The introduction of Montessori teaching and learning practices in an early childhood classroom in a remote Indigenous school

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CHAPTER THREE
REVIEW OF LITERATURE

3.1 INTRODUCTION

The purpose of the research was to observe and describe the effect of Montessori pedagogy in a remote Aboriginal Early Childhood program. The research questions that framed this study were:

1. In what ways do Aboriginal students respond to Montessori pedagogy within a remote Early Childhood program?
2. In what ways has Montessori pedagogy impacted on student behaviour within a remote Aboriginal Early Childhood program?
3. In what ways has Montessori pedagogy impacted on language learning and development within a remote Aboriginal Early Childhood program?
4. In what ways has Montessori pedagogy engaged community members to interact within a remote Aboriginal Early Childhood program?

It seemed appropriate, therefore, to examine the literature across the following three topics: current policies and practices in Early Childhood education in Australia; current policies in Aboriginal education and; the principles and practices of Montessori pedagogy. Table 3.1 outlines a structure for the review of literature pertinent to the study.

Table 3.1
Outline of the Literature Review

| 3.2          | Conceptual framework               |
| 3.3          | Current policies and practices in Early Childhood education in Australia |
| 3.4          | Current policies and practices in Aboriginal education |
| 3.5          | Montessori pedagogy                |
| 3.6          | Summary                            |

3.2 CONCEPTUAL FRAMEWORK

The interplay between the three topics, that is, current policies and practices in Early Childhood education in Australia, current policies and practices in Aboriginal education and principles and practices of Montessori pedagogy brings into focus the conceptual framework that underpins this research. A review of the literature on current
policies and practices in Early Childhood education in Australia highlights recent national and state policies and methods of best practice. Literature on current policies and practices in Aboriginal education focuses on the key documents for educational institutions working with Aboriginal students and the main practices schools should employ. The review of the literature on principles and practices of Montessori pedagogy is organised in terms of four sub-themes of Montessori education: historical context, child development, teaching and learning and current research. The conceptual framework underpinning the review of literature is presented in Figure 3.1.

![Figure 3.1: Conceptual Framework of the literature related to Early Childhood education and Aboriginal education.](image)

### 3.3 CURRENT POLICIES AND PRACTICES IN EARLY CHILDHOOD EDUCATION IN AUSTRALIA

In this section three key policies, the National Quality Framework [NQF] (ACECQA, 2012), the Early Years Learning Framework [EYLF] (DEEWR, 2009), and the Australian Curriculum (ACARA, 2014a) are initially described, as these key policies underpin the teaching practices in the classroom observed in the study. Current practices within Early Childhood education are then reviewed, specifically the practices of play-based learning and learner-centred approaches.
3.3.1 Current policies in Early Childhood education in Australia

3.3.1.1 National Quality Framework

The National Quality Framework [NQF] (ACECQA, 2012) was established in 2012 for Early Childhood education centres and after school hours care services across Australia. The aim of the framework is to improve quality and foster ongoing development within Early Childhood settings across Australia (ACECQA, 2012). The National Quality Standard [NQS] (ACECQA, 2012) is a key component within the National Quality Framework (ACECQA, 2012). The Standard outlines seven quality areas to which Early Childhood education providers should adhere. The aim of the policy is to outline a guideline for Early Childhood providers to deliver high quality educational institutions for all children across Australia (ACECQA, 2012). Table 3.2 outlines the seven quality areas of the NQS (ACECQA, 2012).

Table 3.2
Quality areas of the National Quality Standard (ACECQA, 2012)

<table>
<thead>
<tr>
<th></th>
<th>Quality Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Educational program and practice</td>
</tr>
<tr>
<td>2</td>
<td>Children’s health and safety</td>
</tr>
<tr>
<td>3</td>
<td>Physical environment</td>
</tr>
<tr>
<td>4</td>
<td>Staffing arrangements</td>
</tr>
<tr>
<td>5</td>
<td>Relationships with children</td>
</tr>
<tr>
<td>6</td>
<td>Collaborative partnerships with families and communities</td>
</tr>
<tr>
<td>7</td>
<td>Leadership and service management</td>
</tr>
</tbody>
</table>

ACECQA (2012) aims to endorse high-quality Early Childhood programs through each of the seven areas in the NQS identified for improvement, reflection and learning. The key focus of the standard is to promote “the safety, health and wellbeing of children” (ACECQA, 2012, p. 1). The NQS was a mandated policy for early childhood education and the teacher-researcher adhered to this quantity standard.

3.3.1.2 Early Years Learning Framework

To address Standard One of the NQS (ACECQA, 2012), DEEWR (2009) produced the Early Years Learning Framework [EYLF]. This framework is mandated for all Early Childhood educators working in learning programs for children birth to five years, across Australia. Within Western Australia, the framework is mandated from
birth to eight years. DEEWR (2009) identified three fundamental requirements for a child’s development and learning: belonging, being and becoming, which are reflected in the EYLF. Figure 3.2 depicts the elements of the EYLF (DEEWR, 2009).

DEEWR (2009), through the EYLF, as a mandated document for educators, aims to provide the best practice, care and education for Early Childhood students. The impetus for the framework was to provide a policy for Early Childhood educators to ensure nationwide consistency. Additionally, the framework aimed to provide a structure for quality in Early Childhood programs. The three sections of the framework: are: principles, practices and learning outcomes. Table 3.3 outlines the principles, practices and learning outcomes of the EYLF (DEEWR, 2009).
### Table 3.3


<table>
<thead>
<tr>
<th>Principles</th>
<th>Practices</th>
<th>Learning Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Secure, respectful and reciprocal relationships</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Partnerships with families</td>
<td></td>
<td></td>
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<tr>
<td>- High expectations and equity</td>
<td></td>
<td></td>
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<tr>
<td>- Respect for diversity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Ongoing learning and reflective practice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Holistic approaches</td>
<td></td>
<td></td>
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<tr>
<td>- Responsiveness to children</td>
<td></td>
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<tr>
<td>- Learning through play</td>
<td></td>
<td></td>
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<tr>
<td>- Intentional teaching</td>
<td></td>
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<tr>
<td>- Learning environments</td>
<td></td>
<td></td>
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<tr>
<td>- Cultural competence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Continuity of learning and transitions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Assessment for Learning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Children have a strong sense of identity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Children are connected with and contribute to their world</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Children have a strong sense of wellbeing</td>
<td></td>
<td></td>
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<tr>
<td>- Children are confident and involved learners</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Children are effective communicators</td>
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</tbody>
</table>

The principles of the EYLF (DEEWR, 2009) outline the fundamental beliefs of Early Childhood educators across Australia. These beliefs provide the foundation for all Australian Early Childhood learning centres. The principles underpin the practices, which relate to the pedagogy of Early Childhood educators. Education facilitators use the listed pedagogical practices within the teaching and learning environment. The learning outcomes outline the goals the children should achieve during their experiences in the Early Childhood setting.

#### 3.3.1.3 The Australian Curriculum

The Australian Curriculum Assessment and Reporting Authority [ACARA] (2014a) developed the Australian Curriculum to provide a nationwide curriculum for all school-aged children in Australia. In addition, the curriculum links to a national assessment program to monitor and measure student progress (ACARA, 2014a), known as NAPLAN (ACARA, 2014a). Table 3.4 outlines the list of the eight learning areas in the Australian Curriculum (ACARA, 2014a).
Table 3.4

*Eight learning areas of the Australian Curriculum (ACARA, 2014a, p. 15)*

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The Arts: Dance, Drama, Media Arts, Music and Visual Arts</td>
</tr>
<tr>
<td>2</td>
<td>English</td>
</tr>
<tr>
<td>3</td>
<td>Health and Physical Education</td>
</tr>
<tr>
<td>4</td>
<td>Humanities and Social Sciences</td>
</tr>
<tr>
<td>5</td>
<td>Languages</td>
</tr>
<tr>
<td>6</td>
<td>Mathematics</td>
</tr>
<tr>
<td>7</td>
<td>Science</td>
</tr>
<tr>
<td>8</td>
<td>Technologies: Design and Technology; and Digital Technologies</td>
</tr>
</tbody>
</table>

In addition to the Australian Curriculum (ACARA, 2014a), ACARA released two support documents: English as an Additional Language or Dialect (EAL/D): Teacher Resource and Dimensions of the Australian Curriculum. The EAL/D Teacher Resource (ACARA, 2014b) aimed to provide support for teachers’ delivering teaching and learning programs to students who are classified as English as an additional language or dialect. The resource intends to provide advice for teachers when delivering the curriculum and to provide practical examples of implementation (ACARA, 2014b). The EAL/D Teacher Resource (ACARA, 2014b) assisted the teacher-researcher of this study as, 17 of the 18 participants’ were classified as learning English as an additional language. The participants’ home language was Ngaanyatjarra. The Dimensions of the Australian Curriculum (ACARA, 2014c) aims to provide direction for teachers when exploring Aboriginal and Torres Strait Islander culture and history. The document highlights the importance of teaching Aboriginal and Torres Strait Islander history and culture to all Australian children. Although ACARA focused on Aboriginal and Torres Strait Islander history and culture, research states a specific *Anangu* (Aboriginal person) curriculum should be developed for Aboriginal and Torres Strait Islander students (Minjikur, 2013, p. 9).

The EAL/D and Dimensions support documentation are pertinent to this study as the majority of participants are of Aboriginal descent and English is often their third or fourth language. In relation to the Australian Curriculum (ACARA, 2014a), current research suggests that the national curriculum might be superfluous in a remote Aboriginal setting (Guenther, 2012; Lester, 2013; Minjikur, 2013; Osborne, 2013; Tjitayi, 2013). Mintjikur (2013) commented, “The Australian Curriculum is expected to
be taught in *Anangu* (Aboriginal) Schools and this is very difficult for them to learn properly. At this rate, perhaps we will continue to fail year after year” (p. 9). In 2013, Flinders University Australia presented a proposal for an alternative curriculum for remote Aboriginal students entitled, Red Dirt Curriculum. The Red Dirt Curriculum aims to provide more culturally appropriate pedagogical practices for remote Aboriginal students (Lester, 2013; Mintjukur, 2013; Osborne, 2013; Tjitayi, 2013).

### 3.3.2 Current practices in Early Childhood education in Australia

Currently there are two key constructivist pedagogical underpinnings in Early Childhood education in Australia: play-based learning and learner-centred ideology. Constructivism can be defined as “a theory suggesting that children learn by constructing their own understanding” (Brewer, 2006, p. 503). Jean Piaget and Lev Vygotsky were the founding theorists of constructivism and modern theorists include Jerome Bruner and George Forman (Piaget, 1959; Vygotsky, 1978). Constructivists’ pedagogical practices are supported in the EYLF (DEEWR, 2009). Specifically, key principles within the EYLF (DEEWR, 2009) endorsed play-based learning and learner-centred pedagogical practices. Table 3.3 outlines the key principles and practices of the EYLF.

#### 3.3.2.1 Play-based learning

Play-based learning can be described as “a context for learning through which children organise and make sense of their social worlds, as they actively engage with people, objects and representations” (DEEWR, 2009, p. 46). Pramling-Samuelsson and Fleer (2009) states that play-based learning is “characterised by thinking and activity that is symbolic, meaningful, active, pleasurable, voluntary, rule-governed and episodic” (p. 2). Play-based learning can occur in many different modes (Barblett, 2010). These different modes can comprise numerous configurations of children and materials. Table 3.5 describes the six modes of play.
Table 3.5
*Six modes of play* (Barblett, 2010, p.1)

<table>
<thead>
<tr>
<th>Mode of Play</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pleasurable-play</td>
<td>An enjoyable and pleasurable activity.</td>
</tr>
<tr>
<td>Symbolic-play</td>
<td>Meaning to the player that is often not evident to the educator.</td>
</tr>
<tr>
<td>Active-play</td>
<td>Requires action: either physical, verbal or mental engagement with materials, people, ideas or the environment.</td>
</tr>
<tr>
<td>Voluntary-play</td>
<td>Freely chosen. However, players can also be invited or prompted to play.</td>
</tr>
<tr>
<td>Process-orientated-play</td>
<td>Players may not have an end or goal in sight.</td>
</tr>
<tr>
<td>Self-motivating-play</td>
<td>Is considered its own reward to the player (Shipley, 2008)</td>
</tr>
</tbody>
</table>

Play-based learning is endorsed by the EYLF (DEEWR, 2009). Learning through play enables the child to construct meaning of their world through interacting with people and objects (Barblett, 2010). Play is a cultural activity and cannot be separated from learning and development (Barblett, 2010; Shipley, 2008). However, current researchers argue that although play is natural to a child, it is not always the best method of learning (Fleer & Peers, 2012). Grieshaber and McArdle (2010) argue that “there are other sides to play that are not so romantic, natural or particularly educative, and play is not always the best way for young children to learn” (p.1). Researcher’s state that natural play is not occurring in classrooms; what is occurring is manufactured play (Fleer & Peers, 2012; Grieshaber & McArdle, 2010). Pedagogical practices of play-based learning fail to provide students in early childhood setting adequate teaching and learning experiences (Fleer & Peers, 2012; Siraj-Blatchford, 2009).

DEEWR (2009), however, discusses the importance of play-based learning and teaching. Play-based learning provides a context for children to “organise and make sense of their social worlds, as they engage actively with people and representations” (DEEWR, 2009, p.46). Furthermore, “play fosters creative skills through imagination, thought and strategies for problem solving” (DEEWR, 2009, p. 46). In relation to this study, the teacher-researcher reviewed the current body of literature for play-based learning and identified similarities between play-based learning and Montessori pedagogy. These similarities included the importance of children developing skills of problem solving, social cooperation and social collaboration. In summary, the play-based learning is a key pedagogical practice with the Early Childhood curriculum documentation in Australia, therefore, must be incorporated.
3.3.2.2 Learner-centred ideology

The second practice common in Early Childhood education is learner-centred ideology. The objective of the learner-centred ideology is to develop the child as a member of society (McLachlan, Fleer & Edwards, 2010). Learner-centered ideology aims to provide a pedagogical framework for the teacher to meet the needs and interests of the child. The child is the centre of the teaching and learning environment. Within this ideology, the student needs are met and not those of the teacher, staff and the wider community (McLachlan, Fleer & Edwards, 2010).

Friedrich Frobel, Johann Heinrich and Jean-Jacques Rousseau were key theorists of learner-centered education. Modern theorists include John Dewey, Loris Malaguzzi and Maria Montessori. Specifically, Dewey was the leading education theorist in North America in the early 1900s and founded the practice of learner-centred ideology (Brewer, 2006).

Key principles of the ideology include: hands-on, integrated, interest and experienced based learning (Brewer, 2006; McLachlan, Fleer & Edwards, 2010). These principles aim to encourage independence, concentration, self-determination and perceptual awareness. Models of learner-centred ideology include: active learning, collaborative learning, inquiry-based learning, cooperative learning, project based learning and Montessori pedagogy (Brewer, 2006).

3.3.3 Summary

In this section, two sub-themes of literature were highlighted in relation to the intended research: current policies of Early Childhood education in Australia and current practices of Early Childhood education in Australia. Three key policies in Early Childhood education in Australia were reviewed: the Australian Curriculum (ACARA, 2014a), the National Quality Standards [NQS] (ACECQA, 2012) and the Early Years Learning Framework [EYLF] (DEEWR, 2009). The teacher-researcher of this study adhered to these mandated policies with the teaching and learning practices within the Early Childhood setting observed in this research. As seventeen of the eighteen participants of this study were classified as learning English as an additional language, the teacher-researcher sought to understand current polices for EAL/D students. Two current practices of Early Childhood education in Australia were reviewed: play-based
learning and learner-centred ideology. The teacher-researcher analysed play-based learning and learner-centered ideology in relation to Montessori pedagogical practices to draw similarities and differences.

### 3.4 CURRENT POLICIES AND PRACTICES IN ABORIGINAL EDUCATION

Two key Department of Education policies underpin the classroom observed in the study. The first is the National Aboriginal and Torres Strait Islander Education Strategy (MCEECDYA, 2015) which outlines the national education policy for all public schools across Australia. The second is the Directions for Aboriginal Education 2015 (Department of Education, Western Australia, 2015), the current document for public schools across Western Australia. These documents provide the framework for the operational structure of Department of Education schools within Western Australia. These two documents are now reviewed.

#### 3.4.1 National Aboriginal and Torres Strait Islander Education Strategy

The National Aboriginal and Torres Strait Islander Education Strategy (MCEECDYA, 2015) builds on the previous educational policy, Aboriginal and Torres Strait Islander Education Plan 2010-2014 (MCEEDYA, 2010). This current educational strategy aims to outline the commitment education ministers to Aboriginal and Torres Strait Islander students (MCEEDYA, 2015). The document details seven priority areas. These priority areas include: leadership, quality teaching and workforce development; culture and identity; partnerships; attendance; transition points including pathways to post-school options; school and child readiness; and literacy and numeracy (MCEEDYA, 2015).

One major change from the previous policy is the removal of the seven targets for action (MCEEDYA, 2010). These seven targets for action provided educational settings with key objectives for Aboriginal and Torres Strait Islander students. Each target was set with an optimal completion date. However, current policy updates acknowledge that the seven targets for action have not been achieved (DPMC, 2016). Researchers (DPMC, 2016; Guenther, 2012; Hewitson, 2007; Hughes & Hughes, 2009; Osborne, 2013) conclude that due to limited support for principals, teachers, students and community members, these targets have failed to address the factors impacting achievement.
Current research states that factors such as poor attendance, poor attention, high teacher turnover, language learning difficulties, attrition and fragmented approaches contribute to the failure of Aboriginal education (DPMC, 2016; Guenther, 2012; Hewitson, 2007; Osborne, 2013). DPMC (2016) stated, “Since 2008, the Australian Government has made available more than $2.8 billion to support state and territory governments to increase children’s participation in Early Childhood education programs” (p. 13). Remote Aboriginal education has undergone an abundance of proposals and restructurings however, current data suggests minimal improvements have been made to close the gap (DEEWR, 2009; DPMC, 2016; Guenther, 2012; Osborne, 2013). Current research states that limited progress has been made in remote Aboriginal education settings (DPMC, 2016) and highlights the importance of trialling alternative methods of teaching and learning.

3.4.2 The Directions for Aboriginal Education 2016

The policy, The Directions for Aboriginal Education 2016 (Department of Education, Western Australia, 2016) is the current key document for Aboriginal education for Western Australian schools. Current Early Childhood education policy states, “All children have the right to an education … that lays a foundation for the rest of their lives, maximizes their ability and respects their family, cultural and other identities and languages” (DEEWR, 2009, p. 5). As such the school community of Papulankutja is cognizant of the need to comply with the four key areas of focus within the plan. These include: children are ready for school; students attend school regularly; students improve literacy and numeracy skills; and students have pathways to real options after school (Department of Education, Western Australia, 2016, p. 2). Within this study, the teacher-researcher complies with the four areas of focus however, current research states that limited progress has been made within the state of Western Australia in remote Aboriginal teaching and learning environments (DPMC, 2016; Department of Education, Western Australia, 2016).
3.4.3 Current practices in Aboriginal education

Three main practices are identified for educational institutions to provide successful teaching and learning experiences to Aboriginal students (DEEWR, 2016; Harrison, 2005; McKnight, 2016; National Congress for Australia’s First Peoples, 2016; Perso & Hayward, 2015). The three practices that are crucial for working with Aboriginal students are: building partnerships with families (DEEWR, 2016; McKnight, 2016; National Congress for Australia’s First Peoples, 2016; Perso & Hayward, 2015); understanding and accepting cultural traditions and history (Government of Australia, 2016; McKnight, 2016; Mintjukur, 2013; Osborne, 2013; Perso & Hayward, 2015) and “working systematically” (DEEWR, 2016, p. 1; Perso & Hayward, 2015). Figure 3.4 depicts practices of successful education for Aboriginal and Torres Strait Islander students.

![Diagram showing 3 practices: Partnerships with families, Working systematically, Understand and accept cultural traditions and history.]

Figure 3.3. Successful education for Aboriginal and Torres Strait Islander students.

Each of the practices mentioned above are of equal importance. Educational institutions for Aboriginal and Torres Strait Islander students are encouraged to connect the three practices. These practices are now reviewed.

3.4.3.1 Partnerships with families

Forming partnerships with families is a key practice for working with Aboriginal students. Partnership can be defined as “an association of two or more people or partners” (Oxford Dictionary, 2016.) These partnerships can comprise numerous combinations within a school setting: teacher-student, teacher-
parent/guardian, teacher-Indigenous worker and; teacher-family/wider community (DEEWR, 2009; DEEWR, 2016; Department of Education Western Australia, 2015; Guenther, 2012; Harrison & Selwood, 2016; Munns, O’Rourke & Bodkin-Andrews, 2013; National Congress for Australia’s First Peoples, 2016; Perso & Hayward, 2015). It is essential for schools working with Aboriginal students to “build strong community relationships across the whole community” (Munns, O’Rourke & Bodkin-Andrews, 2013, p. 2). The Victorian Government Department of Human Services (2006), has formulated, “seven guiding principles for building blocks for good communication with Aboriginal families” (p. 53). Each of the seven principles is of equal importance (Victorian Government Department of Human Services, 2006). Figure 3.4 depicts these seven guiding principles.

When communicating with staff and parents, it is important for school staff to be conscious of the guiding principles. Conversations with families provide a foundation for building a relationship and subsequently, a partnership (Commissioner for Children and Young People, 2015; Department of Education Western Australia, 2015; Munns, O’Rourke & Bodkin-Andrews, 2013). The building of partnerships is a long-term process and requires all parties involved to be patient and sensitive to the cultural needs of the family (Commissioner for Children and Young People, 2015;

![Diagram of seven guiding principles](image)

Figure 3.4. Building blocks for good communication: seven guiding principles. (Victorian Government Department of Human Services, 2006, p. 53)
Department of Education Western Australia, 2015; McKnight, 2016; Perso & Hayward, 2015). McKnight (2016) commented, the “teacher placing themselves in a respectful relationship by sharing their experience of relationship with Country is crucial to the living relationship within Western Australia” (p. 122). The school staff must be conscious of current cultural events such as men’s business and initiations, sorry business (funerals) and other geographical specific significant events (McKnight, 2016; Munns, O’Rourke & Bodkin-Andrews, 2013).

3.4.3.2 Understand and accept cultural traditions and history

To engage effectively with Aboriginal students, it is crucial for school staff to build their knowledge and acceptance of cultural traditions and history to support positive relationships with the students, parents and wider community (Commissioner for Children and Young People, 2015; Department of Education Western Australia, 2015; Harrison & Selwood, 2016; Lester, 2013; McKnight, 2016; Munns, O’Rourke & Bodkin-Andrews, 2013; Nakata, 2007; National Congress for Australia’s First Peoples, 2016; Osborne, 2013; Perso & Hayward, 2015). The cultural traditions vary in each Aboriginal region of Australia and school staff should seek to understand and respect the local significant traditions, events and history (Commissioner for Children and Young People, 2015; Department of Education Western Australia, 2015; Osborne, 2013). Through the knowledge and acceptance of cultural traditions and history, the school is more likely to succeed in working effectively with Aboriginal students and their families (Munns, O’Rourke & Bodkin-Andrews, 2013; Perso & Hayward, 2015). In addition, the school should seek to understand faux pas specific to the local area by opening shared discussions with community elders and families. These discussions may be through verbal and non-verbal communication and may include practices such as people not looking people in the eyes when addressing them, or acknowledging the significant colours that should or should not be worn. Additionally, the school staff could build knowledge of local language/s or dialects that will in turn provide the school staff with a common language to be used in a classroom and wider community setting (Harrison & Selwood, 2016; Harrison, 2005; Perso & Hayward, 2015).

Educational institutions in major centres often provide Indigenous language courses. The understanding and acceptance of these cultural traditions could allow the teacher to successfully lay the foundations of “effective action” in partnerships with
families (DEEWR, 2016, p. 1). Through these practices, the school may gain respect for the local context. Understanding cultural traditions and history may provide the school and staff with a sense of belonging and inclusion, thus reducing the feeling of isolation. Living and working in a remote Aboriginal community can be a geographically isolating experience, therefore, socially and emotionally, the school staff may need support (Department of Education Western Australia, 2016). These feelings of isolation could be bridged if school staff seek to understand and accept cultural traditions and history, providing an increased sense of belonging in the remote Aboriginal community.

In addition to cultural traditions and history, the traditional child-rearing techniques and teaching practices should be considered. The traditional child-rearing techniques and teaching practices should be built into current teaching and learning methodologies. Harrison (2005) stated, “Schools and institutions fail Indigenous students because they fail to accommodate their cultural differences” (p. 871). Schools and institutions should seek to understand how Indigenous students learn to inform teaching and learning practices in the classroom (Harrison & Selwood, 2016; Harrison, 2005; Perso & Hayward, 2015). Current teaching and learning methodologies separate western knowledge and Indigenous ways (Harrison, 2005; McKnight, 2016; Munns, O’Rourke & Bodkin-Andrews, 2013; Perso & Hayward, 2015; Robinson & Nichol, 1998). Yunkaporta (2009) describes “Aboriginal pedagogy as being holistic, imaginal, kinesthetic, cooperative, contextual and person-orientated, each point being contrasted with a opposite orientation from western pedagogy (p. 8). Cross cultural theories of teaching and learning in Indigenous education display characteristics by which students “regulate their own learning behaviour while the teacher’s responsibility would be to create conditions that enable this learning to take place” (Harrison, 2005, p. 873).

Key teaching and learning techniques used in traditional Aboriginal culture are observation, imitation, repetition, connected to real-life purposes and problem solving (Christie, 1984; Harris, 1984; Yunkaporta, 2009; Minutjukur, 2013; Robinson & Nichol, 1998; Shinkfield & Jennings, 2006). Schools and institutions should seek to incorporate self-regulated learning, purposeful learning, learning by observation into the current methodologies instead of separating traditional child-rearing techniques and teaching practices (Harrison, 2005; Yunkaporta, 2009; Perso & Hayward, 2015; Robinson & Nichol, 1998). Perso and Hayward (2015) commented, “teachers need to
find out about teaching and learning in the homes and cultures of their students so they can build a ‘bridge’ for students to make the transition from students’ homes to Western schools as smooth as possible” (p.50).

3.4.3.2 Working systematically (Government of Australia, 2016).

Another component of working with Aboriginal students, as shown in Figure 3.4, is working systematically. Working with Aboriginal students requires the school to plan for long-term goals with staff, students, parents and the wider community (Munns, O’Rourke & Bodkin-Andrews, 2013; National Congress for Australia’s First Peoples, 2016). DEEWR (2016) states, “effective action is not sporadic or short term, it is carefully planned and implemented” (p. 1). Practices in Aboriginal education require detailed review of government policy and current academic literature. The school should seek to understand current national and state policies to directly inform planning, strategies and targets and plan for long-term action. Working systematically within an educational context highlights the importance of long-term planning and collaboration with both the educational institution and the community to achieve common targets. Targets should be determined with all school staff and the wider community (Munns, O’Rourke & Bodkin-Andrews, 2013).

2.4.4 Summary

Two key polices in Aboriginal education were reviewed: The National Aboriginal and Torres Strait Islander Education Strategy (MCEECDYA, 2015) and Direction for Aboriginal Education 2016 (Department of Education, Western Australia, 2016). These key policies highlight literature confirming Aboriginal education in Australia is failing to meet the targets set for national and state policies. The next section of the literature review focuses on Montessori pedagogy as an alternative approach to remote Aboriginal education in an Early Childhood program.

3.5 MONTESSORI PEDAGOGY

Montessori pedagogy is the final section of the review of literature. The aim of Montessori pedagogy is to provide children with learning environments that enhance and support the “development of social, intellectual and ethical independence” (Montessori Australia Foundation, 2011, p. 3). A Montessori classroom can be described as a multi-age setting with a prescribed set of educational materials, where the
student selects his, or her own work for a long period of time (Brown & Steele, 2016; Cossentino, 2010; Danner & Fowler, 2015; Lillard & Quest, 2006). Four sub-themes relating to Montessori pedagogy are reviewed. These are: historical context, child development, teaching and learning; and current research (Figure 3.6).

Figure 3.5. Four sub-themes of Montessori pedagogy.

### 3.5.1 Historical context

The founder of Montessori pedagogy was Dr. Maria Montessori. Dr. Montessori graduated as one of the first female physicians in Italy in 1896 and continued her studies in anthropology, natural sciences and psychology. She established the first Casa dei Bambini (Children’s’ House) for students aged three to six in Rome in 1907 (Feez, 2010; Lillard, 2005). The students of the Casa dei Bambini were of the lowest social-economic level and the majority of the parents were illiterate (Montessori, 1966). In 1909 the Casa dei Bambini began to gain international attention from educational academics because the children “very quickly became socially and intellectually independent, not through adult coercion, but through their own activity, interest and effort” (Montessori Australia Foundation, 2011, p. 3). Four Australian educators attended the first Montessori training course in Rome in 1913 (Montessori Australia Foundation, 2011; Feez, 2013). The Montessori National Curriculum (Montessori Australia Foundation, 2011) is the lead document of Montessori pedagogy in Australia. ACARA approved the Montessori National Curriculum (Montessori Australia Foundation, 2011) in November 2011 as an alternative curriculum to The Australian Curriculum (ACARA, 2014a).
3.5.2 Child development

Table 3.6 outlines the six concepts of child development within Montessori pedagogy.

Table 3.6

<table>
<thead>
<tr>
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<th>Six concepts of child development (Adapted from Isaacs, 2012)</th>
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<tbody>
<tr>
<td>1</td>
<td>Planes of Development (divided into four six-year spans)</td>
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<tr>
<td>2</td>
<td>Sensitive periods</td>
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<tr>
<td>3</td>
<td>Movement</td>
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<td>4</td>
<td>Sensory learning</td>
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<td>5</td>
<td>Freedom/Independence</td>
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<tr>
<td>6</td>
<td>Observation</td>
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The first concept within child development is the Planes of Development. The Planes of Development are divided into four six-year spans or multi-aged groups (Cossentino, 2005; Feez 2010). Children display unique characteristics that are specific to each six-year span (Isaacs, 2012). Figure 3.6 presents Dr. Montessori’s Four Planes of Development specific to each six-year span.

![First Plane of Development 0 to 6 Years](image1) ![Second Plane of Development 6 to 12 Years](image2) ![Third Plane of Development 12 to 18 Years](image3) ![Fourth Plane of Development 18 to 24 Years](image4)

Figure 3.6. *Four Planes of Development*

Multi-age groupings aim to provide the each child with an understanding of the wider world (Brown & Steele, 2015). The program observed in this study overlapped the first Plane of Development, from birth to six.

The second concept of child development is sensitive periods. A sensitive period can be defined as, “a special sensibility which a creature acquires in its infantile state, while it is still in a process of evolution” (Montessori, 1966, p. 38). Sensitive periods include: movement, language, love of the environment and order. During a sensitive period, children are drawn to a particular element of the environment (Lillard, 2005). Dr. Montessori discussed sensitive periods in the late 19th Century and the early 20th Century. Pediatric neuroscientists have since supported the hypothesis (Cossentino...
Specifically, pediatric neuroscientists have studied and documented the effects of Montessori pedagogy on children’s neural development (Lillard & Else-Quest, 2006; Fogassi, 2016). Montessori pedagogy bases teaching and learning practices on sensitive periods to create neural engagement in children (Cossentino, 2010; Lillard, 2005). A child experiences the sensitive period for language during the first six years of life. During this time a spotlight is placed on conscious and unconscious learning experiences by which the child innately wishes to learn.

The third concept, movement, is a core element of child development within Montessori pedagogy (Johnson, 2016). Movement is a normal function of a human being. Voluntary movements provide children with the ability to control their mind through movement (Feez, 2010). Movement encourages gross motor equilibrium, fine motor control and coordination (Johnson, 2016). Dr. Montessori discussed three types of movement: analysis of movement, economy of movement and precision of movement. These three types of movement provide the child with the skills to develop coordination (Regni, 2015). Research suggests that movement and cognition are directly related (Lillard, 2005). Literature suggests mainstream educational programs do not support the relationship between cognition and movement (Lillard, 2005). Movement is a core foundation of Montessori pedagogy practices (Lillard, 2005). Human beings retain information more accurately and faster if cognition and movement are aligned (Fogassi, 2016). The Early Childhood program observed in this study catered for the concept of movement to occur.

The fourth concept is student independence, autonomy and freedom (Block, 2015; Cossentino, 2005). Autonomy is the central characteristic to Montessori methodology (Johnson, 2016). Research indicated that human beings have a basic need for autonomy (Ryan & Deci, 2001). Montessori pedagogy encourages children to work and build their own intellect with the guidance of the teacher and peers (Johnson, 2016). Independence and autonomy are key characteristics of traditional Aboriginal child-rearing techniques (Gollan & Malin, 2012; Harrison & Selwood, 2016). The teacher-researcher of this study, aimed to provide a teaching and learning environment that fostered student autonomy. Autonomy was achieved through encouraging and supporting student freedom of choice and independence. The teacher-researcher
directed these behaviours as far as possible within the context of the classroom.

The fifth concept centres on sensory learning (Cossentino & Whitescarver, 2012; Danner & Fowler, 2015; Lillard, 2005). Within a Casa dei Bambini Montessori classroom there are a set of materials for Sensorial Education. Sensory materials were developed to refine the child’s senses (Lillard, 2005). The program observed in this study, had a full set of Montessori Sensorial Education materials. Montessori’s staged theory of human development indicated a child’s brain during the first plane of development requires sensorial exploration (Cossentino, 2007; Fogassi, 2016). To stimulate a child’s neurological development the child needs to interact with his or her environment through the visual, tactile, olfactory, gustatory and auditory senses (Cossentino, 2007; Fogassi, 2016). Moreover, a child at thirty-six months will imitate adults through the use of his or her senses (Meltzoff, Williamson & Marshall, 2013). Imitation during this period of brain development is termed ‘Mirror Neuron Systems’ (MNS) (Meltzoff, Williamson & Marshall, 2013). MNS permit the child to sensorially learn new skills. Cossentino (2012) commented that “by the age six ninety-five percent of brain development is completed” (p. 31). Studies by Christie (1984) and Harris (1984) noted Aboriginal people learn by imitation (Harrison & Selwood, 2016).

Pediatric neuroscience highlights the importance of aligning sensory learning to child development (Fogassi, 2016; Hughes, 2015). The EYLF (DEEWR, 2009) confirmed sensory learning as a method of best practice within an Early Childhood teaching and learning environment. Outcome four of the EYLF (DEEWR, 2009) outlines that “Children are confident and involved learners” (p. 34) through the practice of linking the child to the natural sensory environment.

The final concept of child development within Montessori pedagogy is observation. Observation is an essential method of monitoring student progress to inform parents, caregivers and other professionals (Cossentino, 2005; DEEWR, 2009). Fleer and Surman (2006) and Dr. Montessori hold similar approaches to observation within an Early Childhood educational setting. Through the process of observation, the teacher is able to understand the child in his or her natural state and only interrupt when the child is working unproductively (Block, 2016; Fleer & Surman, 2006; Lillard, 2005). Montessori teachers are trained to observe children and direct them to the next
learning activity (Cossentino, 2005; Lillard, 2005). This practice is consistent with the practices promoted by other researchers, where teachers are trained to naturally observe children’s activity (Fleer & Surman, 2006). Within the EYLF (DEEWR, 2009) observation is a method of inclusive assessment. Observation is a key component to learning within traditional Aboriginal child-rearing techniques. For example, Makinti Minutjukur who is the Director of the Pitjantjatjara Yankunytjatjara Education Committee stated, “When I was a child, I would go out together with my parents and learnt by watching them” (Minutjukur, 2013, p. 9). Katrina Tjitayi is the School Improvement Coordinator for the APY Lands and former Director of Pitjantjatjara Yankunytjatjara Education Committee. Tjitayi (2013) commented, “It would seem that learning today is more difficult. In the past they learnt by watching, listening and practicing what their family taught them” (p. 11). Observation as a teaching and learning pedagogical practice is presented in both Montessori pedagogy and traditional Aboriginal child rearing techniques (Christie, 1984; Harris, 1984). Breadmore (1986) completed a study in 1986 of Aboriginal children in remote Western Australia and noted the positive correlation between observation in Montessori practices and Aboriginal students. The teacher-researcher of this study, aimed to provide an educational setting that supported traditional Aboriginal practices.

3.5.3 Teaching and learning

There are three elements within Montessori pedagogy of teaching and learning (Figure 3.7).

![Figure 3.7 Three elements within Montessori pedagogy of teaching and learning](image-url)

Figure 3.7 Three elements within Montessori pedagogy of teaching and learning
3.5.3.1 **Role of the teacher**

The role of the teacher is a key consideration within Montessori pedagogy. Figure 3.8 outlines the five dimensions of the role of the teacher.

![Figure 3.8 Five dimensions of the role of the teacher within Montessori pedagogy (Montessori Australia Foundation, 2011).](image)

Within a Montessori classroom, the main role of the teacher is to connect the children to appropriate learning experiences through giving three period lessons (Cossentino, 2005; Johnson, 2016). The three period lesson is divided into: association, recognition and remembrance and derived from Sequin’s method “for obtaining an association between an object and its corresponding term in teaching defective children” (Montessori, 1967, p. 156). Dr. Montessori discovered this method was highly effective for all children (Lillard, 2005).

3.5.3.2 **Role of the materials**

The second element in the teaching and learning pedagogy is the role of the materials. Montessori materials are “sets of objects, each set designed to exacting specifications” (Montessori Australia Foundation, 2011, p. 10). Montessori materials are classified in four main areas: Practical Life, Sensorial Education, Language and Mathematics. Each area has a set sequence of materials. Montessori materials are intended to capture attention, promote interaction, self-mastery, self-correction, self-discipline, range across all learning areas and are designed to maintain a sequence in the learning continuum, moving from concrete to abstract (Cossentino, 2005). Montessori materials aim to isolate a single quality (Regni, 2015). Within a Montessori environment, there is only one of each material therefore, children learn to share with
their peers (DEEWR, 2009). In a Montessori teaching and learning environment, children from an early age develop self-confidence and experience real-life experiences through Montessori material (Cossentino, 2005). Research by Greeno (1998) concluded, “If we value students’ learning to participate in practices of inquiry and sense-making, we need to arrange learning practices of inquiry and sense-making for them to participate in” (p. 14). Montessori materials provide the child with the prepared environment for meaningful and real-life learning experiences. Methods of best practice within an Early Childhood teaching and learning environment outline the importance of a child working with materials that support real-life situations (DEEWR, 2009).

3.5.3.3 Role of the prepared environment

The third element considered in the teaching and learning curriculum is the role of the prepared environment. The Montessori prepared environment is orderly, materials have a particular place and the children are quiet (Cossentino & Whitescarver, 2012; Lillard, 2005). Research by Diamond and Lee (2011) identified that Montessori classrooms are usually characterised as uncluttered, simple and attractive. The physical environment includes furniture and materials suited to the child’s size, strength and developmental stage (Feez 2010; Gresham, 2002). As this environment is usually calm, the children are able to engage in deep concentration with their work as they feel protected, confident and assured (Cossentino, 2006). Environments should be welcoming and energetic spaces to promote learning and cater to the child’s interests and needs (DEEWR, 2009).

3.5.4 Current research of Montessori pedagogy

The fourth sub-theme explored in this review of the literature relates to current research concerning Montessori pedagogy. Particular elements of Montessori pedagogy from the early nineteen hundreds have now been absorbed into current educational teaching and learning practices (Cossentino, 2007). Cossentino (2007) commented, “Many elements of Montessori thought to be ‘quaint’ and ‘unscientific’ have been validated and absorbed into the educational mainstream” (p.1). These elements include: child-size furniture, manipulative materials, multiage groupings, differentiated learning or self-paced learning and elements of play (Cossentino, 2010; Gresham, 2002; Lillard, 2005). These elements provide a structure for methods of best practice within Early
Childhood education (DEEWR, 2009; Gresham, 2002; Lillard, 2005).

The concept of play is a method of best practice in an Early Childhood program (DEEWR, 2009). Montessori pedagogy links the terminology play and ‘work’. The concept of ‘work’ is frequently discussed in child development within Montessori pedagogy. Specifically, Montessori practitioners use the term in “technical, social and moral” forms (Cossentino, 2006, p. 64). Dr. Montessori (1966) stated, “A child’s desire to work represents a vital instinct since he cannot organise his personality without working” (p. 186). Through social, sensory and cogitative work the child explores the environment (Fogassi, 2016). Within Montessori pedagogy, research documents the link between work and play-based approaches. For example, “Montessori’s multilayered conception of work overlaps in some important ways with current understandings of play” (Cossentino, 2006, p. 68). These corresponding overlaps include practices being child-centered and the child being guided by his or her own natural desire for exploration (Cossentino, 2006; Csikszentmihalyi, 1990; Rathunde, 2001). Similarly to play, work within a Montessori teaching and learning environment allows the child to “discover, create, improvise and imagine” (DEEWR, 2009, p. 15). Both ‘work’ and play aim to provide the child with the opportunity to promote cognitive development through problem solving and social development through collaboration with peers (DEEWR, 2009).

Current research highlights that Montessori pedagogy provides techniques of classroom management that are considered to be best suited for a culturally diverse student cohort (Brown & Steele, 2015). From 2011 to 2012, a comparative study was completed by Brown and Steele (2015) in seventeen public elementary schools in the United States of America, three public Montessori schools and twelve mainstream public schools. The total number of students in this study were 12 886 (1 102 from Montessori public schools and 11 784 from mainstream public schools). Brown and Steele (2015) stated that, “Montessori environments may provide lessons for traditional schools to promote equitable discipline” (p. 15). They highlighted moreover, the importance of multiage grouping and movement for children with behavioural issues as it provides “continuity of classroom culture and climate year to year” (2015, p. 17). Current research emphasises a link between the reduction of behavioural issues and freedom of movement within the classroom (Brown & Steele, 2015; Byun, Blair &
Pate, 2013). Further research by Pickering (2003) noted Montessori pedagogies are used as treatment strategies for students with Attention Deficit Hyperactivity Disorder (ADHD).

Along with the various advantages associated with Montessori pedagogy, commentators have highlighted certain criticisms. These criticisms include: fallacies of self-correcting materials, outdated pedagogy, small research sample sizes and the use of a unique script pertaining to Montessori teaching. Fallacies of self-correcting material (cited in Cossentino, 2007) arose in 1914 from researchers at Columbia University. Montessori pedagogy was developed in the late 19th and early 20th century and faces the criticism of providing an outdated teaching and learning pedagogy. The criticism of small sample sizes provides difficulty in reliability and generalizability of results in research of Montessori pedagogy. Criticism of the unique script derives from the teacher providing linguistically prescribed three period lessons with Montessori material to the child. Some children may not learn through this style of teaching.

In addition to these three criticisms, general disapproval of Montessori pedagogy is presented in international educational forums. For example, the Well-Trained Mind Forum (2016) suggested that children may not take to the Montessori independent style of work cycle and may find it difficult to transition into a mainstream classroom. Additionally, various international educational forums commented that Montessori schools can be elite, inaccessible and expensive as they are privately managed (Rasmussen College, 2016). Montessori schools are often privatised educational settings, which are only accessible to high income earning families. Montessori pedagogy can be criticised, as the materials are expensive to purchase (Rasmussen College, 2016; Well-Trained Mind Forum, 2016). The teacher-researcher’s own situation reflected this criticism. She sourced all Montessori materials by donation from Montessori schools around Australia. Finally, Montessori teacher-training is considered expensive and geographically unattainable (Rasmussen College, 2016; Well-Trained Mind Forum, 2016). Generally, the teacher must hold a Bachelor of Education in addition to the Montessori training to work in a Montessori school. Montessori training is offered in limited geographical locations globally and can be difficult for teachers to access.
Despite these criticisms, Association Montessori Internationale [AMI], supports numerous Montessori projects around the world for children and families who are less fortunate. The *Educateurs sans Frontières* encourages innovative and sustainable projects to help children in various geographical locations. Some locations include: ‘Born Inside’- Mothers and babies in Holloway prison and Bronzefield prison in the United Kingdom; Internally Displaced Persons camp in Nakuru Kenya- Corner of Hope Montessori Teacher Training and School; and a school for early childhood children in Haiti (Association Montessori Internationale, 2016; Feez, 2013). AMI *Educateurs Sans Frontiers* and the national Australian branch, Montessori Children’s Foundation [MCF], supported the teacher-researcher throughout the process of this study. MCF have supported other projects in Weipa State School in Cape York Peninsula, Strelley pastoral station in the Pilbara region of Western Australia, Wadja Wadja High School in southwest Rockhampton in Central Queensland, Cairns West Public School, and Tagai State College on Thursday Island in the Torres Strait Islands (Feez, 2012).

Currently there is limited published research regarding Montessori pedagogy in a remote Indigenous program (Breadmore, 1986; Montessori Children’s Foundation, 2013; Rioux & Rioux, n.d). The first documented collaboration of Montessori pedagogy with Aboriginal students was in 1977 at Weipa State School in Cape York Peninsula (Feez, 2012). The elders of the Napranum community “strong endorsed the approach” (Feez, 2012, p. 159). In the 1980’s Montessori teaching and learning practices were adopted with Aboriginal students at Strelley pastoral station in the Pilbara region of Western Australia (Breadmore, 1986; Feez, 2012). The elders of the ‘Strelley Mob’ supported the Montessori approach as the Aboriginal children were learning English as an additional language “without the loss of dignity” of their own culture and language (Feez, 2012, p. 159). In 1986 Murdoch University, then known as the Western Australian Institute of Technology conducted a study to describe the “parallels between the learning strategies valued in the community and the Montessori approach” (Feez, 2012, p. 160). However, due to lack of funding the project was forced to close (Breadmore, 1986).
More recently, there have been projects of the Montessori approach with Aboriginal and Torres Strait Islander children on Thursday Island, Armidale, Aurukun and Pormpuraaw (Montessori Children’s Foundation, n.d.). Tagai College on Thursday Island in the Torres Strait Islands adopted the Montessori approach in 2009. In addition, a program for children aged 0 to 3 years was created, entitled ‘Strait Start’. The Strait Start program has been introduced to six other islands in the area and regular training is held for Torres Strait Islanders who are employed by the school and program (Montessori Children’s Foundation, n.d.). The Strait Start program aims to “capitalise on the solid foundation of the Torres Strait Nation and develop sustainable and culturally-relevant solutions that address the education, training and employment priorities of the communities” (Denzin & Boulden, 2010, p. 8). The Minimbah Montessori pilot project in Armidale in New South Wales ran from 2006 to 2009 for a mix of Indigenous and non-Indigenous children aged between 5 to 7 years. Montessori Children’s Foundation (2013) highlighted that “the Indigenous Montessori children topped their school in the national NAPLAN tests” (Montessori Children’s Foundation, 2013). A further study by Boulden, Hilson and Tyne (2010) highlighted the importance of Montessori pedagogy within an Indigenous setting, noting “Montessori does not impose a ‘one-size-fits-all’ program” (p. 7). Furthermore, Boulden, Hilson and Tyne (2010) argued, Montessori teaching and learning follows the child’s development and introduces new skills and concepts once mastery, confidence and satisfaction are developed.

3.5.5 Conclusion

In this section, four sub-themes of literature relating to Montessori pedagogy were highlighted. These sub-themes include: the historical context of Montessori pedagogy, an overview of child development, a summary of Montessori teaching and learning practices and current research of education relating to Montessori pedagogy.

3.6 SUMMARY

In this chapter, literature was presented to identify the current policies and practices. The literature covered the following areas: Early Childhood education in Australia, Aboriginal education and Montessori pedagogy. The following chapter presents the research plan that was used in this inquiry.