such as-</td>
<td></td>
</tr>
<tr>
<td>• ESL needs</td>
<td></td>
</tr>
<tr>
<td>• Mental health issues</td>
<td></td>
</tr>
</tbody>
</table>
- Wellbeing concerns
- And, how to create a sense of belonging for Indigenous students.

| Indigenous educational pedagogy. |

This research shows that Indigenous educators participating in this research study use Indigenous knowledge in educational contexts and have provided opinions and examples from experience of how Indigenous students use Indigenous knowledge. Indigenous educators participating in this research study know, define and identify Indigenous knowledge in this space. Indigenous knowledge empowers and unifies Indigenous people in education. Indigenous educators should be acknowledged as authorities in including Indigenous knowledge in schools and understand what should be included in pre-service teacher education.

Connections could be made with the bilingual education movement that was effectively cancelled due to lack of necessary Northern Territory government support from 2008. The necessary support required included funding, policy and practice but central to this was the recognition of the importance of Indigenous educators and their invaluable language skills in the bilingual process. Much funding would be needed to train many more Indigenous educators. This was a stumbling block to the continued wide-spread success of bilingual education in the Northern Territory. (Devlin, 2011)

Indigenous languages are most definitely very important components of Indigenous culture and identity. Even if not Indigenous language speakers, Indigenous
people still use the name of their language group to identify themselves and connect to others. In saying this, Indigenous educators should have already been formally recognized as necessary to the integration of Indigenous knowledge into the Australian education system. They should be highly regarded. Instead, as Reid and Santoro (2006) explain, the label of Indigenous Teacher can bring with it negative connotations in the way that “…the position of ‘The Indigenous Teacher’ is marked as deficient and less able within the discourses of Australian schooling, so that Indigenous teachers have to struggle to attain a sense of self as ‘teacher’ outside of this pre-determined identity” (p. 144).

The MATSITI project did further the Indigenous cause in the education space, stating that

*Aboriginal and Torres Strait Islander students ‘cannot be what they cannot see’. A more powerful mentoring force will be unleashed by more Aboriginal and Torres Strait Islander teachers in Australian schools. Aboriginal and Torres Strait Islander students’ identities and cultures will be strengthened, and all students will enrich their school experience through more Aboriginal and Torres Strait Islander teachers (MATSITI, 2016, p. 8).*

This research goes further and provides the specifics of how Indigenous educators are important and how Indigenous knowledge is the element of cultural difference that needs to be understood and utilised. In strengthening this recognition
of the importance of Indigenous educators, Nakata reminds us that “Indigenous peoples hold collective rights and interests in their knowledge” (Nakata, 2002, p. 283).

6.2.2 Findings from the emergent data

The research questions were designed to find out if it is important to include Indigenous knowledge in pre-service teacher education, why it would be important, and then what to include. The importance has been confirmed. The reasons why it is important have been explained, and the knowledge that should be included has been described. The research findings go further.

This research has also established other key findings. Understanding these other key findings draws together the questions of this research and the results. These findings can be best explained under the headings of –

a) The meaning of Indigenous knowledge and understandings for how to incorporate it
b) The importance of Indigenous educators and different expectations of education (educational pedagogy)
c) True Indigenous Australian History (inadequacies of the current curriculum)
d) Aboriginal English – gaps about how to cater for Indigenous students and improve educational outcomes
e) Indigenous Identities – complexity within education, including Leadership
f) Continuing challenges such as racism
g) An emerging Indigenous methodology

It is important to explain each of these unexpected findings in detail.
6.2.2.1 a) The meaning of Indigenous knowledge and understandings for how to incorporate it

Indigenous people have their own definitions of Indigenous knowledge and Indigenous educators are the authorities on what is Indigenous knowledge and how it should be included in the educational space – classrooms, schools, and within a system. Indigenous educators participating in this research study thought that pre-service teachers need to learn about Indigenous knowledge from Indigenous people. They do not need to learn Indigenous knowledge. Indigenous people are extremely important for a reshaping of the education system, because including learning about Indigenous knowledge requires Indigenous people and their knowledge.

6.2.2.2 b) The importance of Indigenous educators and different expectations of education (educational pedagogy)

One of the key findings over and above the initial expectations of the research is the affirmation of the importance of Indigenous educators. To clarify this is also the reasons outlined for this importance. The NADPE report further confirms the importance of Indigenous educators by stating that “Indigenous education issues in ITE be recognised as a specialist area of study in Education and ITE” (ACDE, 2017, p. 19). This statement makes the distinction that Indigenous education is a specialist area of study ‘in education’ – which means that it is a specialist area of study in schools; requiring specialist knowledge from Indigenous educators. The statement also determines that it is a specialist area of study in Initial Teacher Education (ITE) – which
means that it is a specialist area in universities and other providers of ITE (or preservice teacher education); requiring guidance and consultation from Indigenous academics in the field of education.

Interestingly, the explanation for recommending this recognition of expertise and specialist knowledge is that “many schools continue to struggle with issues of Indigenous cultural knowledge and diversity” (ACDE, 2017, p. 12). The report goes further to recommend that this specialist area “requires further research and development” (ACDE, 2017, p. 13).

The overlap of cultures and knowledge systems also requires a realization that people have different expectations and ideas about education – purpose, best practice and pedagogy. (Malin, 1994).

Indigenous pedagogy demands an alternative focus with students, their families, and culture as central to the learning taking place within a school and classroom. This cultural and family focus is about people, not primarily about outcomes and assessment. Indigenous educators understand this different pedagogical approach in comparison to current standards and expectations. Indigenous teachers are extremely important for Indigenous students. “The evidence base for the positive impact of Indigenous teachers on outcomes for Indigenous students cannot be ignored” (MATSITI, 2016, p. 25).
The following table, Table 14, describes an Indigenous pedagogy. Each of the elements have either been documented in the literature or evident in participant responses. The combination of these elements creates an overview of an Indigenous approach to teaching practice in an urban context.

Table 14 - Indigenous teaching practice in an urban classroom

<table>
<thead>
<tr>
<th>The Indigenous Teacher</th>
<th>Knowing (Personal)</th>
<th>Being (Personal/Public)</th>
<th>Doing (Public)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Knowledge</strong></td>
<td><strong>Values and Beliefs</strong></td>
<td><strong>Relatedness</strong></td>
<td></td>
</tr>
<tr>
<td>Epistemology</td>
<td>Axiology</td>
<td>Ontology</td>
<td></td>
</tr>
<tr>
<td>Self-awareness – who we are, what we are doing, and why</td>
<td>Emphasis placed on aspects of curriculum and mode of delivery</td>
<td>Relationality / connections</td>
<td></td>
</tr>
<tr>
<td>Cultural and Curriculum knowledge</td>
<td>Understanding about how we be Indigenous and educators</td>
<td>Indigenous educational leadership</td>
<td></td>
</tr>
</tbody>
</table>

Practice begins with Indigeneity, strength in knowing one’s self. It is shaped by this self-awareness and then bolstered by cultural and curriculum knowledge; epistemological privilege. Although curriculum may be an oversimplified distinction, it is the focus of western education. Values and beliefs then shape how curriculum is delivered. An Indigenous educator’s Indigenous knowledge factors heavily in the delivery, or pedagogy, because relationships and connections are fundamental to acquiring knowledge. Yunkaporta (2009) explains that “we know that there are always connections between all things, places where different elements are no longer
separate but mix together and become something else. This way of working gives us new innovations as well as bringing us together” (p. 1).

The Indigenous educator’s Indigenous knowledge starts as something personal, from within, and then gradually becomes public as they develop a teacher identity and perform their role as teaching professional.

6.2.2.3 c) True Indigenous Australian History (inadequacies of the current curriculum)

Understandings about what really happened to Indigenous people provides a context to appreciate contemporary Indigenous Australia. That is the importance of history; knowing where we came from to understand how we have arrived at where we are. Australian history represents Indigenous people in a way that is superficial, making light of the atrocities imposed on Indigenous people. This history is written by non-Indigenous Australia. Indigenous people were meant to be bred out or assimilated.

Unfortunately, what is left is a curriculum that is not representative of Indigenous Australia and does not provide non-Indigenous people with a context through which to understand Indigenous people. Rose explains this as

*Education overtly suppressed and devalued all aspects of Indigenous knowledge.*

*The ramifications of this cultural and historical suppression embedded in a regenerative curriculum overflowed, affecting not only Aboriginal and Torres*
Strait Islander people, but also non-Indigenous people, who were denied access to significant knowledge of the land on which they now lived (Rose, 2015, p. 70).

Some non-Indigenous teachers may be underprepared. This situation is unchanged despite variations to curriculum documents, outcomes and standards. These measures have been implemented in a system that is largely non-Indigenous and with a guise of consultation which is then interpreted through a non-Indigenous lens. Buckskin (2016) goes further to encompass policy development and discusses this in terms of policies and practices that were “applied in some places, but never adequately resourced or implemented system-wide with appropriate continuity, monitoring and evaluation” (2016, p. 184).

Indigenous voice is either misinterpreted or filtered out, in a process of “starting reform then stopping, over and over” (Buckskin, 2016, p. 184).

Indigenous academics are vocal in the space. Pascoe (2011) expresses himself clearly on historical anomalies and the need for change in schools. Buckskin (2016) has stated that the ‘gap’ has no chance of closing unless non-Indigenous Australia listens to Indigenous educators and involves them in decision-making. Anderson (2011) has listed hurdles to Indigenous academic achievement and made recommendations for educators. Moreton-Robinson et al. (2012) have found teacher training lacking. Lowe and Yunkaporta (2013) have critiqued the curriculum and reported it deficient. Rose (2015) has made statements about cultural and historical suppression in the curriculum. Garlett discusses the importance of quality teaching and the need for
“Increased understanding of and respect for Aboriginal and Torres Strait Islander histories, heritage and cultures by all teachers” (2015, p. v). This is required because “teachers will play a major role in bringing about the accelerated improvement we are seeking” (Garlett, 2015, p. v).

While noting all these expert Indigenous voices, it should also be noted that Indigenous voice has been minimal or rendered insignificant when compared to non-Indigenous commentary on education. When considering the Indigenous contributions that have been made, Indigenous voices have been undervalued with regards to system-wide educational change. With little to no improvements evident (since the inception of NAPLAN in 2008) for the Indigenous students struggling in a system that reports annually on their underperformance. “…progress in improved outcomes for Aboriginal and Torres Strait Islander students is slow and patchy” (MATSITI, 2016, p. 25). Indigenous people should be listened to and their opinions utilised and valued, with attention given to the experience and knowledge of Indigenous educators; central in decision-making.

6.2.2.4 d) Aboriginal English – gaps about how to cater for Indigenous students and improve educational outcomes

Language has been a barrier for many Indigenous people to success in education, particularly in remote areas where more people are likely to be speaking different Indigenous languages. In contemporary Australia, when you think about
language difficulties you do not think about urban settings first. The reality is that many Indigenous students in urban classrooms could speak Aboriginal English.

*However, in the past 30 years the education system has failed to improve literacy outcomes for the vast majority of Aboriginal-English speaking students. This failure affects all aspects of Indigenous people’s lives, including their health, and has led to social problems of different kinds. (Sharifian & Department of Education W.A., 2012, p. 9)*

The Australian education system is in Standard Australian English and intelligence is measured against this standard.

*These simplistic measures of student performance, which are based on English-speaking norms, lead policy makers to react to Aboriginal-language-speaking students limited English literacy attainment in relation to the benchmark, rather than recognising that they are on a different English language and literacy learning trajectory (Freeman & Staley, 2018).*

The paragraph above describes the situation faced by many Indigenous students within the Australian education system. It results in deficit views of Indigenous academic ability, negative attitudes towards Indigenous languages, and does not recognise Indigenous students as multilingual.

*...policy makers have responded to the perception that it is inequitable for English-speaking students to compete with first language speakers in the final year of high school (year 12). On the other hand, Aboriginal-language-speaking*
students are required to catch-up with their monolingual English-speaking peers and attain the English literacy standards within four years by achieving the Year 3 NAPLAN benchmarks (Freeman & Staley, 2018, p. 179).

The study by Freeman and Staley has found that necessary ESL support is not provided as it is to other students. This is relevant to urban settings as well, where Indigenous student may speak Aboriginal English.

Most participants had language concerns and about the assessment of education in English. Among the concerns, Standard Australian English as a barrier to academic achievement for Aboriginal students in urban schools who speak Aboriginal English was raised as an issue. This perception is elaborated by ACARA with the explanation that “EAL/D students bring with them their own cultural knowledge and experiences, and therefore it cannot be assumed that they will have the cultural knowledge and perspectives required for success in schooling through the Australian Curriculum” (2012, p. 5). The ‘D’ in EAL/D is for dialect and encompasses students who speak Aboriginal English which is a dialect of English.

The area of concern is that many pre-service teachers do not know what Aboriginal English is, how to identify it and then cater for students who need support to learn Standard Australian English. This is described in more detail by Sharifian and the Department of Education W.A.

There is significant miscommunication between them and their non-Aboriginal teachers on the one hand, and lack of transparency in the literacy materials to
which they are exposed on the other hand. This is due to the differences that exist between Aboriginal English and Australian English, assumed to be the only correct form of English by most non-Aboriginal teachers. (Sharifian & Department of Education W.A., 2012, p. 7)

The literature on the topic in an Australian context is available online and includes materials in the ACARA national curriculum for EAL/D speakers, as well as education departmental resources. Western Australia, Queensland and NSW have numerous resources available which describe teaching implications and strategies. So why wouldn’t teachers know about Aboriginal English?

The difficulty is that the language knowledge sits within the linguistic community. There is a distinction between mainstream teacher knowledge, learnt by pre-service teachers within a teaching degree, and specialist knowledge, learnt by only those pre-service teachers wanting to be ESL teachers, or those with an interest in Linguistics. The focus on knowing about Aboriginal Language speakers may also be misconstrued as only relevant to the more remote areas where Indigenous students are still speaking their own distinct languages.

Lack of awareness and understanding about the relevance and prevalence of Aboriginal English throughout urban settings, means that Indigenous students are at a disadvantage. There should be more emphasis in this area and the learning about Aboriginal English should be incorporated into the mainstream teacher knowledge, especially to cater for our population demographics in the Northern Territory.
Improvement requires change to current practice. “This cultural shift involves mainstream teachers rethinking their roles as teachers of monolingual children to whom they simply have to deliver content or literacy teachers focusing only on first language literacy development and neglecting additional language development” (Dobinson & Borchi, 2016, p. 45).

The professional teaching organization Australian Association for the Teaching of English (AATE) recognise the that there is an issue and the need for something to be done.

*While over the last two decades there has been some progress made towards the recognition of Aboriginal English in the classroom and the inclusion of Aboriginal texts in the curriculum, progress remains slow; teachers could be better resourced and supported to deliver Aboriginal texts and culturally informed pedagogies (AATE, 2018).*

If Australian educators are completing their teacher training without the fundamentals in baseline information about Indigenous students, including what students bring with them to school as a starting point for learning, then how can the teachers differentiate to cater for student needs?

The new knowledge in this research study is that an in-depth understanding of Aboriginal English and how to respectfully and professionally cater for the learning of Aboriginal English speakers should be mandatory for all mainstream classroom teachers, not just considered specialist knowledge for specialist teachers which are the
current assumptions expressed in the relevant ACARA resources (English as an Additional Language Teacher Resource - EAL/D Learning Progression Foundation to Year 10, 2014), as evidenced in the following information about the EAL/D learning progression resource. “It has been developed primarily for teachers who are not EAL/D specialists” (English as an Additional Language Teacher Resource - EAL/D Learning Progression Foundation to Year 10, 2014, p. 2) however, the resource is general, presenting broad descriptions of student characteristics to assist teachers in placing students on the continuum. Teachers are warned that the descriptions are not exhaustive and are not checklists. Finding strategies to progress students through the levels of the continuum is very difficult and then quite general. Adversely, the document then states that this progression is complex and could take many years.

Students may appear to ‘slip’ between phases at transition points, particularly between Developing English and Consolidating English or when they move from an Intensive English progression to a mainstream class, as they meet new academic challenges that require increasingly sophisticated use of academic language (English as an Additional Language Teacher Resource - EAL/D Learning Progression Foundation to Year 10, 2014, p. 3).

Finally, for further support mainstream teachers are urged to seek “the advice and support of specialist EAL/D teachers” (English as an Additional Language Teacher Resource - EAL/D Learning Progression Foundation to Year 10, 2014, p. 4).
More investigation is required and additional training for teachers is the obvious place to start. These sentiments are echoed by Sharifian and Department of Education W.A. (2012, p. 8) “The results will then need to be fed into every aspect of teacher education and curriculum development for Aboriginal students”.

6.2.2.5 e) Indigenous Identities – complexity within education, including leadership

Explaining the position of Indigenous people within the Australian education system requires a lengthy discussion. There is not a simple one liner that describes all the relevant areas. From an Indigenous perspective, there are numerous areas of contention which require further examination. Indigenous identity in the Australian education is one of these areas.

The identity of potential participants in this research study was a part of the selection criteria. Participants had to be Indigenous. The research, through answering the research questions and through the process of semi-structured interviews, investigated Indigenous knowledge which is central to Indigenous identity. It is this concept that seems to be misunderstood or disregarded in education. It is the knowledge of the ‘other’ and is then not valued. Buckskin (2015) outlines this disregard as “Aboriginal and Torres Strait Islander cultures are neither Anglo nor Western. Until state and territory governments and education systems understand that, they cannot ‘close the gap,’” (p. 185). Indigenous identity and the lack of representation within the education system is a concern. It is a concern for Indigenous people. This is not new
information in itself, but the research exposes the fact that it is a continuing theme. This sentiment is echoed in the concluding statements of the MATSITI final Report citing government inaction. “It is time that these government commitments, stated in a wide range of policy documents over a long period, be translated into actions or risk becoming part of the national shame revealed by the lack of progress in achieving many Closing the Gap targets” (MATSITI, 2016, p. 29)

What is new knowledge is the way that Indigenous teachers, in the process of developing their professional teaching identity, enact leadership in a very specific way. Indigenous educational leadership is redefined as an ‘indicator of need’. The system does not adequately represent Australia’s Indigenous cohort. Indigenous teachers correct the shortfall by leading to ensure that Indigenous, and in some cases non-Indigenous, student needs are met. Indigenous teachers do this as best they can in a system that has professional standards which do not recognise and acknowledge this form of leadership. Indigenous educational leadership is cultural. Indigenous teachers may feel culturally obligated to act. They do this without defining what they do as leadership, but it is leadership. The many examples provided by participants hardly mentioned the word ‘leadership’, apart from one response that described job progression in the standard westernised sense of moving up through the recognized teacher pathways.
6.2.2.5.1 Indigenous teachers as Leaders

The researcher coded data as leadership, even though it was not classified as such by participants. Examples included detailed participant quotes about proactive behaviour where action is required, support for Indigenous students, and then support for non-Indigenous students and teachers to create a more conducive learning environment. Without this teacher leadership, without Indigenous teachers taking the necessary action, the need for a more conducive learning environment would remain and hinder academic progress. The Indigenous teacher actions were necessary because there was a need. Indigenous educational leadership was demonstrated through the thoughts, actions and attitudes of Indigenous educators participating in this research study.

These leadership roles as outlined in the interview responses seem to be taken on more readily by the Indigenous teachers anyway, despite the burden of an extra load, because they understand the communal benefit; the benefit to the Indigenous students. This act epitomises the cultural differences in leadership. Noting Hohepa’s (2013) words again,

*Rather than being constructed as a leadership ‘type’ or ‘style,’ Indigenous educational leadership as ‘different’ may be better understood in terms of the enactment of leadership, which is located in and guided by Indigenous knowledge, values, and practices, in order to realize Indigenous educational aspirations* (p. 619).
Western ideas about leadership define it as goals achieved by working with others to obtain these goals. Whereas Indigenous leadership has a point of difference in that the act of working for the community is the goal. Indigenous education leadership has this same preface but in the context of classrooms and schools. Indigenous educators enact leadership in a distinctly Indigenous way and unfortunately the educational system within Australia further defines their efforts because of a necessity to respond to a system that is not necessarily inclusive of Indigenous people.

These understandings could be further elaborated to say that Australian Indigenous Educational Leadership is an indicator of the strength and use of Indigenous knowledge by Indigenous educators, in their efforts to address the failings of a system to meet the educational needs of Indigenous students. Through their efforts, Indigenous educators provide expertise in the area of Indigenous Australia to non-Indigenous students and teachers. This expertise may encompass curriculum, pedagogy and knowledge specific to their language group recognizing regional difference and diversity of Indigenous Australians.

The cultural knowledge required enacting Indigenous educational leadership is also what allows the Indigenous educators to identify the areas of need in the first place. The standpoint of a minority within a system, the focus away from blaming the people to shortfalls of the system, makes areas of need glaringly obvious to that minority. Indigenous students may have difficulties in articulating the areas of need. Indigenous educators can identify and articulate areas of need that require action. They can make a unique and valuable contribution. Reid and Santoro (2006) explain that
...this struggle 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 children (p. 144).

Indigenous educators participating this research study noticed the Whiteness of schooling. “I pick up on things which is terrible, but you know it’s always got to have a brand mark (Indigenous)” (Nerrida). The statement refers to an offensive staffroom conversation between non-Indigenous teachers about an ‘Indigenous’ student. It could be said that Nerrida identified with the student and recognised the racial statements as unacceptable and unprofessional. For the Indigenous teacher, it feels personal.

6.2.2.6 f) Continuing challenges such as racism

On numerous occasions, participants spoke about incidents that can at best be called ignorance and at worst Racism. There were statements about negative attitudes towards Indigenous students, low academic expectations of Indigenous students, the need for Indigenous teachers to boost Indigenous student resilience and self-esteem, a lack of knowledge to cater for Indigenous student literacy needs, avoidance of Indigenous curriculum content, tokenism of Indigenous content, and the need for Indigenous teachers to protect Indigenous students and their families. These were the perceptions of Indigenous educators in our current Australian public education system.
The challenges outlined for Indigenous students and educators are recurring themes that seem to have no immediate solutions if we continue down the same track as always. “The discursive environment of Australian schools remains overwhelmingly ‘White’ despite decades of both State Education Department and Federal Government multicultural policies, so that the Indigenous Other is knowable, speakable and constructed as a social subject, primarily in racial terms” (Reid & Santoro, 2006, p. 146).

Restating the sentiments conveyed by Buckskin (2016) that the ‘gap’ has no chance of closing unless non-Indigenous Australia listens to Indigenous educators and involve them in decision-making, becomes an imperative. Or are we doomed to awaken every day to the same situation ad infinitum? Considering how long these challenges have been known, recorded, written about, and explored from other angles and with other modes of research, Indigenous educators could be forgiven for being jaded about the Australian education system. This is deplorable especially when you consider that in 2015 there were “…a total of 200,563 Aboriginal and Torres Strait Islander students, or 5.3% of total enrolments in Australia’s schools” and that the “…majority of these students (84%) attended government schools” (MATSITI, 2016, P. 10).

The disconcerting realization is that many Indigenous teacher-education students do not even complete their Initial Teacher Education qualification; already discouraged. In fact, motivation for the MATSITI Project 2012-2015 was low graduation numbers. “Funded by MATSITI, a report commissioned by the Australian Council of
Deans of Education revealed that only 33% of commencing Indigenous teacher education students graduate as teachers” (MATSITI, 2016, p. 6).

Yunkaporta & McGinty (2009) remind us of the cultural interface which is an area of overlap in understanding, or an area of common ground that could be further developed to find links in beliefs and understandings about education. This is an area explored in this research literature review (Woodroffe, 2016) in the commonality of the importance of education in both western and Indigenous cultures. This optimistic approach does not seem be considered by non-Indigenous stakeholders in the context of improving Indigenous academic outcomes. Evidence suggests that non-Indigenous teachers continue to find inclusion of Indigenous content too difficult, catering for Indigenous students too problematic, and the Indigenous people and culture are largely excluded and ‘othered’; noticing only the dichotomy of the knowledge systems.

Yunkaporta and McGinty (2009) contend that Nakata when investigating the cultural interface, sets the foundation but does not transfer theory into educational practice. “...while most of the literature focuses on the why of cultural interface, very little explains the how in terms of what actually happens in the classroom” (Yunkaporta & McGinty, 2009, p. 58). This statement by Yunkaporta and McGinty was made in the context of further investigating the use of Indigenous knowledge in remote community settings.

My research conducted in this study added further knowledge to the field, highlighting the importance of Indigenous knowledge in an urban context. The new
knowledge was added to a limited field and participant responses were expressed in practical terms of Indigenous educator’s application in urban classrooms, student use of Indigenous knowledge, and suggested recommendations were made for how educators can access the necessary information and expertise required. The findings of this research agree with some key findings and recommendations of the 2017 Network of Academic Directors of Professional Experience (NADPE) Report on Professional Experience in Initial teacher Education: A review of current practices in Australian ITE. This report was published by the Australian Council Deans of Education (ACDE) and was commissioned by the Federal Department of Education and Training. The report is significant, as it assesses the professionalism and achievement of standards within pre-service teacher education.

The NADPE Report consists of the results of 5 studies conducted to “provide an account of current developments in ITE, their impact on the delivery and quality of professional experience, and issues that need to be addressed to support further improvements” (ACDE, 2017, p. 10). Study Five has an Indigenous focus - Indigenous Contexts, ITE and Implications for Professional Experience. It is important to note the associated information in the executive summary.

A review of research and practice in the preparation of teachers for Indigenous Education shows that there is more to learn about how to ensure pre-service teachers are prepared to achieve attributes for teaching that reflect the Australian Professional Standards 1.4 and 2.4. The placement experiences of both Indigenous and non-Indigenous pre-service teachers suggest that many
schools continue to struggle with issues of Indigenous cultural knowledge and diversity. While the national response to these issues is fragmented the research supports the view that this aspect of ITE is a specialist area that requires further research and development. There is a need to continue the work that has been seeded by the More Aboriginal and Torres Strait Islander Teachers Initiative (MATSITI) project. The collaboration that has been established through MATSITI and the ACDE has led to the formation of the Australian Indigenous Lecturers in Teacher Education Association (AILTEA) group in 2016, as a national specialist group of Indigenous academic advisors for Education (ACDE, 2017, p. 13).

In body of the report, it is explained that

The varied geographical, educational and cultural issues that influence the delivery of ITE create challenges for providers. Specialist knowledge and resources are needed to address Indigenous education issues. The findings of this project demonstrate that while the MATSITI project has created an awareness of many issues there remains a need for systemic measures to be put in place to address the learning needs of both non-Indigenous and Indigenous pre-service teachers (ACDE, 2017, p. 18).

NADPE Report Findings congruent with this research study are that Indigenous is ‘othered’ and separate in Australian education. Many teachers may be unprepared to meet the Australian Professional Standards for Teachers, and unable to best cater for Indigenous students. A number of schools exclude Indigenous (cultural) knowledge and
may not cater well for diversity. Despite this, the national response to Indigenous issues has been long and ineffective; described in the NADPE report as fragmented. Indigenous ITE is a specialist area that will benefit from further research and development.

Indigenous understandings in ITE may potentially benefit from this research study about the inclusion of Indigenous knowledge and the suggested recommendations written. The knowledge in this research is specific about the use of Indigenous knowledge by Indigenous educators participating, their opinions about Indigenous student use of Indigenous knowledge, and the need for teachers to know about Indigenous knowledge and to be guided by Indigenous teacher expertise. Specialist knowledge is required from Indigenous educators. Indigenous voice is necessary to provide specialist knowledge and expertise. Most importantly, there needs to be systemic change to address the learning needs of pre-service teachers and embed Indigenous knowledge in ITE.

This further confirms the relevance and importance of this research study. It also emphasizes the need for and importance of Indigenous voice and Indigenous knowledge in education, which was described as requiring further research and development. Bodkin-Andrews and Carlson (2016) concur, explaining that “A significant number of respected Indigenous Australian researchers have argued for the need of research to recognise that Aboriginal and Torres Strait Islander people should not be considered as being ‘known’, but rather recognised and respected as ‘knowers’” (p. 789).
This research study has further reinforced the importance of Indigenous voice and the need for the specialist knowledge that Indigenous Australians possess.

6.2.2.7 g) An emerging Indigenous methodology

As an Indigenous researcher, completing work towards the western qualification of Doctor of Philosophy (PhD), it was important to complete the doctorate in a way that honours Indigenous culture and people. West (2000) best articulated this in his thesis entitled - An alternative to existing Australian research and teaching models: the Japanangka teaching and research paradigm, an Australian Aboriginal model. “Those Aborigines who follow are charged with the following: do not deny the articulation of the cultural truths we know and the processes we require to succeed” (West, 2000, p. 17). Following this advice, it is important to note that there was a unique cultural element to progressing the PhD.

While completing the research methodologies expected, another process became evident as the study progressed nearer to completion. The process occurred simultaneously as the chosen methodologies already discussed (Standpoint Theory and shared epistemology model). In western terms of research methodologies, the process could be called an emerging Indigenous methodology, with some autoethnographic characteristics. The distinguishing factor is that it utilized Indigenous community feedback.

Writing (Indigenous epistemology), Talking (oral traditions of knowledge transmission), and Listening (Indigenous feedback - relational ethic and sensibility) Methodology
During the research study, there was an unintentional repeated pattern of events. This patterning included i) writing primarily about Indigenous epistemology and connections with education, ii) talking about the knowledge both known and expressed as oral presentation, and then iii) an informal noting or collection of feedback from the Indigenous audience. This semiotic pattern was repeated several times.

The process was significant to me as an Indigenous researcher. Significance of the Indigenous knowledge to begin with is interesting to consider. What knowledge do we have as Indigenous people? How do we express our Indigeneity as it applies to western contexts such as education? The researcher was able to find links based on their extensive knowledge of the Australian education system. This was perhaps a baseline and the foundation for adding the knowledge of the study participants. In this sense, the writing as a starting point was necessary in establishing the Indigenous epistemology and grounding the importance of the research.

The writing and thinking were then expressed orally as presentations – mostly to an audience with Indigenous members. This was a conscious step in expressing and conveying information in the emerging themes and then gauging the reaction of the audience and inviting and listening to feedback. While feedback was provided by any member of the audience, it was the Indigenous feedback that I was particularly interested in because of the Indigenous nature of the research. Cultural aspects of the research study were embedded in communication of the progress made and presented. Klapproth (2009, p. 35) postulates “that culture is communication” and that it is a system of signs that requires communication to be lived. Furthermore, cultural
knowledge “is seen to be distributed across participants in interaction” (Klapproth, 2009, p. 36).

While the presentations were not stories and were not necessarily presented as narrative in a traditional sense, the presentation style was less or more formal as the situation required. It involved oral knowledge transmission about the research differentiated for the context in the way that “stories are always occasioned and told in particular social situations for particular communicative purposes, and that the structure of a narrative text necessarily reflects the conditions of its occasion and the purpose for which it was told” (Klapproth, 2009, p. 157).

This process was a contributing factor for the research study to succeed. In the initial stages it especially applied to the formulation of a project outline, the devising of a research question, the confirmation and enrolment process, and the development of the literature review.

Significant stages in the research became evident and were punctuated with presentation opportunities and reflection on the way that the information was received. It seems like an overly simplistic process but provided an avenue for Indigenous thoughts and opinions to be considered and to add to the Indigenous nature of the research. Autoethnographic aspects included the “use of cultural richness for self-reflection and understanding the nature of the encounter” (Denzin, Lincoln & Smith, 2008, p. 348).
The research study can be mapped against this process from beginning to end.

In the space between Beginning and End, this emerging methodology contributed to the analysis of the data and influenced the reshaping of information. The thinking that happened at each significant stage in the research study is reflected in researcher journal entries and in the writing resulting from these reformulated ideas, as well as the shaping of the next presentation.

Table 15 - Writing, Talking and Listening; A methodology in practice.

<table>
<thead>
<tr>
<th>Timing/stage of the research</th>
<th>Oral presentations</th>
<th>Chapter/concept development</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>Indigenous Content in Education conference, University of South Australia.</td>
<td>Beginning of the Literature Review. Exploration of concepts in detail particularly divergent knowledge systems. Resulting journal publication.</td>
</tr>
<tr>
<td>2015</td>
<td>Charles Darwin University, HDR conference</td>
<td>Redevelopment of research questions. Areas of potential with education where knowledge systems overlap/complement.</td>
</tr>
<tr>
<td>2017</td>
<td>Organisational Culture conference (International), Charles Darwin University</td>
<td>Further explanations of the ongoing impact of colonisation. What is needed to empower Indigenous people in a system?</td>
</tr>
</tbody>
</table>
The support given to Indigenous researchers by the wider Indigenous community is invaluable and is an extension of the communal nature of Indigenous cultures. It is also an acknowledgement of the fact that Indigenous research should be conducted with the community and benefit the community.

The new knowledge realized in this methodology, as well as that gained overall through the research study have only been possible by working through a process, or with a framework.

### 6.3 The Framework

The framework for this research study can be best described as a reflexive thought process in which knowledge about the research topic has evolved and reshaped, only to be changed and recreated again. The cliché of being on a *journey* is proven true by the synthesis of knowledge into something new and revealing.
Assumptions at the beginning of this research study, while forming the basis of initial conversations and writing have been replaced with findings and evidence. It seems surreal to now have a feeling of coming full-circle and truly understanding the place that Indigenous people have carved out and continue to carve out for themselves in the Australian education system.

I began with knowledge about being an urban Indigenous person in the Northern Territory, and knowledge about being an experienced teacher. With this knowledge came assumptions based on many years of experience within the Australian public education system. The context of this knowledge and assumptions were the urban settings of Darwin and Katherine.

My classroom experiences and the leadership responsibilities of senior teacher and specialist teacher contributed to detailed understandings of best practice in teaching; best practice as defined by the Australian Profession Standards for Teachers. These detailed understandings led to questioning about perceived repeated underperformance of Indigenous students and questioning about the system and implications for teaching.

A review of literature confirmed that there were gaps in the field of knowledge surrounding teaching Indigenous students and a cultural mismatch that could best be investigated by exploring ideas about knowledge, education and effective teaching. Specifically, the gap established the need to listen to Indigenous educators and understand their experiences and perspectives about the system in which they work.
and teach daily. This unique perspective of Indigenous knowledge, thought and opinion adds a dimension to Australian education that is largely unheard and underrepresented. It is the missing piece in the puzzle of Indigenous inequity in Australian education.

The formation of a research question was a key step in being able to access the important information that Indigenous educators had to share about the Australian education system that appears to be failing many Indigenous people. The insights hold value as a contrast to the knowledge held and enacted by non-Indigenous educational decision-makers in schools, departments and governments, who have been unable (and perhaps unwilling) to change a system that privileges non-Indigenous students.

Research Questions - Is it important to include Indigenous knowledge in pre-service teacher education? If so, why? What should be included?

The Indigenous women’s standpoint was a natural positioning for a member of a minority group and necessary to take the focus of blame away from Indigenous students and their families and to place it squarely on the system that is meant to have their best interests at heart, as Australian citizens. The difficulty begins with the interpretation of ‘best interest’. Currently, it is the non-Indigenous interpretation of what is best for Indigenous people in urban public education settings in the Northern Territory. With Indigenous educator voice lacking in Australia, non-Indigenous interpretation is also the norm for mainstream Australian public schools.
A shared epistemology model of research presented a way forward by creating an opportunity for respectful practices in working with Indigenous participants to ensure that the Indigenous interpretation is known. A transdisciplinary ideal presents the opportunity for information to be shared in a way that can be understood by both Indigenous and non-Indigenous people. This joint understanding is necessary to close the cultural divide in education by being able to make the links between cultural knowledge and practices and education. This linking was enforced by the method of ‘Writing, Talking and Listening’, which enabled me to share and think about the research progress and findings through presentation and informal Indigenous feedback throughout the research study.

Reflections on practice through semi-structured interviews and participant journals provided the answers to the research questions and more. I was able to do this by working through the following process –

Figure 11 - Research framework as process
The research study has been developed through the lens of an Indigenous educator. The topic of the research was a proven gap in the field of knowledge. The research questions were written to fill the gap in the knowledge. The methodology chosen filled this gap further by ensuring that Indigenous voice would be heard. The interview questions were written to capture the Indigenous voices and to answer the research questions. The semi-structure to the interviews allowed for priori and emergent coding. The emergent data provided a richness and depth to the research. The analysis through Indigenous standpoint has meant that the education system was the focus, shedding new light on perceived failings. This time though, not the failings of Indigenous people but the failings of a system which advantages non-Indigenous people. The key findings of the research have formed the recommendations and implications.

6.4 Conclusion

The purpose of this research has been primarily to benefit Indigenous children as they enrol and progress through a system that has a history of exclusion, does not acknowledge their culture respectfully, and has low expectations for their success. Further change is needed for these children to thrive and look forward to the bright futures that they deserve. This change towards a bright future will not be possible without the recognition and involvement of Indigenous educators who hold both cultural knowledge, in the form of Indigenous knowledge, and their knowledge of the westernised education system.
Indigenous educators must be valued for their potential to improve a system that is unable to support many Indigenous students; leading to social exclusion and disadvantage. Most importantly, Indigenous educators’ voices must be heard – not only in remote areas, as seen more commonly in the past, but in urban classrooms across the whole of Australia. These same Indigenous educators must be key players in the process of major change required.

An important consideration is how to recognise when the desired change has been achieved. As described earlier in the chapter, current teacher practice with regards to Indigenous learners in the Australian education system is measured through the demonstrated attainment of 1.4 and 2.4 of the Professional Standards for Teachers. The degree of achievement is measured against the descriptors for these standards on the AITSL website at graduate level, proficient level, highly accomplished level, and lead level.

After considering the data and analysis in this research study, other areas could also be used to observe whether change, or in other words success has been achieved. These indicators would include confidence in teaching Indigenous students, academic achievement of Indigenous students, and Indigenous teacher satisfaction with the education system.

The next chapter, Chapter 7, outlines conclusions, suggested recommendations and implications arising from this research study. This final chapter brings together to
the learning in the research and synthesises the information to present the new knowledge in the field.
7. CONCLUSION

The answer to the challenges in Indigenous education will not be found until we begin to get to grips with the real work that has to be done at the [cultural] interface (Nakata, 2011, p. 8).

This research study has been successful in achieving the aims of the research through answering the research questions and creating new knowledge in the field. This concluding chapter will state the answers to the questions, as well as provide a list of suggested recommendations shaped by the key findings. These suggested recommendations will have implications for stakeholders. Implications have been explained. Finally, the chapter concludes with a statement about possible areas needing further attention.

7.1 Research questions

*Is it important to include Indigenous knowledge in pre-service teacher education? If so, why? What should be included?*

Yes, Indigenous knowledge should be included in pre-service teacher education, but it is not as simple as that. It should be included in a specific way. Pre-service teachers should learn ‘*about*’ Indigenous knowledge, what it is and how it benefits students and teachers. Saying that, pre-service teachers should not learn Indigenous knowledge. Indigenous knowledge is the domain of Indigenous people. Only Indigenous people can have an Indigenous perspective and an Indigenous standpoint. Therefore, Indigenous people are required for Indigenous knowledge.
Including Indigenous knowledge in pre-service teacher education increases opportunities for Indigenous people to engage with the Australian education system. Ensuring that the teaching workforce understands the importance of culture and family as integral to education for Indigenous people is a step in the right direction toward equity. Both Indigenous and non-Indigenous Australians will benefit from a shared understanding about the intricacies of Indigenous Australia. This transdisciplinary approach of making knowledge accessible to both Indigenous and non-Indigenous Australia can be achieved through the inclusion of Indigenous knowledge. However, it must be stressed that this is only achievable with the expertise and knowledge of Indigenous educators.

The research has demonstrated that Indigenous educators define and recognise Indigenous knowledge in a way that is meaningful for themselves. The research also shows that Indigenous educators use Indigenous knowledge in the classroom, as part of their daily practice. The knowledge is not just about content but is largely about the way that they do their job. They reinterpret their teacher identity to include Indigenous knowledge as pedagogy. This makes their practice unique and their knowledge a rare commodity, considering how few Indigenous teachers work in classrooms in Australia.

Importantly, Indigenous educators support the continuing needs of Indigenous students. Indigenous educators feel a cultural connection and common understanding about improvement needed in the Australian education system; a system that advantages non-Indigenous students. Indigenous educators can recognise and identify the Indigenous knowledge needed and used by Indigenous students. The research
validates the importance of Indigenous knowledge for students and that it is imperative for pre-service teachers to know and understand how to use understandings about this knowledge to improve student outcomes.

Pre-service teachers need to know about Indigenous knowledge, why it is important to Indigenous people and why it should be a part of their daily teaching practice. At the same time, pre-service teachers should understand the distinction between users (non-Indigenous educators, Indigenous educators, and Indigenous students), and the difference in how they use Indigenous knowledge.

Central to this is the knowledge itself. Indigenous educators have epistemological privilege about Indigenous knowledge and the educational context, almost serving as interpreters between Indigenous and non-Indigenous. Indigenous students need Indigenous knowledge and Indigenous educators to support and promote the respect and strength of Indigenous culture in the western settings of the urban classroom, within which it can be lost or non-existent. Non-Indigenous educators have a responsibility to know about Indigenous Australia including our shared history, and Indigenous languages. They have a responsibility to know about Indigenous knowledge and the respectful way to work with Indigenous colleagues to create an inclusive learning environment for all students. An awareness of Indigenous knowledge and an understanding about its importance to Indigenous people is imperative for teachers in Australian classrooms. Changing the future for Indigenous students who are disadvantaged by the existing western education system must be a priority. This can be
achieved through collaboration and the inclusion of Indigenous knowledge in pre-service teacher education.

Specifics about what Indigenous knowledge should be included in pre-service teacher education can be seen in detail in Tables 11, 12 and 13 as part of the first recommendation listed below.

7.2 Suggested recommendations

<table>
<thead>
<tr>
<th>1. That Indigenous knowledge is included in pre-service teacher education.</th>
</tr>
</thead>
</table>

Participant responses have been combined into the following tables. Table 12, mentioned earlier on page 270, describes what participants determined as the Indigenous knowledge that pre-service teachers should learn about.

Considering that a percentage of these pre-service teachers will be Indigenous, the Indigenous pre-service teachers should be made aware of how they could use their Indigenous knowledge in teaching. This is represented in Table 10 below, as described by Indigenous educators participating in this research study. It is important for non-Indigenous pre-service teachers to understand that Indigenous educators possess this epistemological privilege.

<table>
<thead>
<tr>
<th>Indigenous teachers use Indigenous knowledge to -</th>
<th>HOW -</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strengthen identity</td>
<td>Used continuously; cannot separate identity from practice</td>
</tr>
<tr>
<td>Make deeper connections with students</td>
<td>Sharing information about own identity and cultural background</td>
</tr>
<tr>
<td>Make use of firsthand experiences</td>
<td>For example, speaking an Indigenous language earlier in life can provide a perspective on ESL</td>
</tr>
<tr>
<td>Share Indigenous cultural knowledge</td>
<td>Engaging with Indigenous students, family and community</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Support non-Indigenous educators to become culturally aware</td>
</tr>
<tr>
<td>Build student self-esteem</td>
<td>Encourage students to share and feel confident and proud of their own Indigenous identity</td>
</tr>
<tr>
<td>Enhance the teaching profession</td>
<td>Through collaboration and networking with more Indigenous educators</td>
</tr>
<tr>
<td>Teach important content</td>
<td>Such as True Indigenous Australian History</td>
</tr>
<tr>
<td>Add value to programs and links in curriculum</td>
<td>Incorporating Indigenous views and ways</td>
</tr>
<tr>
<td>Support non-Indigenous students to learn and become culturally aware</td>
<td></td>
</tr>
<tr>
<td>Integrate Indigenous culture into everyday</td>
<td></td>
</tr>
<tr>
<td>Create a learning environment inclusive of all learners</td>
<td>Use an Indigenous pedagogical approach</td>
</tr>
</tbody>
</table>

All pre-service teachers should know about the importance of Indigenous knowledge to Indigenous students, as outlined by Indigenous educators participating in this research study and as seen in Table 11 on page 269.

2. That an in-depth understanding of Aboriginal English and how to respectfully and professionally cater for the learning of Aboriginal English speakers should be mandatory for all pre-service teachers, not just considered specialist knowledge for specialist teachers.

This is an area of potential for further research and a focus for inclusion in pre-service teacher education. While some states such as Western Australia have available resources and strategies for teaching students who speak Aboriginal English, it is not a focus in urban classrooms in the Northern Territory where participants of the research
have raised the concern of Standard Australian English as a barrier to educational success.

Current assumptions as expressed in the relevant ACARA (2014) resource, *English as an Additional Language or Dialect Teacher Resource: EAL/D overview and advice*, is that this is specialist knowledge for specialist teachers.

The concern hinges on the supposition that there may be very many Indigenous students who are underachieving because of a lack of knowledge about Aboriginal English.

3. That Indigenous educators be recognised as having epistemological privilege – Indigenous knowledge and (western) educational knowledge.

When incorporating Indigenous knowledge into the Australian education system, the Indigenous educators will be epistemologically privileged in the way that they know and can identify Indigenous knowledge in their practice. The use of Indigenous knowledge, the respect for and recognition of Indigenous educators as facilitators of Indigenous knowledge will be of utmost importance. This will create a need for further increasing the numbers of Indigenous educators because of the way that they can utilize both western knowledge of education and incorporate their cultural knowledge. Indigenous educators have access to a different pedagogical approach enabling classrooms to be more inclusive. In this way, Indigeneity is a skillset for teaching.
4. That Indigenous voice is recognized as essential to create an inclusive Australian public education system, and that Indigenous educators are decision-makers for change.

This recommendation is at the heart of this research study. It requires the acknowledgement that Indigenous educators can use their perspective to see where educational change needs to occur. Indigenous educators’ voice is the missing piece to the puzzle of educational equity in Australia. However, consultation which is then filtered through the non-Indigenous lens of educational decision-makers is not enough. Change in this way has been misinterpreted and diluted then abandoned.

Indigenous educators, with their epistemological privilege, need to be decision-makers for change in urban educational contexts.

5. That Indigenous enactment of Indigenous Educational Leadership is recognized in the Australian Professional Standards for Teachers, and formally recognized in schools and education departments.

Western forms of leadership are recognized within the Australian Professional Standards for Teachers. There needs to be an understanding of cultural difference in Leadership. This is necessary because Indigenous educators are conducting themselves in ethical and professional ways that bridge the cultural divide.

Indigenous educators are only regarded as professional leaders when they fit with the requirements of leadership as stated on the AITSL website, accessed at https://www.aitsl.edu.au/lead-develop. Indigenous educators are only recognized
when they perform western leadership. Indigenous educational leadership must be understood and recognized.

9. That the Australian Government, universities and other providers of teacher education know about these suggested recommendations to contribute to improving our education system beginning with teacher education.

Indigenous educators are stepping up and taking charge of situations where Indigenous students are requiring extra support. These situations are recognized by Indigenous educators who then provide the support required, such as cultural pride and self-esteem, understanding difficulties with Standard Australian English, and awareness of racism.

As discussed in the previous chapter detailed participant quotes described proactive behaviour where action is required to support Indigenous students, and in some cases non-Indigenous students and teachers, to create a more conducive learning environment. Without this teacher leadership, without Indigenous teachers taking the necessary action, the need for a more conducive learning environment would remain and hinder academic progression. The Indigenous teacher actions were necessary because there was a need. Indigenous educational leadership was demonstrated.

It would be ideal if this specific version of leadership was not required of Indigenous educators. Indigenous educational leadership should only be about Indigenous role models and strong Indigenous culture, not about supporting students because of inadequacies in the system.
7. That all pre-service teachers learn and be required to demonstrate skills and understanding of the true Indigenous history, contemporary Indigenous identity as a result of colonisation, what Indigenous knowledge is, how they can work with Indigenous educators to incorporate Indigenous knowledge into classroom practice, which Indigenous knowledge is relevant to classroom practice and why it is important.

An expectation of responsibility on the part of non-Indigenous teachers to know about Indigenous Australia will help to avoid such sentiments as “Indigenous teachers are often expected to fill the gaps in the knowledge of White teachers about Indigenous education and issues. This has the effect of absolving White teachers from the responsibility to be part of the solution to problems of Indigenous Education” (Reid & Santoro, 2006, p. 151).

A shared responsibility of creating an education system that is inclusive of Indigenous people and culture will create a more inclusive Australia.

8. That all pre-service teachers learn and be required to demonstrate skills and understanding of the impact of racism and low expectations on Indigenous people, and the potential of inclusive classroom pedagogies.

Racism, low expectations and limited pedagogy were raised by participants as issues in schools. The pervasive nature of racism and the phenomenon of white blindness impact on the possibility of racism and low expectations for Indigenous students occurring in schools. If unchecked, racism could be perpetuated. Low expectations and limited pedagogy reflect a teacher’s inexperience and lack of
knowledge. These are issues that all teachers should be aware of early on in their careers to ensure that they are not hurdles to inclusive teaching practice and positive academic achievement. Teachers are required to demonstrate professional and ethical behaviour.

9. That the Australian Government, universities and other providers of teacher education know about these suggested recommendations to contribute to improving our education system beginning with teacher education.

This research study has addressed areas in the field of education that needed to be investigated further to create new knowledge and recommend possible change required. These recommendations have specific implications.

7.3 Implications

7.3.1 Implications for the participants

Participants have been able to express their thoughts and feelings about the education system through this research study. This has been done in a way that recognizes the classroom as the place to make effective change. It also acknowledges that the participants have a perspective not often heard or considered in the Australian education system. Specifically, Recommendation 3 applies to the participants, and other Indigenous educators.
3. That Indigenous educators be recognised as having epistemological privilege – Indigenous knowledge and (western) educational knowledge.

Granted, this epistemological privilege may vary in quantity, particularly if the educators are graduates with limited time in the classroom. It should also be acknowledged that not everyone is good at teaching in general. Some Indigenous educators may not want the responsibility that this epistemological privilege brings. Everyone’s individual choice is relevant. Importantly, instead of Indigeneity being a label and a burden on Indigenous educators, who have been pigeon-holed, Indigenous educators will be seen as ‘knowers’ rather than in deficit, positively impacting the respect for Indigenous teachers.

Professional teacher identity should encompass educators that are Indigenous and who have the advantage of epistemological privilege in the field of education. Teaching could be more readily perceived as a profession of choice for Indigenous people, hopefully impacting on the retention of many more Indigenous pre-service teachers.

Participants have highlighted the contradictions of Leadership and their courage in creating a place both for themselves and the Indigenous students in the urban school settings. Recommendation 5 is pertinent here.

5. That Indigenous enactment of Indigenous Educational Leadership is recognized in the Australian Professional Standards for Teachers, and formally recognized in schools and education departments.
This awareness of the contributing factors, such as racism, lack of knowledge about Indigenous people, culture and language, requiring Indigenous Educational Leadership provides an opportunity for other teachers, executive staff and the education departments to rethink what happens in schools to ensure an inclusive and safe learning environment. It will require action on the part of decision-makers to promote change, and the inclusion in this decision-making of Indigenous educators who are Leaders. These Indigenous Educational Leaders are integral in the process to firstly identify the areas of need, and then implement solutions.

This links directly with Recommendation 6 which considers the definition of Indigenous Educational Leadership as advocating for Indigenous students.

6. That the perceived conditions requiring Indigenous educators to enact Indigenous Educational Leadership be identified and amended where necessary.

The participants and other Indigenous educators should be formally recognized for their Indigenous educational leadership.

7.3.2 Implications for teacher education

As expected, many of the recommendations refer to pre-service teacher education, or Initial Teacher Education (ITE).
1. That Indigenous knowledge is included in pre-service teacher education.

Recommendation 1 refers to the earlier tables, and particularly Table 12 (on page 270) which describes what pre-service teachers should *learn about*.

<table>
<thead>
<tr>
<th>WHAT</th>
<th>HOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>An in-depth understanding of Aboriginal English and how to respectfully and professionally cater for the learning of Aboriginal English speakers mandatory for all mainstream classroom teachers.</td>
<td>By learning the linguistic knowledge and skills required.</td>
</tr>
<tr>
<td>Real Indigenous Australian history, including information about Indigenous treatment such as exclusion and assimilation.</td>
<td>By learning from Indigenous people. Participants confirmed that only Indigenous teachers (people) can have, and then convey their Indigenous perspective.</td>
</tr>
<tr>
<td>Indigenous culture to develop a cultural awareness and understanding of Indigenous world view.</td>
<td></td>
</tr>
<tr>
<td>How to teach Indigenous learners but also acknowledge the importance of Indigenous teachers, particularly in schools with a greater percentage of Indigenous students.</td>
<td></td>
</tr>
<tr>
<td>That it is necessary for non-Indigenous students to learn about and understand Indigenous Australians.</td>
<td></td>
</tr>
<tr>
<td>Possible barriers to learning such as-</td>
<td></td>
</tr>
<tr>
<td>• ESL needs</td>
<td></td>
</tr>
<tr>
<td>• Mental health issues</td>
<td></td>
</tr>
<tr>
<td>• Wellbeing concerns</td>
<td></td>
</tr>
<tr>
<td>• And, how to create a sense of belonging for Indigenous students.</td>
<td></td>
</tr>
<tr>
<td>Indigenous educational pedagogy.</td>
<td></td>
</tr>
</tbody>
</table>

The process for implementing the pre-service teacher learning as described in the previous table, Table 12, is a learning cycle. It is important for the learning cycle to
be transformative, in that it checks assumptions and teaching practice is adjusted accordingly as required. The detail is explained in the following steps -

STEP 1. Reflection on current practice is the first place to start the process of change required to improve the Australian education system. This can take place during ITE for pre-service teachers, and in classrooms of existing teachers already in the system. This step of self-reflection involves thinking about current practice and reflecting specifically on the assumptions that underpin actions.

STEP 2. Conduct an audit of ITE learning suggested recommendations about Indigenous knowledge, outlined in Table 12 of this research study, with an Indigenous educator.

Table 16 - Reflection sheet

<p>| Teacher: | Teaching Team Leader: (Indigenous identified position) |
| Date: | Review Date: |</p>
<table>
<thead>
<tr>
<th>Suggested Recommendation</th>
<th>Audit (Y/N)</th>
<th>Strategy for Implementation</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has an in-depth understanding of Aboriginal English</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caters for the learning of Aboriginal English speakers.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaches Indigenous Australian history, including information about Indigenous treatment such as exclusion and assimilation.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accurately describes and discusses Indigenous culture and utilises knowledge in the classroom.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Uses learning experiences to develop student cultural awareness and understanding of Indigenous world view.

Accurately describes, discusses and demonstrates how to teach Indigenous learners.

Ensures that non-Indigenous students learn about and understand Indigenous culture and people.

Plans for possible barriers to learning - ESL needs, mental health issues, and wellbeing concerns.

Creates a sense of belonging for Indigenous students.

Uses Indigenous educational pedagogy.

This component creates a double loop learning effect, when combined with an action research process to plan, act, observe, and reflect on change to teaching practice. “Double-Loop Learning helps people acquire and integrate new information and develop new skills, to question and possibly discard familiar and perhaps dysfunctional ways of thinking, feeling, and acting” (Cartwright, 2002, p. 69).

STEP 3. Engage in an action research process to implement planned changes to practice. Importantly, this part of the framework includes observation to see changes demonstrated.
STEP 4. Reflection on current practice continues until the desired change has been achieved. Setting and communicating goals is important here. While the initial reflection on practice would be to identify the existence of Indigenous knowledge recommendations as listed, the subsequent reflections would be to quantify or measure the degree to which the recommendations were being implemented. Then, current goals could be adjusted, or new goals set to achieve any further change. The figure below, Figure 12, illustrates this framework.

Figure 12 - Indigenous knowledge implementation framework

- Reflect on current practice and assumptions
- Audit practice against Indigenous knowledge recommendations with an Indigenous educator
- Plan
- Reflect
- Act
- Observe

Considering that a percentage of pre-service teachers will be Indigenous, the Indigenous pre-service teachers should be made aware of how they may use their
Indigenous knowledge in teaching. This is represented in one of the earlier tables;

Table 10.

<table>
<thead>
<tr>
<th>Indigenous teachers use Indigenous knowledge to -</th>
<th>HOW -</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strengthen identity</td>
<td>Used continuously; cannot separate identity from practice</td>
</tr>
<tr>
<td>Make deeper connections with students</td>
<td>Sharing information about own identity and cultural background</td>
</tr>
<tr>
<td>Make use of firsthand experiences</td>
<td>For example, speaking an Indigenous language earlier in life can provide a perspective on ESL</td>
</tr>
<tr>
<td>Share Indigenous cultural knowledge</td>
<td>Engaging with Indigenous students, family and community</td>
</tr>
<tr>
<td></td>
<td>Support non-Indigenous educators to become culturally aware</td>
</tr>
<tr>
<td>Build student self-esteem</td>
<td>Encourage students to share and feel confident and proud of their own Indigenous identity</td>
</tr>
<tr>
<td>Enhance the teaching profession</td>
<td>Through collaboration and networking with more Indigenous educators</td>
</tr>
<tr>
<td>Teach important content</td>
<td>Such as True Indigenous Australian History</td>
</tr>
<tr>
<td>Add value to programs and links in curriculum</td>
<td>Incorporating Indigenous views and ways</td>
</tr>
<tr>
<td>Support non-Indigenous students to learn and become culturally aware</td>
<td></td>
</tr>
<tr>
<td>Integrate Indigenous culture into everyday</td>
<td></td>
</tr>
<tr>
<td>Create a learning environment inclusive of all learners</td>
<td>Use an Indigenous pedagogical approach</td>
</tr>
</tbody>
</table>

All pre-service teachers should know about the importance of Indigenous knowledge to Indigenous students, as seen in Table 11.

<table>
<thead>
<tr>
<th>Indigenous students use Indigenous knowledge to -</th>
<th>HOW -</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strengthen identity and resilience</td>
<td>Through confidence in students knowing who they are</td>
</tr>
<tr>
<td>Connect</td>
<td>Cultural connections between Indigenous students and Indigenous teachers</td>
</tr>
</tbody>
</table>
Understand the world that they live in, and being able to combat racism
By knowing about themselves, and Indigenous history from an early age
Non-Indigenous students having more in-depth knowledge of Indigenous Australia

<table>
<thead>
<tr>
<th>Participate in reconciliation</th>
<th>Understanding what is needed for respectful relationships</th>
</tr>
</thead>
<tbody>
<tr>
<td>Be respectful of cultural knowledge and beliefs</td>
<td>Indigenous teachers recognized as leaders in this space</td>
</tr>
</tbody>
</table>

Importantly, specific cultural consideration that may pose difficulties for student achievement should be known and understood. Recommendation 2 is relevant here.

2. That an in-depth understanding of Aboriginal English and how to respectfully and professionally cater for the learning of Aboriginal English speakers should be mandatory for all pre-service teachers, not just considered specialist knowledge for specialist teachers.

It will be the responsibility of teacher education providers to also make changes affecting emphasis of educational material delivered. Interestingly, during analysis of the data one of the participants included comments about the attitudes and abilities of lecturers, implying that not only course content determines the resulting pre-service teacher understandings but also the agency of the lecturer responsible for teaching the learning material.

Recommendations 7 and 8 elaborate on Table 12 in that they reiterate what pre-service teachers should learn about with regards to Indigenous knowledge and improving academic achievement for Indigenous students.
7. That all pre-service teachers learn and be required to demonstrate skills and understanding of the true Indigenous history, contemporary Indigenous identity as a result of colonisation, what Indigenous knowledge is, how they can work with Indigenous educators to incorporate Indigenous knowledge into classroom practice, which Indigenous knowledge is relevant to classroom practice and why it is important.

8. That all pre-service teachers learn and be required to demonstrate skills and understanding of the impact of racism and low expectations on Indigenous people, and the impact of limiting classroom pedagogies.

Each of these recommendations will be of no use if the people who currently make decisions about pre-service teacher education don’t know about them. Hence the need for Recommendation 9.

9. That the Australian Government, universities and other providers of teacher education know about these suggested recommendations to contribute to improving our education system beginning with teacher education.

7.3.3 Implications for teachers

This means that as pre-service teachers conduct their practicum placements in classrooms, teachers be learning from their practicum students. Practicum students will have new knowledge to better equip them to cater for Indigenous learners. They will
take this new knowledge and employ it in the classroom. This knowledge is outlined in Recommendations 7 and 8.

7. That all pre-service teachers learn and be required to demonstrate skills and understanding of the true Indigenous history, contemporary Indigenous identity as a result of colonisation, what Indigenous knowledge is, how they can work with Indigenous educators to incorporate Indigenous knowledge into classroom practice, which Indigenous knowledge is relevant to classroom practice and why it is important.

8. That all pre-service teachers learn and be required to demonstrate skills and understanding of the impact of racism and low expectations on Indigenous people, and the impact of limiting classroom pedagogies.

As more pre-service teachers become teachers, the schools will be staffed with better informed educators’ whose knowledge and pedagogical approach will further enable Indigenous academic success.

All teachers will need to know about Indigenous Educational Leadership and the inadequacies of the system that require change as stated in Recommendations 5 and 6.

5. That Indigenous enactment of Indigenous Educational Leadership is recognized in the Australian Professional Standards for Teachers, and formally recognized in schools and education departments.
9. That the Australian Government, universities and other providers of teacher education know about these suggested recommendations to contribute to improving our education system beginning with teacher education.

Recommendations 5 and 6 will require teachers to reflect on their own practice and make changes where necessary. This could be confronting if they unfortunately contribute to the inadequacies of the system for example with racism, low expectations, and lack of knowledge about Aboriginal English.

Further to this, teachers will need to be up to date with system wide changes understanding that pre-service teacher education is only the beginning of the change required.

7.3.4 Implications for the Australian public education system

The implications of this research study on the Australian education system may in fact be minimal if non-Indigenous decision-makers choose not to make the necessary changes recommended. Recommendation 4 requires transformational change so aspirations for Indigenous ownership within the national education system are realized.

4. That Indigenous voice is recognized as essential to create an inclusive Australian public education system, and that Indigenous educators are decision-makers for change.

The Australian Professional Standards will require change to accommodate Indigenous Educational Leadership, as stated in Recommendation 6.
9. That the Australian Government, universities and other providers of teacher education know about these suggested recommendations to contribute to improving our education system beginning with teacher education.

Indigenous voice within the system will also require curriculum change particularly about the inclusion of Indigenous Australia, changes to school documents such as curriculum scope and sequence outlining the application of the curriculum within the school, and reflection on pedagogy. These changes are seen in Recommendation 7.

7. That all pre-service teachers learn and be required to demonstrate skills and understanding of the true Indigenous history, contemporary Indigenous identity as a result of colonisation, what Indigenous knowledge is, how they can work with Indigenous educators to incorporate Indigenous knowledge into classroom practice, which Indigenous knowledge is relevant to classroom practice and why it is important.

Indigenous Australia will need to be mandatory study and understanding rather than offered as options for teacher or school discretion.

7.4 Conclusion

I utilised the shared epistemology model to guide the research and ensure a respectful and ethical engagement with participants, as well as Indigenous Women’s Standpoint theory as the method to critique the Australian public education system.
This deliberate approach to the research was key, allowing for surprising findings and providing evidence for recommendations grounded in Indigenous knowledge and experience.

It is fitting that the concluding statements about this research study consider how the recommendations and implications resulting from the research will impact on Indigenous students. The purpose of the research has always been to benefit the Indigenous community and in doing so improve academic achievement and educational experiences of Indigenous students in urban classrooms, acknowledging again that not all Indigenous students have low academic achievement, but many do.

This research has been an opportunity for Indigenous educators to provide their wealth of knowledge and experience to voice opinions about the Australian public education system, to affect positive change. This change is to improve education for Indigenous students.

So, what do the research suggested recommendations mean for Indigenous Students?

The implications of this research study suggested recommendations mean that Indigenous students will see themselves, their culture and their knowledge incorporated in a positive and inclusive way in the Australian education system. For this to happen in a comprehensive way, there needs to be a focus not only on teacher education but also on the whole of the education system with the following question - 

How can Indigenous knowledge be embedded in the Australian public education system?
Students will reap the benefits of informed teachers who understand Indigenous Australia, and who are better prepared to teach Indigenous learners.

Indigenous students will see acknowledgement of the importance of Indigenous people and their knowledge in the Australian public education system. Although the resulting implementation of this research study’s recommendations will be an area of further investigation, it is anticipated that recommendations will lead to an improved education system.
8. REFERENCES


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West, E. G. (2000). *An alternative to existing Australian research and teaching models - The Japanangka teaching and research paradigm an Australian Aboriginal model*. Southern Cross University, Lismore, NSW.


Young People. Perth. Curtin University of Technology and Telethon Institutes for Child Health Research.
9. APPENDICES
9.1 Appendix One – Participants with Themes table

<table>
<thead>
<tr>
<th>Participant</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
<th>Q6</th>
<th>Q7</th>
<th>Q8</th>
<th>Q9</th>
</tr>
</thead>
<tbody>
<tr>
<td>George</td>
<td>Yes</td>
<td>Cultural understandings, stories, and strengths.</td>
<td>Indigenous perspectives, stories, and deeper understandings. Indigenous knowledge from Indigenous people</td>
<td>Strengthens identity, relationships, opens doors for learning and for moving into senior roles. Professionalism and leadership.</td>
<td>Identity. Links between Indigenous knowledge and history. Use it and embrace it. Not taught well by all teachers.</td>
<td>Yes.</td>
<td>Absolutely.</td>
<td>Should be mandated not just a perspective because it is complex.</td>
<td>A whole course on cultural awareness. The true history and world view. Education is about more than English.</td>
</tr>
<tr>
<td>Helen</td>
<td>Yes</td>
<td>Directly relating to my culture, from an elder or family member.</td>
<td>Challenging because of diversity. History from the perspective of an Indigenous Australian to contemporary times.</td>
<td>Engagement and cultural awareness. Inclusive pedagogy.</td>
<td>Education is key. True history of Australia. Use knowledge to dispel fears and create more respect. Assist Reconciliation.</td>
<td>With all my heart and soul. I pray for this change. It will heal deep wounds.</td>
<td>History starting at pre-invasion, culture including lore, language, art, dance and respectful interactions.</td>
<td>Not a lot out there. Without my own personal knowledge, I would struggle. Not satisfied that non-Indigenous pre-service teachers know enough.</td>
<td>Recognition for Aboriginal languages. SAE should not be a barrier to Indigenous learners. Policy should impact on practice.</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>Identity, relationships and family.</td>
<td>Child initiated activities involving Indigenous community members, language and experience.</td>
<td>Personal experiences, cultural understanding, celebrating diversity. Language and hurdles.</td>
<td>Identify as Aboriginal. Opportunities to connect.</td>
<td>Yes – it is important especially for the NT. Networks and opportunities.</td>
<td>Indigenous pedagogy, local Indigenous knowledge such as Larrakia calendar and words.</td>
<td>Sometimes no. Especially not enough to support students with ESL needs.</td>
<td>Limited units available for learning Indigenous students, perspectives, or content. More support is needed through networking.</td>
</tr>
<tr>
<td>-------</td>
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<td>------------------------------------------------------------------------------------------</td>
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<td>------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Jane</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melissa</td>
<td>Yes – but only in</td>
<td>Connecting, relatedness and language.</td>
<td>Relevance for Indigenous students. More</td>
<td>Connections with Indigenous kids, family</td>
<td>Indigenous teachers can use it to connect with</td>
<td>Yes – Indigenous knowledges in teacher</td>
<td>Should acknowledge the importance of</td>
<td>Not good enough yet.</td>
<td>No – I think that’s all.</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>convesation.</td>
<td>Indigenous adults in schools as role models. and community politics.</td>
<td>Indigenous students. Understandings about different learning styles and needs.</td>
<td>education should be compulsory before teaching.</td>
<td>Indigenous teachers especially in schools with large numbers of Indigenous students. Indigenous pedagogy. Teachers caring for students.</td>
<td>I don’t think they are at all. Negative ideas and attitudes. Incorporating Indigenous. I try to use Indigenous knowledges and perspective. I try to share my</td>
</tr>
<tr>
<td>Phoebe</td>
<td>Yes</td>
<td>The way we do things as Indigenous people, what we know, and how we apply our understandings.</td>
<td>Current practice is superficial. Indigenous knowledge from Indigenous people only.</td>
<td>Use it all the time, who I am. Careful about the information shared. Respect and significance of culture. Not superficial.</td>
<td>Indigenous teachers are relatable to Indigenous students. Responsible for maintaining respect for knowledge, culture and Indigenous understanding.</td>
<td>Highly important, NT context. Understanding how to teach Indigenous students. Important for non-Indigenous perspectives from Indigenous people.</td>
<td>Indigenous perspectives from Indigenous people. Professional standards 1.4 and 2.4 are important. Is there a real understanding? It's frustrating.</td>
</tr>
<tr>
<td>Trina</td>
<td>Yes</td>
<td>How Indigenous people view their world.</td>
<td>Teaching about Indigenous views in various subjects – environment, sharing, kinship, spirituality, history, Add value to programs, find links to the curriculum, guide teaching and learning to support Indigenous students.</td>
<td>Multiple ways, breaking down negative stereotypes. Cultural awareness.</td>
<td>Yes – important to understand Indigenous history, culture and knowledges. Teach and find links in curriculum.</td>
<td>History of Australia, as well as issues, strengths and regional differences. Find out how to teach Indigenous students.</td>
<td>I actually don't know. Lecturers have different knowledge and ability in teaching course materials.</td>
</tr>
<tr>
<td>Sharon</td>
<td>No – Indigenous perspectives in the classroom.</td>
<td>Incorporating Indigenous culture into the school and having Indigenous staff to share that culture.</td>
<td>So important. Teaching history about Australia’s first people. Respect.</td>
<td>All countries should know their history and their first people’s culture. Belonging and understanding.</td>
<td>Yes, for sure. Will help teachers understand our ways and culture.</td>
<td>Australian history, assimilation, health and well-being. Stolen generation, the importance of welcome to country. Play-based learning and belonging.</td>
<td>Are they? The education system needs to acknowledge different experiences of learning and a better way to close the gap. Indigenous kids have major gaps in learning and don’t</td>
</tr>
</tbody>
</table>
receive the support they need.
9.2 Appendix Two – Plain Language Statement

The importance of Indigenous knowledge in pre-service teacher education

My name is Tracy Woodroffe and I am a doctoral student at Charles Darwin University (CDU). In addition, I am a lecturer in the College of Indigenous Futures, Arts and Society.

This Plain Language Statement is yours to keep.

Research:

I am conducting research into the importance of Indigenous knowledge in pre-service teacher education, through interviews with Indigenous teacher education students and Indigenous teachers. If you are an Indigenous teacher education student or an Indigenous teacher capable of contributing to my research study, I invite you to participate and would appreciate your assistance with my current research project.

About this project:

In this research project I will be interviewing Indigenous teacher education students from CDU and Indigenous teachers from a variety of NT urban schools (urban as defined on the DoE website), using semi-structured interviews. From this initial group of interviewees, a smaller cohort of 10 participants, who are teachers working in schools, will be invited to reflect on teaching practice by journaling. The data collected will be thematically analysed to create an understanding of Indigenous knowledge in a
classroom context. The findings will influence and shape the review and development of pre-service teacher education courses.

**How you can be part of this project:**

Each interview should take no more than an hour. This may be the total commitment for some participants. Some participants may need to be interviewed again for clarification. Interviews will be conducted at a mutually agreed time and place. 10 participants will be invited to write reflective journals, for a total of two entries each. The timing can coincide with the school calendar and self-reflection timing that may already be in place in schools. The primary benefit of reflective practice for teachers is a deeper understanding of their own teaching style and ultimately, greater effectiveness as a teacher” (Ferraro, 2000).

I am contacting you as you have expressed an interest in participating in this research activity. You are under no obligation to participate in this research, and you may withdraw at any time without prejudice or penalty.

Confidentiality will be maintained, as all interview transcripts will be de-identified prior to analysis. While I know that you are participating in the research, I will not reveal your identity to the others, nor will you be identified in any resulting reports or my thesis.

If I have any questions or concerns regarding the manner in which the research is or has been conducted I can contact the Ethics team of the Charles Darwin University.
Human Research Ethics Committee on (08) 89466923, on the toll free number, 1800 466 215 or by email, ethics@cdu.edu.au.

If you are interested in participating, please see the consent form attached and contact me by email at Tracy.Woodroffe@cdu.edu.au.
9.3 Appendix Three – Participant Consent Form

The importance of Indigenous knowledge in pre-service teacher education

Researcher: Tracy Woodroffe – Doctoral student

Supervisors: Professor Ruth Wallace, Dr Michaela Spencer, Professor Terry Dunbar

I understand that the purpose of this study is to investigate the importance of Indigenous knowledge in pre-service teacher education.

I understand that my participation in this research will involve being interviewed, for up to one hour, and possibly be interviewed again, for a shorter period if clarification is required, at a time and location to suit my convenience. I understand that my participation may also include reflective journaling, for a total of 2 entries over a 10-week period.

I have had the opportunity to ask Tracy Woodroffe and/or Professor Ruth Wallace any questions I may have about the research and my participation. I am aware that I can contact Tracy Woodroffe (8946 6624) or her supervisor Professor Ruth Wallace (8946 6390) if I have any concerns about the research.

I understand that my participation in this research is voluntary. I am free to refuse to participate and I am free to withdraw from the research at any time. My refusal to participate or withdrawal of consent will not affect my relationship with Tracy Woodroffe, the School of Education (SoE) or the College of Indigenous Futures, Arts and Society at Charles Darwin University (CDU).
If I have any questions or concerns regarding the manner in which the research is or has been conducted, I can contact the Ethics team of the Charles Darwin University Human Research Ethics Committee on (08) 89466923, on the toll free number, 1800 466 215 or by email, ethics@cdu.edu.au.

I agree that Tracy Woodroffe has answered all my questions fully and clearly.

I agree that the research data gathered from this project may be published in a form that does not identify me in any way.

I understand that the data will be stored securely and then destroyed 5 years from publication of the research.

By signing below, I am indicating my consent to participate in the research project as it has been described to me. I understand that the data collected from my participation will be used to describe and disseminate information related to the importance of Indigenous knowledge in pre-service teacher education, and that this data may inform the review and development of pre-service teacher education courses.

_________________________________________
__/__/__
Signature (participant)
_________________________________________
__/__/__
Signature (researcher or delegate)