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Opening up the world: Early childhood orientation and mobility intervention as perceived by young children who are blind, their parents, and specialist teachers

Bronwen Susan Scott

A Thesis Submitted in Fulfilment of the Requirements for the Award of the Degree of Doctor of Education

Faculty of Education and Social Work

The University of Sydney

March 2015
AUTHOR’S DECLARATION

This is to certify that:

I. this thesis comprises only my original work towards the Doctor of Education Degree
II. due acknowledgement has been made in the text to all other material used
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Abstract

Orientation and mobility (O&M) is a key domain within the expanded core curriculum (ECC) of skills for children who are blind or have low vision. Although the O&M profession in Australia was established in the 1970s, children have historically been denied opportunities to learn long cane mobility techniques at a very young age. This study explores the development of O&M intervention with children in Australia, discussing the influence of philosophies and pedagogies emanating from both the United Kingdom and the United States. O&M intervention, including long cane mobility, is examined from the perspectives of children, parents and vision education teachers within an Australian early childhood education context. The presentation of individual experiences and stories are rare within the O&M literature, and this study provides new understandings as to how O&M within the early childhood context is perceived and understood.

Using an interpretive interactionist approach, which draws heavily on symbolic interactionist theory, the study captures the experiences and perspectives of fifteen participants toward early intervention O&M. Data were gathered from semi-structured interviews, with children’s written stories, archival video and document material used to support thematic findings. Findings indicate that, for parents and teachers, perspectives toward O&M intervention changed over time as young children demonstrated competent and responsible long cane mobility techniques. The long cane was seen as a natural extension of the child’s body, allowing independent access to all areas of learning and full participation in family life. Teachers and parents identified the importance of professional cooperative action in developing a shared language and goals supportive of O&M intervention, which subsequently extended into children’s inclusive education settings. The findings indicate that early O&M intervention can facilitate current Australian early childhood education learning
outcomes, and is an essential domain within the early childhood ECC. The study also suggests the O&M profession look toward new ways of understanding how individuals who are blind perceive and travel through their world.
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Chapter One: Introduction

For blind children, as for all children, the freedom to move, to be self-amused, and experience the joy of movement is fundamental to being human. (Cutter, 2007, p. 5)

A child born with a sensory impairment such as blindness can face a number of developmental and educational challenges in their early years in areas including: concept and language development; literacy; motor skills; orientation and mobility; social skills; and activities of daily living. This research focuses on one of these areas, namely orientation and mobility (O&M): the ability to travel, as Welsh and Blasch (1980) succinctly define, “independently, safely, and purposefully through the environment” (p. 1). Orientation means knowing where you are, where you are going, and how you are going to get there; to achieve this movement independently and without vision usually necessitates the use of a mobility aid such as a long cane, the techniques of which are taught by an O&M specialist (LaGrow, 2010).

For reasons that will be investigated throughout this study, long cane mobility techniques have historically been delayed until children enter formal educational settings, and the implementation of O&M techniques in the early childhood years has, until recently, received little attention within the related research literature. This study seeks to address this knowledge gap in the O&M field by providing insight into O&M intervention that occurred within the context of a unique early childhood intervention program (EIP) that existed in Western Australia between the years of 2004-2007. Specifically the research retrospectively examines how O&M intervention, including long cane mobility, was experienced and perceived by a small group of children, parents and specialist visiting teachers involved in this program, revisiting the participants several years after their participation in the EIP. This chapter introduces the study by providing the background to the research, outlining the aims
and research questions, clarifying terminology and concluding with an overview of the thesis structure.

**Background to the Research**

My interest in this topic has developed from my own experiences of working as an O&M specialist in Australia and the United Kingdom since the late 1980s. I was unaware of the profession of O&M specialist until I accepted an opportunity to undertake a Graduate Diploma in Orientation and Mobility following the completion of an undergraduate degree in psychology. During the late 1980s in Australia, the focus of O&M intervention was as a rehabilitation service primarily working with adults, reflecting the profession’s post World War II roots in providing blinded war veterans with a set of formalised independent travel techniques. The mobility needs of children with congenital vision loss were not considered until children were six or seven years of age, with long cane mobility often not introduced until children were approaching their teenage years. Anthony, Bleier, Fazzi, Kish, and Pogrund (2002) explain it is only since the late 1980s that the role of the O&M specialist has expanded to include working with young children, a group accounting for a very small percentage of the overall population with vision loss (National Disability Services and Australian Blindness Forum (NDS & ABF), 2008).

According to Watkins (2005), the low incidence of blindness in children in Australia – a nation whose relatively small population of approximately 23.5 million people (Australian Bureau of Statistics, 2014a) is spread over vast distances – creates challenges and difficulties in the provision of effective intervention within the fields of education and O&M. In Australia, O&M intervention is generally resourced through charitable organisations within an allied health environment that provide services for individuals who have low vision or are blind across the life span (Deverell & Scott, 2014). Whilst some education departments have
employed O&M specialists to work exclusively with children, this has been the exception rather than the rule, and as Deverell and Scott (2014) identify, a number of challenges face the O&M profession in Australia, including a lack of funding and inconsistencies in how O&M personnel are trained. In Australia in 2014, there are no early childhood intervention programs within education departments that include an O&M specialist as a member of the team.

My postgraduate O&M training and early professional experiences were heavily influenced by the medical model approach to disability. I was taught to look first at my “client’s” clinical diagnosis of vision loss, before assessing their functional vision and recommending a program of O&M intervention. There was no contact with children or families prior to children entering the formal school environment, and I found myself struggling to impart my professional skills and knowledge to children who often had poor stamina, posture and gait, and limited spatial and environmental awareness. Many of the children I worked with during this time had difficulty learning effective long cane techniques, and independent travel was limited to routes taught by rote. I developed an interest in working with children, completing a Master of Education (Special Education) degree during the 1990s; however it was not until the early 2000s, when I had the opportunity to work within an educationally based early intervention program, that my personal perspective toward O&M intervention with young children changed significantly.

As I became involved with the Department of Education team in Western Australia, early childhood teachers questioned why O&M intervention and long cane mobility were delayed until children began formal schooling, suggesting from their knowledge and experience in early childhood education that children were capable of learning O&M techniques at a very young age. Allied health professionals in other related fields, who were the key contact
people through which referrals for O&M intervention were directed, resisted requests for early long cane introduction, arguing this intervention was not “appropriate”. A review of the literature at that time indicated a lack of research in this area, although anecdotal accounts from the United States including Castellano (1991), Cheadle (1991), and Schroeder (1989) were beginning to suggest very young children could successfully learn modified long cane mobility techniques. Through a series of events described within Chapter Six of this thesis, the early childhood team worked collaboratively to implement O&M intervention including long cane mobility within the EIP. My involvement in this process led to a change in my own perspective toward early intervention O&M; it is this change in perspective, combined with an ongoing sense of frustration that early intervention O&M remains difficult for families and children to access in Australia, that provided the impetus for this study.

**Aims and Significance of the Research**

There is minimal research within the O&M field exploring individual experiences of the O&M intervention process and the acquisition of O&M techniques. From the 1950s until the 1980s much of the research into the processes of O&M, Long (1990) explains, concentrates on perceptual and cognitive aspects of orientation in laboratory settings. Although later studies make use of natural research settings, the focus remains primarily on quantitative measures. Dodds, Carter, and Howarth (1983), for example, study the effect of veering on an individual’s long cane travel efficiency, whilst Sauerberger (1995) looks at the individual’s ability to judge distance and speed of approaching traffic and maintain alignment on street crossings. There is value in these studies as they contribute to an understanding and refinement of specific O&M skills and training techniques. However, there is also a need to represent the viewpoints of those involved with the lived experience of O&M; research of this kind, according to Prus (1996), can provide insight into how individuals construct meaning to the things that are important in their everyday lives.
The aim of this study, therefore, is to determine how children, parents and specialist visiting teachers experience and perceive early childhood orientation and mobility intervention. These experiences and perspectives are explored retrospectively as the early intervention program at the centre of the research has been the only one in Australia in which an O&M specialist was employed directly within an early intervention educational team. In order to achieve an understanding of participant experiences and perspectives, the broad research aim is broken down into three related research questions. Firstly, what were parents’ and teachers’ experiences and perspectives of early childhood O&M intervention? Secondly, how did social interaction enable participants to construct meaning toward O&M and long cane mobility and, finally, what is the long-term significance and influence of early O&M intervention for children and families?

These questions are explored using a qualitative research approach, interpretive interactionism (Denzin, 2001a), which has a focus on the lived experiences of participants in relation to life changing or epiphany moments such as those that occur following the birth of a child who is blind. Underpinned by symbolic interactionist and phenomenological perspectives, interpretive interactionism allows experiences and views of parents, teachers and children involved in early O&M intervention to be explored, perspectives that have not been represented within the O&M literature. The significance of my research study lies, firstly, in providing insight into the experiences and significance of O&M intervention including long cane mobility being implemented within the early childhood intervention context and, secondly, in providing an opportunity for those involved in this process to present their own stories and perspectives toward O&M, enabling a richer understanding of the influence of O&M intervention on daily life.
The decision to include the voices of children within this study reflects the position of the United Nations Convention on the Rights of the Child, developed in 1989 and ratified by Australia in 1990 (Australian Human Rights Commission, 2007). Article 12 of the Convention, according to UNICEF (2014), specifies the right of children to:

> [p]articipate in decision-making processes that may be relevant in their lives and to influence decisions taken in their regard – within the family, the school or the community...it recognises the potential of children to enrich decision-making processes, to share perspectives and to participate as citizens and actors of change. (UNICEF, 2014, para.1)

As the early chapters of this study explore, the social, psychological and physical development of children with blindness is predominantly presented through sighted adult eyes; children are perceived, as Connors and Stalker (2007) describe, as “adults in training” (p. 20). However, as Corsaro (2005) identifies, the emergence of a sociology of childhood, arising in part from an increasing interest in interpretivist and constructivist approaches to research, has led to a recognition that children are active participants in their own development and socialisation. The views and experiences of children with disabilities, according to Connors and Stalker (2007), and De Schwauwer, Van Hove, Mortier, and Loots (2009), tend to be excluded when decisions affecting their lives are being made. The early intervention program at the centre of this study was guided by sociocultural theories of child development, supportive of children’s active participation and with a curriculum developed within a rights-based framework, and it is therefore appropriate that children involved with early O&M intervention are provided with opportunities to express their views in this area.

It is important to acknowledge that this thesis primarily refers to children who are blind with no other significant disabilities. Although my personal belief and philosophy is that children with cognitive or other impairments in addition to vision loss can and should be provided with opportunities to learn long cane mobility, this thesis has not been written to take the
differing teaching and learning requirements of working with children with additional impairments into account.

**Key Terms and Definitions**

In Australia, it is accepted practice to use person first language when discussing disability, an approach reflected in the United Nations Convention on the Rights of Persons with Disabilities (United Nations, 2006), and Australian consumer advocacy groups such as Blind Citizens Australia (http://wordpress.bca.org.au/about/). Therefore this study uses terms such as “children who are blind” and “children who have low vision or blindness”. Specific definitions of blindness and low vision are provided in Chapter Two, along with a discussion as to why terminology use may vary within the literature on blindness.

Several key terms are used throughout this study to refer to differing aspects of the O&M process:

**Long cane mobility:** O&M action utilising a long cane as a mobility aid.

**Mobility:** As a general term, mobility refers to “the act of moving through space in a safe and efficient manner” (Wiener, Welsh, & Blasch, 2010, p. xv). More detailed definitions will be considered in Chapter Three.

**OMAA:** The Orientation and Mobility Association of Australasia, the professional body representing O&M specialists in the Australasian region.

**Orientation:** The “knowledge of one’s distance and direction relative to things observed or remembered in the surroundings and keeping track of these spatial relationships as they change during locomotion” (Wiener et al., 2010, p. xv).
**Orientation and mobility (O&M):** Again, Wiener et al. (2010) provide a succinct and useful definition: “purposeful and directed movement through and within the surrounding environment” (p. xv).

**O&M action:** “Any movement undertaken in the course of the day, whether independently or accompanied” (Deverell, Scott, Battista, & Hill, 2014).

**O&M experiences:** Encompasses O&M intervention, long cane mobility, O&M techniques, and leading to O&M action.

**O&M intervention:** Intentional action from the O&M specialist or associated others, including parents, teachers and paraprofessionals, designed to facilitate or improve the child’s O&M action.

**O&M session:** A formal O&M intervention lesson.

**O&M specialist:** “Professional providing O&M intervention, education and support in the home and in the community, in partnership with family, caregivers and other professionals” (OMAA, 2011-2012, p. 1). The term “O&M instructor” is used interchangeably.

**O&M techniques:** The practical skills and strategies of orientation and mobility, as described in detail within Chapter Three.

Other key terms used through this study are:

**Itinerant professionals:** Professionals who work in an interventionist capacity in educational settings, including visiting teachers, O&M specialists, physiotherapists, occupational therapists and speech therapists.
Visiting teacher: The term currently used in Western Australia to describe the specialist teacher working with children with vision impairment. Other terms commonly used in the literature are Itinerant Teacher (Vision), Advisory Teacher (Vision), Qualified Teacher of the Visually Impaired (QTVI), and Teacher of the Visually Impaired (TVI).

Vision impairment: An umbrella term referring to the spectrum of vision loss from low vision through to blindness. The literature also uses the term visual impairment.

Chapter Overview
This first chapter provides the general background and context of the study, beginning with my personal and professional experiences that led to my interest in undertaking the research. The research aim and specific research questions are outlined and related to the significance of the study, followed by a brief explanation as to the importance of including the voices of the children in the study. Key terms and definitions are provided before an overview of each of the chapters is presented.

Chapter Two begins with the clinical perspective of blindness as an impairment, and presenting specific terms relating to the spectrum of vision impairment along with clarification of the meaning of the terms “blind”, “low vision” and “functional vision”. The majority of this chapter discusses blindness as a disability, beginning with historical, religious and charitable conceptions, and myths and stereotypes influencing how blindness is perceived in Western culture. The influence of disability studies as an academic field is considered, with a discussion firstly on how blindness is framed within the medical model that continues to influence the provision of O&M intervention in Australia. Various social models of disability are briefly presented, followed by a discussion on the World Health Organisation’s (2001) International Classification of Functioning, Disability and Health (ICF) framework, which attempts to provide a multi-perspective approach to the
classification of impairment. The representation of blindness through language and other symbols is then considered, including a discussion on the white cane as an indicator of blindness. Finally, the Australian context is outlined, with a brief discussion on how models of disability influence the Australian sector, and information is provided relating to the numbers of Australian children who are blind.

Chapter Three discusses orientation and mobility, including historical and current practice within the United States, the United Kingdom, and Australia. The chapter begins with a short history of the profession, presenting a range of relevant definitions from which I identify my professional and philosophical approach to O&M intervention, and a brief description of O&M techniques. The main focus of the chapter is on the provision of O&M intervention with children, beginning with a brief outline of the historical context before a longer discussion presents the literature relevant to blindness and child development. The historic and current debates relating to the use of mobility aids with children are explored, highlighting opposing views within the field as to when long cane mobility should be introduced to children. These debates are influenced by the content and availability of O&M specialist training courses, particularly in Australia, where challenges include a lack of professional certification and an ongoing shortage of qualified practitioners (Deverell & Scott, 2014). The final section of this chapter explores alternative approaches to O&M intervention emanating from the United States, which places a greater emphasis on the experiences and perspectives of individuals who are blind.

In Chapter Four, the provision of education services for children who are blind is considered, tracing the shift from residential settings to the inclusive practices in place today. The United Kingdom and the United States have influenced Australia’s education philosophy and pedagogy; therefore the major philosophical, legal and policy shifts within these countries are
presented. Included in this discussion is an explanation of one of the most relevant aspects of education in this field, the identification and implementation of the expanded core curriculum: the set of blindness-specific skills, of which O&M is one of the core domains, that children need to learn in addition to the regular academic curriculum (Hatlen, 1996). The Australian context is discussed, including current philosophies relating to early childhood education and early childhood intervention. This chapter concludes with an outline of the research setting of Western Australia, including the historical and current education service provision for students with vision impairment in that state. O&M intervention within educational contexts is woven through all the discussions.

Chapter Five begins with a methodological overview that situates this study within a qualitative research framework. The interpretive interactionist approach of Denzin (2001a), with its focus on the lived experience of participants in relation to life-changing or epiphany moments, is presented as an appropriate method for representing the perspectives of parents and teachers toward early O&M intervention with young children who are blind. The underpinning theoretical perspectives relevant to this approach, symbolic interactionism and phenomenology, are explained early in this chapter, followed by a discussion on the specific methods, data collection and analysis process, the relevance of the data, and ethical considerations.

Chapter Six begins the presentation of the data analysis, findings and discussion. The chapter begins by explaining the history of the program at the centre of the study, and how differing views of teachers and related allied health professionals toward early long cane introduction impacted on the delivery of O&M programs. In order to illustrate key themes emerging from the data analysis, the stories of two participants, one parent and one teacher, are presented. Denzin’s (2001a) interpretive interactionist approach includes a focus on exploring the
sequence in which a sense of meaning toward a particular phenomenon is reached, and these individual accounts are representative of the “journeys” that participants undertook as their perspectives toward early childhood O&M intervention changed over time.

In Chapter Seven, key themes relating to O&M intervention within educational and community settings are explored. Specifically, this chapter discusses how social interaction enabled teachers and parents to construct meaning toward O&M and long cane mobility, with an emphasis on group life, the establishment of shared goals and actions, and the forming of social relationships.

Chapter Eight focusses on the significance and influence of early O&M intervention for children and families, discussing issues such as how the use of coloured long canes helped facilitate within children a self-concept as independent travellers responsible for their own O&M action. This chapter concludes with a discussion on the concept of “embodied space” (Anvik, 2009, p. 146), suggesting alternative ways of thinking about how children with blindness perceive and negotiate their world. The analysis and findings in Chapters Six, Seven and Eight are situated within the current literature in the fields of O&M and early childhood intervention, and offer new interpretations of O&M intervention.

The final chapter of this thesis revisits the research questions, presents the key implications from the findings, and illustrates the significance of the research to O&M practice. The chapter concludes by discussing the limitations of the study, followed by some personal reflections and suggestions for future research.
Chapter Two: Blindness as Impairment and Disability

The introductory chapter outlined the context and background to this study, raising awareness that the provision of O&M intervention and long cane mobility to children who are blind has historically been delayed until they have moved beyond their early childhood years. This fact has much to do with how blindness has been historically perceived, and the subsequent influence on the provision of educational services and O&M intervention. These three issues – perceptions of blindness, O&M, and education – are considered separately within the following three chapters, in order to provide the contextual background within which this current study is positioned.

The intent of this current chapter is to begin by presenting an overview of blindness defined firstly as impairment, then as disability. These terms are used as per the 2014 World Health Organisation (WHO) definitions, where impairment relates to “a problem in body function or structure”, and disability is “an umbrella term, covering impairments, activity limitations, and participation restrictions” (http://www.who.int/topics/disabilities/en/). In the context of this study, an eye condition is an impairment; and a disability is the effect an eye condition has on an individual’s ability to function in the social and physical world. This discussion begins therefore with clinical perspectives of vision loss, summarising medical categorisations and clarifying terminology used throughout the study. The chapter then discusses attempts to understand and frame the concept of blindness as a disability through the use of theoretical models. Three dominant approaches are considered: the medical model, social models of the United Kingdom and United States, and the biopsychosocial approach of the WHO International Classification of Functioning, Disability and Health (ICF) (World Health Organisation, 2001). The use of language relating to blindness is considered, including common myths and stereotypes, and how these relate to issues of stigma and social identity.
relating to blindness and the use of the white cane. Finally, there is a brief discussion on how
disability is situated within Australian context, including information on the prevalence of
blindness in Australia.

**Blindness as Impairment**

Clinical definitions of blindness and low vision have existed since the mid 20th century,
primarily as a means of satisfying government and rehabilitation agency regulations defining
eligibility for social security benefits and service provision (Koestler, 1976). Internationally,
confirms the WHO definition of blindness differs to the definition of “legal blindness”
commonly used by the majority of Australian charitable service providers. Clarification of
terminology and associated definitions used within the literature and throughout this thesis
therefore need to be established.

**Measuring Vision**

The ability of the eye to see is clinically measured in two ways: visual acuity and visual field.
Visual acuity refers to the ability to distinguish detail; measured using a Snellen chart
(Goldberg & Trattler, 2008), acuity is determined by the line of the chart a person can read at
a distance of six metres. “Normal” vision is a measure of 6/6 (20/20 in the imperial system),
referring to the ability to read a particular size print at the six-metre distance, whilst reduced
visual acuity is recorded, for example, as a figure such as 6/24 or 6/60. In lay terms, a
measurement of 6/60 means that an individual must be six metres or closer to see an object
that a person with unimpaired vision can see at 60 metres. Very low amounts of vision are
defined using terminology such as “count fingers” or “hand movements” (International
Council of Ophthalmology, 2002, p. 9). For those who cannot be tested with the Snellen

chart, for example due to their age or a lack of English literacy, alternatives such as the Lea Vision Tests developed by Hyvarinen, Näsänen, and Laurinen (1980) are available.

Visual fields are tested by recording what can be seen when looking straight ahead at a fixed target, and are measured as a loss of degrees of vision. As field loss can exist independently from acuity loss (International Council of Ophthalmology, 2002), it is possible for a person to present with a full visual acuity of 6/6 but still have significantly reduced peripheral vision.

**Blindness and Legal Blindness**

Prior to the mid 20th century, the term *blind* referred to a person with no vision. Following the Great Depression of the 1930s in the United States, Koestler (1976) explains, the American Medical Association formulated a definition of *legal blindness* to determine eligibility for US Government social security support. As a financial “cut-off point” for social security support needed to be determined (International Council of Ophthalmology, 2002, p. 6), the definition of legal blindness encompasses individuals with acuity loss, field loss, or a combination of the two; therefore an individual who is legally blind may have no sight or a degree of functional vision. Subsequently, the Australian Government established a similar definition for determining eligibility for the Disability Support Pension (DSP) and the Age Pension (Blind). According to the Australian Institute of Health and Welfare (2007), the majority of Australian charitable agencies providing assistance and support to those who have low vision or are blind apply this definition to determine eligibility for particular services.

Currently, the following guidelines are applied to determine whether an individual in Australia meets the definition of legal blindness:

Visual acuity (1.1.V.50) on the Snellen Scale after correction by suitable lenses must be less than 6/60 in both eyes, or
Constriction to within 10 degrees of fixation in the better eye, irrespective of corrected visual acuity, or

A combination of visual defects resulting in the same degree of visual impairment as that occurring in the above points.

(Corn and Lusk (2010) explain the common assumption the word blind equates to complete vision loss can lead to misunderstandings when an individual with some residual vision is classified as legally blind. In order to alleviate these potential misunderstandings, the International Council of Ophthalmology (2002) recommend the term blind be used for “total vision loss and for conditions where individuals have to rely predominantly on vision substitution skills” (p. 1). Vision substitution skills within the O&M context are defined as a reliance on hearing, long cane or guide dog use, and “other blind mobility skills” (p. 13), such as are described in Chapter Three of this thesis. The use of the word blind throughout this study relates to the International Council of Ophthalmology (2002) definition.

**Low Vision**

The term *low vision* most commonly indicates visual acuity of 6/18 or less, or a visual field loss of twenty degrees of fixation or less (Centre for Eye Research Australia, 2007). This definition indicates that although a person is not legally blind (and therefore not eligible for government benefits), their ability to participate in activities of daily living may be affected by their vision loss and they are likely to benefit from the use of low vision aids such as large print or magnifiers (International Council of Ophthalmology, 2002). According to Pollard, Simpson, Lamoureux, and Keefe (2003), many individuals with low vision do not access rehabilitation services believing, incorrectly, that those services are only available to those who are blind. Similar misunderstandings can occur around the use of assistive devices; French (1993) discusses the common misconception that the use of a long cane indicates total
vision loss despite the fact that many individuals with low vision make use of long cane techniques to enhance their ability to travel safely and independently.

**Functional Vision**

The term *functional vision* does not refer to the structure of the eye nor impairment within it, but rather describes the ability of an individual to perform specific activities of daily living (International Council of Ophthalmology, 2007) including reading, cooking and mobility. Functional vision is extremely individual, Colenbrander (2010) explains, therefore a holistic approach to assessment and rehabilitation is required. Geruschat and Smith (2010) confirm the O&M specialist requires an understanding of how factors such as lighting, glare and visual fatigue can impact on an individual’s ability to use functional vision in independent mobility tasks, as well as knowledge as to how effective mobility aid use may enhance the ability to use functional vision effectively.

To summarise, the definitions of legal blindness, blindness, and low vision refer to structural or functional impairments within the eye; these quantitatively measurable impairments are referred to by the International Council of Ophthalmology (2002) as “visual functions” (p. 4), whilst functional vision is a qualitative definition influenced by individual and environmental factors. This thesis is primarily concerned with children who are blind or have very low visual function, and how this vision loss is associated with their ability to function within daily life. It is not just impairment that influences children’s participation, but also historical and cultural perceptions of blindness as reflected through language use, myths about blindness, and stigma and social identity issues, as are now explored.

**Blindness as Disability**

The World Health Organisation (2014) defines disability as “an umbrella term, covering impairments, activity limitations, and participation restrictions”
This is a significant shift from earlier definitions; until the late 1990s the focus was primarily on how impairment restricted an individual from performing “an activity in the manner or within the range considered normal for a human being” (World Health Organisation, 1980, p. 143). Within this medically based definition, Johnston (1996) argues, there is no attempt to take into account emotional, behavioural and social factors that may also limit a person’s ability to perform tasks. The shift from the medical approach to more holistic social models of disability will be discussed within this section. Prior to that discussion however, a brief description of how religious and charity approaches toward blindness have reinforced myths and stereotypical perspectives is provided, as these continue to influence how blindness is perceived in Western society.

Religion, Charity, and Stereotypes

Historically, the meaning of blindness has been heavily influenced in the Western world by what Wheatley (2010) terms the “religious model of disability” (p. 10). With cultural practices including medicine controlled by the Christian Church prior to the Industrial Revolution, Ferguson (2004) identifies that blindness has historically been equated with guilt and sin, whilst Wheatley (2010) provides examples of blinding used as an extreme form of punishment. Powerful myths around blindness have existed for centuries; pity-evoking myths suggest “the blind are in darkness; they are miserable, helpless, useless, maladjusted” (Ferguson, 2004, p. 58), whilst at the other extreme are the beliefs that people who are blind are “gifted” in some way, that their vision loss is compensated by exceptional musical ability, or extraordinary powers of hearing or intuition. Tobin (1998) clarifies there is no empirical evidence to support these views; nonetheless, the prevalence of such beliefs contributes to a less than realistic view of blindness that does not account for individual differences. Additionally, Scott (1969) explains, community behaviours such as the tendency of sighted
people to assume a person who is blind continually requires assistance prevent those with blindness from developing skills of independence, thereby reinforcing these stereotypes.

Prior to the end of the Second World War, Goodley (2011) explains, people with disabilities were primarily supported through charitable organisations. In Australia, charitable models have had a significant influence on the provision of social services, and O’Halloran (2011) explains that, until recently, Australian governments have predominantly relied on charities to provide services and support in this area. The emphasis on charity for those “less fortunate” contributes to the stereotype that people who are blind are helpless, unemployable, and reliant on handouts from other “more fortunate” members of society, according to Wheatley (2010), who discusses the paternalistic nature of early charitable organisations for the blind, arguing that an “overemphasis on charity... deprives people with disabilities of agency” (p. 14). An uncomfortable dichotomy exists with charitable organisations providing rehabilitation services supporting independence remaining reliant on a reinforcement of stereotypical images in order to attract funds. McKinty and Tomkins (2012) relate how, when the Royal Victorian Institute for the Blind was established in Melbourne in 1933, “blind babies were a significant attraction when fundraising” (p. 1), and Johnstone (2012) clarifies that charities continue to reinforce the image of the “brave” child with impairment overcoming a personal “tragedy”. Goggin (2009) argues the charity model remains dominant in Australia, thereby strengthening the view that people with disabilities are to be pitied and require care, and upholding the power of institutions and rehabilitation services over their less capable clients. Relationships between individuals who are blind and rehabilitation agencies is explored in greater detail in Chapter Three, with a particular emphasis on the influence of these relationships on the profession of orientation and mobility. The discussion in this chapter now turns to an exploration of how disability is understood within the various models of disability, beginning with the medical model.
The Medical Model of Disability

The emergence of disability studies as an academic discipline, according to Goodley (2011), has produced a range of perspectives and theory attempting to understand the impaired mind and body, whilst examining how discrimination is “enacted at the level of psyche, culture and society” (p. 10). The notion of blindness as a personal tragedy is reinforced by the medical model of disability, the dominant contemporary Western view until relatively recently (Goodley, 2011). The use of definitions such as legal blindness stem from this model as vision loss is presented solely in terms of physical impairment with an individual’s eye function rated against a clinical measurement defined by the medical profession as “normal”. As explained earlier within this chapter, functional vision use is highly dependent upon environmental factors including lighting, glare sensitivity and colour contrast, as well as, Schwartz (2010) explains, psychological factors, therefore the underlying assumption that any limitation in function is due to the eye condition alone is problematic. The failure to take individual factors into consideration has been heavily criticised; Oliver (1990), for example, argues this view promotes a model where “problems” caused by impairment are perceived as an individual’s misfortune, treatable only through medical or rehabilitative interventions.

Recent developments within the medical profession such as the use of retinal implants and bionic eye technology continue to reinforce the notion that, given time and sufficient funding, medical intervention will cure blindness. The focus remains on normality as defined in a medical sense. Ong and da Cruz’s (2012) review of the history and current developments of bionic eye technology is framed within an assumption that the use of such devices will “allow an improvement in quality of life for blind individuals” (p. 14). There is no acknowledgement that quality of life is subjective, nor any discussion of how this might be effectively measured beyond a clinical setting where “success” is indicated through an individual’s ability to read
letters on a Snellen chart. Outside of academic contexts, media reporting of these interventions tend to be emotional, focussing on “miracles” and reinforcing the view that blindness is a tragedy for the individual involved. There is little emphasis on the social and ethical issues surrounding these procedures, according to Laryionava and Gross (2011) and, to date, no research undertaken into what impact these technologies and the subsequent public perceptions that blindness can be cured will have on those for whom these procedures are ineffective or inappropriate. Ong and da Cruz (2012) acknowledge that retinal implant and bionic eye technology is “far from restoring normal vision” (p. 7), however the effect of environmental factors including colour contrast, lighting or glare sensitivity in influencing an individual’s ability to effectively use functional vision (Geruschat & Smith, 2010) is not considered within their discussion.

The medical model also facilitates an “expert” approach according to Case (2000, p. 271), where decision-making in regard to intervention and service provision is placed in the hands of medical and rehabilitation professionals rather than people with disabilities themselves or their families. Oliver (1989), Scott (1969) and Vaughan (1993b), amongst others, argue that this approach creates a relationship of dependency, with the two latter authors writing specifically within the field of blindness. There has been discussion within the O&M literature that the domination of quantitative research focussing on measurable outcomes, such as defining successful long cane use by an individual’s travel speed and incidences of obstacle contact (Clarke, Sainato, & Ward, 1994; Soong, Lovie-Kitchin, & Brown, 2001), represents the medical model approach seeking to normalise “damaged sighted persons” (Mettler, 1998, p. 68). For Morris (1997), quantitative approaches fail to take into account “the things that make a difference to people’s lives” (p. 243) such as disabling attitudes or, alternatively, enablement of actions creating opportunities for people with impairments that may not otherwise exist. A growing recognition that disability is broader than the medical
approach to impairment, Goodley (2011) explains, led to the emergence of a range of social models of disability, the most influential of which, from an Australian perspective, are now discussed.

Social Models of Disability

The UK social model of disability, pioneered by the Union of the Physically Impaired Against Segregation (UPIAS, 1975) and formalised by scholars including Oliver (1990), presents the view that “disability is something imposed on top of our impairments, by the way we are unnecessarily isolated and excluded from full participation in society” (UPIAS, 1975, p. 3). Central to this argument is a recognition that people with impairments are disadvantaged or excluded from participation not because of their impairment but a multitude of factors including, Marks (1997) explains, “the nature of the built environment, social hierarchy, legislation, attitudes and images, technologies, aesthetics, and language and culture” (p. 887). The social model separates impairment and disability; for Oliver (1990), disability is not the result of impairment but rather is socially and culturally constructed. Proponents of this model, also referred to as a social barriers approach, see disability as being an act of exclusion by the able-bodied population. The rise of the social model in Britain, according to Shakespeare and Watson (2001), has had two key impacts on the disability movement in that country. Firstly, the advocating of social change through the dismantling of disabling barriers identified a political solution toward promoting inclusion, and, secondly, challenging the dominant medical view altered the self-perception of people with disabilities, empowering a movement working together toward full civil rights.

A civil rights approach dominates the social model of disability within the United States context, where disability rights have been strongly influenced by the American Civil Rights Movement and the emerging “minority [group] model” (Connor, Gabel, Gallagher, &
Morton, 2008, p. 443, brackets in original). Within this approach, there is a particular focus on issues of discrimination, stereotyping and marginalisation that, according to Meekosha (2004), reflects cultural, social and political differences between the United Kingdom and the United States. Cultural representations of disability are emphasised within the United States model, with key authors such as Zola (1993) highlighting the power of language as “one of the mechanisms by which dominant groups kept others ‘in place’” (p. 167). Cultural representations of blindness through the use of language and other media are discussed later within this chapter. Despite differences in philosophy and approach, Connor et al. (2008) identify that both the United Kingdom and United States social models reject the medical model and advocate for full inclusion for people with disability across society.

Attempting to understand the experience of disability through the use of theoretical models has proved challenging as human experience is individual and therefore difficult to categorise. Shakespeare and Watson (2001) propose that reaching an understanding of disability that adequately accounts for all is a complex and ongoing task, one which needs to include “all the dimensions of disabled people’s experiences: bodily, psychological, cultural, social, political” (p. 25). Although the United Kingdom social model has had significant influence, the separation of impairment and disability has been debated by Corker (1999) who contends this position disregards individual experience by failing to account for the fact that impairment affects people in different ways. For example, as explained previously in this chapter, the effects of vision loss vary widely between individuals (Colenbrander, 2010; Geruschat & Smith, 2010); the removal of social barriers alone will not provide solutions to all those effects. It is difficult to determine, as Shakespeare and Watson (2001) ask, “where does impairment end and disability start?” (p. 17). For Hughes and Paterson (1997), the social model “proposes an untenable separation between body and culture, impairment and disability” (p. 326). They propose instead a “sociology of impairment” (p. 330) that
recognises individual lived experiences of impairment and disability. Additionally, Paterson and Hughes (1999) suggest a phenomenological approach has much to offer the field of disability studies by exploring “the ways in which impairment is produced in the everyday world, how oppression and discrimination become embodied and become part of everyday reality” (p. 608).

Thomas (2012) argues for a “sociology of disability” (p. 210) that changes the focus of research from issues of coping, the changing body, being a patient and dealing with the health system to one that focusses on the social oppression caused by “avoidable restrictions on the life activities, aspirations and psycho-emotional well-being of people categorised as ‘impaired’ by those deemed ‘normal’” (p. 211, emphasis in original). However, she emphasises that “impairment effects: the direct and unavoidable impacts that ‘impairments’...have on individuals’ embodied functioning in the social world” (p. 211, emphasis in original) are also of critical importance. Anastasiou and Kauffman (2013) support this point, arguing that sensory or physical impairments including blindness must be considered “a big part of [individual] existence and activity” (p. 445). As Thomas (2008) maintains, “disabled individuals live lives shaped both by impairment effects and by the effects of disablist social factors” (p. 17), and understandings of disability must take all these factors into account.

Ferguson and Nusbaum (2012) argue that in addition to considering the physical effects impairment has on an individual, disability research must consider the historical, social, and cultural contexts. They suggest, as does Thomas (2012), the World Health Organisation’s International Classification of Functioning, Disability and Health (ICF) framework provides one means of shifting disability research toward a more holistic and
sociological approach. This framework, and the relevance to the study of areas such as O&M, is now discussed.

**The International Classification of Functioning, Disability and Health (ICF)**

The International Classification of Functioning, Disability and Health (ICF) (http://www.who.int/classifications/icf/en/), endorsed by the WHO in 2001, provides a multi-perspective framework approach to the classification of impairment. Human functioning is defined at three levels: body; person; and person in society, with disability involving dysfunction at one or more of these levels and expressed in terms of “impairments, activity limitations and participation restrictions” (World Health Organisation, 2001, p. 10). In order to contextualise these levels, the ICF takes into consideration environmental factors, or the “physical, social and attitudinal environment in which people live and conduct their lives” (p. 10). The framework attempts to synthesise medical and social perspectives and is designed for use across disciplines including education, medicine, research and policy-making. There is no single definition of disability within the framework; rather the ICF model recognises that disability is positioned on a continuum of human health, and a universal experience that can affect all people.

In 2007, in response to changing social and cultural contexts of childhood disability, a Children and Youth version of the ICF, the ICF-CY, was released (World Health Organisation, 2007). Halfon, Houtrow, Larson, and Newacheck (2012) explore these changing contexts, identifying a complex pattern of change affecting rates of childhood disability, including demographics, environmental factors such as exposure to chemicals and toxins, media and information technology, and medical advances. A growing number of children are diagnosed with complex neurodevelopmental disorders including cerebral (or cortical) vision impairment (CVI), which, according to Lueck (2010), is now the major cause
of vision loss in children in Western countries. The complexity of CVI, where functional vision levels fluctuate from day to day or even minute-to-minute (Palmer, 2003), means accurate assessment is difficult, and traditional medical and social model frameworks are not broad enough to allow for a full understanding of the disabling effects of such complex conditions. Halfon et al. (2012) suggest the ICF-CY attempts to overcome the shortcomings of both those models by positioning disability on a dynamic continuum influenced by many factors, and providing a universal frame of reference for the recording and communication of child disability and health and the associated restrictions on activity limitations and social participation.

The ICF-CY framework consists of four interlinked components: body functions; body structures; activities and participation; and environmental factors. This multidimensional model is useful in demonstrating the complexity of impairment in children, Adolfsson, Malmqvist, Pless, & Crisp (2011) explain, as it changes the focus from aetiology and developmental milestones to assessment within natural, rather than clinical, contexts. Considering a life skill such as O&M, the ICF-CY highlights numerous factors that potentially impact on the ability of a child who has low vision or is blind to become independently mobile; these range from physical factors, such as the eye condition, associated medical implications, proprioceptive ability and specific muscle and movement functions (low muscle tone, for example), to the impact of technology, societal attitudes and the availability of support and relationships.

The inclusion of the activities and participation domain adds an important construct to the ICF-CY that has not been evident in previous frameworks. In addition to identifying physical aspects of mobility (such as the ability to walk, and to walk short or long distances, around obstacles and so forth), there is a recognition that it is important to consider not only how
children complete tasks but also how they experience and manage their activity and participation in various life situations (Adolfsson et al., 2011). Most critically, according to Adolfsson et al. (2011), there is an emphasis on an interdisciplinary team approach that includes placing equal importance on the child’s and parents’ perceptions of participation in “real life” (p. 1231) activities. This is a significant shift from the way professions within the rehabilitation field such as O&M have traditionally functioned, emerging as they have from a medical perspective.

The ICF has drawn criticism for continuing to focus predominantly on a medical and individual perspective and placing a lesser emphasis on social factors. Shuttleworth and Kasnitz (2006), for example, argue the body functions and body structure domains continue to reference impairment as a deviation or loss from the norm; this is problematic for some disability theorists, Imrie (2004) explains, for whom the category of “normal” is viewed as “a social construction” (p. 287). Other concerns include those raised by McDougall, Wright, and Rosenbaum (2010) who argue the framework lacks strong theoretical underpinning and fails to include concepts such as quality of life. However, Shakespeare (2006) is more supportive, proposing the framework “offers a way forward for defining and researching disability” (p. 60). Of relevance to the O&M field is Douglas, Pavey, Corcoran, and Clements (2011) evaluation of the use of the ICF as a tool for interviewing individuals with vision loss about their mobility; they conclude a strength of the model is that “it provides for understanding different perspectives of the experience of disability” (p. 19).

Nonetheless, both the World Health Organisation (WHO) and the United Nations have moved toward a broader understanding of the concept of disability than was previously in existence. The definition adopted in 2006 by the United Nations Convention on the Rights of Persons with Disabilities, building on the ICF framework, states:
Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others (United Nations, 2006, p. 7).

In 2011, the WHO in conjunction with the World Bank released the World Report on Disability (World Health Organisation and the World Bank, 2011) that aims to provide global guidance on implementing the Convention. However, despite the increasing recognition of the social model and the development of frameworks such as the ICF-CY, Breen, Wildy, Saggers, Millsteed, and Raghavendra (2011) identify that the medical model continues to dominate both training and practice within Australian health and rehabilitation professions. According to Woodcock and Tragaskis (2008) and Breen et al. (2011), this is also the case for professionals working with children with disabilities and their families.

Scholarship with the field of disability studies, according to Thomas (2012), continues to explore new means of understanding impairment and disability within an increasingly complex world. An understanding of these models is relevant to this study as they highlight the increasing understanding that individual identities and experiences are centrally important to the development of intervention strategies such as O&M. There is no “one size fits all” model of intervention; attempts to categorise individuals by their disability, Thomas (2012) argues, “inevitably results in crude reductionism” (p. 223). The following section explores how language use around blindness can result in this kind of reductionism through the development of stereotypical views that fail to take individual differences into account.

**Language and Identity**

Proponents of the United States social model of disability such as Zola (1993) argue cultural representations of disability through language and other media is repressive, leading to the formation and reinforcement of stereotypical and stigmatising views of impairment. The
following section discusses language use as it relates to blindness, including clarification of terminology used in the Australian context, before considering issues of stigma associated with the use of a white cane.

**Language Use Relating to Blindness**

Blindness has historically been identified as the most feared of all impairments (Koestler, 1976), and continues to be identified as such, according to De Leo, Hickey, Meneghel, and Cantor (2009), and Southwell (2012). The use of language and the cultural portrayal of disability within public media, including language, literature, film and drama, Danforth (2008) explains, provide insight as to how blindness is perceived within Western society and why it is so feared. The *Collins Concise Dictionary & Thesaurus* (2000) lists 19 definitions of the word “blind”; only five refer to physical loss of vision. Other definitions include “unable or unwilling to understand; not determined by reason; acting or performed without control or preparation; a person, action, or thing that serves to deceive or conceal the truth” (p. 90). Synonyms for blindness include “careless, heedless, ignorant, inattentive, inconsiderate, judicious, insensitive, morally darkened, neglectful, oblivious, prejudiced” (p. 90). These primarily negative connotations, Bolt (2005) argues, contribute to misconceptions and prejudices about what it means to be blind, and are reinforced through other forms of media.

Safran (1998), in an analysis of the representation of blindness in film over the past century, notes the reinforcement of incorrect beliefs such as those who are blind “face feel” to establish relationships, have a “sixth sense” or “second sight”, or maintain a stiff, fixed position with the head. Within the mainstream print media, the dominance of negative language and images depicting disability continues, according to Goggin (2009), and Green and Tanner (2009), despite the establishment of ethical codes and guidelines for journalists.
around the reporting of disability (I. Richards, 2009). Disability has long been used as an artistic metaphor for social conflict, as Snyder and Mitchell (2001) illustrate in their discussion on horror movies, and Zola (1993) argues this practice results in individuals being identified and stigmatised by their impairment. Specific issues surrounding stigma and identity in people who are blind are discussed later in this chapter.

The United Kingdom and United States have adopted different terminologies when referring to individuals with impairments, which are then transferred to specific groups such as individuals who are blind. In the United Kingdom, where disability is seen as an act of exclusion, Goodley (2011) clarifies the term “disabled people” is preferred as it is seen to reflect the understanding that people become disabled by the constructs of contemporary society. In the United States, the preference is for “people with disabilities”, reflecting a person first approach that stems from the minority group perspective, according to Shakespeare and Watson (2001). Person first terminology was adopted within the Convention on the Rights of Persons with Disabilities (United Nations, 2006), and is also accepted practice within Australian advocacy groups such as People with Disabilities Australia (http://www.pwd.org.au/) and Blind Citizens Australia (http://wordpress.bca.org.au/).

International publications such as the Journal of Visual Impairment & Blindness (http://www.afb.org/jvib/jvib_main.asp) and the International Journal of Orientation & Mobility (http://www.ijorientationandmobility.com/) promote the use of person first language, whilst the British Journal of Visual Impairment (http://jvi.sagepub.com/) reflects both terminologies. These approaches are not universally accepted, however; the National Federation of the Blind (NFB) in the United States expresses strong objections to the use of person first language, arguing it is little more than a euphemism implying blindness is something to be ashamed of (Jernigan, 1983). Resolution 93-10 of the NFB Convention states:
We believe that it is respectable to be blind, and although we have no particular pride in the fact of our blindness, neither do we have any shame in it. To the extent that euphemisms are used to convey any other concept or image, we deplore such use. We can make our own way in the world on equal terms with others, and we intend to do it.

The NFB therefore refers to “blind people”, an approach also advocated for by those promoting the structured discovery learning approach to O&M such as Altman and Cutter (2004), Cutter (2007), and Mettler (1998); this approach and how it differs philosophically from conventional O&M practice is presented in Chapter Three. As identified in the introductory chapter, this thesis will use person first language as it is the predominant Australian practice, however this example indicates some of the complexities and strong emotions involved when considering this issue.

**Stigma, Social Identity, and the White Cane**

Zola (1993) argues that the practice of “labelling” (p. 168) individuals with their impairment can lead to these individuals becoming stigmatised and categorised. Within the literature, Robert Scott (1969) and Erving Goffman (1963) have explored issues associated with stigma and social identity relating to blindness. Goffman (1963) defined stigma as an attribute with a “discrediting” (p. 2) effect, such as a physical deformity, a perceived character flaw (for example, alcoholism), or a difference in race or religion. Blindness can be, but is not always, identified by an obvious difference in the appearance of the eyes, and metaphorical meanings associated with the word blindness can be projected onto a person who is blind. Scott (1969) argues that being blind risks being perceived as different, which has a profound impact on self-concept and social identity. Goffman (1963) argues that the “visability” (p. 48) of a stigma is a crucial factor in establishing an individual’s social identity, as this identity is informed by social responses triggered by visible impairments. Therefore some individuals
may choose to conceal their impairment, “passing”, as Goffman (1963, p. 42) puts it, as an individual without impairment.

For an individual who is blind their impairment can be highly visible, particularly if they make use of a “stigma symbol” (Goffman, 1963, p. 43) such as the white cane. Literature exploring the experience of age-related vision loss, including studies by Moore, Constantino, and Crisp (2000), Wong, Guymer, Hassell, and Keefe (2004), and Bennion, Shaw, and Gibson (2012), consistently identify common themes of avoidance and reluctance toward the use of a long cane as a mobility aid. Participants in Wong et al.’s (2004) study saw the long cane as a “symbol of blindness, disabilities (sic), and weakness....it may also have represented self-pity and self-insufficiency” (p. 638). Higgins (1999) reported similar outcomes in her New Zealand based study of both adults and children, although younger participants attributed this perception in part to poor instruction and late cane introduction, with one participant arguing “a cane should be like [sic] seen as an absolutely essential part of a blind person’s life” (p. 573). More recently, Southwell (2012) identifies that counsellors working with individuals with adventitious vision loss and their families identify issues of identity, stigma and stereotyping around long cane use as a common issue. For the NFB in the United States, a particular goal is the promotion of the long cane as a tool of self-sufficiency (https://nfb.org/free-cane-program) rather than a stigma symbol.

As is discussed further in Chapter Three, there are considerations around whether an individual needs to be identified as blind through the use of a white cane; a recent trend is for individuals to request long canes of different colours. The use of a white cane as an identifier of blindness and low vision has been conventional Western practice since 1931 when White Cane Laws, providing right-of-way on road crossings to white cane users, were adopted by Lions Clubs International across the United States (Blasch & Stuckey, 1995). These laws,
established in Illinois in 1930 after an individual using a black cane was observed having difficulties in crossing a road, are based on the assumption that a white cane is more visible to motorists. The widespread adoption of this assumption provides an example of how a solution to a specific problem, in this case an individual having difficulties in crossing a road, becomes sedimented into a “taken-for-granted reality” (Fine, 1992, p. 96) that extends far beyond the original local context. White canes today, according to the World Blind Union (n.d.), “stand as a recognised symbol of blindness and as a symbol affirming the right of blind people to exercise the same rights and responsibilities as others” (p. 4). However, the emphasis on cane colour implies an underlying assumption that long cane users are safe travellers only if they identify their impairment, a perception that, according to Koestler (1976), reinforces stereotyped views that people with blindness are unskilled and independent travel without vision is inherently dangerous. Additionally, the linking of safe access within community spaces to the use of a specific mobility device, a white cane, imposes social barriers to participation through the promotion of what Kitchin (1998) describes as “able-bodied conceptions of the world” (p. 351). The onus of responsibility is placed on sighted individuals to respond “appropriately” to ensure the safety of a traveller with a white cane, rather than trusting in the ability of individuals who are blind to develop high-level independent travel skills regardless of cane colour.

Shakespeare and Watson (2001) argue the implications of impairment on self and social identity are different for those with congenital impairments, and to date there has been no research on how the long cane is viewed by those with congenital vision loss receiving O&M intervention at a young age. The following chapter provides an insight into the historical background and development of the O&M profession that explains why this is the case, and this study seeks to begin to fill that knowledge gap by including the views of children with
congenital blindness toward O&M intervention. Prior to concluding this chapter however, the Australian disability context with specific reference to blindness will be briefly discussed.

**Disability and Blindness in Australia**

The disability movement in Australia, according to Meekosha (2004), draws on both the United Kingdom and United States social models, however Soldatic and Chapman (2010) argue disability in Australia is “largely under-theorised” (p. 139). Authors including Meekosha (2004), Meekosha and Soldatic (2011), and Hollinsworth (2013) propose that theoretical models anchored in northern hemisphere perspectives fail to sufficiently explain experiences of disability in countries with colonial histories, with Hollinsworth (2013) arguing the experiences of Indigenous Australians continue to be marginalised despite the fact that rates of disability in these communities are significantly higher in comparison to non-indigenous Australians (Goggin & Newell, 2005). Since the mid-1990s, according to Soldatic and Chapman (2010), the Australian disability movement has become increasingly fragmented with a tendency for issues to be framed around specific impairments rather than common issues. This has created difficulties in accessing funding across all disability sectors; Moore (2012) identifies this as a significant challenge within the early childhood intervention field in Australia, arguing, “this approach ignores the commonalities between categories of disabilities” (p. 30), thereby forcing disability groups and advocates to compete for limited funding.

For Goggin and Newell (2005), the experiences of Australians with disability represent a “social apartheid” (p. 19), where individuals continue to be excluded from full participation in the community due to social, economic and political barriers; a recent Productivity Commission Report (Australian Government Productivity Commission, 2011) acknowledged that disability support in Australia is “underfunded, unfair, fragmented, and inefficient, and
gives people with a disability little choice and certainty of access to appropriate supports” (p. 2). The Australian Government has recently established a new funding initiative, the National Disability Insurance Scheme (NDIS), which commenced in July 2013 and provides individualised and flexible assistance to people with disabilities (http://www.ndis.gov.au/). Disability support in Australia remains fragmented however, including in the education and O&M sectors; these issues are discussed further in Chapters Three and Four.

With regards to blindness and low vision in Australia, it is well recognised that Aboriginal and Torres Strait Islander people have disproportionately high rates of eye disease including trachoma (Australian Institute of Health and Welfare, 2011), a condition found most commonly, Taylor (2008) explains, in undeveloped countries where there are high levels of poverty and dry arid conditions, such as central Africa. Within the general Australian population, there is little information on the prevalence of vision loss prior to the 1990s, according to Taylor et al. (2005). The most recent figures, from the Clear focus: The economic impact of vision loss in Australia in 2009 report (Access Economics Pty Limited, 2010), estimate 575 000 Australians over the age of 40 are classified as having low vision or blindness. This report specifically identifies problems with “fragmented funding and service delivery” (p. iii) in this sector, recommending professionals including O&M specialists be included in the Health Workforce Australia database (https://www.hwa.gov.au/). To date, this has not eventuated; the following chapter provides further information on the current situation and status of O&M specialists in the Australasian region.

Vision Loss in Children in Australia

The most recent data on the numbers of Australian children who are blind or have low vision is from the 2007-2008 National Health Survey (Australian Bureau of Statistics, 2009), which estimates that 1.8% of children from birth to age fourteen have “diseases of the eye”. This
figure includes conditions correctable through the use of glasses or contact lenses, and it is therefore difficult to accurately gauge the numbers who would be classified as meeting the clinical definitions of low vision or blindness. In response to this lack of statistical information, the Royal Institute for Deaf and Blind Children (RIDBC) Renwick Centre in New South Wales established the Australian Childhood Vision Impairment Register (ACVIR) in 2010 (http://www.ridbc.org.au/renwick/australian-childhood-vision-impairment-register-acvir). This voluntary register aims to develop and maintain a record of children in Australia with vision impairment; as of 2011, 450 children were registered (Silveira, 2011). Once established, the register aims be an important resource in the provision of accurate information to allow for planning and resourcing effective service provision to children who have low vision or blindness.

In this study’s research setting of Western Australia (WA), Crewe et al. (2012) estimate 0.15% of the state’s population of 2.25 million are legally blind; again there are no indications of how many are children. The Department of Education Western Australia annual report 2006-2007 (Department of Education Western Australia, n.d.) indicates over 400 children with blindness and low vision were supported by the Visiting teacher service in that year, a very small percentage of the more than 400,000 children resident in the state (Australian Bureau of Statistics, 2007). Resources to meet the needs of all students with disabilities in Australia are currently inadequate according to the Department of Education, Employment and Workplace Relations (2012), and the low incidence of vision impairment creates additional funding challenges (Pagliano, 1989; M. Steer, private communication, February 9, 2014). Lack of funding has been identified as a significant issue in the provision of orientation and mobility services in the Australian context, both in the education sector (Palmer, 2005) and across broader contexts (Deverell & Scott, 2014). These issues, and the
implications for O&M service provision to children, will be explored in greater depth within the following two chapters.

**Conclusion**

This chapter has presented an overview of blindness in order to establish a broad context to this research. Historically, blindness has been understood from a primarily negative perspective, with myths and stereotypes influencing how the general community construes the meaning of blindness, and a medical model approach toward rehabilitation remains dominant. From a social model perspective, the discussion considered how factors including the nature of the built environment, the use of language and images, technology and social attitudes, impact on individuals who are blind, and explained how recent frameworks such as the ICF (World Health Organisation, 2001) have attempted to provide a multi-perspective approach to how impairment is classified and defined. The chapter included a discussion on stigma and social identity, with a particular focus on the white cane and how its use is often presented in the literature as stigmatising, before providing a brief explanation on disability and blindness in the Australian context.

The following two chapters discuss issues relating to O&M intervention and the provision of educational support for children who are blind respectively. Chapter Three presents the historical background of O&M intervention, with a particular focus on the debates relating to the provision of O&M intervention and long cane mobility with children, whilst Chapter Four discusses educational policies and procedures for children who are blind, beginning with an historical international overview and concluding with an analysis of education provision in the research setting of Western Australia.
Chapter Three: Orientation and Mobility

The importance to every blind man of acquiring the power of walking in the streets without a guide can scarcely be exaggerated. (W.H. Levy, 1872, p. 69)

Professionals working within the orientation and mobility (O&M) field provide specialised instruction enabling individuals with vision loss to acquire the O&M techniques necessary for independent travel. The profession has progressed from formal beginnings during World War II to working with increasingly complex and diverse populations in equally as complex and diverse environments. The focus of this chapter is on O&M intervention with children, a group neglected when the profession was established. To contextualise this, I begin with a brief history of the profession, before reviewing various definitions of O&M and highlighting my own professional philosophical approach to O&M intervention. Secondly, I briefly describe the core O&M techniques, as an understanding of these techniques is required in order to appreciate the traditional resistance to the implementation of O&M intervention with children. The core of the chapter discusses the historic and current debates relating to the provision of O&M intervention with children, in particular the issue of when long cane mobility should be introduced, before I conclude with an examination of O&M specialist training courses and professional certification. The aim of this chapter is to contextualise this study within an international and local context, providing an understanding of how O&M intervention in Australia is currently delivered to young children.

History of the O&M Profession

Historically, the literature has described individuals with blindness travelling independently using sticks or staffs (Hoover, 1950) and, within the residential school settings of the 19th century, groups tied together with rope or using what Ritchie (1930) described as the “crocodile technique” (location 445). Early independent mobility skills, known at the time,
Bledsoe (2010) explains, as “foot travel” (p. 435), were basic, either self-taught or passed on through teachers who were themselves blind. Despite the establishment in 1929 of the Seeing Eye dog guide school in the United States, Blasch and Stuckey (1995) explain training in this context emphasised the skills of working with a dog guide rather than independent travel. Bledsoe (2010) confirms the terms “orientation” and “mobility” were not used until the 1940s and 1950s, following the development of formal O&M techniques.

The catalyst for the foundation of the O&M profession came about with the involvement of the United States in World War II, and the return to that country of an unprecedented number of soldiers with injuries causing partial and complete vision loss (Bledsoe, 2010; Miyagawa, 1999). The need for rehabilitation services within the military hospitals was so high the Veterans’ Administration established a Surgical Division of Ophthalmology in 1943 at the Valley Forge General Hospital in Pennsylvania. Miyagawa (1999) reports the focus of rehabilitation was initially on self-care, braille and typing, along with the provision of the psychological support required to adjust to adventitious blindness. There were no formal techniques for teaching safe independent travel; however, within the hospital setting it became apparent there was a need to develop some means by which blinded soldiers could travel independently.

The use of a long cane as a mobility aid was first described in detail by British writer, W. Hanks Levy, who was himself blind, in 1872. During the early 20th century, a short white cane had been used as a means of identification, generally in conjunction with sighted assistance, although Ferguson (2007) and Miyagawa (1999) report that many who were blind resisted using this cane due to negative connotations of dependency. Dog guide users initially made use of a short white cane, however Whitstock, Franck and Haneline (1997) explain this technique was thought to be ineffective and the practice was phased out in the United States.
(although it is still used in that context in some European countries). However, it was not until 1944 that the long cane was established as an effective mobility tool, when Levy’s techniques were researched and modified at the Valley Forge General Hospital by Richard E. Hoover and Warren Bledsoe (Miyagawa, 1999). Levy’s original description closely resembles how the long cane is used today:

One of the greatest aids to him who would walk by himself is a stick; this should be light and not elastic, in order that correct impressions may be transmitted from the objects with which it comes in contact to the hand of the user...when stepping the stick should be waved alternately from right to left to correspond with the movements of the feet....and as the stick should always be held about six or nine inches from the feet, the ground will always be examined before actually being trodden. (Levy, 1872, p. 69)

Hoover identified a crucial flaw in Levy’s description, according to Blasch and Stuckey (1995), where the cane is depicted tapping the ground ahead of the front foot. Hoover realised that, by having the cane touch instead the ground in front of the trailing foot, this would allow protection from obstacles, kerbs or holes and enable the user to maintain a relatively straight line of travel (Blasch & Stuckey, 1995). From this realisation, Hoover developed a series of systematic long cane mobility techniques, establishing the foundations of the profession as it exists today.

**Defining O&M**

“The ability to move independently, safely, and purposefully through the environment” (Welsh & Blasch, 1980, p. 1) is the definition of O&M presented in the field’s first, and seminal, textbook *Foundations of Orientation and Mobility*. As the O&M profession has expanded into working with increasingly diverse populations, there have been several attempts to define more deeply the complexities of independent travel. Psychologists studying perception, such as Gibson (1954), define mobility from a visual perspective, examining how the impact of visual stimuli on locomotive behaviour enables individuals to
travel through complex environments. Building upon Gibson’s work, Strelow (1985) attempted to capture a theory of mobility, reviewing studies of both sighted and blind mobility. Concluding no one theory is sufficient to capture the complexity of independent travel, Strelow argues that, rather than a single dominant skill, “there are several principles of visual and nonvisual guidance, cognitive ability, and motor sequence planning” (p. 245), used in ways individual to the person travelling through the environment. Building from this, LaGrow (2010) attempts to isolate the components of orientation and mobility important for people with vision impairment, presenting a definition in two parts. Firstly, an individual must use perceptual and motor learning to accurately observe and interpret sensory information acquired whilst travelling, secondly, this information is combined with conceptual knowledge and knowledge of the travel environment to safely and accurately direct movement through it.

The definitions from Welsh and Blasch (1980) and later adaptations by Wiener, Welsh, and Blasch (2010) and LaGrow (2010) have allowed the O&M profession to isolate and refine the specific techniques an individual requires to achieve competence in O&M techniques. However, the underlying medical perspective evident in this approach encourages a “checklist” technique of assessment and training, as depicted in early teaching textbooks such as Hill and Ponder (1976). Although appropriate when meeting the needs of working age men with adventitious, war-inflicted blindness, the population benefiting from O&M intervention has expanded over the past 60 years. There has been a large increase in the numbers of people with low vision, primarily caused through degenerative and age-related eye conditions, who benefit from O&M intervention, according to Griffin-Shirley and Welsh (2010). O&M specialists increasingly work with populations whose needs were not considered when the profession began, such as those with physical and/or intellectual disabilities, and very young children. Furthermore, there have been dramatic changes within
the physical environment, including significant increases in vehicle numbers. Technological advances including Global Positioning Systems (GPS) are readily available via smart-phones, adding another dimension to independent mobility for those with vision loss. Although the definitions of O&M by Welsh and Blasch (1980), Wiener, Welsh, and Blasch (2010) and LaGrow (2010) are accurate and relevant, there is a place for a more holistic definition reflecting the needs, choices and wide range of abilities of people with blindness and low vision.

My professional and personal philosophy as an O&M specialist working with young children is best reflected in the words of Huebner and Sidwell (2004), who position O&M within a framework of individual freedom and independence supporting the individual “to move about independently, safely, confidently, with ease and spontaneity, using choice of mode or travel device” (p. 34). O&M specialists must also consider the individual’s safety, sensory awareness and sensory integration skills, self-orientation, and comfort and ease (pp. 36-37) and, when working with children, apply knowledge related to child development and learning in order to empower children to make choices and feel confident toward their own O&M action. This knowledge includes developing an understanding of how to adapt the traditional O&M techniques that I now describe.

**O&M Techniques**

A handful of key textbooks, including Hill and Ponder (1976), LaGrow and Weessies (1994), and Deverell, Taylor, and Prentice (2009), detail core O&M principles, techniques, and teaching strategies. Primarily, these texts outline a “standard” curriculum for teaching adults with total blindness and without additional disabilities, whilst acknowledging the need for individualised program design to meet those with broader needs. Their purpose is to provide a comprehensive and sequential guide to O&M techniques; techniques of orientation and
mobility are considered separately whilst there is an underlying acknowledgment the two areas are interrelated and proficiency is required in both to become an efficient traveller. Although there are a number of techniques and mobility aids for those with low vision, this chapter refers only to techniques relevant for individuals with very low vision or complete vision loss.

**Orientation Techniques**

Orientation techniques, according to Deverell et al. (2009), include the ability to identify and use nonvisual environmental clues and landmarks, knowledge of indoor and outdoor numbering systems, measurement and compass directions, the ability to access a range of maps (audio or tactile), and the development of self-familiarisation skills and strategies. Effective use of these techniques requires the use of cognitive processes such as decision making, problem solving, and an understanding of body, spatial and environmental concepts (Hill & Ponder, 1976; Deverell et al., 2009).

**Mobility Techniques**

Traditionally, mobility techniques were initially taught within a controlled indoor environment, with proficiency in these techniques required prior to the introduction of a mobility aid such as the long cane (LaGrow & Weessies, 1994). Mobility techniques include the sighted guide technique (also referred to as human guide or guiding), requiring the individual who is blind to hold the arm of another person who then leads them through the environment; methods exist for traversing narrow spaces, negotiating stairs, reversing direction, negotiating closed doorways, and seating (Hill & Ponder, 1976). Self-protection techniques allow for semi-independent travel in familiar environments. The upper body protection technique involves positioning one arm horizontally across the body, with the arm held at shoulder height with the elbow bent at an angle of approximately 120 degrees. The
palm of the hand faces outwards with the fingers cupped and slightly relaxed, providing protection from chest and head high obstacles, and is also used in conjunction with the long cane if a known overhanging obstacle is in the path of travel. The lower body protection technique, where one arm is extended slightly forward and downward across the traveller’s midline and held about 30 centimetres in front of the body, provides limited protection against hip high obstacles when the traveller is not using a mobility aid. With both upper and lower body protection techniques, the arms must be far enough away from the body to allow time to react if an obstacle is contacted (Deverell et al., 2009).

Mobility techniques include methods of establishing position, such as trailing with one hand along a surface to establish a line of direction, or “squaring off” on a flat vertical surface to cross open space. Individuals are also taught systematic search patterns and techniques for self-familiarisation to indoor environments (LaGrow & Weessies, 1994). As travel moves into more complex environments, both indoor and outdoor, long cane techniques are introduced.

**Long Cane Techniques**

The long cane, developed by Hoover (1950), has evolved over time from a rigid aluminium cane to the more common folding lightweight cane used today. Cane tips vary from a straight metal tip to a large rolling ball tip, each, Farmer and Smith (1997) explain, suitable for different travel environments and conditions. The cane is traditionally white, although Hoover (1950) did not believe cane colour was the most important issue, stating, “each individual should be able to select the type, size, weight and colour of the cane to conform to his or her needs” (p. 363).

The long cane’s purpose, LaGrow and Weessies (1994) explain, is three-fold: it protects the user from (below the waist) obstacles and drop-offs in front of him or herself by acting as a
previewer of the environment; it provides additional tactual information about the environment as perceived through the cane; and it identifies the individual’s blindness or low vision. When used correctly, the long cane also assists the individual to maintain a relatively straight line of travel, and allows an efficient user to be an independent traveller in both familiar and unfamiliar environments. LaGrow and Weessies (1994) identify two basic long cane techniques, the diagonal technique and the two-point touch technique.

**The diagonal technique.** The diagonal technique is used primarily in indoor familiar environments, and involves walking with the cane held in a fixed position at a 45 degree angle across the body with the cane tip just above or in constant contact with the ground. As described by Jacobson (1993), “when viewed from the front, the cane appears to be diagonally across the student’s body, extending two inches beyond the shoulder of the dominant side to two inches beyond the opposite shoulder” (p. 71). This technique does not always provide adequate protection from obstacles, and it can be difficult to maintain straight-line travel, according to LaGrow and Weessies (1994). Hence it is generally recommended for indoor use, or for those with sufficient residual vision to require the use of a cane for identification purposes only. The diagonal technique can also be used when introducing cane techniques to very young children, as discussed later in this chapter.

**Two-point touch technique.** The most commonly used long cane skill is the two-point touch technique that, once learned, allows a competent user to concentrate on integrating additional sensory information to maintain orientation within their environment according to LaGrow and Weessies (1994). When using two-point touch, the individual holds the cane in a midline position with the cane tip on the ground and the cane held at such an angle that the cane tip provides information about the ground approximately two steps ahead. As the individual walks, the cane is arced from side to side, tapping the ground at a width
approximately five centimetres beyond each shoulder, thus providing adequate protection from below the waist obstacles for the body. The cane is tapped in time with the individual’s footsteps so when the left foot touches the ground, the cane tip taps the ground on the right side and vice versa, thereby previewing, Hill and Ponder (1976) explain, the following footstep. The individual has time to react appropriately if any obstacles or drop-offs such as a kerb or stair are encountered. Mastery of the two-point touch technique, La Grow and Weessies (1994) argue, requires co-ordination and motor skill to manoeuvre the cane correctly, and cognitive skill to react appropriately when an obstacle is detected; for those without these skills, adapted techniques can be taught to allow safe travel in supervised or familiar environments.

Long cane travellers, according to Sauerburger and Bourquin (2010), can become proficient to the extent they are not cognitively aware of the cane or the particular techniques they are using; therefore effective travellers, Martinsen, Tellevik, Elmerskog, and Storilikken (2007) explain, can consciously focus attention on specific landmarks and environmental cues when necessary. Traditionally, the O&M profession has emphasised the development of “correct” long cane techniques, a perspective that has been influential when considering the provision of O&M intervention with children. The discussion now focusses on O&M intervention with children, providing the historical background and identifying child development theories relevant to children with blindness. Following is an exploration of O&M intervention with very young children, with a particular focus on differing opinions around the early introduction of long cane mobility.

**O&M Intervention with Children**

When O&M intervention began to be offered to school-age children during the 1950s in the United States, it was on the proviso a child be assessed for their level of maturity,
responsibility and “readiness for mobility” (Lowenfeld, 1971, p. 178) as indicated by their progression through a set of “prerequisite” developmental processes. Guided by the medical approach to disability, O&M practitioners, beginning with Hill and Ponder’s (1976) textbook, believed long cane mobility could not be introduced until children had attained a certain level of cognitive processes and psychomotor functions that included concept development, problem solving and decision making skills, balance, posture, gait, and stamina. O&M intervention with children therefore focused on orientation skills and the development of these “prerequisite” abilities, with age recommendations for the introduction of long cane mobility ranging from twelve to fourteen years in the United States (Lowenfeld, 1971) to sixteen years in the United Kingdom, according to Tooze (1981).

Delaying the introduction of long cane mobility created inherent difficulties that, according to Miyagawa (1999), only served to reinforce the perception that children lacked the capability to be long cane travellers. Miyagawa (1999) reports students in the 1950s experiencing difficulties transitioning to independent long cane travel after spending the core of their childhood years relying on sighted peers; some resisted long cane use due to the perception that its use was overly conspicuous. Despite recommendations from Miyagawa (1999) that O&M techniques should be introduced to children before their education was complete and they became overly dependent and resistant to the introduction of new skills, the specific O&M needs of children, particularly younger children, were not seriously considered within the field until the 1980s when the question of when to introduce long cane mobility began to appear in the literature.

As the unique O&M needs of infants and pre-schoolers began to be considered, the focus remained on a linear model of O&M technique development. Hill, Rosen, Correa, and Langley (1984), for example, recommend the implementation of “formal instruction” (p. 61)
in concept development, gross motor and fine motor skills prior to the introduction of long cane mobility. Traditional adult-focussed instructional techniques appear to influence these recommendations; Schroeder (1989) argues the resistance from O&M specialists to early long cane mobility was due to “the method of instruction which is deficient for encouraging early use of the cane rather than the child’s maturational inability to use a cane effectively” (p. 1), and Mills (1980) suggested basic long cane mobility was not beyond the ability of very young children if the appropriate intervention was provided. As will now be explored, opinions of when long cane mobility should be introduced have been influenced by the research focus on the effect of blindness on child development; until recently, there has been little consideration of how young children learn and how existing O&M techniques could then be adapted appropriately.

**Blindness and Child Development**

There is a significant amount of literature reviewing the impact of blindness on child development, including influential works from Lowenfeld (1971), Fraiberg (1977) and Warren (1984). Of particular significance are the areas of concept, motor, and sensorimotor development, with much of the literature supporting the need for development in these areas to be established prior to the introduction of long cane mobility (Clarke et al., 1994; Hill et al., 1984; Mancil, Manuel, Sifferman, & Blasch, 1998). This literature is predominantly positioned within the medical model framework, emphasising skills such as the ability to maintain a mid-line position when holding a long cane, building wrist and arm strength to arc the cane, and the development of cognitive abilities to interpret information perceived through the cane; the techniques used by adult long cane travellers. Hill and Ponder (1976) clearly state concept development, particularly body, spatial and environmental concepts, must be well-established and developed “through a systematic and extensive training
program” (p. 3) prior to the introduction of “formal” mobility techniques that include long cane mobility. This view subsequently influenced the development and implementation of mobility aids for children, described later in this chapter, and it is only recently that developmentally appropriate practice around long cane introduction has been considered within the literature.

**Cognitive development.** The effect of blindness on a child’s cognitive development, including language and concept development, has been well established in the literature including work from Fazzi & Klein (2002) and Warren (1994). An early study from Cutsforth (1951) found nearly half of the language used by children with blindness contained what he termed verbalism, or “the use of abstract concepts not apprehended by concrete experiences” (p. 48). This finding was so influential, Warren (1994) reports, that some educational programs were subsequently structured so as to avoid the use of visually based concepts and vocabulary. Later studies have discounted this belief, recommending the provision of concrete experiences be promoted where possible in order to facilitate understanding (Warren, 1994). More recently, studies from Rosel, Caballer, Jara, and Oliver (2005), and Vinter, Fernandes, Orlandi, and Morgan (2012), argue that all children, sighted and blind, use verbalisms as language develops, and conclude children with congenital blindness generally adapt to appropriate language use that includes an understanding of abstract concepts, although their language reflects sensorimotor, rather than visual, experiences. Vinter et al. (2012) recommend that, along with the provision of concrete experiences, parents and caregivers include visual language in their interactions with children who are blind in order to facilitate their acquisition of knowledge in what is a predominantly visual world.

The importance of spatial conceptual knowledge to the acquisition of O&M techniques is well-established (Anthony et al., 2002; Hill et al., 1984; Warren, 1984, 1994), however the
visual and abstract nature of space means conceptual understanding can take longer to establish in children with blindness. The role of direct experience through movement and O&M intervention has long been recognised as a crucial component in the development of spatial concepts; Warren (1984) comprehensively discusses a number of studies supporting this, and the work of Lilli Nielsen (1991) specifically recommends opportunities for “spatially related activities” (p. 16) begin at as young an age as possible. The continuing focus on children learning to use two-point touch as their first long cane technique means the O&M profession has traditionally viewed the acquisition of spatial concepts as a pre-requisite to long cane use, enabling children to utilise the “correct” mid-line position and cane arc, and understand their subsequent movement through space. This view has resulted in long cane mobility being delayed, rather than explored as a potential means of improving children’s spatial awareness.

Other concepts critical to the development of O&M techniques include object permanence, mass and volume, causality, and time and space; without intervention, children who are blind risk developmental delays in these areas (D. Fazzi & Klein, 2002; Hatton, Bailey, Burchinal, & Ferrell, 1997; Warren, 1994). The cognitive development theories of Piaget (Piaget & Inhelder, 1969), and in particular his first two stages of cognitive development – the sensorimotor stage (birth to approximately two years) and the pre-operational stage (approximately two to seven years of age) – have been discussed extensively within this context. Much of the early intervention work with young children with blindness focusses on strategies to enhance the child’s development through these key stages, based on the understanding that early movement and concrete experiences are critical. Proponents of early long cane mobility, such as Anthony et al. (2002) and Cutter (2004, 2007), argue that the promotion of developmentally appropriate cognitive development can be facilitated through the provision of a long cane allowing children to independently move through space,
however the potential role of early long cane mobility is often ignored in the literature. This argument is fundamental when considering the provision of early O&M intervention and will be returned to throughout this thesis.

**Motor and sensorimotor development.** There are numerous studies, according to Troster and Brambring (1993), confirming blindness can potentially impact coordination, postural control, motor stimulation, social interaction, motivation for movement and the integration of sensory skills. As definitions of O&M have identified, individuals require an ability to integrate motor skill development with sensorimotor awareness (Wiener et al., 2010) in order to purposefully interact with their environment. Studies including those from Adelson and Fraiberg (1974), Celeste (2002) and E. Fazzi et al. (2002), have consistently shown mobility milestones such as independent walking tend to be significantly delayed in children who are blind, with some researchers (Sonksen, Levitt, & Kitsinger, 1984; Levtzion-Korach, Tennenbaum, Schnitzer, & Ornoy, 2000; Troster & Brambring, 1993) attributing this to the strong role vision plays in the stimulation of early goal-directed movement. Equally, other studies suggest additional factors can contribute to these delays, including the restriction of independent movement in children with blindness by parental overprotection (Sonksen et al., 1984; Troster, Hecker, & Brambring, 1994; Rosen, 2010). Several older studies, such as Burlingham (1965), Kratz (1973) and Lydon and McGraw (1973), attribute motor delays to the child’s natural instinct to protect themselves in unfamiliar environments by limiting their own movement, with the resulting passive behaviour further delaying appropriate motor skill development.

Many of these studies have been criticised by Adelson and Fraiberg (1974), and Prechtl, Cioni, Einspieler, Bos, and Ferrari, (2001), who have identified methodological limitations including the low incidence of blindness and the inclusion of children with additional
disabilities in this research, factors that make it difficult to identify whether motor delays are due to blindness alone. What is clear from the literature is a lack of early movement can lead to sensorimotor difficulties with balance, muscle tone, posture, gait, and endurance, all of which, Rosen (2010) explains, impact on a child’s ability to use a long cane efficiently. These findings have been interpreted as confirming that sensorimotor development must be established prior to the introduction of long cane mobility (Ferrell, 1979; Hill et al., 1984; Warren, 1984; Foy, Von Scheden, & Waiculonis, 1992). Hill et al. (1984) categorically state, “good posture and gait are particularly important prerequisites for utilizing any system of orientation and mobility, such as the long cane” (p. 61). Although numerous studies have identified effective early intervention can reduce potential motor development delays caused through blindness (Troster & Brambring, 1993; Levitzion-Korach et al., 2000; Prechtl et al., 2001; Rosen, 2010), little attention has been paid to the role of the O&M specialist within this context, according to Skellenger and Sapp (2010). It is only relatively recently that authors such as Pogrund and Rosen (1989), Anthony et al. (2002) and Cutter (2007) have considered whether sensorimotor delays could be overcome by providing very young children with mobility aids to facilitate safe independent movement. In part, this issue was complicated by the fact that, until the development of the “kiddy-cane” in 1990 (Pogrund, Fazzi, & Schreier, 1993, p. 52), O&M specialists wanting to introduce long cane mobility had to modify an adult size cane, often quite heavy and unwieldy for a child to use. This contributed to the belief young children were unable to use long canes until they had reached a certain level of physical maturity, as argued by Hill et al. (1984) and Foy et al. (1992). As the more appropriate kiddy-cane became widely available, opinions within the O&M profession were divided over when and how it should be introduced; as an initial mobility aid, or following a period of time using an adaptive mobility device? The following section discusses the development of mobility aids for children, beginning with an explanation of
adaptive mobility devices before moving onto the development and use of long canes with very young children.

**Mobility Aids for Children**

During the 1980s, and prior to the availability of the kiddy-cane, O&M specialists began developing alternative mobility tools that would assist young children to travel independently through their environment. The rationale was to develop a simple, easy to use device allowing children to move freely without fear of injury whilst concepts and motor skills developed to the stage where they were “ready” to use a long cane. These mobility tools were initially called “pre-cane” devices, however the term commonly in use today is adaptive mobility device (AMD), reflecting the views of authors such as Pogrund and Rosen (1989) who felt the term pre-cane incorrectly implied the aid must be introduced prior to the introduction of the long cane.

**Adaptive mobility devices.** One of the first AMDs was a simple hula-hoop, later adapted to become an aid known as the hoople. To use the hoop as a mobility device, the child grasps it with both hands in front of their body, allowing the other side of the hoop to drop to the ground. The hoop is pushed along the ground in front of the child, detecting obstacles and drop-offs. Bosbach (1988) argues that the hoop should be used until the child gains the “maturity” to use a long cane, although no empirical evidence is provided to support this view. The hoople, developed as a stepping stone tool to long cane use, involves the attachment of a long handle to the hoop that allows the device to be used with one hand and with a similar grip to that used with a long cane. Once a child had been assessed that they were able to progress to using a long cane with two-point touch technique, Bosbach (1988) explains, they could then transfer to that aid. The hoople was developed by the Royal National College for the Blind (RNCB) in the United Kingdom, and is still promoted as a
pre-cane aid for young children (Royal National College for the Blind, n.d.). There is little critical analysis of these devices in the literature, other than Clarke (1988), who concludes the hoop is “not functional for long-term use or in a variety of environments” (p. 128).

Clarke’s (1988) comprehensive review of mobility devices for children, including the long cane, provides insight into the views of the O&M profession during the late 1980s. O&M specialists are advised to evaluate mobility aids against ten criteria; “social, motor, vision, safety, adaptability, training, travel, cost, maintenance, and availability” (p. 118). Advantages and disadvantages of each aid, which include push toys, pedalled vehicles, AMDs and the long cane, are presented, although the long cane is seen as a “future goal” (p. 124) of intervention reached through a progression of stepping stones using AMDs or other devices. Clarke focusses on the concept of normalisation throughout her discussion, defining it in this context as the selection of a device that is “age-appropriate, as ‘normal’ in appearance as possible, and socially acceptable to a child’s family members” (p. 121). Plastic or wooden hockey sticks, baseball bats or golf clubs are considered as potential early mobility devices as, Clarke explains, they are commonly used by all children and can be arced across the floor to clear a path of travel. However the logic behind this argument is questionable, as using toys or sports equipment as mobility devices for children up to the age of six years may increase social barriers simply through its use outside a regular context. This view serves to reinforce the notion that blindness should be “hidden”, rather than encouraging children and families to use a specialised tool, a long cane, for independent mobility development. The ability to sweep a hockey stick or golf club along the floor in front of the child requires no more or less skill than sweeping a long cane, the primary difference is that the long cane is a recognisable symbol of blindness.
Clarke’s (1988) recommendations must be considered with the caveat that long canes made specifically for young children were not available at this time. However, consistent with other studies from this era, such as Foy et al. (1992), Hill et al. (1984) and Tooze (1981), long cane mobility continues to be viewed from the traditional adult perspective with an emphasis on the ability to learn two-point touch. Evaluation of the long cane is included in Clarke’s study; considerations such as the child’s maturity, their ability to use the cane safely around themselves and others, and whether children have the motor skills to use the cane to provide adequate coverage are all touched upon, and considered to be disadvantages in choosing the cane over any other mobility device. Clarke argues that long cane use may be frustrating to the child due to their lack of maturity to use it correctly (that is, with an adult technique), and suggests the cane may be used as a “weapon” (p. 130). Pogrund and Rosen (1989) dispute this view, citing a lack of evidence that children cannot be taught appropriate rules around safe long cane use. Their research will be returned to later in this chapter.

An influential outcome of Clarke’s (1988) research was the development of an AMD known as the Connecticut pre-cane. Promoted in the early 1990s, this device is constructed using PVC piping glued together to make a four sided frame with runners that slide along the ground when pushed in front of the child (Foy et al., 1992). Originally developed for children aged around four years, Foy and colleagues conclude this device is necessary as “children of this age need optimal protection to foster confidence in moving but lack the kinaesthetic awareness, motor control, mental discipline, and responsibility to achieve adequate cane usage in a reasonable time” (p. 178). The Connecticut pre-cane is cheap to make, and was promoted on the basis that it was safe to use and required minimal training, thereby allowing for independent travel with a low level of direct supervision. There has been little research on the use of this device, other than a 1994 study by Clarke et al. (1994), which is discussed below. Variations on the Connecticut pre-cane continue to be designed and manufactured by
companies such as AmbuTech (http://www.ambutech.com) in the United States and their use is still widely recommended for both adults and children, particularly those with additional disabilities (Skellenger & Sapp, 2010). Whilst there is a place for the use of AMDs with some individuals who are blind, my research focusses instead on whether long cane mobility is an appropriate O&M intervention option for very young children. The following section reviews the literature that has emerged since the 1980s on long cane mobility for children.

**Long cane mobility with young children.** In 1989, Rona Pogrund and Sandra Rosen published a comprehensive argument supporting the introduction of long cane mobility with children. Detailing pros and cons of early cane use, they argue the only prerequisite skills required for a child to successfully use a long cane is good balance and the ability to grasp a cane. Following the publication of their paper, a prototype children’s cane was developed by the American Foundation for the Blind (AFB) and the Orientation and Mobility Training Program at California State University (Pogrund et al., 1993), resulting in the “kiddy cane” becoming readily available to O&M specialists during the mid 1990s. Significantly, Pogrund and Rosen (1989) acknowledge that their views contradict traditional adult-focussed O&M philosophies and intervention frameworks, supporting earlier opinions expressed by Mills (1980) and Schroeder (1989) who suggested that rather than children lacking appropriate motor and developmental skills, O&M specialists held unrealistic attitudes and expectations toward a child’s ability to use a cane. The lack of clarity on this issue amongst the profession is further demonstrated in studies from Skellenger and Hill (1991), and Dykes (1992); although both studies found support from O&M specialists toward early long cane mobility, there was a strong indication for the need for research into specific training techniques and clarification about what, if any, pre-cane skills were required prior to long cane introduction with this age group.
The 1980s and 1990s saw the emergence of two schools of thought. The first maintained the belief young children do not possess the cognitive and motor abilities to interpret tactile, auditory and conceptual information from the cane, and continued development on adaptive devices for use until children were “long cane ready” (Foy et al., 1992; Mancil et al., 1998). This view persisted despite minimal research comparing children’s AMD use and long cane use, primarily a study from Clarke et al. (1994) comparing long cane and Connecticut pre-cane use with four pre-school children who were taught to use both devices. Quantitative measures were taken on “incidences of body contact, average speed of travel, and appropriateness of the use of the device” (p. 22), as children negotiated an artificial obstacle course in a hallway using either the long cane or an AMD. Although the authors concluded the AMD was a “relatively easy-to-use, effective form of protection” (p. 28) for children travelling independently, they also found that prior to training the children in the study did not seem to understand what the AMD was for, with the device being banged on the side, dragged behind them or looped around their necks. These findings contradicted Foy et al.’s 1992 study, discussed above, which indicated one advantage of the AMD was a need for minimal instruction. Clarke et al.’s (1994) study also suggested that with modifications to technique, pre-schoolers could learn to use a long cane. Although an important initial step in researching mobility device use with children, both the AMD and long cane are evaluated on limited outcomes, namely obstacle avoidance and speed of travel. The potential wider benefits of early O&M technique acquisition, such as facilitating conceptual knowledge and the development of purposeful movement, are not considered.

A second school of thought, supporting early long cane mobility with children, also emerged during this era. Authors such as Morsely, Spencer, and Baybutt (1991) questioned the emphasis on children’s ability to maintain a “correct” grip and cane technique, given a lack of empirical evidence supporting this view. Anecdotal and personal accounts of successful
early cane introduction, including Besson (2004), Castellano (1991), Cheadle (1991), Cutter (2004) and Schroeder (1989), were published. An assessment tool, the Preschool Orientation and Mobility Screening Test was developed by Dodson-Burk and Hill (1989), followed by key resources including Early Focus: Working With Young Blind and Visually Impaired Children and Their Families (Pogrund, Fazzi, & Lampert, 1992) and the TAPS (Teaching Age-appropriate Purposeful Skills) Curriculum (Pogrund et al., 1995). Rather than expecting children to adapt to traditional adult-focussed techniques, O&M specialists were encouraged to modify their teaching strategies to meet the child’s development level.

In the 2000s, early childhood teaching philosophies began to be emphasised, including placing a strong emphasis on teaching O&M techniques in functional and meaningful contexts in collaboration with the child’s family and other professionals. Anthony et al. (2002) and Cutter (2007) suggest early long cane mobility facilitates the development of motor, concept, and sensory skills in children at a developmentally appropriate age, arguing “it is through movement that young children learn about the world, develop muscle tone and coordination, and become actively engaged with other people and their surroundings” (Anthony et al., 2002, p. 327). Recommendations for adapted O&M techniques for very young children include modified guiding, introduced as soon as the child is beginning to walk, and developmentally appropriate body protection techniques which are used until the child is able to position their arms correctly. These skills can be taught in conjunction with long cane mobility according to Anthony et al. (2002) and Cutter (2007) who argue children do not need to “master” these skills prior to long cane introduction. Young children, travelling with a relatively high degree of supervision, can begin long cane mobility by implementing a diagonal technique, moving to two-point touch when developmentally appropriate. Cutter’s (2007) “promotion model” of early O&M intervention, supports the introduction of long cane mobility early in life, the goal being “the independent movement
and travel in blind children at an age/stage appropriate time so that children develop the perception of themselves as active movers and independent travellers” (Cutter, 2007, p. 2). Within this model of intervention, O&M specialists are encouraged to support parents to teach and reinforce O&M techniques, consistent with early childhood intervention practices.

There is currently no consensus within the O&M profession as to when long cane mobility should be introduced to children. The most recent O&M teaching text from Deverell et al. (2009) states “there is a school of thought which considers that, if long cane skills are introduced and reinforced during childhood, it will put the child off long cane use later in life” (p. 136). Although no specific supporting references are provided in support of this statement, my personal experience is that this view continues to be presented by both O&M specialists and other allied health professionals working with this age group. Cutter’s (2007) recommendation that a long cane is an essential tool for young blind children is also presented in this text, but Deverell et al. (2009) do not elaborate on the age the aid should be introduced. This lack of clarity highlights the need for O&M specialist training courses to include early intervention and child development theory, as well as the need for further research into early intervention O&M implementation and techniques. The following section of this chapter considers how new research developments in the field of neuroplasticity could provide new and exciting ways of understanding the role of vision and other senses to an individual’s O&M action.

**Neuroplasticity and Spatial Perception**

Recent research in the medical field making use of technological developments in the area of brain neuroplasticity, provide a new perspective on how skills such as spatial perception develop. Kupers and Ptito (in press) show that brain activation in sighted individuals and those with congenital blindness during experiences of movement through space is
“essentially similar” (p. 14), demonstrating the ability of the brain to compensate for vision loss. Fiehler and Rosler (2010) used functional magnetic resonance imaging (fMRI) to investigate whether early movement experience in those with congenital blindness impacts on their perception of space. The study compared those who had gained early movement experience through early O&M intervention (referred to as OMT in this study) and those who received O&M intervention later than the age of twelve years; through localising regions of the brain responsible for the “non-visual processing of action” (p. 194), Fiehler and Rosler confirm the importance of the proprioceptive and kinaesthetic systems to spatial perception. Their results demonstrate that early movement experiences can compensate for blindness, with the authors categorically stating, “the earlier blind individuals started the OMT the more accurate and the more precise was their space perception” (p. 200). Fiehler and Rosler (2010) recommend “visually impaired people to start intense OMT as early as possible” (p. 200), arguing “non-visual spatial experience during the first years of life appears to be capable of shaping spatial processing mechanisms” (p. 201). An earlier study (Fiehler, Reuschel, & Rösler, 2009) found “congenitally blind participants who attended O&M training early in life were very accurate in space perception approaching the performance level of sighted controls” (p. 903). They note that O&M intervention has generally been omitted in the literature on spatial cognition, but these findings suggest the study of neuroplasticity can demonstrate how those with congenital blindness develop an understanding of space and provide insight into the influence of early intervention on spatial development. If so, this presents exciting possibilities for the future of O&M intervention and associated research.

The discussion in this chapter now moves to review the history and development of O&M specialist training courses, with an emphasis on the Australian context. Following this, an alternative approach to O&M instruction in the United States, the structured discovery
method (Mettler, 1998), is described, as many of the underpinning philosophies and teaching practices have relevance to O&M intervention with the early childhood age group.

**Training Courses and Certification for O&M Specialists**

During the 1950s in the United States, short courses to train O&M personnel were conducted within rehabilitation hospitals. The profession was originally considered a “trade” rather than a profession (Miyagawa, 1999), however Wiener and Sifferman (2010) identify it quickly became apparent that courses were not of sufficient length to enable sighted individuals to understand and subsequently teach the complexities of travel without vision. In 1958, the Office of Vocational Rehabilitation prioritised the training of O&M personnel, with selection criteria, curriculum, and length of training established in conjunction with the American Foundation for the Blind (Wiener & Sifferman, 2010). It was agreed programs should consist of a minimum of twelve months university based training, and that O&M specialists must be sighted in order to adequately monitor the safety of their students (Wiener & Sifferman, 2010). Although this second stipulation was removed in 1996 by the accrediting body for O&M specialists at the time, the Association for Education and Rehabilitation of the Blind and Visually Impaired (Wiener & Sifferman, 2010), divisions were created within the profession, for reasons discussed in further detail later in this chapter. The first university based program for preparing O&M specialists was established in Boston in 1960, according to Barraga (1990), paralleling the development of training courses for teachers of students with vision impairment. Professional certification in the United States followed in 1961, and has since undergone several versions to reflect changing job roles and responsibilities. Currently, proficiency in a number of competencies must be demonstrated in order to achieve accreditation as a Certified Orientation & Mobility Specialist (COMS) by the Academy for Certification of Vision Rehabilitation and Education Professionals (ACVREP) (http://www.acvrep.org/).
The establishment of the O&M profession in the United Kingdom and Australia has been less formalised. Within the United Kingdom, Dodds and Howarth (1995) explain that University of Birmingham psychologist and researcher Dr Alfred Leonard first observed long cane mobility and other O&M intervention techniques on a visit to the United States whilst researching an electronic mobility aid, the Sonic Torch, in the 1960s. He subsequently endeavoured to establish an O&M program at the Royal National Institute for the Blind (RNIB), although Dodds and Howarth (1995) report considerable resistance was encountered, seemingly due to political issues within agencies in the United Kingdom at the time. Nevertheless, an O&M program was instigated at the Midlands Mobility Centre (later to become the National Mobility Centre) in Birmingham in 1964. The National Mobility Centre was responsible for training Mobility Officers prior to being incorporated into the RNIB School of Rehabilitation Studies at the University of Central England in 1994, according to Dodds (1996). Professionals in the United Kingdom now train as rehabilitation workers with their role incorporating O&M intervention, independent living skills (also referred to as activities of daily living) and communication skills such as braille (Neustadt-Noy & LaGrow, 2010). Recently, Dodgson and McCall (2009) reported the profession in the United Kingdom was “fragmented” (p. 171), with rehabilitation workers predominantly being trained to deliver O&M intervention in the style developed in the United States in the 1940s. Of concern is their observation that course options for rehabilitation workers are diminishing; combined with a lack of professional development opportunities to promote broader expertise within the field, Dodgson and McCall (2009) suggest the profession of O&M in the United Kingdom is at risk of stagnating.
**Australian Courses**

The United Kingdom training model for O&M practitioners initially influenced Commonwealth countries including Australia, New Zealand and South Africa, with early graduates training in the United Kingdom before returning to their home countries (Neustadt-Noy & LaGrow, 2010). Although the dog guide movement was established in Western Australia in 1951, Ford (1971) reports it was 1971 before the first O&M specialists (or instructors as they were then referred to) were trained at the National Guide Dog Training Centre in Kew, Victoria. The Kew course was taught by instructors from the United States and was initially the only Australian option for those wanting to train as O&M specialists (Branson & Rutt, 1982). Deverell and Scott (2014) identify that O&M personnel preparation courses have been primarily university based since the 1980s, with courses offered at La Trobe University Victoria, Renwick College (The University of Newcastle) New South Wales, and Griffith University Queensland, although some agencies have offered competency-based courses delivered within the vocational education and training (VET) sector. The professional body for O&M specialists in the region, the Orientation and Mobility Association of Australasia (OMAA), has recently developed a Quality Framework for the profession, including a Code of Ethics and Standards of Practice; currently there is no professional certification or registration process for Australasian O&M personnel (Deverell, Scott, Battista and Hill, 2014). A recent census of the profession in the Australasian region presented by Deverell and Scott (2014) shows 178 O&M specialists employed in Australia and New Zealand in late 2011, the majority of whom work within charitable agencies in Australia.

Both the South Pacific Educators in Vision Impairment (SPEVI, 2006) and Wells (2008) draw attention to the lack of sufficiently trained O&M specialists in Australia to work with
the early childhood age group. Existing personnel training courses are delivered inconsistently (Deverell & Scott, 2014), and the relatively small Australian population means it is not financially viable to offer courses with a specific focus on O&M intervention with children.

**O&M in Education Settings**

In the United States O&M became a course requirement for students with blindness in the 1970s, although Hatlen (2000) clarifies this referred to students of high school age. The 2004 Reauthorization of the Individuals with Disabilities Act (IDEA) recognised O&M intervention as a “related service” (http://idea.ed.gov) for students with vision impairment; Griffin-Shirley, Kelley, and Lawrence (2006) recommend an O&M specialist be a member of the transdisciplinary educational teams delivering services to students with vision impairment, including “infants, toddlers, (and) preschoolers” (p. 4). Specialised courses for O&M personnel working with unique populations including preschoolers are now available in the United States, although Wiener and Sifferman (2010) identify training within the early childhood area is still limited and Skellenger and Sapp (2010) report many O&M specialists in the United States remain “uncomfortable with providing services to very young children” (p. 200).

O&M is a core domain within the expanded core curriculum, the specialised learning areas that students with vision impairment require in addition to the regular academic curriculum (Sapp & Hatlen, 2010). The expanded core curriculum is discussed in further detail in the following chapter, however Hatlen (1996) clarifies specialist vision support teachers and O&M specialists are responsible for teaching these skills. Despite these recommendations and the well-established importance of the expanded core curriculum as discussed by Sapp
and Hatlen (2010), the provision of O&M intervention within the education sector remains inconsistent, particularly in the United Kingdom and Australia.

In the United Kingdom, Douglas et al. (2009) explain children in mainstream schools are supported by qualified teachers of the visually impaired (QTVI) who are required to have a mandatory qualification (MQ) in vision impairment. There is disagreement as to what extent teachers should be trained to provide O&M intervention given the shortage of qualified O&M specialists; Ravenscroft (2012) asserts QTVIs lack the training and qualifications to teach O&M techniques, noting they “do receive some training in sighted guide techniques, but this is not commensurate with fully qualified orientation and mobility instructors” (p. 205). According to Pavey, Douglas, McCall, McLinden, and Arter (2002), and Douglas et al. (2009), the provision of O&M intervention within the United Kingdom education system is of concern, partly, Pavey et al. (2002) conclude, due to a lack of clarity over the definitions of mobility and independence. According to Douglas et al. (2009), mobility and independence in the United Kingdom includes O&M, independent living skills, communication and social skills; in the United States and Australia, the definition primarily refers to the acquisition of O&M skills and techniques. The “Steps to Independence” project conducted by Pavey et al. (2002), reviewing the delivery of mobility and independence skills to children in inclusive education settings in the United Kingdom, makes a number of recommendations including development of a mobility and independence curriculum framework, alternate methods of service delivery, and requirements for future training of professionals. Douglas, Pavey, McLinden, and McCall (2003) found many rehabilitation workers, whose training courses are focussed on adult intervention, felt unprepared and insufficiently trained to deliver mobility and independence skills to younger children or those with additional and complex needs.
These concerns led to the establishment of the Mobility21 project (Wall, 2009), and the subsequent 2011 publication of a set of Quality Standards by Miller, Wall and Garner (2011) relating to the delivery of mobility and independent living skills to children and young people in the United Kingdom. The critical importance of having qualified O&M specialists who are skilled in working with children is highlighted by Ravenscroft (2012), who stresses “it is not enough to have instructors who are trained to work with adults who suddenly find themselves working with children: this smacks of viewing the child as a ‘little adult’” (p. 205). More recently, the RNIB has commenced a Graduate Diploma Specialist Qualification in Habilitation and Disabilities of Sight (Children and Young People) (http://www.ioe.ac.uk/study/departments/phd/PDI9_CYP9IM.html), training professionals to provide mobility and independence training to children.

Within the Australian context, there is little literature on the provision of O&M intervention within educational settings. Ford (1971), consistent with the views of the times, emphasises the importance of children developing sensorimotor skills and relevant concepts prior to the introduction of the long cane, clearly indicating the teaching of these skills is considered the responsibility of an educator with the O&M specialist becoming involved with long cane training only once these skills have been mastered. LaGrow (1998) also differentiates between the responsibilities of the visiting teacher, stating their role is to provide instruction in “concept development, basic orientation skills, map skills, self-protective techniques, human (sighted) guide techniques, and sensory development” (p. 205), with that of the O&M specialist who primarily teaches “formal orientation and mobility skills in outdoor and uncontrolled environments” (p. 205). Whilst this may have been applicable when it was standard practice for long cane mobility to be introduced at a relatively late age, the increasing acknowledgment of the importance of early O&M intervention and long cane mobility (Anthony et al., 2002; Cutter, 2007) indicates this position needs to be reviewed. As
I have argued previously (Scott, 2009), O&M intervention, particularly in the early years, is more holistic than a set of “informal” and “formal” skills; rather, skills need to be integrated in order to facilitate appropriate developmental movement in young children.

The professional body for educators within the Australasian region, the South Pacific Educators in Vision Impairment (SPEVI), issued a Statement of Principles and Standards for the Education of Children and Youth with Vision Impairments in November 2004 that includes the provision that “every student who is blind or vision impaired must have the services of...an orientation and mobility instructor” (SPEVI, 2006, p. 69). This recommendation has proved difficult to implement due to a shortage in the region of qualified O&M specialists (SPEVI, 2006; Scott, 2009, Wells, 2008). Additional challenges to the provision of O&M intervention in educational settings are examined by Pagliano (1989), and include the spread of population, distance, the low incidence of vision impairment and the number of differing agencies involved. SPEVI (2006) does not clarify whether education providers should be employing O&M specialists directly. Some Australian states, such as Queensland, Tasmania and Western Australia, have employed O&M specialists within their education services at differing points in time, although it is more common for services to be provided through charitable organisations (Deverell & Scott, 2014). In the research setting of Western Australia, an individual must have a recognised teaching qualification in addition to O&M qualifications to work with the Department of Education and Training, and the role falls under the title of Visiting Teacher (Vision). As Deverell and Scott (2014) have identified, there is currently no certification process for O&M specialists in Australia and the content of personnel training courses is varied. Within Western Australia, there are no O&M specialist training courses nor, as is discussed further in the following chapter, specialist training for teachers wishing to work within the field of vision impairment (Douglas, 2003).
As a result, the implementation of O&M techniques in educational settings can prove challenging.

**Alternative Approaches to O&M Intervention**

To date, research within the O&M field has paid minimal attention to the diversity of both adults and children. A core issue within my research is the shift from viewing young children as “little adults” (Ravenscroft, 2012, p. 205) being taught O&M techniques with adult-focussed techniques and expectations, to adapting a more developmental approach to O&M intervention that takes into account early childhood intervention theory and approaches. Cutter (2007) makes the distinction between what he terms the top-down, or adult-focussed, approach that has dominated O&M intervention, observing this results in “frustration and disappointment for both the child and the teacher” (p. 12), when the child inevitably fails to meet expected standards. Rather Cutter advocates a bottom-up approach, which he describes in this context as “out of the experience comes the concept” (p. 12). In other words, providing a developmentally appropriate approach to O&M intervention allows the child to foster their own understanding of independent travel over time, with the relevant skills and concepts emerging in a way that is most suitable for them. The result, according to Cutter (2007), is that children will be empowered through their own mobility, and both the child and the community will view the skills of long cane mobility in a positive light.

Cutter’s (2007) promotion model of O&M intervention has developed from an alternative approach to O&M intervention known as the structured discovery learning approach. Established by Mettler (1998), this approach provides an alternative perspective to O&M intervention, as is now described.

The certification and accreditation system, overseen by the Association for Education and Rehabilitation of the Blind and Visually Impaired (known as AER) prior to the establishment
of ACVREP in the United States in 2000, initially included a requirement for O&M specialists to be fully sighted in order to monitor the safety of their students (Wiener & Sifferman, 2010). According to Mettler (1998), this requirement stemmed from the military-based rehabilitation context from which the original university programs developed. These programs delivered a predominantly prescriptive approach toward O&M intervention, the limitations of which have become apparent as techniques and training programs designed for adults have been applied without modification to children. In response to this, Vaughan (1993a) explains, the National Federation of the Blind (NFB) in the United States has led a consumer-driven approach to rehabilitation, challenging public perceptions about blindness, and advocating for employment equality including within the O&M field. Much of this was driven by a key leader within the NFB, Dr Kenneth Jernigan, whose 1963 speech “Blindness – handicap or characteristic” (Jernigan, 1983) called for those with blindness to challenge existing stereotypes and take control over their own educational and health concerns. As a result, an alternative approach to O&M intervention, the “structured discovery learning approach” (Mettler, 1998, p. 1), was developed, drawing heavily on cognitive learning theory and Bandura’s (1982) concept of self-efficacy. Significantly, this approach removes the requirement that O&M specialists have vision in order to teach O&M techniques, thereby opening the way for people with blindness to train as O&M specialists.

Traditional approaches to O&M intervention, Mettler (1998) argues, are based on the assumption that travel without vision is inherently dangerous, with instruction focussing on safe travel “as would be the case if the student could see” (p. 11). Alternatively, the structured discovery learning approach challenges the assumption that vision is the primary sense used to navigate the environment safely, focussing instead on a paradigm that recognises and draws on both the O&M specialist’s and the student’s mutual cognitive experiences. There is a focus on how individuals use a range of perceptual information to
enable independent travel, and on developing the student’s ability to self-monitor and take responsibility for their own O&M action. Proponents of structured discovery learning, such as Altman and Cutter (2004), advocate that attitudes and beliefs around blindness are fundamental to successful O&M intervention, arguing that intervention must begin with “blind persons having a sense of being whole blind persons, not as damaged sighted persons” (p. 68). Long cane mobility is considered a foundational skill allowing for independent travel and, subsequently, an independent life. Ferguson (2007) explains the goal of the structured discovery approach is the cultivation of problem-solving skills and confidence within the O&M student. This is achieved, in part, by the use of non-visual teaching techniques; O&M specialists are required to develop a very high level of personal travel skills with their own vision occluded and to teach O&M techniques without the use of vision. Currently, Bell and Mino (2011) report, the structured discovery approach is being taught to O&M specialists in some agencies in the United States and through a graduate program at Louisiana Tech University.

The passing of the Americans with Disabilities Act in 1990, Ferguson (2004) reports, was a significant step forward for the acceptance of O&M specialists who have low vision or are blind within the O&M field. However it was not until 1996 that professional recognition and certification through AER, and now ACVREP, was available for O&M specialists with vision loss, according to Wiener and Sifferman (2010). An alternative professional certification known as the National Orientation and Mobility Certification (NOMC) was established by the National Blindness Professional Certification Board (NBPCB) in 2001 (Ferguson, 2007), recognising those professionals trained under the structured discovery model; Bell and Mino (2011) confirm the majority of NOMC accredited O&M specialists are themselves blind.
The structured discovery learning approach has been applied to O&M intervention with children, primarily through Cutter’s (2007) promotion model as discussed earlier in this chapter. As will be discussed in Chapter Eight, the promotion model strongly aligns with current early childhood intervention practice through a focus on developmentally appropriate O&M intervention, and although Cutter’s (2007) work had not been published when the EIP at the centre of this study was in existence, many of the intervention techniques and philosophies are similar. In addition to challenging traditional beliefs that children need to be “long cane ready” prior to the introduction of long cane mobility, the principles of the structured discovery/promotion model approach emphasise the development of autonomy and self-responsibility, both important educational outcomes for children with disabilities according to Wehmeyer (1996). There remain, however, a number of barriers restricting children from receiving early O&M intervention including, within the Australian context, the structure of inclusive education systems and a lack of clarity around the provision of O&M intervention. These are topics covered in the following chapter.

Conclusion

This chapter has discussed the field of orientation and mobility from its beginnings as a rehabilitation technique for adventitiously blinded adults through to the development of O&M intervention for very young children. This reading of the literature identifies a number of challenges around the provision of O&M intervention for children: firstly, the continuing belief that young children require a set of pre-requisite skills and concepts before they can successfully use a long cane; secondly, the shortage of O&M specialists qualified to work with young children; thirdly, the lack of clarity within the Australian education sector around the delivery of O&M intervention; and, finally, a failure to consider the perspectives and lived experiences of those involved in the O&M process. The following chapter considers the
provision of educational services for children who are blind, including the provision of O&M intervention within educational contexts.
Chapter Four: Education – From Residential Schools to the Expanded Core Curriculum

Education for children who are blind has undergone significant change since the inception of the European residential school system in the late 1700s. The aim of this chapter is to trace these changes, beginning with the United Kingdom and United States models that have influenced Australian education both philosophically and pedagogically. These models begin with a focus on vocational skills based education, before identifying the philosophical, social, legal and policy shifts resulting in the inclusive academic and expanded core curriculum delivered to students today. The Australian educational position for children who are blind is then positioned within this broader international perspective, with the historical background and the relevant Australian legislation reviewed before the focus is narrowed to the research setting of Western Australia. The second section of the chapter discusses the development of early childhood education and the subsequent influence on early childhood intervention for children with disabilities, primarily from an Australian perspective.

Historical Aspects

Prior to the 18th century, education for the vast majority of children with blindness was non-existent. Kelley (1999) explains that during this era many children were separated from their families and placed into institutionalised care facilities; for others, according to Heller (1979) begging was the only “employment” option. The first acknowledgement that individuals with blindness may have untapped abilities and intellectual competence came about in 1749 with the publication of French philosopher Denis Diderot’s Letter on the Blind for the Use of Those Who See (Jourdain, 1916); his discussion on sensory perception and argument that vision loss does not inhibit the ability to learn, Margo, Harman, and Smith (2013) propose,
began a change in attitude toward those with blindness and their ability to function as active contributors to their society.

It was not uncommon during the 1800s for people with disabilities to be paraded in the street for public “entertainment”, and it was such an experience as witnessed by Frenchman Valentin Hauy that inspired the establishment of the first school for the blind:

Eight or ten poor blind persons, with spectacles on their noses, placed along a desk which sustained instruments of music, where they executed a discordant symphony, seemed to give delight to the audience. A very different sentiment possessed our soul, and we conceived, at that very instant, the possibility of realizing, to the advantage of those poor unfortunate people, the means of which they had only an apparent and ridiculous enjoyment....these different examples soon convinced us how precious it would be to the blind to possess the means of extending their knowledge, without their being obliged to wait for, or sometimes even in vain to demand, the assistance of those who saw. (Hauy, 1894, pp 30-31)

After Hauy successfully provided rudimentary access to literacy to a young blind beggar via a system of embossing print letters, Heller (1979) explains, he was appointed in 1784 by the Philanthropic Society of Paris to head L’Institution des Jeunes Aveugles, the first school for the blind. An initially successful venture, the school focussed on reading and writing through the embossed print system, music, and vocational skill acquisition. In 1799, according to Ritchie (1930), the French Revolution led to the school being closed and students sent to an adult facility, the Paris Blind Asylum, with no access to educational services. Hauy was dismissed from his position, and subsequently moved throughout Europe to continue his work; as specialised “professions” for the blind such as piano tuning, rug and basket weaving were introduced during the early 1800s, schooling for students with blindness became well established throughout Europe and the United Kingdom. The educational emphasis during this era, according to Ritchie (1930), was on the acquisition of vocational skills rather than academic accomplishment.
The United Kingdom

The first school for the blind in the United Kingdom was established in Liverpool in 1791, and several more sites opened across the country during the first half of the 19th century (Pritchard, 1963). Although generally segregated from mainstream pupils, Ritchie (1930) reports that educators experimented with the idea of teaching blind and sighted pupils together, however discussions during a series of European education conferences in the 1880s reached a consensus that integrated education was not ideal for children with blindness. As a result, a Royal Commission was appointed in 1885 to identify appropriate education practices that would increase employment opportunities for students with blindness. During this time, Copeland (1995) explains, lobbying for education for deaf students was also occurring, resulting in the Commission’s terms of reference subsequently being broadened to include “the deaf and dumb and of such other cases as from special circumstances (that) would seem to require exceptional methods of education” (p. 182). Initial recommendations from the Royal Commission had been for the education of children with blindness to occur in local schools with the proviso that either the teacher learnt braille or the child received peripatetic support. However the inclusion in the Royal Commission of children with intellectual disabilities, the “other such cases” (Copeland, 1995, p. 182), led to the concept of the “special school” that ultimately became the recommendation for those with sensory disability.

In 1890, the Education of Blind and Deaf (Mute) Children (Scotland) Bill was passed, followed by the corresponding English legislation, the Elementary Education (Blind and Deaf Children) Act in 1893, which included the requirement for school authorities to provide education for children with blindness from age five to sixteen. According to Florian (1998), this requirement had a significant impact on the establishment of separate special education services for the blind in the United Kingdom as public schools struggled to cope with the
subsequent large increase in enrolments. The legislation included the provision of financial aid to support children with sensory disability (Kelley, Nagel, & Cruikshank, 1998), assisting the development of specialised schools. Ritchie (1930) argues the focus on economic rather than educational outcomes began a trend of educating deaf children alongside children with blindness despite their quite contrasting educational needs, a trend that extended to some areas of the United States and Australia. Watkins (2005) speculates economic reasoning explains Australia’s decision to establish educational sites such as the Royal Institute for Deaf and Blind Children (RIDBC), still in existence in New South Wales.

In England and Wales, Florian (1998) explains, it remained a legal requirement until 1934 for children with blindness, deafness, epilepsy, intellectual or physical disabilities to be educated in special schools or classes. With the establishment of the profession of special education this practice continued until the 1960s, when the social and civil rights movements began to have an influence. A British Government inquiry into the education of children with low vision or blindness led to the release in 1972 of the Education of the Visually Handicapped report, also known as the Vernon Report. Douglas et al. (2009) explain the Vernon Report supported integrated education within mainstream local schools, a position further supported by the release in 1978 of the Warnock Report. The subsequent release of the 1981 Education Act (Douglas et al., 2009) reinforced the rights of children with special educational needs (SEN) to be educated in their local schools; although specialised schools for the blind remain in existence in the United Kingdom, Douglas et al. (2009) report these specialised schools primarily support children with additional and complex needs, whilst the majority of students who are blind or have low vision are educated within their local school systems with support from a qualified teacher of the visually impaired (QTVI).
The United States

Education provision for children with vision impairment in the United States was pioneered in the early 1800s, according to Farrell (1950), by three privately funded schools: the New England Asylum for the Blind (now Perkins School for the Blind); the New York Institute for the Education of the Blind (now New York Institute for Special Education); and the Pennsylvania Institution for the Instruction of the Blind (now Overbrook School for the Blind). Although originally conceived as charitable institutions rather than educational facilities, Welsh (2006) explains that the success of their education programs paved the way for forty similar schools to be established across the United States by the end of the 1800s. Educational programs within these schools were based on three principles according to Hatlen (2000): students’ individual interests and abilities should be taken into account; the curriculum should closely resemble the regular school curriculum; and education should prepare these children to play an active role in their communities.

Although these residential schools were generally a successful and accepted model, by 1900 a Chicago public school became the first to accept a child with blindness within the regular classroom. By 1947 this option had spread across twenty cities with children participating in the regular curriculum supported by a teacher proficient in braille (Meyer, 1950), and there was an emphasis on the importance of the child’s family, home environment and day to day social contacts in the local community. Plants (1950) describes criticism for the residential school system increased during this era as students were observed struggling with post-school life resulted in a “home teaching” (p. 122) system being introduced. There was no set curriculum for home teachers, and teachers themselves had low vision or were blind in order that they be “sympathetic” (Plants, 1950, p. 123) to their student’s needs. As O&M instruction was not yet readily available, teachers relied on guides for travel to student’s
homes; children, Plants (1950) explains, were “almost completely dependent upon parents and siblings for any contact with his (sic) environment other than that within his (sic) physical grasp” (p. 120). Ultimately, the home teaching program became one of assisting children with blindness to adjust to their impairment from an emotional perspective, therefore being “regarded as social work, rather than an academic function” (Plants, 1950, p. 127).

The shift from the residential school and home teaching system toward the inclusive practices in existence today began in the mid 20th century in the United States, significantly influenced by two factors; an increasing awareness that the educational needs of children with low vision were distinctly different to those of children with blindness, and an “epidemic of blindness” (Silverman, 1980, p. 3) caused by a condition known as retrolental fibroplasia. Coinciding as they did with the human and civil rights movements of the 1960s, these factors contributed to major changes in educational services for children with vision loss.

**Educating children with low vision.** Early education provision for children with vision impairment was restricted to those who were blind or had very low vision, as eligibility for special education services was determined by whether children were legally blind according to the United States definition established in 1935. Hatlen (2000) explains that any student meeting that criterion was taught as though she or he were totally blind, regardless of any functional vision. The prevailing view was that “over-using” residual vision would result in a deterioration of that vision, therefore students with low vision were not given the option to learn print but rather they were blindfolded to ensure they learnt braille via touch (Mogk, 2004). Goodrich and Huebner (2010) establish that although schools catering for children with low vision began to be established as early as 1908 in London, it was Natalie Barraga’s seminal 1964 research that resulted in a dramatic shift as to how these children were educated. Barraga (2000) demonstrates that, provided children are given
appropriate educational strategies and equipment, functional vision can be used effectively and efficiently within an educational context. As a result, eligibility for educational services became based on an assessment of functional vision rather than a measurement of legal blindness. Additionally, the increasing availability of optical devices such as magnifiers and telescopic aids for younger children in the 1960s and 1970s allowed access to mainstream printed curriculum materials, thus ensuring the majority of children with low vision could be educated in the public schools with support from an itinerate teacher (Barraga, 2000).

**The impact of retrolental fibroplasia.** Although medical advances during the early half of the 20th century eliminated many causes of childhood blindness, Silverman (1980) identifies that these advances also gave rise to the “epidemic” (p. 3) caused when an unprecedented number of children were blinded through retrolental fibroplasia (RLF). Also known as retinopathy of prematurity (ROP), RLF was first identified in 1942 (Jefferson, 1952), and during the 1940s and 1950s it was estimated that as many as 10,000 children in the United States were affected, including, according to Williams (1958), up to half the population of children with blindness under the age of seven. It was not until 1951 that the cause of RLF, high oxygen concentrations in the humidicribs of premature babies, was identified, however Campbell et al. (1983) explain there was no decrease in the incidence of blindness from this condition until 1980. Whilst residential and public schools supporting children with blindness struggled to cope with the increasing numbers of students, medical researchers began questioning whether segregated education was the most appropriate option. Krause (1955) researched 107 children with RLF in the Chicago area, arguing that, where possible, placement in a local community school with sighted peers should be the preferred educational option, particularly to assist in overcoming what he termed behavioural “mannerisms” (p. 528) and negative emotional patterns: in his opinion, “the average child fared better in the city school than in an institution for the blind” (p. 528). There was also a
social and demographic change, Koestler (1976) explains, in that the majority of children affected by RLF were born into middle class families who could afford to access the medical services that had initially saved their child’s life; consequently, these families had more power over their children’s education than previous generations where blindness was often connected with poverty. The power of individual rights coincided with the establishment of highly influential legislation impacting upon educational provision for all children with disability, as is now discussed.

**Legislation**

As disability rights activists began to have an influence on community thinking following the civil rights movements in the 1960s, the United Nations moved to promote a number of initiatives including the Convention against Discrimination in Education (UNESCO, 1960), the Declaration on the Rights of Mentally Retarded Persons (United Nations Human Rights, 1971), the Declaration on the Rights of Disabled Persons (United Nations Human Rights, 1975), and the International Year of Disabled Persons in 1981 (http://www.un.org/esa/socdev/enable/disiydp.htm). As Hatlen (2000) explains, the most significant legislation in regards to education provision was the passage of the United States Education for All Handicapped Children Act (P.L. 94 – 142) (United States Congress, 1975), which emphasised, in unequivocal terms, the right to education for all children. The Act introduced the requirement of comprehensive assessment of all children, the development of Individualised Education Plans (IEPs), and recognition of the rights of parents to actively participate in the planning and programming of their child’s education. In 1990, the Act was reauthorised as the Individuals with Disabilities Education Act (IDEA), introducing the concept of education within the “least restrictive environment” (Katsiyannis, Yell, and Bradley, 2001, p. 330). Additional modifications in 1997 changed the focus to ensure
students with disabilities received appropriate support and services; Wolfe and Harriott (1998) clarify this includes the addition of orientation and mobility as a “related service” (p. 89) for students not only with vision loss but also for children “who are developmentally delayed and who need mobility training to access the community and/or school” (p. 90). In 2004, the mandate that functional skills be addressed in addition to academic outcomes was included (United States Department of Education, n.d.), reinforcing the importance of skills such as O&M within the educational programs of students who have low vision or are blind.

**Australian Education Models**

As Australian law is based on the British Westminster system, there are significant differences in the legal system that have influenced the provision of education services for students with disabilities. Australia does not have rights legislation but rather a Constitution defining the functions and powers of the Commonwealth (Hayes & Hayes, 1982); therefore, according to Safran (1989), the Australian Constitution is unable to legislate for education as a “right”. Instead, the majority of policy change is conducted at a state level, where Forlin and Forlin (1998) confirm there are significant variations between regions. The two major legislative Acts influencing inclusive education are the Disability Services Act (DSA) (Australian Government, 1986) and the Disability Discrimination Act (DDA) (Australian Government, 1992). The Disability Standards for Education (Australian Government (ComLaw), 2005) clarifies the DDA legislation around education provision for students with disabilities, defining student rights and explaining obligations and measures; Dickson (2011) explains a primary obligation for education providers is the requirement to make “reasonable adjustment” (p. 1) in supporting students with disabilities. There is no legislative support for intervention such as orientation and mobility in the Australian education context.
Historically, United Kingdom models influenced early Australian education policy, although during the early days of colonisation Australia had no public education system and the education of children with disabilities was deemed to be the role of religious or charitable institutions. Watkins (2005) explains it was an unexpected trebling of the population during the gold rush era of the mid 1800s that created significant social change in Australia, culminating in the establishment of public education including the provision of education for children with blindness. As discussed earlier in this chapter, there was a tendency to educate students with blindness alongside those with deafness, and Watkins (2005) confirms this occurred in all Australian states with the exception of Victoria, where the first Australian school for students with blindness was established in Melbourne in 1866 (Kelley et al., 1998).

Integration of children with vision impairment into the regular classroom has existed throughout Australia’s history, in all likelihood, according to Pagliano (1989), due to compulsory schooling requirements but limited availability of special schools; full class integration has been dated back to the 1940s in both Tasmania (Pagliano, 1989) and Victoria (Watkins, 2005). Post World War II, it is generally accepted that educational trends and philosophies from the United States have become more influential in Australia (Kelley et al., 1998; Pagliano, 1989; Watkins, 2005), despite the legislative differences as described above. From the late 1950s, the trend was for younger children to be educated in specialised settings, and be integrated into the local school at high school level during the final two years, which were not compulsory but necessary for those wishing to qualify for university entry. Watkins (2005) describes this as the “most significant phase in the growth of systematic education for the vision impaired in Australia” (p. 143). Integration for children from primary school age onwards emerged during the 1970s, and Douglas (2003) confirms visiting teacher services were implemented in all states by 1981. Although some schools “for the blind” remain in existence in Australia, they primarily cater for students with disabilities additional to vision
impairment. The exception is in South Australia, where the South Australian School for Vision Impaired (SASVI) offers enrolment for any primary school student who is legally blind, as well as high school students with additional disabilities (http://www.sasvi.sa.edu.au/). The closure in Victoria of the Burwood School for the Blind in 2009 led to the establishment of an independent school, the Insight Education Centre for the Blind and Vision Impaired, taking enrolments from February 2013 (http://www.insightvision.org.au); the success of that venture is still to be determined.

The research setting: Western Australia. Western Australia (WA) is physically the largest state in Australia, comprising a landmass of 2,532,400 square kilometres (Australian Bureau of Statistics, 2014b), or one third of the Australian continent. However, with a primarily arid desert climate, the population is relatively small with just over 2.3 million of the 22.6 million living throughout Australia; the majority of the Western Australian population is situated in the south-west corner of the state according to the Australian Bureau of Statistics (2014b), with 78% based in the capital Perth or its surrounding area.

WA was the last Australian state, according to Watkins (2005) to provide a specialist education service for those with vision impairment. Douglas (1989) reports WA’s first school, the Victoria Institute and Industrial School for the Blind of Western Australia, was established in 1896 with sixteen students who were provided with a basic academic education. Primarily the focus was on the development of self-sufficient adults who could continue to work in the industrial enterprise, given the lack of other employment opportunities. Although legislation requiring compulsory school attendance for children with sensory disabilities was passed in WA in 1919, it was not until the 1930s that the educational needs of children with vision loss began to be seriously considered by the Education Department, according to Douglas (1989). From 1945, education was undertaken at the
Western Australian Institute for the Blind, with a qualified Education Department teacher being appointed in 1947. Integration of Western Australian children with vision impairment in local primary school settings began in 1954 (Watkins, 2005), with increasing student numbers leading to the establishment of the Sutherland Blind Centre in Dianella that, Douglas (2003) explains, was the primary base for the education of children with vision impairment in WA from 1967 until the early 1980s. As education provision shifted towards a fully inclusive system, the visiting teacher service commenced in 1981, and in 1985 the Department of Education established the Education Support Branch (Douglas, 2003). The visiting teacher service is currently one of four Schools of Special Educational Needs (the others providing support for hearing impairment, intellectual and learning disabilities, and medical and mental health) (http://det.wa.edu.au/ssen/detcms/portal/). Inclusive education models are the norm for students who are blind, although if children have additional disabilities an education support school (also known as a special school in other regions of Australia) is often the preferred option.

With regards to early childhood education, although a recommendation for a kindergarten and preschool for children with vision impairment was made in the 1950s there were insufficient numbers of children for this to be practical. Watkins (2005) describes preschool services for children with vision impairment across Australia as “sparse” (p. 150), and there was no educational provision for young children with vision impairment in Western Australia prior to them entering the formal schooling system until the late 1990s (D. Wilkinson, personal communication, 20 February 2012). Further detail on the structure of the visiting teacher service as it relates to this research project is provided later in this chapter, following the discussion on early childhood and early childhood intervention. Prior to that, this chapter outlines the development of specialist support teacher services and the establishment of the expanded core curriculum.
The Development of Specialist Support Teacher Services

As inclusive education became the norm in developed Western countries, specialist education support for students who are blind shifted from the classroom based model of the residential school to itinerate or visiting teacher services. There have also been significant changes to the curriculum over time, from the teaching of vocational skills to the facilitation of full access to academic courses of study. This has been made possible through the development of the braille code, and, more recently, rapid advances in technology that allow students who are blind to access curriculum materials at the same time as sighted peers. However there remain significant educational challenges that the specialist teacher must meet within their daily role, most specifically in establishing a balance between the teachings of academic skills with life skills.

Although there was a basic academic component within the early curriculum for students with blindness, it did not extend beyond basic literacy and arithmetic, primarily because there was no easy access to printed materials. Tutoring in vocational and handicraft skills, along with music, were dominant in the early European schools according to Watkins (2005), however there was no focus on the teaching of life skills. From an educational perspective, the most significant milestone occurred with the development of the braille code in 1827, which provided access to literacy in both the read and written form. Developed in Paris by Louis Braille, Vaughan and Vaughan (1998) explain the tactile code enabled the regular curriculum to be implemented within schools for the blind, allowing teachers to better educate and prepare students for a broader range of employment than had previously been possible. Although the braille code initially had its detractors and was not officially recognised in France until after Louis Braille’s death in 1852 (D’Andrea, 2009), the simple 6-dot code was adopted in the United Kingdom where it advanced to a three-level system beginning with un-contracted braille where each word is spelt out letter by letter, to a highly
contracted level where a single pattern represents a word or punctuation symbol (Hatlen, 2000). In 1860, the system was acquired in the United States and adapted to the American Braille system; although differences between American braille and the United Kingdom code created difficulties with sharing and producing resources, it was 2004 before an internationally agreed upon braille code was developed. Known as Unified English Braille (UEB), this code replaced British braille in Australia in 2005 according to Gentle, Steer, and Howse (2012), and is internationally the primary literacy medium for students who are blind in schools today. The significance of braille in advancing education and access to information for people with vision impairment cannot be over-stated.

Teacher Certification

The first educators working with students with blindness in the United States had no formal training, with many being blind themselves and former students of the schools in which they subsequently taught. The curriculum for students from the 1900s onwards focussed on both academic and vocational skills; students with scholastic potential were provided the opportunity to complete academic programs, Hatlen (2000) explains, whilst vocational skill training continued to be offered in areas such as piano tuning and basket making. Curry and Hatlen (1988) state there were few options for specialised teacher training and, with the focus on blindness rather than low vision, teachers were required to be skilled in braille reading, use of the braillewriter, slate and stylus, and typing. It was during the 1920s that specialist teacher training courses were initiated partly, Koestler (1976) explains, as residential schools for the blind sought recognition as educational establishments rather than “institutions”; some programs targeted newly graduated students looking to move into a career teaching students who were blind, whilst others, cooperative approaches between existing schools for the blind and teacher training colleges, established summer school programs to provide specialised
skills to already trained teachers. Although efforts were made during the mid 1930s to establish formal certified training programs for teachers, Harley (1990) identifies it was not until the 1960s that federal funds began to be available for programs for teachers of children with vision impairment, and professional standards in special education were established by the Council for Exceptional Children (CEC) (Hatlen, 2000).

The Expanded Core Curriculum

With the implementation of inclusive education during the 1980s, the competencies required of the teacher of the visually impaired (TVI) changed as the role shifted from being classroom based in specialist schools to providing itinerate services across a variety of settings. There was a heavier focus on an academic curriculum being followed by all students, however as Wolffe et al. (2002) examine, concerns were raised that students with vision impairment were completing their education lacking skills of independent living and O&M. This recognition provided the impetus for American educator Phil Hatlen to identify and define a group of specialised learning areas consisting of concepts and experiences acquired naturally and incidentally by sighted students, that needed to be taught in addition to the regular academic curriculum; these additional learning areas were termed by Hatlen (1996) as the expanded core curriculum. For Hatlen (1996), the expanded core curriculum epitomises, for students who have low vision or blindness, “the opportunity to be equal and the right to be different” (p. 25).

The expanded core curriculum consists of nine domains: compensatory academic skills; O&M; social interaction; independent living; recreation and leisure; career education; technology; sensory efficiency; and self-determination. In 1988, the Council for Exceptional Children (2009) published the specialist teacher competencies required to work with students with vision impairment in the United States, with the associated Division of Visual
Impairment (CECDVI) adopting the *Knowledge and Skills for All Beginning Special Education Teachers of Students with Visual Impairments* (Hatlen, 2000); the current knowledge and skill sets are outlined by the Council for Exceptional Children (2009) and recognise the need for teachers to have a range of skills including the ability to assess, plan and teach programs across a variety of settings, knowledge of braille, optical and non-optical device use, and basic O&M techniques (p. 145). Erin, Holbrook, Sanspree, and Swallow (2006) confirm teacher certification in vision impairment is considered essential; currently, certified courses in the United States for teachers of the visually impaired (TVI) are guided by AER with regard to meeting content and competency requirements (AER, n.d.).

Despite recognition that certified specialist teachers must implement the components of the expanded core curriculum, Wolffe et al. (2002) identify that TVIs spend a significant amount of time teaching general academic skills rather than these specialist skills. More recently, Lohmeier, Blankenship, and Hatlen (2009) found many TVIs indicate they have difficulty finding time to teach the skills of the expanded core curriculum, a finding supported by an Australian study from Brown and Beamish (2012). The literature also indicates professionals in the United States lack confidence in understanding how expanded core curriculum techniques be taught (Lohmeier et al., 2009; Sapp & Hatlen, 2010), highlighting an area of concern for personnel preparation programs.

**Specialist Teacher Training in Australia**

Teacher training for those working in the blindness field in Australia began during the 1960s with the development of specialised training courses in Sydney, according to Gale (1998). Visiting teacher services were established during the 1970s and early 1980s (Kelley et al., 1998), however, although training courses have remained in existence in the eastern states of Australia, few have been consistently long running. Douglas (2003) confirms that states with
smaller populations such as Western Australia have never had specialised teacher training in this field, with teachers trained “on the job” or completing training interstate. Concern at the lack of specialised teacher training courses in Australia, and the variations in qualifications seen across states, territories and educational sectors has consistently been expressed (National Disability Services and the Australian Blindness Forum, 2008; Morris & Sharma, 2011); some states, including Victoria (Morris & Sharma, 2011) and Western Australia (Douglas, 2003), have no legal requirements for teachers to obtain specific qualifications in vision impairment before working in the field. This is in contrast to the position in the United States, where Erin et al. (2006) state categorically that “specialized preparation and relevant credentials are essential” (p. 8), and the United Kingdom, where teachers are required to have an additional mandatory qualification (MQ) in order to work within the vision impairment field (Douglas et al., 2009).

The shortage of appropriately qualified teaching personnel in Australia is a concern that has been repeatedly expressed (Pagliano, 1989; Watkins, 2005; Brown & Beamish, 2012). Historically, no specific guidelines around Australian teacher competencies existed until 1996 when, Gale (1998) explains, draft Standards were developed. In 2006, SPEVI released the Principles and Standards for the Education of Children and Youth with Vision Impairments, Including those with Multiple Disabilities (SPEVI, 2006), a document designed to recognise the needs of students with vision impairment in the South Pacific region, and reflecting the Australian Government’s National Goals for Schooling in the Twenty-first Century (MCEETYA, n.d.). The SPEVI (2006) Principles and Standards identify the need for adequate teacher training programs to be established within the Australasian region, noting “there has never been a time in the history of the education of students who are blind or vision impaired when there were enough specialised teachers to meet student need” (p. 71). The Standards focus on the need for specialist teachers to be adequately trained to deliver the
components of the expanded core curriculum; recommended teacher competencies include an understanding of eye conditions as they relate to education and development, the ability to assess, teach and advocate for students, and specialised curriculum knowledge relevant to students with vision impairment.

The establishment of specialised teacher training courses is complicated by the fact that the Australian education sector is governed at a state level (Forlin & Forlin, 1998), resulting in regional variations in educational provision, policies and procedures. Three sectors are responsible for education according to Berlach and Chambers (2010): the government (state) sector, Catholic and independent sectors. Sectors and states have different educational provisions in regards to the education of students with vision impairment, thereby creating difficulties in the provision of a comprehensive national approach. The National Disability Service and the Australian Blindness Forum (2008) estimate 3,000 students across the country receive services from a visiting teacher, but Pagliano (1989) argues the low incidence of blindness and low vision, and the spread of these students across vast and often sparsely populated regions, creates unique and difficult challenges in the provision of those educational services. The disparity in nation-wide equity in educational provision for students with vision impairment was criticised in a 2002 Government Review of Higher Education (M. Steer, private communication, February 9, 2014), and both Pagliano (1989) and Watkins (2005) have expressed concerns at the lack of Australian research into this area. These ongoing issues impact on the delivery and quality of education support for students with vision impairment; as is the case with the shortage of qualified O&M specialists (Deverell & Scott, 2014), these are concerns that have yet to be adequately addressed.

The issues discussed in this chapter to date provide the broad educational background for this research, and have outlined the unique challenges experienced in the Australian context that
include a lack of specific legislative policies, the variations in service provision across regions, and the shortage of qualified specialist teachers. As the focus of this research is on the early childhood years the remainder of this chapter will discuss early childhood education and intervention; some international historical background is provided but the discussion primarily focusses on the development and delivery of these services in Australia.

**Early Childhood Education**

Early childhood education has existed since the establishment of the German kindergarten system by Friedrich Froebel in 1837, whose key concepts, according to Manning (2005), included a belief in the importance of play as a primary curriculum and educational tool for young children. The first Australian kindergarten opened in New South Wales in 1896 (Clyde, 2000) and by 1911, kindergartens for children aged over three years were established across the country (Press & Hayes, 2000). As explained previously in this chapter, state governments in Australia hold responsibility for the provision of education services, and early childhood education is no exception. Clyde (2000) provides examples demonstrating contrasting early approaches to Australian kindergartens that range from the philanthropic in New South Wales, church involvement in Victoria and state government control in South Australia. Kindergarten Unions or Associations were established across Australia by 1916, guided by the philosophies and influence of both Froebel and pragmatist John Dewey’s views on the functions of education. Clyde (2000) clarifies Australian kindergartens were primarily designed to meet children’s socialisation and educational needs, rather than considering the growing needs of mothers within the poor and working classes. To fill that need, Brennan (1998) explains, day nurseries that catered for children from infancy and which were open for longer hours were established, the first in Sydney in 1905, with a primary focus on caring for children’s physical health and wellbeing and staffed by nurses rather than teachers. These two contrasting approaches to early childhood education and care, designed to meet different
community needs, had an influence on the later evolution of early childhood intervention services. Prior to that discussion, a brief summary of the major theoretical influences on early childhood education is presented.

**Theoretical Influences**

Early childhood education has been influenced from a theoretical perspective by a range of positions including, according to Odom and Wolery (2003), behavioural theory, psychoanalytic theory, and, most significantly, constructivist theory. The influence of behavioural theory, embodied in the work of Ivan Pavlov, John Watson, and B.J. Skinner, is particularly evident in the areas of learning, motivation, behavioural management, curriculum development and assessment (Strain et al., 1992), however Fromberg and Gullo (1992) argue many early childhood practitioners consider adult-directed behavioural approaches as inflexible when used as the sole strategy for curriculum intervention. Psychoanalytic theorists, who focus on the concept that emotional development in the early years is critically influential in our later adult lives and emphasise relationships between infants and the primary care giver, have contributed to the development of the key worker approach currently practiced in early childhood and early childhood intervention practice (Manning-Morton, 2011). The key worker approach, Sloper (1999) explains, provides a single point of contact through which all professional interventions are co-ordinated, thereby supporting and empowering parents to make decisions based on individual family needs.

A major contribution to the evolvement of developmentally appropriate early childhood practice has come from the constructivist theories according to Odom and Wolery (2003). The concept of a “normal” process of development, established within the field of developmental psychology, is reflected in early childhood pedagogy (Albon, 2011), particularly within the stage theory approach of Jean Piaget (1896-1980). Piaget’s theory of
cognitive development (Piaget & Inhelder, 1969), which outlines a series of distinct developmental stages that children progress through as they acquire the skills of learning and thinking, has been hugely influential within the field of early childhood education. Kammii (1992) explains Piaget’s approach has a focus on how children interact with the world, suggesting children learn through action and a process of trial and error. The role of the educator is to guide the child through the learning process through the utilisation of questioning and discussion. Essentially, children are encouraged to work things out for themselves, as they progress through what are essentially “fixed” developmental stages. According to Albon (2011), Piaget’s view has been criticised in more recent times for presenting an assumption that “children” and “childhood” are universally understood concepts, and for an inflexibility in taking into account learning differences caused by gender, social and cultural circumstances, or individual ability.

An alternative constructivist perspective, socio-cultural theory, is best represented through the work of Lev Vygotsky (1896-1934), who argues that childhood development is culturally influenced and social interactions and relationships, particularly with family, are the basis for learning. Vygotsky’s (1978) concept of the zone of proximal development (ZPD) represents his belief that it is under the guidance of adults and more capable peers that children learn; the ZPD represents the gap between a child’s existing developmental level and their potential development. Through guidance by adults or peer mentors, children learn to solve more complex problems than those they can achieve independently, thus progressing to a higher level of conceptual thinking. According to Corsaro (2005), Vygotsky placed key importance on the role of language in how children learn to make meaning of and understand their world, particularly in the formation of concepts. Vygotsky believed the development of language was linked to how children use tools to achieve goals, arguing, “the most significant moment in the course of intellectual development...occurs when speech and practical activity, two
previously completely independent lines of development, converge” (Vygotsky, 1978, p. 24). This concept has particular relevance to the focus of this study, early childhood O&M, as it supports the idea promoted by Anthony et al. (2002) and Cutter (2007) that early long cane mobility facilitates concept development in children who are blind through the provision of an appropriate tool with which children can access and explore the environment in the absence of vision.

Although long cane mobility was not available when Vygotsky was developing his theories of childhood development, his beliefs in the area of special education could be considered well ahead of their time. According to Gindis (1999), Vygotsky viewed disability as a qualitative, rather than a quantitative difference, believing the role of special education should be in providing children with alternative means of communication and development that compensated for their impairment. He also believed the social consequences of an impairment were the biggest barrier to learning, arguing that “the child’s social milieu, not the organic impairment per se, modifies a course of development and leads to defective development” (Gindis, 1995, p. 79). Within early childhood education generally, approaches that adopt Vygotsky’s theories, according to Smith (2011), adopt socially valued goals with children encouraged to take an active role in the co-constructing of meaning through interaction with both peers and adults.

**Early Childhood Education in Australia**

The developmental theories of Piaget and Vygotsky present contrasting approaches to early childhood teaching according to Grieshaber (2008); the Piagetian approach views development as preceding learning, with teachers supporting and responding to child-directed learning, whilst the Vygotskian approach stimulates learning and development by encouraging children to complete physical and conceptual tasks that are just beyond their
current ability, thus “pushing development in new directions that may not be possible by waiting for children to develop at their own pace” (Grieshaber, 2008, p. 508). Although these two approaches continue to dominate early childhood teaching pedagogy, Ryan and Grieshaber (2005) examine a growing awareness that the early childhood population is becoming increasingly diverse, concluding the traditional dominance of the developmental theories does not equip early childhood teachers with the knowledge and skills to deal with cultural and linguistic difference, nor provide for inclusive education practice for children with disabilities. The most recent approach within the Australian context, the Early Years Learning Framework (Council of Australian Governments, 2009), has been explicitly designed to include a range of theoretical perspectives in order to avoid “advocating or assuming adherence to any one theoretical stance” (Sumsion, Barnes, Cheeseman, Harrison, & Crisp, 2009, p. 10). The framework includes reference to developmental, socio-cultural and socio-behaviourist theories that influence teaching and curriculum, along with critical and post-structuralist theories which, according to Sumsion et al. (2009), encourage reflective practice and offer insights into issues of power, equity and social justice. Guided by the 1989 United Nations Convention on the Rights of the Child (United Nations Human Rights, 1990), the framework outlines five learning outcomes for children aged from birth to five years: children have a strong sense of identity; children are connected with and contribute to their world; children have a strong sense of wellbeing; children are confident and involved learners; and children are effective communicators (Council of Australian Governments, 2009). This framework is now mandatory for early childhood educators in Australia, providing a unified approach to the sector.

**Early Childhood Intervention**

As discussed earlier in this chapter, the parallel developments of early childhood education and the maternal child health services offered by day nurseries influenced early intervention
in Australia (Press & Hayes, 2000), as well as in Europe, the United Kingdom and the United States according to Kamerman (2000), and Meisels and Shonkoff (2000). Coinciding with a growing body of research into child development and the growth of special education as a discipline (Smith & Rous, 2011), two key terms within early intervention have emerged. The first key term, *early childhood special education*, represents the professional and program parameters and standards, and defining how early intervention should be practiced in relation to the theoretical foundations of the field. The second key term is *early childhood intervention*, which has varying definitions representative of different approaches. Early definitions focus on the provision of services and are primarily derived from a professionally directed, segregated approach based on the deficit (medical) model of disability, according to Moore (2008). For example:

> Early childhood intervention consists of multidisciplinary services provided to children from birth to 5 years of age to promote child health and well-being, enhance emerging competencies, minimize developmental delays, remediate existing or emerging disabilities, prevent functional deterioration, and promote adaptive parenting and overall family functioning. These goals are accomplished by providing individualized developmental, educational, and therapeutic services for children in conjunction with mutually planned support for their families. (Shonkoff & Meisels, 2000, p. xvii)

More recent definitions of early childhood intervention have shifted away from this deficit-based model to a family-focused, interdisciplinary and functional approach to early intervention as a result, Moore (2008) explains, of professional collaboration with families and the provision of support within local communities. Organisations such as Melbourne’s Centre for Community Child Health (2010) emphasise the importance of the child’s learning environment, confirming that early childhood intervention should be defined in terms of “providing children with experiences and opportunities that promote competencies that enable them to participate meaningfully in home and community environments” (p. 36). This view is supported by research from Dunst and Trivette (2009), who recognise that, rather
than concentrating primarily on the child, critical components of successful early intervention programs focus on intervention with the whole family and the development of family empowerment. Dunst (2007) outlines three guiding principles for effective early intervention practice. Firstly, functional behavioural competencies are promoted by strengthening self-initiated and self-directed learning in children. Secondly, he recommends strengthening confidence and competence in parents to enable them to promote their child’s learning and development through appropriate experiences and opportunities. The third principle outlines the role of the early intervention practitioner as one of supporting and strengthening the capacity of parents through the modelling of evidence-based best practice and limiting direct intervention with the child so as to develop a parent rather than practitioner-mediated approach.

Dunst and Trivette’s (2009) integrated framework model has been influential in defining early childhood service models in Australia, according to Moore (2012), as has Guralnick’s (2005) developmental systems model. Influenced by Bronfenbrenner’s (1979) ecological systems approach, Guralnick (2005) proposes developmental outcomes are a result of the quality of interactions between children and parents, the value of experiences gained through family exposure to physical and social environments, and the general health and wellbeing of the child. In terms of support provided by early intervention professionals, Guralnick (2005) identifies the provision of resources, social support, and information and services as the most critical. In addition, Moore (2012) identifies the influence on Australian practice from the support-based home visiting model outlined by McWilliam (2010), and the unified theory of early intervention practice as outlined by Odom and Wolery (2003). All these approaches have a focus on professionals working to empower families, and recognise the limitations on what early childhood intervention practitioners can provide directly to the child, given the
relatively small amount of time they spend with the child. In summary, Moore (2012) clarifies the aim of early childhood intervention as follows:

To ensure that the parents or other key caregivers are able to provide young children who have disabilities or developmental delays with experiences and opportunities that promote the children’s acquisition and use of competencies which enable the children to participate meaningfully in the key environments in their lives. (p.12)

There remain numerous challenges in the Australian context to achieving this aim, including a lack of clarification on early childhood intervention outcomes, a lack of consistency across regions as regards to aims and philosophies, and complex and inefficient funding models (Moore, 2012). During the early 2000s, funding for inclusive practice focussed on the provision of additional specialist staff (Llewellyn, Thompson, & Fante, 2002) rather than family involvement and individualised programming, although Llewellyn et al. (2002) suggest that, despite ongoing challenges in relation to funding and conflicting professional approaches, many Australian parents actively seek inclusive early childhood education programs. The Better Start for Children with Disability (FaHCSIA, 2011) initiative, implemented in 2012, was designed to provide greater family control and choice over funding for early intervention services for children with selected disabilities, including vision impairment, however there has not yet been analysis of the initiative’s effectiveness. With regards to varying professional approaches, Burton, Haynes, Hanline, McLean, and McCormick (1992), and Odom and McEvoy (1990), have suggested that different philosophies in personnel preparation programs have created a conflict between early childhood and specialist early intervention educators. Llewellyn et al. (2002) report that many specialist service providers continue to withdraw the child from the education setting for therapy, a practice contradictory to recommendations for best practice in early inclusive education and, as discussed in Chapter Two, there is evidence that the medical model approach is still dominant amongst Australian professionals working with young children.
with disabilities (Breen et al., 2011). Both Llewellyn et al. (2002) and Moore (2008) identify that early childhood workers in mainstream environments need to work collaboratively if appropriate service models are to be developed that enable inclusive practice. The establishment of collaborative practice models in relation to the implementation of O&M intervention is an issue explored in my study, and is discussed within Chapter Seven.

In Australia, as in the United States, legal policies within the early childhood education and care (ECEC) domain are developed nationally at a framework level, with specific decisions relating to the implementation of these policies occurring at a state level (Kamerman, 2000). The United States has specific legislation provisions for early childhood intervention within IDEA that identify a range of related services, including O&M (United States Department of Education, n.d., p. 635), however Australia lacks a comprehensive national policy. Moore (2012) explains that whilst frameworks such as the Early Years Learning Framework (Council of Australian Governments, 2009) for early childhood education are useful in providing consistency across regions, similar frameworks are still to be developed for the early childhood intervention sector. He is critical of the Better Start for Children with Disability (FaHCSIA, 2011) funding package, arguing this scheme disregards recommendations for best practice through a focus on direct therapy provision rather than a collaborative approach within children’s existing learning environments. The National Disability Insurance Scheme (NDIS) initiative (http://www.ndis.gov.au/), which commenced in July 2013, has been identified as a mechanism by which early childhood intervention in Australia could undergo significant reform (KPMG Australia, 2011; Moore, 2012), however, this is still to be determined.
Early Childhood Intervention in the Research Setting of Western Australia

The history and structure for education provision for students with vision impairment in Western Australia was briefly outlined earlier in this chapter. The population spread within Western Australia dictates that services for children with vision impairment are based in Perth, unlike other Australian states that have a larger population spread and therefore have regional service bases. During the time frame with which this research is concerned, 2004-2007, the visiting teacher service was part of the Statewide Specialist Services branch of the Department of Education Western Australia (Department of Education Western Australia, 2004). During that time frame, the visiting teacher service employed teachers trained in the areas of early childhood, special education, primary school and secondary school. The service was divided into two teams – the Early Childhood/Additional Disabilities (ECAD) Team, and the Primary School/High School (PSHS) Team. Students were seen in a variety of locations across Western Australian including homes, day care settings, kindergartens, education support schools, and local preschools, primary and secondary schools. As mentioned, there was no early childhood intervention or education service for young children with vision impairment in Western Australia prior to them entering the formal schooling system until the late 1990s (D. Wilkinson, personal communication, 20 February 2012), when the EIP at the centre of this study was established. This program was based on two New Zealand education approaches, *Te Whariki* and *Te Kohanga Reo*, whose philosophy will now be outlined.

**Te Whariki and Te Kohanga Reo.** The early childhood education philosophy known as Te Whariki has a focus on families, culture and diversity, play and the natural environment. The languages of the Maori and European cultures co-existing in New Zealand are incorporated and, as Smith (2007) explains, there is a focus on an inclusive curriculum within a bicultural society. According to Soler and Miller (2003), the Maori term Te Whariki
can be metaphorically viewed in several ways, including the concept of a woven mat that interweaves learning principles and goals to take into account the individual’s particular learning situations. Alternatively, the learning curriculum can be viewed as a spider web. Both metaphors, Soler and Miller (2003) suggest, contrast with tradition step model approaches that focus on measurable outcomes. Te Whariki is heavily influenced by the Vygotskian socio-cultural approach, which sees teachers taking an active role in engaging in joint activities with children (Smith, 2007).

A second concept from New Zealand early childhood that influenced the structure and programming within the EIP is known as Te Kohanga Reo, or “language nest”, which commenced as a pilot program in New Zealand in 1982 as a means of incorporating Maori language and culture into early education programs, prior to these values and philosophies being incorporated into Te Whariki (Prochner, 2004). Within the EIP in Western Australia, the Te Whariki philosophies were incorporated with the “language nest” concept represented through an emphasis on the use of braille as the primary tool for literacy for children who are blind. A key focus for teachers within the Te Whariki model, according to Smith (2011), is the support of children’s “autonomy, exploration, commitment and aspirations” (p. 153); consequently, Te Whariki has been criticised for its lack of subject-based knowledge and the focus on teaching children how to learn, rather than what to learn. However, Smith (2011) argues that a socio-culturally based program such as Te Whariki is not necessarily incompatible with a subject-based curriculum, identifying examples of children who gained meaningful, culturally relevant subject-based knowledge through the application of appropriate teaching skills. A key component within my research is identifying whether such an approach is empowering for children with blindness, and reflecting on the concept that teaching children how to learn through the use of O&M techniques is a component that is perhaps missing from traditional rehabilitation based approaches to O&M intervention.
Conclusion

This chapter has discussed the historical philosophies and pedagogies around the education for children with blindness, with regard to the influences of both the United Kingdom and United States approaches to the Australian situation. The shift from a residential, vocational skills based curriculum to the delivery of the expanded core curriculum has been traced, and the gaps in appropriate teacher training in Australia identified. The second part of the chapter described the development of early childhood education and intervention, before concluding with a description of the research setting, Western Australia, and a summary of the influence of the Te Whariki early childhood program on the program at the centre of my research. This chapter concludes the background and contextual information relating to this study; the following chapter presents the methodological approach to my investigation, describing the philosophical and theoretical underpinnings, and detailing the data collection and analysis procedures.
Chapter Five: Methodology and Methods

This chapter presents the rationale for the research topic, explains the choice of an interpretive approach, and outlines the research design, data collection and analysis methods used in this study. The rationale behind the choice of Denzin’s (2001a) interpretive interactionism approach is described; primarily drawing on symbolic interactionism, along with phenomenology and hermeneutics, this approach is used to examine how turning point or epiphany experiences alter meanings in people’s lives. The first part of the chapter discusses these underpinning theoretical perspectives, with particular reference to the appropriateness of the research design for this study. I then describe how these approaches were utilised to carry out the research, including a discussion of the data analysis process, the trustworthiness of the data and ethical considerations. The chapter concludes with a discussion of the study’s limitations.

Rationale for the Research Topic

This study uses an interpretive interactionist approach to determine how children, parents and specialist visiting teachers experience and perceive early childhood orientation and mobility intervention, including the introduction of early long cane mobility. The field of O&M is one with which parent and teacher participants had little knowledge or experience until they experienced a turning point moment in their lives, becoming personally or professionally involved with a child for whom the mastery of O&M techniques is an essential skill. The choice of this approach reflects my belief as a researcher that there is value in representing participants’ multiple realities and life experiences, a position influenced through my reading of the literature in the O&M field where research has predominantly been conducted within a positivist paradigm. In positivist research, Prus (1996) explains, human behaviour is seen to be a product of internal and external factors acting to generate particular outcomes; one
example of this style of research within the O&M field is the study by Clarke et al. (1994) discussed in Chapter Three where successful long cane use in children is measured in terms of their travel speed and incidences of contact with obstacles. These measures give little consideration to the broader meaning of O&M, such as how long cane use impacts holistically on a child’s life or on the lives of those they come into contact with. The complexity of lived experience, how human beings attribute meaning to their lives through interaction with others, and how meanings are constructed through social interactions, all central concerns within an interpretive research approach according to Prus (1996), are issues that have largely been ignored within the O&M literature.

A rare example of the importance of including personal narratives and experiences in research in the O&M field is provided through the work of Berndtsson (2006). Using Merleau-Ponty’s (1945/2005) phenomenological concept of the life-world, Berndtsson explores the processes through which a group of Swedish adults with blindness or very low vision go through, prior to accepting the long cane as a mobility aid. The six participants within her study initially described their loss of vision as a “break” or discontinuation in their lives. It took a specific event, such as a fall or a wish to undergo training with a dog guide (for which the development of O&M techniques is generally a requirement), to trigger a perception that the long cane could be a useful and necessary tool. Berndtsson describes this process as opening up “the horizon of actions” (p. 4), as participants were able to adjust their responses to the perceptions of others around long cane use and allow their own feelings of self-confidence to outweigh any negative public perceptions around the use of the cane. Although the majority of Berndtsson’s participants had undergone vision loss as adults, one lost vision as a young child; unlike the other participants, this individual was not influenced by negative symbolism around long cane use and blindness, describing his feeling toward the cane as “neutral”. Berndtsson interprets this as a reflection of his vision loss early in life,
proposing “this situation is natural for him” (p. 5). For all participants, their social worlds were positively expanded through the increased independence they gained through long cane use, and they came to perceive the cane “as part of themselves” (p. 5). It is the lack of lived experience research of this kind, which helps develop an understanding of the meaning O&M intervention has for individuals that provided the rationale behind my choice of methodology and developed my interest in representing the insights and feelings of a small group of teachers, parents and children around their O&M experiences.

The Interpretive Approach

Within the interpretive approach there is an appreciation that there is, as Crotty (1998) explains, “no objective truth waiting for us to discover it” (p. 8). Rather, interpretivist research, according to Prus (1996), is concerned with understanding experience as explored through participants’ perspectives in light of a particular situation: how do people attach meanings to situations in their lives and interact with others in order to undertake their daily activities? In order to explore human behaviour from such a perspective, Creswell (2007) explains researchers must position themselves within the field of study, aiming to “get as close as possible to the participants being studied” (p. 18). My professional immersion within the EIP described in this study allowed me to reflect not only on how O&M intervention influenced children’s lives, but also on the personal and professional lives of others closely involved with the program. In my previous roles as an O&M specialist working with children, O&M intervention was not embedded within an educational framework; the acquisition of O&M techniques was seen as skill development appropriate for older children rather than a fundamental early life skill. However, within the EIP, I observed parents exhibiting excitement and pride when their child was moving confidently through space using a long cane, and the visiting teachers involved in the program were passionately involving O&M techniques within every other aspect of their educational programs. This
seemed somewhat “deeper” than the teaching and acquisition of the skills for independent mobility, although it was difficult to understand on a surface level what made the EIP different to previous programs in which I had been involved. When considering a research design therefore, the interpretive stance with its focus on understanding shared meanings was an appropriate choice. More specifically, I became aware that I was in fact observing a process where the early implementation of O&M techniques was changing participants’ views on blindness per se, a deeper outcome than was initially anticipated when the long cane was introduced. It was through this realisation that I came to use interpretive interactionism as the approach underpinning my research.

**Interpretive Interactionism**

Interpretive interactionism, developed by Norman Denzin (2001a), is a methodological approach used to explore the perspectives or worldviews of participants within specific social and educational contexts, with a particular emphasis on epiphany or life-changing moments. Whilst grounded in the symbolic interactionist tradition, interpretive interactionism also draws on phenomenological and hermeneutical positions as a means of exploring and representing transformational moments in people’s lives, whilst seeking to be both moral and ethical, focussing on issues of marginalization and stigmatization and suggesting steps for social change (Denzin, 2001a). It is therefore an appropriate choice, not only for this specific project, but also within the broader field of disability.

Interpretive interactionism is situated within what Denzin and Lincoln (2005) define as the seventh movement of inquiry in social sciences and humanities, the “methodologically contested present” (p. 3). Denzin (2001b) describes this as:

A period of ferment and explosion...defined by breaks from the past, a focus on previously silenced voices...and a concern with moral discourse,
with critical conversations about democracy, race, gender, class, nation, freedom, and community. (p. 324)

Denzin (2001a) suggests the interpretive interactionist approach can be used to explore the public policies or programs designed to address “personal troubles” (p. 2); as the previous chapters in this study have indicated, this is a perspective often applied toward those individuals who have low vision or are blind. However Denzin (2001a) argues that, by presenting alternative definitions and questioning the assumptions made around the “troubles” under investigation, the interpretive interactionist researcher can “help change the world in positive ways” (p. 2).

In adopting an interpretive interactionist approach, Denzin (2001a) argues it is critical for the researcher to be aware of how “history, power, emotion and knowledge” (p. 49) shape the process of interpretation. The researcher is exploring personal histories, which are in turn influenced by the larger historical implications that surround the phenomenon in question. There is an underlying assumption that the researcher brings a level of power and knowledge to the research process, and that interpretive research is never free from emotion; my own assumptions, emotions and values in relation to this study are therefore discussed within this chapter, and there is an inherent understanding that these influence my interpretation of participants’ experiences and stories. The interpretive interactionist approach provides a means of including the voices of children, a group who, according to Connors and Stalker (2007), have been marginalised in research. There is an increasing understanding of the importance of listening to and recognising children’s perspectives, particularly, Morris (1997) argues, when considering how intervention practices and policy influence children’s lives. Within this study, I have included artefacts including video images and children’s written stories as a means of representing their early O&M experiences. However, it is acknowledged that parents and teachers have power over decisions that impact the lives of
very young children; much of the data analysis is therefore concerned with understanding how teachers and parents perceive and make meaning of O&M intervention and blindness, as it is these perspectives that influence what early intervention programs can and should provide. As Denzin (2001a) explains, it is only through understanding and interpreting the experiences of those involved in such programs that their effectiveness can be determined.

Further detail regarding the methods utilised in this study is provided within the second half of this chapter; prior to that discussion, the underlying perspectives within interpretive interactionism – symbolic interactionism, phenomenology and hermeneutics – are explored.

**Symbolic Interactionism**

As a theoretical perspective, Plummer (2000) explains, symbolic interactionism is primarily concerned with the meaning of acts, behaviours, feelings, emotions, how we define ourselves and our situations, how we adjust to others and develop perspectives on our lives. Originating within the “Chicago School”, Plummer (2000) explains symbolic interactionism is a tradition that evolved from both European sociological theory and the pragmatic approach evident during nineteenth century America, where meaning is seen as constantly evolving through the interaction between human beings, the environment, and the social world. Symbolic interactionism builds upon the work of sociologists such as Wilhelm Dilthey (1833-1911) and Charles Cooley (1864-1929), psychologists and philosophers William James (1842-1910) and John Dewey (1859-1952), and, most notably, George Herbert Mead (1863-1931) and Herbert Blumer (1900-1987).

**Historical aspects.** The American pragmatic tradition, according to Plummer (2000), suggests there are multiple truths “grounded in concrete experiences and languages, in which a truth is appraised in terms of consequences” (p. 196). Of particular influence in symbolic interactionism are the pragmatic assumptions that the emergent self is socially constructed,
individuals act towards things on the basis of their meaning, and these meanings are also socially constructed (Prus, 1996). The use of symbolic interactionism as a research approach in this study can therefore contribute to an understanding of how meaning toward blindness is constructed within the social contexts of a child’s family, community and educational settings.

William James is credited with popularising pragmatism through his work on the “self” and his interest in stream of consciousness. According to Denzin (1992), James identified two components of the self: the “I” and the “me”. The “I”, or the self as subject, is the central state of a person’s consciousness, which interacts with the self as object, or “me”; for James, Denzin (1992) explains, “persons have as many selves as they have social relationships” (p. 4). Considered one of the early pioneers of the concept of symbolic thought, according to Faberman (1985), James’ ideas were further developed by Charles Cooley (1902) in his work on the “looking-glass self”, a concept emphasising how our sense of self is shaped through social interaction. Cooley (1902) proposed three principle elements to the looking-glass self—”the imagination of our appearance to the other person; the imagination of his (sic) judgement to that appearance, and some sort of self-feeling, such as pride or mortification” (p.152). Prus (1996) identifies a fundamental concept in Cooley’s work is that of the “primary group” (p. 50); the family and peer groups shaping the looking-glass selves of the child, forming the ideals and social nature the child then takes into society. As the child develops language and begins to play, Charon (2010) explains that the taking on of the perspectives of this primary group, or what Mead (1934) calls “the generalised other” (p. 89), is a beginning step toward seeing the self as a social object.

George Herbert Mead builds upon the work of both Cooley and James in his seminal text *Mind, Self, and Society* (Mead, 1934), incorporating James’ concepts of self and self-
reflection. However, Mead primarily aligned himself philosophically with psychologist and educator John Dewey, focussing on the social rather than the individual according to Huber (1973). In Mead’s work, the concept of “self” is developed, extending the components of the “I” and the “me” to propose that “the ‘I’ is the response of the organism to the attitudes of the others; the ‘me’ is the organized set of attitudes of others which one himself assumes” (p. 174). This view, according to Charon (2010), develops from James’ notion of humans as both subjects and objects interacting with the social world; the “self” develops through a process of reflexivity generated from social interaction and our responses to what Mead terms “significant symbols” (p. 61). The significance of a symbol, Mead explains, whether language and words, physical or manufactured objects, ideas, perspectives or emotions (Charon, 2010), lies in our shared understanding of meaning as developed within a social frame of reference.

Mead (1934) does not see human reaction to significant symbols as predetermined or conditioned, describing the “mind” as a process determining how we take action or make choices around how to act. According to Charon (2010), this involves thinking and choosing how to interpret and respond to symbols, control our actions and problem-solve. Not only can the individual then adjust him or herself to the attitude of others, Mead argues individuals can also change the attitudes of others. This concept, Mead’s (1934) “generalized other” (p. 89), allows an individual the ability to recognise the attitudes and perspectives of others, and to develop what Charon (2010) terms a “socially created conscience” (p. 158) allowing an individual to communicate, act appropriately, and work with others in group situations.

In the late 1960s, Mead’s insights were formalised into a research perspective by Herbert Blumer, who defined three basic premises of what he termed “symbolic interactionism”: human beings act toward things on the basis of the meanings that the things have for them;
the meaning of such things is derived from, or arises out of, the social interaction that one has with one’s fellows; and these meanings are handled in, and modified through, an interpretative process used by the person in dealing with the things he encounters (Blumer, 1969, p. 2).

A central assumption of symbolic interactionism, according to Blumer (1969), is the notion that “human society is people engaging in action” (p. 7); the interactive process between people creates meaning and an interpretative process is continually in play as meanings towards things are constantly being checked, suspended, regrouped and transformed depending upon interaction with others. Ultimately, Blumer (1969) proposes, this process influences how we see ourselves within our wider social context. As a child, the interpretive process begins with the observation and imitation of parents, who teach us not only about ourselves but also about the attitudes and values in the society we are living in. Growing older, we become more aware of these attitudes and values, finally developing the concept of the generalised other where values are recognised as universal, and the self, according to Blackledge and Hunt (1985), remains relatively stable across a range of social encounters.

Prus (1996) argues that societal attitudes and values, which become ingrained as the norms and rules of daily life, are likely to be taken for granted until people define them as being “ineffective in dealing with their circumstances” (p. 151). This is particularly relevant, Prus (1996) suggests, when linked to “organisational principles” (p. 151), the “objective” political and historical assumptions and perspectives that guide society. The interpretive interactionist approach recognises that these views can disempower specific groups of people; for example, as the preceding chapters have explored, a range of perspectives exist that assume children who are blind are not “capable” of learning to use a long cane until they reach a certain age. These perspectives and assumptions also influence parental attitudes toward their child’s
capabilities, and ultimately the attitudes and values within society toward these children. The significance of this theoretical stance to this study is that it allows for the interpretation of individual experiences within the social context of the EIP, exploring if and how preconceived viewpoints toward blindness can be changed.

**The significance of symbols.** Central to symbolic interactionism is the notion that the individual is seen as an active constructor of action and meaning (Woods, 1983), with a particular emphasis on the shared meaning of symbols in defining the social world. Symbol use, particularly in language use and the meanings given to physical objects, provides a central understanding of people’s perspectives toward a particular phenomenon according to Charon (2010). Physical objects within the symbolic interaction context are defined as “social objects” (Charon, 2010, p. 45); in other words, an object is not just a physical “thing”, but is given meaning by how it is defined and used. For example, an object such as the long cane will be perceived within the social context and use of the cane; for a sighted person with no experience of blindness, their meaning of the long cane may be based upon predominantly negative language associations with the word “blind”. If they have never observed or interacted with a competent and confident long cane user, their understanding of the long cane may reflect the views presented in the literature in that it is seen to represent weakness and dependency (Wong et al., 2004), rather than seen as a tool of independence.

Erving Goffman’s (1963) work on stigma as it relates to blindness was discussed in Chapter Two; in particular his views around the “visibility” of impairment and the use of what he termed a “stigma symbol” (p. 43) such as the long cane. Goffman (1963) proposes that “normals” (p. 3) struggle to cope with their feelings of discomfort when interacting with a person with a “visible” impairment, and may avoid social interaction as a result. Within the blindness field, there is a focus on the development of social skills and reducing the
“visibility” of blindness through teaching skills and behaviours that meet the social rules of the sighted world, such as establishing and maintaining eye contact during conversation (Fazzi, 2002). Goffman argues a failure to adhere to these social expectations “violates communication etiquette and repeatedly disrupts the feedback mechanics of spoken interaction” (p. 49), thus increasing the “visibility” of an impairment. Orientation and mobility also has a focus on decreasing the “visibility” of blindness through the development of sensorimotor skills including good posture and gait. As discussed in Chapter Three, there has been disagreement within the O&M field as to whether long cane mobility should be introduced once “good” posture and gait have been established (thereby allowing an “appropriate” use of the long cane), or whether early introduction of the cane actually facilitates development of these skills. These are issues explored within the data analysis of this study.

Although Goffman did not consider himself to be a symbolic interactionist, Charon (2010) observes that his influence on the tradition has been significant, particularly his work on the meaning of ritual within social interaction. Goffman (1983) placed an emphasis on what he termed the “interaction order” (p. 2), the patterns of behaviour that are unconscious to most of us but which establish the rules for social conduct. His perspective on social interaction, Charon (2010) says, is “dramaturgical”; in other words, Goffman saw life as a “performance”, where humans are both “actor” participants as well as an audience. He felt our choices are active, in that we choose how to present our public selves in light of the social situations in which we find ourselves.

Goffman’s work has been criticised, Scambler (2009) explains, for failing to take into account how issues such as class, gender, ethnicity and status also influence social encounters. Like Thomas (2012), whose views were discussed in Chapter Two, Scambler
(2009) calls for a move away from a medical focus and toward a sociological research approach in the area of stigma and disability. Despite these criticisms, Goffman’s legacy in this area, his influence on symbolic interactionism, and later methods and perspectives including interpretive interactionism, remains highly significant.

**Modern approaches to symbolic interactionism.** A change in perspective occurred within the field of symbolic interactionism during the period between 1951-1962 that had a significant influence on the later development of the interpretive interactionist approach (Denzin, 1992). Most significant were societal changes that saw the development of professions, including the medical and rehabilitation professions, exuding a collective power and authority. These professional groups generated a new set of social rules, according to Hughes (1960), and occupation became associated with prestige, status and self-identity. Oliver (1989), Scott (1969) and Vaughan (1993b), amongst others, argue that the power imbalance between professionals and people with disabilities creates a relationship of dependency, particularly within the rehabilitation and medical context. Symbolic interactionist theory provides a means of exploring power within social life according to Dennis and Martin (2005), and also provides an opportunity for marginalised groups to question and challenge assumptions made by those in positions of power (Denzin, 2001a). It is therefore a useful method with which to question the historical and cultural assumptions that led to the development of “blindness professionals”, and the subsequent influence these professionals have had on the access to O&M intervention for young children who are blind.

Symbolic interactionism underwent a decline in popularity during the 1960s, in part, according to Hall (1987), because of the dramatic social changes occurring in that decade. Stryker (1987) explains the perspective was criticised for lacking scientific rigour and glossing over the complex process of social interaction, whilst Huber (1973) argues the
framework had a bias reflecting the “unstated assumptions of the researcher, the climate of opinion in the discipline, and the distribution of power in the interactive setting” (p. 282). As a result of these criticisms, according to Fine (1993), new methods and perspectives have emerged; influenced by phenomenology, feminist theory, post-structural and postmodern views, these perspectives ensure the interactionist view is now “multifocal” (Fine, 1993, p. 81), and subsequently stronger. Feminist theory, for example, explores the power of society in shaping the sense of self and identity, using “critical, biographical and naturalistic” (Denzin, 2001a, p. 46) research methods to represent long-silent female perspectives. Plummer (2000) explains this approach is also used in Denzin’s interpretive biography, from which the interpretive interactionist method developed. These approaches counter earlier criticisms such as those by Huber (1973) by making explicit the researcher’s position in light of historical and cultural assumptions and demonstrating an awareness of how power and knowledge influences the interpretive process. Throughout this study, I have ensured my own perspectives are transparent, and acknowledged that the interpretation of data is influenced by those perspectives.

Symbolic interactionism, and particularly the new interpretations of this tradition, is the predominant influence on the interpretive interactionism approach. However, interpretive interactionism also draws on both phenomenology and hermeneutics, whose relevance is now briefly described.

**Phenomenological Influences**

The “phenomenological self”, according to Denzin (1992, p. 26), relates to our conscious experience of a particular phenomenon. Within this perspective, Creswell (2007) explains, consciousness and understanding are seen as fundamentally interlinked, and it is through consciousness that meaning is attributed to objects and symbols. Major influences include
Alfred Schutz (1899-1959) and his exploration of “multiple realities” or world-views, which Prus (1996) defines as the understanding of how people relate to one another through daily social situations, thereby developing shared understandings of the world. The influential text *The Social Construction of Reality* by Berger and Luckmann (1966), integrates Schutz’s phenomenological approach, describing it as concentrating on “the structure of the commonsense world of everyday life” (p. 16). Prus (1996) notes that, through the introduction of concepts such as multiple realities and “taken for granted realities” (p. 90), scholars such as Schutz, Berger and Luckmann have enriched the interpretive approach to the study of lived experience.

A second important phenomenological influence is the work of Maurice Merleau-Ponty (1908-1961), whose work on perception and exploration of the embodiment of human experience has particular relevance to the life-world experiences of those with sensory loss including blindness. Merleau-Ponty (1948/2004) observed that objects in the world (such as the long cane) are not neutral, but rather evoke a favourable or unfavourable reaction through what it symbolises to the individual. He also understood the human body to be “no longer conceived as an object of the world, but as our means of communication with it” (2005, p. 106); as Bentz and Rehorick (2008) explain, interpretation and meaning is epitomised within the human body itself. Of particular interest are Merleau-Ponty’s views on the perception of space, and the concept of incorporating external objects “into the bulk of our own body” (2005, p. 166). In explaining this concept, Merleau-Ponty uses the example of an individual using a long cane, a tool which becomes “an instrument with which he (sic) perceives...a body auxiliary, an extension of the bodily synthesis” (2005, p. 176, emphasis in original). Although this study is not specifically investigating the phenomenological experiences of children using the long cane, the use of an interpretive approach allows parents and teachers
to reflect and comment on these issues through the utilisation of descriptive accounts of their experiences.

Both Schutz and Merleau-Ponty emphasise the importance of “thick description” in presenting and interpreting the individual life-world experience, and this is a central technique used within interpretive interactionist research (Denzin, 2001a). Thick description, Denzin (2001a) explains, involves situating lived experience within its contextual and historical situation, and presenting meaning as a sequence of events. Explorations of rich descriptive accounts of lived experience are essential, according to Bentz and Rehorick (2008), to uncovering and interpreting the meaning of individual experience. Interpretation of data involves using Husserl’s (2012) concept of “bracketing”, the putting aside of any preconceived ideas and assumptions the researcher has; in this way, Denzin (2001a) explains, the researcher makes “recognisable and visible a slice of human experience” (p. 47). The bracketing process involves attempting to suspend previous knowledge and experiences whilst “actively listen(ing) to participants and their individual reality” (Hamill & Sinclair, 2010, p. 17). However, as Denzin (2001a) explains, “every researcher brings his or her own preconceptions and interpretations to the problem being studied” (p. 43), requiring an openness in regards to his or her preconceptions within the context of the research. It is therefore timely to identify the assumptions I, as the researcher, bring to this project.

**Researcher Assumptions**

As an O&M specialist, I was trained within a rehabilitation context based on the medical model of disability, one that considers both congenital and adventitious blindness to be a loss and a disadvantage from the norm of being sighted. The concept of children with congenital blindness being “different” rather than “disabled” did not enter into my training, nor the majority of years that I have practiced as an O&M specialist; I was also strongly influenced
by the perspectives presented in the literature that young children are unable to use long canes until they are physically and cognitively “ready”. It was not until I relocated from a rehabilitation-focussed workplace to one of early intervention education that my perceptions around O&M intervention with children changed significantly. This was initially a challenging, but exciting, process, requiring me to reconsider the manner in which I undertook my professional role. I now believe the early introduction of O&M techniques within a supportive, play-based early childhood framework is essential for both children and families, and I feel frustration when the “appropriateness” of early long cane mobility is constantly questioned. Although some of the rehabilitation models with which I have experience espouse the central role of the family in the decision making process, O&M intervention has not been a part of the conversation until the child reaches an age of transition into the formal education system. This, I consider, is too late, and not only compromises the child’s ability to be independent, but continues to reinforce negative connotations and perceptions of what it means to be blind.

Denzin (2001b) argues that researchers utilising an interpretive interactionism approach “must make their own value positions clear” (p. 5). As stated earlier in this chapter, this study came about through my immersion within an early intervention team implementing the skills of the expanded core curriculum, including orientation and mobility. Consequently, I was able to observe what I believed to be positive changes in perspectives within all the participants. My wish to explore the lived experience of these participants shaped the formulation of my research question, and the interpretation of data represents an attempt to understand the shared meanings of those involved with the EIP rather than the development of a theory that can be generalised to other situations.
Summary
Symbolic interactionism, phenomenology and hermeneutics all influence interpretive interactionism, a research approach used to examine how turning point or epiphany experiences alter meaning in the lives of individuals. Denzin (2001a) clarifies that epiphanies are “those interactional moments that leave positive and negative marks on people’s lives” (p. 143), and observes that these moments “occur within the larger historical, institutional and cultural arenas that surround an individual’s life” (p. 37). Interpretive interactionism also explores the public policies or programs designed to address “personal troubles” (p. 2). From the medical perspective, blindness has been seen as a “personal trouble”, with clinical and rehabilitation interventions developed to help individuals “fit in” as best they can to a sighted world. An interpretive interactionist research design allows for historical and cultural beliefs around blindness to be explored within the context of an education based program, and to present an alternative view around the introduction of O&M techniques to children that respects individual stories and experiences.

Methods
The remainder of this chapter describes the methods used to undertake this study. It begins with an explanation of how a suitable research question was formulated, before introducing the research participants, interview questions and data collection process. Clarification of the data analysis process is presented, before concluding with a discussion on the trustworthiness of the data and the ethical considerations related to the study.

Framing the Research Question
In order to discover how meaning is given to the experiences the researcher wishes to understand, an appropriate research question must be conceived. Within an interpretive interactionism design, Denzin (2001a) explains, the research question must be framed in
terms of “how” experiences are given meaning, rather than “why”, and the investigator must locate a research site where the phenomenon under investigation can be studied within the context of the researcher’s own personal life history. In this case, my experiences in establishing and providing O&M intervention within the early childhood context provided an ideal setting for exploring how this process was given meaning by the participants. This research had to be conducted retrospectively, as post-2007 the EIP no longer has an O&M specialist as a member of the teaching staff. However, as Street and Ward (2010) explain, a retrospective approach focussing on an extreme or one-off case such as the EIP “can be very insightful and provide interesting findings about a prior event” (p. 825).

In one sense, I was interested in exploring my own epiphany or turning point; the realisation that the early introduction of O&M techniques had a deeper influence on the children’s lives than anticipated. I also sought to understand how parents and teachers came to make meaning of O&M within the context of their lives and professional roles. From this background, the broad research aim for this study was developed: how was orientation and mobility intervention, including long cane mobility, experienced and perceived by children, parents and specialist visiting teachers within a specific early childhood education context. This aim was broken down into three related research questions: firstly, what were parents’ and teachers’ experiences and perspectives of early childhood O&M intervention? Secondly, how did social interaction enable participants to construct meaning toward O&M and long cane mobility and, finally, what is the significance and influence of early O&M intervention for children and families?

These questions were devised keeping in mind the relevant historical, cultural and institutional conceptions toward blindness, education, O&M intervention and early long cane mobility as discussed in Chapters Two, Three and Four.
Research Procedure

As discussed in Chapter Four, children with low vision and blindness are supported in the education setting in Western Australia through a visiting teacher service, whose role is to provide strategies and assistance to families and schools to maximise educational outcomes, including the implementation of the expanded core curriculum. During the time frame during which the O&M intervention took place, 2004-2007, the early childhood team worked with children from birth through to Year Two of school (generally aged seven years). Some children within this age group attended the weekly EIP, focussing on the development of foundational skills of the expanded core curriculum, including O&M. The teachers in this group came into the role through various avenues, there being no training courses specifically in vision impairment education in Western Australia, and there was considerable variation in knowledge and understanding about O&M. Parents had no knowledge of O&M until the unexpected challenges of parenting a child with low vision or blindness meant they found themselves as part of this group. The research involved returning to members of the group four years later; my in-depth understanding of the program and well-established relationships with the participants that had developed from our previous experiences in the EIP allowed me to collect multiple stories grouped around the common theme of O&M intervention.

Ethics approval was required from both the Government of Western Australia Department of Education (Department of Education Western Australia, 2009) and the Human Research Ethics Committee at the University of Sydney (Protocol No: 13339). The Department of Education Western Australia (2009) application specified how participants would be contacted, data collection tools, and the use of additional data including documentation relating to their O&M intervention. Following these approvals (Appendices A and B), a total of twenty potential participants were approached to be included in the research via the Vision
Education Service (Appendix C). Initially all who were approached agreed to participate, however one family withdrew from the study prior to the interview stage due to their child undergoing serious medical treatment at the time. Ultimately, only one father was available to be interviewed; the final participant number therefore was fifteen, consisting of six teachers, and five parents and four children representing four families, all based in the Perth metropolitan area. Teachers and parents were initially contacted by mail via the Department of Education Western Australia (DETWA). Teachers received a Participant Information Statement (Teachers) and Participant Consent Form (Appendix D). Parents were sent a Parent Information Statement, Participant Information Statement (Parent/Guardian) and Participant Consent Form (Appendix E). Child participants were contacted through their parents, again via DETWA. They were provided with a Child Information Statement and Child Consent Form in a braille format, with a print transcription and a Parental/Guardian Consent Form provided for parents (Appendix F). Once participants were confirmed, an information letter and consent form for Department of Education Site Managers was sent to the relevant schools, via DETWA, to allow my access to school sites (Appendix G).

As the research progressed, I requested a modification to the original ethics approval in order to include archival video footage demonstrating O&M intervention between 2004-2007. This modification was approved on 20 June 2012 by the Human Research Ethics Committee, and is included in Appendix B. Additional consent to use this archival footage was sought from parents, all of whom agreed this material could be included within this study. The additional Parental/Guardian letter, Information Statement, and Consent Form relating to this modification are included in Appendix E.

Table 1 presents a summary of participants. All participants have an Anglo-Saxon background, reflective of the population demographics of Western Australia (Australian
Bureau of Statistics, 2014b). Pseudonyms have been used to protect the identity of participants.

Table 1

<table>
<thead>
<tr>
<th>Teachers</th>
<th>Years of teaching experience at time of interview</th>
<th>Teaching background</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emily</td>
<td>25+</td>
<td>Early childhood/early intervention</td>
</tr>
<tr>
<td>Michelle</td>
<td>25+</td>
<td>Early childhood/special education</td>
</tr>
<tr>
<td>Sophie</td>
<td>25+</td>
<td>Early childhood</td>
</tr>
<tr>
<td>Kirsty</td>
<td>20+</td>
<td>Special education</td>
</tr>
<tr>
<td>Amy</td>
<td>5+</td>
<td>Early childhood</td>
</tr>
<tr>
<td>Ella</td>
<td>20+</td>
<td>Special education</td>
</tr>
</tbody>
</table>
Parents | Age at time of interview | Child participating in study | Child’s age when O&M intervention commenced | Child’s age at time of interview
--- | --- | --- | --- | ---
Grace | 35 | Laura (No light perception) | 3 years | 12 years
Mary | 30 | Angela (Some visual function) | 3 years | 7 years
Melissa | 31 | Julie (No light perception) | 14 months | 8 years
Olivia | 41 | Stephanie (Some visual function) | 18 months | 9 years
Mike | 41 | | | |

**Data Collection**

Collection of data was achieved primarily through the use of open-ended interviews, as recommended by Denzin (2001a) and Prus (1996). A number of guiding questions were developed in order to “engage the participants in conversations across as wide a range of areas as possible” (O’Donoghue, 2007, p. 37), and hence generate data which would reveal their perspectives toward the research questions. In the development of the guiding questions, the views of Blackledge and Hunt (1985) were considered. They explain a participant’s perspective includes four interrelated components: the participant’s aims or intentions toward the phenomenon under investigation, their strategies in relation to this phenomenon, what they see as significant (and their reasons behind these points), and what they expect as the outcome of their aims and strategies. These four components were used as a starting point to develop the guiding questions as discussed below. As suggested by the name, guiding questions are intended to prompt a wide range of responses, not necessarily to be answered specifically.
Interviews

Interviews were conducted in a variety of locations, including DETWA offices, schools and participants homes, and recorded using a digital Pulse Smart Pen (https://www.smartpen.com.au/) so that a microphone and tape recorder were not required. During the interviews, although the participants were aware they were being recorded, the device was unobtrusive as it consisted only of the digital pen and notebook. This assisted in establishing conversational and relaxed interviews with the participants. An additional advantage was being able to utilise a “walking interview”, a participatory technique, Emmel and Clark (2009) explain, that offers “insights into the ways in which everyday life is embedded in and receptive to place” (p. 14). This technique provided valuable insights to children’s mobility as I walked with them throughout their school, the first stage of my contact with them as described in further detail below, and the Smart Pen was both unobtrusive and able to record clearly, even in noisy areas. In interviews with teachers and parents, I made use of archival video footage of children learning O&M techniques that was taken at various times between 2004-2007 in order to “invoke comments, memory and discussion” (Banks, 2007, p. 66); still images and transcription of this footage is presented within the data analysis where relevant.

Teachers and parents. Interview questions differed between participant groups. To explore the perspectives of the visiting teachers, conversations began by viewing video footage of children at the EIP, establishing teaching backgrounds, how teachers came to be involved with vision education and how they became aware of O&M. I then asked specifically about their involvement with the EIP program, using the following guiding questions to explore their perspectives and experiences of O&M intervention within the EIP during 2004-2007:
1) What intentions did you have around O&M intervention and the teaching of O&M techniques?

2) What strategies did you use in regards to the teaching of O&M techniques?

3) What significance did you give to the teaching of O&M techniques?

4) What outcomes did you expect from O&M intervention and the teaching of O&M techniques?

Teachers were also asked what influence they thought O&M intervention had on the children they taught, their initial thoughts toward early long cane mobility, and their opinions on teaching strategies such as using coloured canes and children naming their canes.

Guiding questions for parents were framed so as to explore their experiences and perspectives toward O&M intervention, both when their child was involved with the EIP program and within the current context of their everyday family life. Conversations began by viewing archival video footage of their child undertaking early O&M intervention either at the EIP or in the home. The following questions were then used as a starting point:

1) How did your family become involved with O&M intervention?

2) What aspects of O&M intervention were significant for you?

3) What did it mean to you for your child to receive O&M intervention when they were very young?

4) What opinions do you have about O&M intervention?

5) What influence do you think O&M intervention has had on your family?
Interviews with the teachers and parents ranged from between fifty minutes to three hours. All interviews took place during a single session, with the exception of the three-hour interview that was conducted over two consecutive days. My intimate knowledge of the EIP program enabled interviews to become conversations, with my own interpretations and perceptions being shared with the participant. Denzin (2001a) considers this to be critical within an interpretive interactionist approach, as it situates the researcher within the social group being studied, and assists in creating trust with interviewees.

**Data Collection with Children**

When investigating children’s lived experiences, Dockett and Perry (2007) feel “knowing children, and their knowing the researcher, as well as the context, are essential parts of constructing meaning and interpreting the data” (p. 52). Greene and Hill (2005) also acknowledge the critical importance in the research context of the development of trust between child and adult. This development of trust is also essential within O&M intervention programs, and I felt confident the significant amount of time I had spent with the children over several years would allow rapport to be quickly re-established, ensuring they would be relaxed and comfortable to share their thoughts and feelings. Strategies I already used as an O&M specialist when working with young children were a useful research tool. For example, France, Bendelow, and Williams (2000) suggest that being seen as a “non-adult” (p. 157) is a useful strategy to bridge the age gap and develop a relationship that is “honest, open and empathetic” (p. 152). The children all addressed me by my first name as they had when I was their O&M specialist; this strategy, along with allowing the child control over where we would have our interview, also helped to “separate” me from the teaching staff in the school, a factor to be considered when making children feel at ease in a research situation (France et al., 2000).
In order to provide children with the opportunity to express their points of view about using the long cane as a mobility aid, I adapted the “Mosaic Approach”, a multi-method framework for conducting research with children developed by Clark and Moss (2001). They describe this approach as participatory, reflexive, adaptable, focused on children’s lived experiences and embedded into practice. The mosaic has three separate components: observation, “child conferencing” (p. 12) or interviewing, and the use of “cameras, tours and mapping” (p. 12) as techniques for eliciting additional information about children’s experiences. This approach is highly relevant for my research although some techniques, such as the use of cameras, were adapted to be more meaningful to children who are blind. Instead of photographs, I asked the children to write a story about their cane to gain a broader perspective on their views around long cane use, a technique that also recognises “children’s different skills and competencies” (James, 2007, p. 269) in the ways in which they express their views.

Data collection with child participants therefore involved three components: a “tour” of their school, a semi-structured interview and a story written by the child about their cane. The aim was to capture a richer, broader view of how the long cane forms part of these children’s lives than would have been obtained by using the interview format alone. The three phases were all conducted over a single visit ranging from ninety minutes to two hours with either the child’s visiting teacher or their education assistant present, a DETWA requirement as I was no longer an employee. I knew all the children, although face-to-face contact with them had not occurred since 2007. The children are accustomed to their visiting teacher arriving at various times during the day, and to being away from the classroom for periods of time (such as during O&M sessions), so this was not a new or unusual experience for them. Suitable times were arranged with the classroom teacher via the visiting teacher.
Tour of the school. Lewis (2002) recommends choosing an activity as the starting point when conducting research with children; in this case, the tour acted as both a method of reintroduction to the children and beginning my interview. Clark and Moss (2001) define tours as “an exploration of an...institution guided by the children themselves” (p. 27). This was an ideal thematic fit with my research focus on orientation and mobility; when working as an O&M specialist in a school setting, a functional assessment observing the child’s ability to travel independently is initially undertaken. For the children involved in the study therefore, it was not an unexpected activity to be asked to take an adult on a tour around their school. Not only did this commence our time together in a relaxed way, it gave me an opportunity to observe the child using their cane, whilst allowing the child to have a sense of control over the session as they decided where we would walk. Our conversation whilst we were walking was recorded, producing interesting insights around the child’s long cane use, their mobility experiences and their confidence in moving around the school. It was then comfortable to move from the tour to asking the child if we could sit somewhere so I could ask them some questions about their cane (they chose a room, which was either the school library or their resource room where they tended to have braille sessions). It was very easy to move from the talking on the tour to asking more specific questions about their mobility and their feelings about using the long cane. The data collected during the tour was coded along with the interview data. Brief reflective notes about their long cane use during the tour phase were written at the conclusion of each session.

Interviews. Unlike the teacher and parent interviews, which asked them to reflect on past events, interview questions with the children were primarily focussed on the present and the meaning the long cane has for them now. It was anticipated the significance and influence of early long cane training would be discovered using this strategy, given the fact that all the children were very young when they first began learning O&M techniques. Guiding
questions for the children, developed using suggestions from Westcott and Littleton (2005), used the following open-ended questions as a starting point:

1) What do you remember about when you first got (cane name)?

2) What do you like using about (cane name)? What don’t you like?

3) When do you use (cane name)?

4) Where do you use (cane name)?

5) Where’s your favourite place to use (cane name)? Why?

6) Who else do you know who uses a cane?

7) What do your friends think when you use your cane?

8) What advice do you have for other children about the cane?

**Children’s written stories.** In all cases except one, stories were written during the visit to the school. The exception was one child who had been at home when the interview with the parent was conducted (playing in a different vicinity of the house), and who had excitedly written the story at home to give me when I visited her school the following day. One student who had an injured wrist and was therefore unable to braille independently dictated her story to me. Stories were transcribed by the visiting teacher, either on the brailled story itself or on a separate piece of paper, and are included within the following chapters.

**Analysis of Data**

Following the completion of all interviews, the analysis of data began with the process of transcription. I transcribed all interviews; although time consuming, it was important to follow Denzin’s (2001a) recommendation of immersing myself in the data as much as
possible in order to begin to attempt to define participant’s meaning in relation to the phenomena being studied. Following transcription, I used the qualitative data analysis software HyperRESEARCH v3.5 (Hesse Biber, Dupuis, & Kinder, 1990; Researchware, Inc, n.d.) to assist in coding. This process began with the uncovering of key words, statements and phrases relating to the topic under investigation, an initially overwhelming experience due to the large amount of data extracted from just a single interview. My first level of interpretation, following thematic analysis strategies recommended by Attride-Stirling (2001), involved returning to the interview guiding questions and devising a coding framework. For the teacher participants for example, the text was broken down into meaningful fragments through the development of a matrix that initially developed codes under the following headings: aims or intentions, teaching strategies, significance of O&M intervention, and outcomes of O&M intervention. From this process, forty codes were developed. I then developed a second matrix in order to categorise codes into relevant groups, a process Richards (L. Richards, 2009) describes as “topic coding” (p. 100). Code categories at this stage were still descriptive, and used the three research questions as a starting point in conjunction with issues emerging from the text itself. This resulted in coded text being grouped into one of the following broad categories: meaning of O&M intervention, teaching strategies such as naming the cane and the use of coloured canes, social interaction, and the influences of early long cane introduction. By following the same process for the parent and child interviews, I was able to generate a significant amount of coded text ready for interpretation.

The first step of interpretation involved taking the coded text in each of these categories and, using Attride-Stirling’s (2001) recommendations as a guide, creating sets of “basic themes” (p. 392). The example in Table 2 demonstrates how basic themes were identified within the category of “meaning of O&M intervention”, one of the topics identified within the teacher
interview data. Codes within this category were regrouped into clusters that represent “issues discussed” (Attride-Stirling, 2001, p. 396), from which basic themes were identified. Repeating this process across all topic codes resulted in twenty-four basic themes for teachers and twenty-two for parents. Children’s data, collected during both the school tour and the interviews, was also coded to the level of basic themes; as the scope of interview questions was narrower and the amount of text generated from this data much smaller than from the adult participant data, this resulted in four basic themes being identified. As this number is too few to categorise at the more abstract levels of “organising” and “global” themes (Attride-Stirling, 2001, p. 393), I chose not to interpret the children’s data further but rather to include it at this descriptive level in Chapter Eight to support and clarify teacher and parent perspectives. In this way, I felt children’s voices were still being included in the discussion. The full matrix of themes at the basic, organising and global level for all participants is included in Appendix H.
Table 2

*Example of Moving from Codes to Themes – Meaning of O&M Intervention for Teachers*

<table>
<thead>
<tr>
<th>Codes (Step 1)</th>
<th>Issues discussed</th>
<th>Basic themes (Step 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-Significance of O&amp;M intervention</td>
<td>-Comfort for families</td>
<td>Confidence in O&amp;M techniques generalise to all aspects of the child’s life</td>
</tr>
<tr>
<td>-Independent mobility</td>
<td>(confidence for their child’s future)</td>
<td></td>
</tr>
<tr>
<td>-Confidence</td>
<td>-Cane as a tool for independence</td>
<td></td>
</tr>
<tr>
<td>-Excitement</td>
<td>-Exploring</td>
<td></td>
</tr>
<tr>
<td>-Breadth of O&amp;M techniques</td>
<td>-Not wrapped up in cotton wool</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Safety</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Confidence that generalised to everything</td>
<td></td>
</tr>
<tr>
<td>-Perceptions from sighted children</td>
<td>-Capabilities of cane users</td>
<td>Good O&amp;M techniques can change stereotypical views about blindness</td>
</tr>
<tr>
<td>-Social perceptions</td>
<td>-Socialisation</td>
<td></td>
</tr>
<tr>
<td>-Young children not responsible enough to use the cane</td>
<td>-Responsibility of own learning</td>
<td>Good O&amp;M techniques allow the child to take responsibility for their own learning</td>
</tr>
<tr>
<td>-Needing other skills prior to cane introduction</td>
<td>-Mentoring other children</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Cane is a tool, not foreign to introduce it early</td>
<td></td>
</tr>
<tr>
<td>-Using the cane is natural</td>
<td>-Skill reinforcement</td>
<td>O&amp;M is a natural skill that “opens up the world”</td>
</tr>
<tr>
<td>-Access to the sighted world</td>
<td>-Natural skill</td>
<td>O&amp;M encompasses every aspect of learning</td>
</tr>
<tr>
<td></td>
<td>-“Opening up the world”</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-“It gave them their life”</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Same as sighted child, ‘normal’</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Impact on other learning</td>
<td></td>
</tr>
</tbody>
</table>

At this point, I followed Creswell’s (2007) recommendation of returning to the adult participants to confirm if these themes represented their views, and whether any significant points had been omitted. This was conducted via email due to the fact that I now reside on the eastern coast of Australia and it was not cost or time effective to return to Western Australia to undertake this process through further face-to-face contact with participants. All adult
participants provided written email responses, which were taking into consideration during the two stages of data analysis. Each stage of data analysis will now be described.

**Data Analysis: Stage One**

The purpose of the first analysis was to answer the first research question by detailing parents’ and teachers’ recollections of their experiences and perspectives of early childhood O&M intervention, and to reflect upon the process of how perspectives were acquired. Data relating to the participant’s early knowledge about and involvement with O&M intervention provided a background, their initial perspectives. This stage was labelled *starting a new journey*. The following three stages, *negotiating a bumpy road*, *reaching a turning point* and *a new path of understanding*, were identified through a process of classifying and reordering the relevant basic themes in order to present a story that “locates the phenomenon in the personal biographies and social environments of the persons being studied” (Denzin, 2001a, p. 79). I have included the full matrix representing how these stages were identified from basic themes in Appendix H, and this section of analysis is discussed in detail in Chapter Six.

**Data Analysis: Stage Two**

The second stage of data analysis was more complex. In order to explore the remaining research questions – to identify how social interaction enabled participants to construct meaning around O&M intervention and long cane mobility, and to identify the significance and influence of early O&M intervention for children and families – the basic themes were clustered together in groups that represented larger, shared concepts. For both the teacher and parent data, this resulted in six “organising themes” (Attride-Stirling, 2001, p. 393) respectively. These in turn were summarised to create two “global themes” (Attride-Stirling, 2001, p. 393) for each participant group, representing the interpretation of perspectives toward the meaning of O&M intervention. Table 3 provides an example of how I identified
the global theme of “social interaction” from the teacher data, with the full table representing basic, organising, and global themes available in Appendix I. These themes are explored in detail in Chapters Seven and Eight respectively.
Table 3

*Example of Moving from Basic Themes to a Global Theme - Teacher Data*

<table>
<thead>
<tr>
<th>Basic themes</th>
<th>Organising themes</th>
<th>Global theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Collaboration with the O&amp;M specialist</td>
<td>Teamwork</td>
<td>Social interaction</td>
</tr>
<tr>
<td>2. Collaboration with schools</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Good O&amp;M techniques send a positive message re a child’s capabilities – can change stereotypical views</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Coming into the educational setting already using the equipment normalised in for peers and teachers</td>
<td></td>
<td>Community</td>
</tr>
<tr>
<td>5. A confident child fosters increased acceptance and social integration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. O&amp;M techniques increase the expectations toward children who are blind</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. O&amp;M intervention is meaningful in children’s lives and needs to be shared with peers</td>
<td></td>
<td>Peers</td>
</tr>
<tr>
<td>8. Being surrounded by peers who were blind normalised the cane – everybody wanted one</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. ‘Competition’ between cane users was health and resulted in pride in the child’s own mobility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. O&amp;M is exciting and children learn from each other as much as from teachers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Young sighted children are curious and interested in O&amp;M techniques and long cane mobility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Sighted peers developed a pride in child’s achievements</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Throughout the data analysis process, I maintained a routine of keeping memos (L. Richards, 2009) as a means of recording my thoughts and reflections of emerging ideas and themes. These are in the form of both written memos stored electronically, including utilisation of Bazeley’s (2013) “describe, compare, relate” (p. 16) technique, and mind maps drawn in a large sketchbook. An example is provided in Appendix J. I also kept reflective notes following my visits to the children’s school, recording my thoughts and observations immediately upon the completion of the visit. These are referred to, where relevant, in the following chapters.

This concludes the information on data collection and analysis. The final considerations within this chapter involve what Tracy (2010) refers to “qualitative quality” (p. 837); in other words, does the data have value? Lincoln and Guba (1985) use the term “trustworthiness” as a means of determining the validity and reliability of qualitative data; how this was achieved within my research is now discussed, along with ethical considerations and issues of confidentiality.

**Trustworthiness of the Data**

The validity and reliability of qualitative data is achieved, according to Lincoln and Guba (1985), through the criteria of credibility, transferability, dependability and confirmability; these terms are used in place of the traditional quantitative research terms of internal validity, external validity, reliability and objectivity. Each of these criteria, and how it was achieved within my research, is now discussed.

**Credibility**

Credibility refers to how “honest” the final report seems to the participants, in terms of how well it captures their reality. Denzin (2001a) confirms the interpretive interactionist approach requires the researcher to be personally situated within the processes being researched, rather
than a neutral objective observer. My participation in the EIP during the time-frame the research focusses on and my in-depth understanding of the culture enabled me to be confident that trust with the research participants would be established quickly, and to determine what aspects were relevant and of interest. My own values and assumptions that have influenced this study have been identified throughout this chapter.

Miles and Huberman (1994) note that verification of the data can be built into the data collection process by collecting and double-checking findings throughout the research. This process, known as member checking, allows for interpretations and conclusions to be taken back to participants to ensure their accounts have been represented correctly. As described, I chose not to ask participants to view raw coded data, as it was felt this could be rather overwhelming. Rather, I used Creswell’s (2007) recommendation of a preliminary theme analysis, asking participants to confirm via email if the initial themes represented their views, and whether any significant points had been omitted. These responses were considered during both stages of the data analysis.

The credibility of the data can also be enhanced through the use of multiple sources of data, which allows for triangulation and a deeper clarification of meaning (Tracy, 2010). In addition to accessing case files, I was able to make use of video footage that had been taken over the duration that I worked at the EIP. Using the software package Transana (http://www.transana.org), I transcribed and created still images for the purpose of “enabling the reader to gain a sense of the relevant phenomena and how they bear upon the observations, insights and arguments that are being presented” (Heath, Hindmarsh, & Luff, 2010, p. 121). As described previously, relevant archival video footage was used during teacher and parent interviews as a means of invoking memories of children’s early long cane
mobility at the EIP. Selected “video snapshots” taken from some of this footage are included within the findings where relevant.

Tracy (2010) proposes that a researcher’s “tacit knowledge” (p. 843) of the phenomenon under investigation provides an additional means of establishing credibility in qualitative research. She argues the key to understanding behaviour and interaction comes from the researcher’s ability to “delve beneath the surface to explore issues that are assumed, implicit, and have become part of participants’ common sense” (p. 843). One strength of this research is the tacit knowledge I have gained as a practitioner within the O&M field over a period of twenty-six years. Over that time, I have observed the changes within practice that have occurred within the field, particularly in terms of O&M intervention with children. I also had a tacit knowledge of the research setting, which enabled me to have a deeper understanding of perspectives identified in interviews and to interpret perspectives in light of that knowledge.

**Transferability**

Transferability in qualitative research involves providing readers with sufficient information to determine whether the findings are plausible, according to Creswell (2007). An essential element is the use of “thick description”, which captures and represents the meanings of actions or events for participants and is interpretive rather than descriptive. Denzin (2001a) describes the goal of interpretive interactionism as creating “a text that permits a willing reader to share vicariously in the experiences that have been captured” (p. 99). In this study, a morning at the EIP has been described in detail, and thick description examples are provided within this study against each of the themes uncovered in the analysis. My tacit knowledge (Tracy, 2010) of both the nature of O&M intervention and of the research setting allowed me
to present thick description that I believe accurately represents the experiences and perspectives presented in this study.

Dependability and Confirmability

Miles and Huberman (1994) explain that dependability in qualitative research determines “whether the process of the study is consistent, reasonably stable over time and across researchers and methods” (p. 278). Dependability is established by the development of an “audit trail”, as demonstrated through thorough record keeping of all information collected during the course of the study (O’Donoghue, 2007). Throughout the research process, the process recommended by Richards (L. Richards, 2009) of referencing and dating all the steps involved during the interview coding, along with memos, diagrams and reflective journal entries used during the data collection phase were followed. Multiple copies of all records were kept. The audit trail also ensures “confirmability” of the data; defined by Lincoln and Guba (1985) as the “extent to which the data and interpretations of the study are grounded in events rather than the inquirer’s personal constructions” (p. 324).

Interpretive research does not seek to be valid or objective as quantitative research does. As Denzin (2001a) explains, this is an issue of power; interpretive qualitative researchers understand that power is embedded within all social structures, and conducting research involves having power over how the research is interpreted and used. It is therefore acknowledged this research is my interpretation of the participants’ lived experiences and does not seek to be generalisable to other populations or communities. As with all research, this study has limitations; these are discussed following an explanation of the ethics procedure.
Ethical Considerations and Confidentiality

In addition to ethics approval from the University Human Research Ethics Committee, specific ethics approval for this project was obtained from the Department of Education Western Australia (DoEWA). Information letters and assent/consent forms for children, parents and teachers were developed using the DoEWA’s written policy guidelines for conducting research within Western Australian schools. These guidelines cover issues of participation and consent, participant and data withdrawal, privacy and confidentiality, checks for undertaking research on Department sites, insurance cover, publication and reporting of findings, and the research approval process. Written consent was obtained from all participants. With regards to research with children, it is a DoEWA requirement researchers must:

Obtain informed written consent from a primary caregiver and the research participant if the participant is a minor under the age of 18 years. Informed consent from a primary caregiver must indicate that he or she has discussed the matter with their child, who in turn has agreed to participate. (Department of Education Western Australia, 2009, p. 5)

Including children in research can be ethically challenging, particularly when obtaining consent for participation. The youngest child in this study was seven years old at the time of interview contact; research from both Ford, Sankey, and Crisp (2007) and Hill (2005) has indicated that, through the use of developmentally appropriate language and explanations, children this age are able to understand the concept of a research study and thus make decisions around participation.

With this in mind, care was taken in developing an appropriate information letter/consent form for the children participating in this project. The DoEWA provides an information letter template (Department of Education Western Australia, 2009), which was used with some project specific modifications. The template for young children (rather than older primary
children) was chosen so as to be suitable for the entire age range (six to twelve years) of the children in the study. Information was provided in an accessible braille format for the children, with a print transcription for parents. As children were not necessarily able to sign their name, I followed Dockett’s (2008) strategy of providing stickers for the child to indicate whether they wished to participate by placing the sticker next to the brailled YES or NO. Bright “smelly” stickers were used to provide additional sensory input, given visual cues were not relevant to all these children. As some time passed between the child receiving the initial information letter and the data collection process, I followed Conroy & Crisp’s (2009) recommendation of beginning my visits by asking each child if they knew the purpose of the visit, and confirming they agree to participate in the project.

Care was also taken to follow the ethical conduct guidelines issued by the National Health and Medical Research Council, Australian Research Council and the Australian Vice-Chancellors’ Committee in their National Statement on Ethical Conduct in Human Research (National Health and Medical Research Council, 2007). Specifically, the guidelines on “children and young people” and “people in dependent or unequal relationships” were closely reviewed to ensure guidelines were met.

Participants were informed they had the right not to participate and could withdraw from the study at any stage. All information obtained during the course of the study remains confidential. All data, including documents, interviewer notes and interview transcripts were stored securely in the researcher’s home office during the active phase of the research. Upon completion, all original material, including data and analysis material have been forwarded to the University of Sydney for secure storage in the Department of Education and Social Work for a period of seven years, after which they will be destroyed in accordance with University procedures.
Limitations of the Study

Whilst this research aims to present a new contribution to how early childhood O&M intervention can be understood, the study has limitations. Firstly, the findings represent the experiences and perspectives of a unique and specific group of children, parents, and educators, in a specific region of Australia and bounded by a specific time frame. Given the retrospective nature of the research, these perspectives may be limited by participants’ memory of events, and influenced by the participants’ familiarity with the researcher’s position on early long cane introduction. Therefore, it is not reasonable to expect that these results can be generalised beyond this particular case. Secondly, the participants’ lives and their social contexts have changed, and will continue to change, since the time frame with which this study was concerned. Consideration therefore needs to be given to the fact that participant perspectives are relevant to the period in which the study was being conducted, and may have shifted over time. Thirdly, the research has focussed on a very small number of participants, and is primarily concerned with children who are blind but have no other significant disabilities. Although some of the findings may be relevant to broader populations with vision loss, this cannot be assumed.

On reflection, there were some problems with the data collection processes. As I was no longer an employee of the Department of Education in Western Australia when the field research took place, approval to conduct the research on school sites required that children be interviewed in the presence of their education assistant or visiting teacher. An issue that arose as a result was that on occasion, during times where I was deliberately pausing or waiting for the child to answer, the education assistant or visiting teacher began to prompt the child or ask a different question. These “interruptions” were included in the data transcriptions to try to minimise the effect they might have had on a child’s response. In hindsight, although I had discussed what I was doing with the staff, clearer instructions on the importance of not
interrupting my conversations with the child would have been useful. A further limitation of the data collection is the absence of fathers’ voices. Although I attempted to include fathers in the data collection process, only one participated in the interviews. This possibly reflects the role of mothers as the primary caregivers for children with disabilities (Resch et al., 2010), however it needs to be taken into account that fathers may present differing perspectives toward early childhood O&M than are presented in this study. The interview including a father was conducted with both parents present, with conversation tending to be dominated by the mother. This suggests it would be more valuable to interview parents separately in order to gain a clearer understanding of both mothers’ and fathers’ perspectives.

Throughout the study, I have endeavoured to identify my own assumptions, emotions and values, consistent with Denzin’s (2001a) interpretive interactionist approach. It is recognised that the findings represent my interpretation of participant experiences and views, and that these interpretations are influenced by my personal involvement with the EIP and children, families, and teachers involved prior to the research being undertaken. I have attempted to support my interpretations through the use of multiple data sources including interview data, archival documents and video footage. In spite of these limitations, the study aims to contribute to an understanding of how early childhood O&M intervention can be perceived and experienced, and offer possibilities for further avenues of research both within Australia and other regions of the world.

**Conclusion**

This chapter has described the philosophical approach to my research, and explained my choice of interpretive interactionism as a theoretical perspective. The underpinning approaches of symbolic interactionism, phenomenology and hermeneutics have been described in relation to how these perspectives influence interpretive interactionism. Finally,
the methods utilised throughout the research have been described, concluding with ethical considerations. The following three chapters present the findings, exploring experiences of early childhood O&M intervention through the documentation of a broad range of participants’ experiences. The emphasis is on allowing the participant voices to present their perspectives, thus capturing some of the richness and diversity of their experiences.
Chapter Six: Perspectives of Parents and Teachers Toward O&M Intervention

This chapter is the first of three data chapters investigating how children, parents and specialist visiting teachers experience and perceive early childhood orientation and mobility intervention. O&M experiences encompass O&M intervention and the subsequent acquisition of long cane mobility and O&M techniques, the combination of which results in the child’s O&M action. These chapters include analysis and discussion, drawing on symbolic interactionism and, to a lesser degree phenomenology, to explore the research questions.

The primary focus of this chapter is the first research question: what were parents’ and teachers’ experiences and perspectives of early childhood O&M intervention? The chapter explores how perspectives toward early O&M intervention developed and changed over time, as traced through the representative stories of one parent and one teacher. Within this chapter, parents and teachers recall their experiences of early childhood O&M intervention within the context of the EIP located in Western Australia (WA) between the years 2004-2007. Issues discussed include the barriers faced by parents and teachers upon commencement of the program, the role of the visiting teacher in relation to O&M intervention, how O&M techniques were implemented within the EIP, and how the long cane came to be the mobility aid parents chose for their child. Participant stories have been captured through thick description, allowing for common themes to be identified and individual stories constructed and presented as they occurred in sequence (Denzin, 2001a). Contextualising these stories within the social worlds in which they occurred presents an interpretation of how interaction between parents and teachers influenced perspectives, and introduces key issues and concepts that will be explored further within the following two data chapters.
Within the interpretive interactionist approach, Denzin (2001a) explains, “description provides the framework for interpretation” (p. 137). Therefore, this chapter begins by describing a typical morning at the EIP, demonstrating how O&M intervention was implemented within that program. Knowledge of the social interaction processes within the EIP is essential to understanding the interpretation of data. To recap, the EIP catered for children with low vision or blindness but generally no other significant disabilities. Between the years 2004-2007, the time frame with which this study is concerned, the program was staffed by early childhood teachers including the O&M specialist and was conducted once a week at a centrally located primary school in Perth. The children who attended were aged between eight months and eight years, and there were between four and eight children attending each week, allowing for a staff/child ratio of close to one-to-one. The program is still in existence, although there is no longer an O&M specialist on staff.

**A Visit to the Early Intervention Program**

Each Friday morning, a preschool building within a centrally located Perth primary school becomes transformed into the location for the EIP. Prior to the children arriving, teachers unpack the poem cards, brightly coloured and including both large print and braille, and place them alongside braille books on the bookshelf; the ingredients to make the play-dough are organised in the kitchen; three or four braillers and a supply of braille paper are placed on a round desk with a chair at each one; and the painting easels are set up on the verandah. The container of rice is poured into a large plastic tray and “magic stones”, rubber snakes, plastic dinosaurs and toy cars are hidden amongst the rice, as searching for these items provides both a tactile experience for the children and provides a fun method of introducing techniques of systematic searching.
The children attending the EIP include older children already attending school, who take Friday morning off from their regular classes in order to participate, along with those who are still very young and yet to commence formal schooling. As children arrive for the morning, some walk independently using their long canes, whilst parents guide others. The first task for children is to find a hook on the wall outside the classroom in order to hang up their backpack and their cane. The smallest children need some assistance with this, but the older ones are expected to complete this task independently. Parents generally depart at this point; although they have the choice to participate in the entire session, most choose to take this time to complete other activities, returning at the end of the two-hour session.

The session begins with “circle-time”; the very small children sit in a teacher’s lap, whilst older children sit cross-legged in between their friends or next to a teacher. The first task is to sing the “good morning” song, so everyone in the circle can introduce him or herself and learn who is sitting in the circle and in what position. If necessary, teachers will quietly remind children to lift their head when they say hello, an important social skill. Children then have the opportunity to choose from a selection of nursery rhymes and songs on the poem cards, which, in addition to the large print and braille, have tactile representations at the bottom of the card; Figure 2 presents an example of a poem card with a representation of a long cane. The child who chooses is given enough cards for every other child and must hand the cards out, reinforcing their ability to remember who else is there and develop listening skills so they can reach across the circle and give each child their card. When the song is finished, the same child collects the cards back and hands them to a teacher to return to the bookshelf.
Morning teatime is used to reinforce O&M techniques as children independently travel to the bathroom to wash their hands. Modified body protection techniques are used, with teachers providing a verbal prompt if required. Children then make their way to the veranda, trailing along the hooks until they identify their own bag through touch. Adults provide assistance if required, but the children learn to take their own bag off the hook, unzip it and take out their lunch box, then rehang their bag before taking their morning tea inside. The children are also expected to unwrap their morning tea, learn how to put straws in box drinks and to open small plastic packets of biscuits or cheese. Again, assistance is provided if required, but there is an expectation that children will complete these skills independently. Whilst the children are having morning tea, teachers step away from the table so children can develop social skills such as initiating conversation, taking turns, and listening to each other without excessive adult input or interference.

When morning tea is complete and lunch boxes returned to bags, children choose an activity such as painting, finding the objects in the rice, or playing in the playground. If they want to find the swings or the wooden tree house, these opportunities are used to provide a choice around O&M techniques. Children can use their cane, trail the fence, or follow the sound of a
teacher’s voice whilst they use modified body protection techniques. Although under close supervision, children travel independently with teachers only intervening if the child is obviously disoriented or is going to contact an obstacle in a manner that is not safe; in that way, children learn to be independent, self-reliant and confident in their own ability. The morning ends with a second circle-time, where the group can discuss what has occurred through the morning before singing the “good-bye” song, which provides another opportunity for children to practice social skills. As parents arrive, the children independently find their way back out to the hooks on the verandah to collect their bags and their canes, before walking back out to the car park semi-independently or being guided by a parent.

The above description of a typical morning at the EIP describes how, when and where the participants involved in this study experienced much of their interaction involving early O&M intervention. Denzin (2001a) clarifies the use of such descriptions allows the researcher to “capture the phenomenon...locating and situating what is to be studied in the natural world” (p. 74). This then allows participants’ stories and experiences to be interpreted within this specific context, identifying the common themes and meanings through which participants define the particular phenomenon (Denzin, 2001a). The following section begins by defining “perspectives” within the context of this study, before presenting the stages participants moved through as they acquired perspectives toward young children’s O&M experience.

**Defining Perspectives**

A perspective, according to Prus (1996), represents an individual’s worldview, encompassing people’s definitions of “rules, norms, prevailing practices, lines of authority, consensual understandings, and other ‘rules of thumb’ people develop to provide guidance of a generalised nature” (p. 151). Until becoming personally or professionally involved with a
child for whom O&M was an essential life skill, parents and teachers in this study had limited or no perspectives on O&M intervention. For parents, all of whom are sighted, their experiences began with a fear of the unknown, of suddenly having to deal with the emotional and practical concerns around parenting a child with blindness. There was little knowledge about O&M intervention and what it involved for their child. Parents received conflicting advice around early mobility aid use, and found themselves having to deal with the preconceptions of others toward their child and his or her abilities. For teachers, the majority began working in the vision impairment field with little or no previous exposure to O&M intervention or techniques. Their early experiences included feeling frustrated as they attempted to establish an educational service that included O&M intervention, and, as with parents, working through issues around their own and others preconceived views toward blindness and independence in very young children. This chapter examines how the perspectives of both parents and teachers evolved from this beginning point to a position where O&M action was seen as a central life skill embedded within children’s daily educational and family life.

Figure 1 provides an illustration of the stages participants moved through as they acquired perspectives toward young children’s O&M experience. This figure utilises the interpretive interactionist approach of Denzin (2001a), providing an interpretation of the multiple experiences and stories captured in parent and teacher interviews. From these interviews, basic themes pertaining to the experience and meaning of early childhood O&M experiences were identified using the data analysis process as described in Chapter Five, then classified and reordered to present a story. The aim is to present a “sequence of experience” (Denzin, 2001a, p. 117) that allows for an understanding of how interaction between participants produced a shared meaning toward O&M intervention and ultimately children’s O&M action.
This is not to suggest that all participants experienced the same linear journey, rather to present the common themes underlying the findings.

Figure 1: Stages of parent and teacher perspective acquisition identified from basic themes.

The four stages of perspective acquisition illustrated in Figure 1 reflect the symbolic interactionist influence underpinning the methodological position of interpretive interactionism by focussing on participant actions, emotions and motives for behaviour. This approach builds on Blumer’s (1969) proposition that individuals act toward things on the basis of the meanings those things have for them, interpreting and modifying these meanings through social interaction. In order to discuss Figure 1 and answer the first research question, I have chosen to present the individual stories of parent Melissa and teacher Sophie. Interpretive interactionist methods attempt to “find the same recurring forms of conduct,
experience, and meaning” (Denzin, 2001a, p. 79) within participant’s lived experiences, and a focus on two illustrative accounts allows for a rich descriptive interpretation highlighting important themes and concepts that are further explored in the following chapters. Prior to the presentations of Melissa and Sophie’s stories, the context behind the establishment of the EIP and the implementation of O&M intervention within that program are presented. This provides the contextual understanding of the establishment of the EIP, that allows Melissa and Sophie’s experiences to be interpreted, and outlines the challenges and barriers both parents and teachers encountered when O&M intervention was first introduced to the EIP program.

**Establishment of the Early Intervention Program**

Traditionally the Department of Education in WA had not been involved in providing services to young children with low vision or blindness prior to them entering the education system at around four years of age (Douglas, 2003), with services for younger children provided through a rehabilitation agency. Following the establishment of the EIP in the late 1990s, basic O&M intervention was provided to children attending the EIP on a consultancy basis via that agency. However long cane mobility was not available to very young children until the Department of Education employed an O&M specialist as a member of the EIP team in 2002. Michelle and Emily both held leadership roles within the EIP; their experiences as discussed over the following several paragraphs provided insight into the establishment of the program and the challenges involved.

The EIP was principally aligned with the New Zealand *Te Whariki* and *Te Kohanga Reo* (language nest) philosophies described in Chapter Four, and based on a similar New Zealand program initially established to introduce foundational braille skills to very young children with blindness. Teacher Emily, who was involved with the New Zealand program, explained:
In those days, children did not get exposure to braille until they were five. They did not get exposure to any specialised education service bar contact at that stage with someone like myself. So I started reflecting back and thinking what I know about children’s knowledge base and how they learn. They need those early experiences, so what harm can I do to provide some experiences of braille?

These early braille experiences proved successful, leading Emily to contemplate at what age other skills such as orientation and mobility were being introduced. She recalled, “I was watching little wee ones having difficulty with their mobility. They were gaining skills in all sorts of things, but then everything I was reading was talking about spatial awareness and trying to get kids moving through space.” An O&M specialist was subsequently appointed to the team in New Zealand, resulting in a program including early O&M intervention; the program results were later presented at a conference attended by the Western Australian manager. When Emily relocated to Perth, the opportunity was taken to introduce the program as a component of the visiting teacher service. Initially this proved challenging because, as Michelle observed, “The Education Act didn’t cover the areas we were moving into”. Nonetheless, through persistence and the establishment of a new staffing formula, described by Douglas (2003), funding was attained to employ a number of specialist early childhood teachers and develop an early intervention program.

**O&M Intervention within the Early Intervention Program**

During the early years of the EIP, prior to my appointment, very young children received limited O&M intervention. Primarily this was due to a lack of qualified O&M specialists, a longstanding issue in Australia (Deverell & Scott, 2014), although the misconception that O&M intervention in educational settings is primarily concerned with long cane mobility with older children (LaGrow, 1998) and the traditional resistance to early long cane mobility as discussed in Chapter Three also had an influence. With no O&M specialist amongst their staff, the first option was for the EIP to “buy in” consultant O&M specialist time from the
outside rehabilitation agency. Although there was funding available for this consultancy service through the Department of Education, the lack of qualified O&M personnel in the region meant that, as Michelle recalled:

[We] lost even the ability to buy as much [O&M] time as we needed. We had money that we could have bought more, but they [rehabilitation service] didn’t have the availability, the resource, to allow us to buy.

Attempts to overcome this difficulty by employing an O&M specialist directly with the Department of Education was hampered by the requirement that O&M specialists have additional qualifications in education. Michelle explained:

We’d explored with the Department whether we could employ an O&M as a straight O&M [that is, without an education qualification] and it was trying to put a square stick in a round hole as far as the Department was concerned. There was just no way that their rules would allow that.

In addition to these difficulties obtaining qualified personnel, teachers recalled feeling frustrated as they were exposed to differing opinions on when long cane mobility should be introduced to young children. Allied health professionals in other related fields, the key contact people through which referrals for O&M intervention from the rehabilitation agency were directed, resisted requests for early long cane introduction. Emily recalled attempts to incorporate long cane mobility within the EIP:

Blocked, totally blocked. Told, ‘That’s not your job, you don’t do that, it’s a physio’s [physiotherapist] role. An OT [occupational therapist] will assess whether that child has the capabilities of actually holding a long cane. They don’t have those skills until they’re five’.

These views reinforce Breen et al’s (2011) assertion that the Australian allied health sector continues to be dominated by the medical model of disability, and demonstrate how historical and cultural assumptions around the ability and “appropriateness” of young children using long canes become sedimented into a “taken-for-granted reality” (Fine, 1992, p. 96). These “realities” are further reinforced, Shibutani (1955) argues, because group perspectives are
attained through participation in “reference groups…that group whose perspective constitutes
the frame of reference of the actor” (p. 563). Within the rehabilitation agency, the nature of
O&M intervention was influenced by different backgrounds and perspectives than those of
the educationally based reference group within which teachers were located. Shibutani (1955)
explains that “variations in outlook arise through differential contact and association; the
maintenance of social distance – through segregation, conflict, or simply the reading of
different literature – leads to the formation of distinct cultures” (p. 565). The structural nature
of the two organisations meant there were limited opportunities for communication between
professional groups, which unfortunately led to conflicts of opinion between professionals
and a degree of “territoriality” around what services should be available to families. Such
difficulties are not uncommon in the health, social service and education sectors, and have
been explored in depth by scholars including Irvine, Kerridge, McPhee, and Freeman (2002)
and Richardson and Asthana (2006). Additionally, there were specific issues involving
parents and teachers receiving conflicting advice about O&M intervention from professionals
trained in related allied health fields but without orientation and mobility qualifications. This
reflects both the shortage of O&M specialists and the lack of professional recognition and
certification for O&M specialists in Australia, an issue currently being addressed by the
profession (Deverell & Scott, 2014).

A turning point for the development of the EIP came about with my employment as the
O&M specialist, returning to Western Australia after working in the United Kingdom. With
qualifications in special education, I could be employed directly with the Department of
Education as a Visiting Teacher/O&M specialist. Emily remembered feeling excited about
the employment of “a skilled O&M who would be open enough to be looking at something
that was not part of their training, really different and really new.” As will be discussed in
more detail in the following chapter, my employment led to a process of professional
cooperation that enabled the individuals working within the EIP to provide a service that, as Emily said, “was radically different from what had been provided before”.

Despite this early excitement, establishing the O&M specialist role within the education team was challenging as there was no clear definition of the O&M specialist role within the education sector and preconceptions existed as to what this role should involve. With early O&M intervention not a common practice, some within the education sector questioned my involvement with that team. Michelle recalled, “Some views, and I think they still prevail in some states (of Australia), is all the O&M is there to do is sighted guide and teach children how to use a long cane. They don’t get involved in other parts of education”. Emily noted, “Like all other services I worked for, where there are teachers whose core teaching skills are for older children, they questioned the use of resource”. However, Michelle recalled a strong view that “decisions about the children’s education shouldn’t be made on an economic basis” was maintained, with the staffing formula mentioned earlier used to support an O&M specialist role. Even so:

It was a challenge in terms of stretching the money, and finding what was needed. The frustrating parts were the political infighting about whether young children were the best way of spending that money. I still find it really difficult that anyone at all in education cannot see the importance of building a sound base for what you want to do. In every profession that I know of, you look at what you’re doing at the foundations first and then build on that. (Michelle)

The establishment of the O&M specialist role within the EIP team provided the opportunity for teachers, parents, and myself as an O&M specialist to reevaluate perspectives toward early O&M intervention. Perspectives change, according to Prus (1996), when the views to which individuals are first exposed, such as those described above, are defined as “ineffective” (p. 151); the interaction that occurred as a result of O&M intervention being implemented within the EIP, and how this interaction influenced perspectives, are explored in
further detail in Chapters Seven and Eight. The discussion in this chapter now turns to the first stage presented in Figure 1, *starting a new journey*, which is summarised from the perspectives of all parent and teacher participants.

**Starting a New Journey**

**Early Experiences of Parents**

It’s all unknown to you. You’ve never come across it before. It is really hard. (Mary)

You don’t actually process it in your own head. You haven’t really got time to sit there and think because...well, they’re a baby and then you go, ok well here’s another one for you, it’s a blind baby...and you’re like, right, ok...what do I do now? (Grace)

When asked about their early memories upon learning of their child’s diagnosis, parents recalled feeling concerned for their child’s future. Having no previous experience or exposure to blindness meant parents did not know what to expect from themselves, from professional intervention or from their child. This was a life-changing event, and all remembered they were thrown into a world they felt unprepared for and knew little about. Grace felt “a bit shaky”, and Mary confused, saying, “It was really hard to know what was going on”. Mike initially thought his child “was born with no eyes”. These initial emotional reactions led parents to question what life held in store for their families.

In answering Grace’s question – ”What do I do now?” – a natural assumption would be that parents were referred to appropriate agencies for information and professional support. As described in previous chapters, WA has one central agency providing services to people of all ages who have low vision or are blind. Children also receive educational support through specialist visiting teacher service within the Department of Education. Specialist early childhood education intervention was not available until the implementation of the EIP during the late 1990s, nevertheless all parents participating in this study were able to receive
services from both agencies from the time their child was born. As Grace remembered however, referral was not necessarily an automatic process:

She was about eight months old when the doctor said, “Oh, you better go to the Association”, and I went, “What? What are you talking about?” I knew nothing! I knew nothing.

Timely referral to professional support is critical. All parents identified that they were reliant on professional support agencies to provide advice and input around the life skills their child needed to learn without the use of vision. Orientation and mobility is one of these skills, and this was an area parents had not considered and knew little about. Olivia recalled:

We didn’t realise O&M was a therapy or a subject or a...part of life really now. I didn’t actually give any thought about how people learn to walk around or, just thought, you know, they teach themselves.

Early childhood O&M intervention that included long cane mobility was not available until the EIP began to offer this in 2002. How parents experienced early O&M intervention and the resulting perspectives that emerged are explored through Melissa’s story; prior to that the background of teacher participants is briefly described, followed by a short discussion of the history behind the development of the EIP.

**Early Experiences of Teachers**

For teachers, *starting a new journey* began with their employment within the EIP. Qualifications and training opportunities for specialist visiting teachers in the area of vision impairment are not consistent across Australia (National Disability Services and Australian Blindness Forum (NDS & ABF), 2008); postgraduate courses are available on the eastern seaboard but Douglas (2003) confirms never within Western Australia. Teachers participating in this study came to the role with a background in either early intervention, early childhood or special education. Once in the visiting teacher role, teachers were encouraged to undertake part-time, distance education study to complete a Graduate Certificate in Education (Vision
Impairment) via Flinders University in South Australia. There was, therefore, considerable variation between teachers in terms of their knowledge and understanding of O&M intervention and techniques when I joined the EIP team in 2002 as the O&M specialist.

The Department of Education Western Australia describes the role of the visiting teacher as follows:

[To] ensure students with vision impairment have access to the curriculum by advising on teaching and learning adjustments. They also implement the Expanded Core Curriculum in areas such as reading and writing Braille, assistive technology and orientation and mobility. (Department of Education, n.d.)

As discussed in Chapter Three, there is a lack of clarity around role responsibilities with regards to O&M intervention within Australian educational settings. LaGrow (1998) defines the visiting teacher’s role as providing instruction in “concept development, basic orientation skills, map skills, self-protective techniques, human (sighted) guide techniques, and sensory development” (p. 205), with the O&M specialist teaching the child “to use formal orientation and mobility skills in outdoor and uncontrolled environments” (p. 205). In practice, O&M specialists are often not involved with a child until long cane mobility is introduced (Scott, 2009). I argue that O&M intervention needs to be considered more holistically as O&M techniques cannot be separated into “basic” and “formal” skills, and a deep level of cooperative professional practice is essential for effective skill development, particularly in the early years. The following chapter discusses the importance of cooperative practice in enabling teachers and parents to develop a shared perspective and philosophy toward early O&M intervention.

This concludes the background information relating to the establishment of the EIP and the implementation of O&M intervention within this program. The remainder of this chapter discusses the three remaining stages of perspective acquisition as illustrated in Figure 1:
negotiating a bumpy road, reaching a turning point and developing a new path of understanding. These stages are explained and interpreted through the personal stories of parent Melissa and teacher Sophie, followed by a discussion on the implications of these stories.

A Parent’s Perspective: Melissa’s Story

Melissa is the parent of two children, the youngest of whom is blind. She became involved with the EIP through the recommendation of another parent and, as with all the parents involved with this study, had no previous knowledge of blindness or what services were available for her daughter. She remembered, “A parent put me onto the EIP. I knew nothing about it and I met her obviously through the Association. I didn’t really think or know too much about anything when we first started there”. When Melissa’s daughter Julie began attending the EIP, there was one other young child, Stephanie, who had begun to use a long cane. However, there were also several older children still receiving O&M intervention from the rehabilitation agency who were using the Connecticut pre-cane, as described in Chapter Four, as their first mobility aid. (It should be noted that both parents and teachers used the term pre-cane rather than AMD, and that terminology is used throughout the data analysis to avoid confusion.) During our interview, Melissa spoke passionately around the early introduction of O&M techniques and what they meant to her family and young daughter Julie.

Negotiating a Bumpy Road

Negotiating a bumpy road relates to the early challenges and barriers faced by parents and teachers as long cane mobility was made available to young children. When Julie began to receive O&M intervention at the EIP, she was fourteen months of age and had just begun to walk. In addition to attending the EIP, Julie was receiving services such as physiotherapy and
occupational therapy through the rehabilitation agency, and Melissa was encountering differing opinions toward the introduction of long cane mobility with Julie. My case notes from that time record Melissa asking if I could speak with the allied health professional who was recommending a pre-cane device. I noted “I have given ‘Melissa’ some recent literature re use of the long cane, and this is the option she has chosen” (Department of Education Western Australia personal case notes, 8 April 2004). Melissa made this decision based both upon this written information and her observations of Olivia’s daughter Stephanie using the long cane. Melissa felt Julie should have the same opportunity as Stephanie, recalling, “I was really excited. I think I was one of them that pushed for her to get the cane as soon as possible”. She elaborated, “I liked the idea of her having the cane straight away, and for her just to understand that’s what she needed it for, from such an early age. For her to get used to always having it with her.”

The decision to commence long cane mobility led to some conflict between Melissa and other professionals working with Julie as the following exchange illustrates:

Melissa: I copped flak (sic) for not using the pre-cane. I got told that she was much better off if she started with the pre-cane. I asked them to give me the reasons why she was better off and the reasons they gave me just weren’t valid...I did get pressure to use the pre-cane, very much so...but for me it just wasn’t even a question.

Bronwen: What do you think your main reason was that you didn’t want to?

Melissa: For not using it? One of the things, it wasn’t recognisable. If she was down the shop with it, people would be looking at her funny, going what is that? I didn’t see the point in teaching her one thing and then a year down the track...teaching her another thing. Why wouldn’t you teach them to use something straight away?

This exchange illustrates the importance to Melissa that Julie use a recognisable tool, the long cane, rather than a mobility device that may elicit “funny” looks from the public. Despite the fact that the use of the cane would immediately identify Julie as blind, this was less
stigmatising for Melissa than the use of a device for which the purpose was not immediately apparent and the public did not recognise. Melissa explained, “Just being able to, in the shops, walk around. If she has the cane, people are a lot more aware of her being blind. It made my life easier because they got out of the way and things like that”. This suggests parents viewed the cane as a tool for their child to attain independence rather than a “stigma symbol” (Goffman, 1963, p. 43). Other parents expressed similar views, and the significance of this theme is explored more deeply in the following two chapters. Melissa also understood Julie would need to become a long cane traveller at some point in her life and, despite being presented with the view that pre-cane use prior to the introduction of long cane mobility was beneficial to the later development of long cane techniques, Melissa could not see any advantage in Julie using one mobility aid before transferring to another, saying “Because she learned the cane at such an early age, it didn’t matter if she didn’t ‘get it’ for the first year. At least she still had a year of practicing with it”. Melissa compared the experience of learning long cane mobility as comparable to any other developmental task a young child is exposed to, explaining:

It’s the same with books, you give a six-month-old a book, they’re not going to sit there and read it, are they? They’re gonna explore it, they’re gonna have fun with it, exactly what she did with the cane. She explored it, she had fun with it and learned how to use it appropriately.

The emotional component of long cane mobility significantly influenced Melissa’s decision making. Contrary to research suggesting long cane use is viewed as stigmatising (Bennion et al., 2012; Moore et al., 2000; Wainapel, 1989; Wong et al., 2004), Melissa remembered this as an exciting time, saying, “I remember the excitement of it. I remember when she first used her cane. I think I stood there and cried”. There was an element of pride for Melissa that Julie was only fourteen months of age when she began long cane mobility, as she explained:
That was the thing, she was the youngest child to start at the EIP at that stage, and without that and the O&M and everything that went hand in hand, she probably wouldn’t be as confident as what she is now...being able to ride a bike and just not being afraid to explore the world.

Melissa did not recollect feeling negative emotions toward Julie’s early long cane use, identifying instead that long cane mobility was paramount to the development of Julie’s confidence and independence:

I think the most significant thing would be the confidence that it gave her. Just helping her out with everyday stuff like ‘let’s go to the car’ and she’d be able to get out of the house and walk to the car on her own. And independence as well. Definitely the independence that it created for her.

Research in other fields of disability, including Goddard, Lehr, and Lapadat (2000), and Wiart, Ray, Darrah, and Magill-Evans (2010), has identified that, for parents, the most important goals are the development of independence and social acceptance for their children. Melissa valued the establishment of independence in her child from as young an age as possible and, as such, was willing to ignore any perceived stigma around cane use because the goal of independence outweighed any negative public perceptions.

**Reaching a Turning Point**

As the early challenges of implementing long cane mobility were met, parents and teachers began *reaching a turning point* in their perspectives, describing how O&M intervention had a wider and more significant influence for children than they had initially anticipated. For parents, this turning point occurred when they began to observe their child independently accessing the wider social community. Melissa valued opportunities for Julie to broaden her experiences, saying:

The way she was able to explore and given the opportunities of being able to do it in different places as well. It’s one thing to do all your O&M at home and get to know around there, but you’re not going to stay at home your entire life. You do need to explore different places.
As Julie gained proficiency in long cane use, Melissa continued to experience positive emotional responses, reflecting, Prus (1996) argues, the social context in which she found herself. For example, when Julie was just over two years of age, our O&M sessions were undertaken at a sports centre so Melissa could play netball. Rather than hiding Julie’s blindness, Melissa remembered, ”Just how exciting it was, when you used to come and do the O&M at netball”. Melissa enjoyed other people’s positive reactions to her daughter’s progress, explaining, “All the other players would be talking to me about it, and I was always so proud of going, ‘Oh yes, that’s my daughter and she’s learning her O&M’”. This reaction is an example of what Shibutani (1955) describes as the “confirming responses of other people” (p. 569) supporting Melissa’s sense of pride in Julie’s emerging long cane mobility, enabling her to continually reinterpret Julie’s potential to be an independent traveller. As Julie’s long cane proficiency grew, Melissa developed the confidence to let her daughter “push the boundaries” of independence. She provided an example, saying, “We were at a party at my brother-in-law’s house and...she climbed a gum tree! She went pretty much straight to the top!” Melissa identified that much of her own confidence in Julie’s abilities came from observing Julie’s confidence. She explained, “I trust her. She knows her limitations and she just likes to explore. She has confidence and I reckon the O&M was a huge part of her having that confidence”.

Melissa stressed the importance of Julie’s social interaction with peers using long canes within the EIP setting, saying, “Her understanding that there are other children out there who are blind because obviously it’s not an everyday thing that you see...I think her listening to what’s being said and knowing that she’s not doing it alone”. This interaction was also valuable to Melissa and her husband, reflecting Blumer’s (1969) premise that social interaction influences meaning and the resulting actions people take. As Melissa said, “To see what the other children were doing with their canes and how they progress, it gives you
confidence to know that your own child can do it”. All parents attributed the influence of the social interaction that occurred between both the children and parents as a result of them attending the EIP as a significant factor in the development of a positive perspective toward early long cane use. This was demonstrated by the change in emotional language as parents shifted from using terms such as confusion, fear, the unknown, frustration and resistance to talking about their child’s O&M action in terms of excitement, pride, progression, hope and independence. Group interaction, such as occurred within the EIP, is central to the establishment of shared goals, actions and the forming of relationships, all factors that Charon (2010) identifies enables parents to construct meaning toward their child’s O&M experiences. Melissa’s observations are expanded upon in the following chapter, which explores in depth the social processes and interactions central to the development of parents’ perspectives.

**A New Path of Understanding**

The final stage, *a new path of understanding*, occurred when O&M action was embedded within the child’s educational and family life. When Melissa requested that her daughter begin to learn the long cane at fourteen months of age, her initial motivation was so her daughter could “get used to always having it with her”. As she observed her daughter progress and experienced positive feedback from the public toward this progress, Melissa’s emotional responses toward the use of cane turned to excitement and pride. When I asked Melissa what the early use of the long cane meant to her and her family at the time of interview, she struggled to articulate her feelings. The word that reoccurred was “normal”, although Melissa felt uncomfortable with this term, saying, “Normal is such a terrible word to use”. There was an awareness that the use of this language implied that her daughter’s blindness meant that she was not “normal”. However, by using the word “normal”, Melissa
was trying to express that, for her family, Julie’s independent mobility enabled them to live their lives much as they would have done if Julie had been born with vision. At a basic level, Melissa said, “It just makes life easier because she can walk with her sister quite easily, she’s got the confidence to be able to walk with any of us.” She explained, “She’s got such a normal walking gait. She doesn’t have any of that kind of stilted walking that you sometimes see with kids who are blind who haven’t had the opportunity to explore”. Melissa had observed older children who were “not confident in space”, observing, “that’s really hard then”. Alternatively, Melissa described Julie’s movement as “normal”, saying: 

She gets around every day like a normal human being, like a sighted person. The only way that you’d know she wasn’t sighted when you’re out and about is because she has a cane in her hand. She’s exactly the same as going to the shop with her sister, there’s no difference.

This comment brings to mind the views of Goffman (1963) on social expectations and the “visibility” of impairments. As discussed in the previous chapter, Goffman proposed that people with a “visible” impairment evoke feelings of discomfort in those without impairments. For Melissa, the acquisition of good O&M techniques that enabled her daughter to move independently in public as though she was “normal” removed much of the stigma that she associated with “stilted walking” and a lack of confidence in space. This perspective presents an interesting dichotomy that has not been fully explored in the literature to date, although proponents of the structured discovery approach to O&M intervention such as Altman and Cutter (2004) argue that societal attitudes can be changed through the ability of persons with blindness to travel confidently and independently. Melissa’s perspectives suggests that although the use of the long cane immediately makes blindness “visible”, competent and independent use of the aid and the establishment of “normal” gait and posture can negate that visibility, presenting blindness as a difference rather than a disability. This is a significant finding within this study, and is discussed in greater detail in Chapter Eight.
The early acquisition of a range of independent O&M techniques also enabled Melissa’s family to continue to travel both within Australia and internationally. They were able to adjust to different mobility challenges, choosing which O&M technique most suited the situation. Melissa explained, “There’s no stress taking her anywhere, she can get around. As you know we travel overseas every single year. With travelling overseas it’s given her the confidence that she can move around”. Melissa has become a strong advocate for O&M intervention because of her experiences, including for older children for whom the acceptance of long cane use is sometimes difficult. She commented:

There’s a young girl who’s going blind, she’s about eight. I spoke to her and her mum in regards to her cane because she didn’t have one yet. She was getting one, but I just encouraged her to push for the cane sooner rather than later.

To summarise, Melissa began her journey with no knowledge about blindness or the techniques of O&M. Although she felt positively toward the early introduction of the long cane with her daughter, this led to some conflicts with other professionals. Melissa identified social factors, such as recognition of the aid by the public and the subsequent interaction that occurred, helped shape her perspectives to a degree where she became a passionate advocate for the early introduction of the cane. The influence of O&M intervention on family life is a theme returned to in Chapter Eight.

A Teacher’s Perspective: Sophie’s Story

Sophie commenced employment as a visiting teacher with an extensive background in early childhood education, but no training in vision impairment. Her role was to work with very young children in home, day care and early education settings, and to co-ordinate the weekly EIP session. She completed the Graduate Certificate in Education (Vision Impairment) through Flinders University once she commenced working in the field, and her knowledge of O&M was initially limited to what she was learning in her course:
I started the course six months after I started [work at the EIP]. I was taught about sighted guide for very little children, the types of language you might use with them to guide them, and what not to do in terms of not to mollycoddle them.

Sophie began working in the EIP prior to my employment as the O&M specialist with the team, and was initially exposed to a perspective of O&M that excluded mobility aid use. She explained, “I was taught to encourage independence by what you might say or what you might do or offer them. But there wasn’t any suggestion of offering children a mobility aid.” Although Sophie “didn’t have any concept whatsoever as to when you would start a child with a long cane”, her background in early childhood development led her to question why early introduction of the long cane would be seen as inappropriate. She explained, “As an early childhood teacher the suggestion of it was in no way foreign or it didn’t seem like a bizarre thing to do. So the suggestion that it was...why would you not?” Once I joined the team as the O&M specialist and began attending the EIP that Sophie co-ordinated, we began to work together as a team to introduce early O&M intervention and long mobility to the children attending the program.

Negotiating a Bumpy Road

For Sophie, a primary goal for the young children she was working with was the development of “independence”, which she described as “not just independent as in going off eventually to do things on their own but...the understanding that they can’t be carried around on someone’s hip or have someone hold their hand.” Sophie had no preconceived ideas about what type of O&M intervention was “appropriate” for children of this age, aligning her expectations with what she would expect from working with a sighted child:

There has to be a point where a sighted child isn’t going to be carried around or held on a hip or have their hand held beyond a certain stage so there was that understanding that even as a baby or toddler children were becoming independent. Whether it be through sighted guide or through
a long cane, there had to be something immediate for them to become independent.

Sophie was working under the guidance of the teacher from New Zealand and, as such, was exposed to an alternative perspective to that presented by the therapy staff whom she also interacted with in the course of her work. She recalled, “The team leader I had at the time was already open to the idea of very young children using mobility aids, but until we got a real O&M [Specialist], there wasn’t any suggestion of offering them a mobility aid obviously”. In the early phases of introducing long cane mobility techniques to these children, following my employment, Sophie recalled that she continued to be exposed to the traditional arguments against early long cane use, such as the belief that very young children would use long canes inappropriately and dangerously, turning them into “weapons”. In Sophie’s experience, this was not a valid argument:

They learn very quickly that part of learning to use a mobility device is – this is the way it’s used, this is what it’s used for, and if it’s not used appropriately, it’ll be taken away. And they don’t like that, because they know that this is a tool for their independence.

For Sophie, the key to very young children using long canes in a safe and appropriate manner was the collaborative practice that occurred within the context of the EIP. When O&M intervention was contracted through an outside agency, as was the case in the early days of the EIP, there was limited opportunity for collaboration, with information about skill development imparted through a one-off professional development or workshop session. For Sophie, having regular ongoing contact with the O&M specialist in the context of her day-to-day interaction with the child was of far greater value:

We would watch you work with the child. If you sat there and said, “Right, you’re supposed to say this and this and this, and this is the way you do it”, and modelled it as an adult, that would have had nowhere near the impact.
Through observing my actions and listening to the language I used when teaching long cane mobility skills, Sophie said, “When it came to doing it in the home, we just mimicked what you would have said”. All teachers made similar comments, and the importance of this regular informal collaboration is discussed in greater detail in the following chapter.

In addition to coordinating the EIP, Sophie had regular interactions with classroom teachers in mainstream schools, where a component of her role was facilitating children’s independence. She became aware that her own perspective toward early independence in children with blindness was influenced not only through her additional specialist training but also the ongoing progress that she observed within the children attending the EIP, explaining, “I would have been less likely to allow a child to be independent when I was an early childhood teacher without training in vision impairment. I would have been horrified I think.”

Asked to clarify this point, Sophie elaborated:

Safety’s a very big part of early childhood teaching. Making sure the children are safe and happy in their learning environment. I think if I hadn’t had training and if I hadn’t had the fantastic successes and excitements that we had with these children, I wouldn’t have believed that it was possible. I would have been reluctant to allow children to be independent.

Sophie identified that this aspect of the job was challenging for her, explaining, “When I went...to a mainstream kindergarten and spoke to the kindergarten teacher who didn’t have vision training...they would put up road blocks, ‘But what if? And what if?’ I could absolutely hear my voice in their questions”. This allowed Sophie, as she said, to have “a great deal of empathy for their concerns”. One of the benefits of working closely with an O&M specialist identified by Sophie was professional development for mainstream classroom teachers and the education assistants working alongside them could include “videos of the [O&M] progression, because teachers, especially early childhood teachers, are developmental thinkers”. She provided an example:
To see a tiny one sucking the end of the cane to see what kind of tip was on it, and banging it, seeing what sort of noise it makes, seeing what it feels like...then a few minutes later walking along listening to the sound it makes. They can see the progression in front of their very eyes.

Sophie elaborated that, for mainstream teachers, exposure to professional development of this kind was “very important” in terms of their confidence in supporting the child’s O&M action in the inclusive school setting.

**Reaching a Turning Point**

The turning point in Sophie’s perspective toward O&M intervention and early long cane use came as she developed an awareness that children were learning skills in what she described as an “instinctive” manner. Sophie remembered thinking this was “very exciting”, saying, “It was incredible. The really tiny ones that we first started with...it was almost as if they knew that [the long cane] was something that could help them find their way about without any great long explanations”. As described earlier, Melissa described feeling excitement as she observed her daughter progressing with the cane; Sophie recalled experiencing similar emotions, commenting, “It just made your face light up, watching them explore and learn and be independent.” In addition, Sophie felt these positive emotional responses helped families develop confidence in their child’s skills, which in turn empowered them to advocate for their child’s needs:

Families encouraged their child to be independent. They become quite passionate advocates for O&M. They saw the direct relationship between the value of their child being taught good O&M skills and appropriate mobility devices. It was direct, physical, concrete evidence that their child needed O&M.

Sophie also talked about the concept of responsibility, both in terms of children learning to be responsible for the appropriate use of their cane, and in their use of the long cane as a learning tool. She observed that young children would use the cane in what could be observed as “inappropriate” ways, such as having the cane tip off the ground. She did not
view this as children being “naughty” with the cane however, explaining, “They go through that wanting to reach up to find things, or to poke through the garden a bit further to ‘see’, but it’s really developing that understanding that, ‘Oh, this is actually still an extension of my body’”. Sophie applied her knowledge of early childhood education in this context, saying, “If that’s allowed to be done in an appropriate way, that’s still ok because it’s helping them to learn”. This provides an example of how positioning O&M intervention within an alternative framework to the traditional rehabilitative context allows for different perspectives and meanings of long cane use to be established.

A New Path of Understanding

As identified, Sophie indicated a primary goal for the children she worked with was the attainment of independence; O&M intervention and long cane mobility was seen as one method of achieving this. What she did not anticipate was the spontaneous learning that she observed occurring as a result of children establishing these early O&M techniques. As she recalled:

You see a child who is crawling and then they start to toddle and cruise around the furniture and then they start to walk...you give them a long cane which is almost as long as their body and then you see them toddling off down the path. This is a child who’s only been walking for one or two months and they’re already off exploring.

It was from observations such as this that Sophie developed the perspective that early O&M intervention, along with the development of early literacy skills, was one of the most important domains of the expanded core curriculum, explaining, “Obviously all the other areas were important, but if they didn’t have literacy and couldn’t get about independently...they were the two most important things”.

Sophie therefore began to see the use of the cane by very young children as an instinctive and natural means for them to begin to explore their world. Here she exhibits the ability to “take
the role of the other” (Charon, 2010, p. 104), or Mead’s (1934) “generalised other” (p. 89), which enabled her to move past her own fears and preconceptions around blindness. Rather than viewing the long cane as a potentially socially negative identifier of blindness, Sophie saw it as a tool for achieving her goals for the children she worked with through the fostering of independence, saying:

I can’t imagine now (that) a child, whether they’re totally blind or have some vision...it’s a bizarre thought to me that a child would not be given a long cane the minute they were able to stand up and had a little bit of balance.

Sophie thus gained what Charon (2010) identifies as a centrally important quality in teachers, taking the role of the other in order to learn from her students and adjusting her perspectives to enable students to reach their goals. When asked what she thought the significance of early O&M intervention was from her point of view as a teacher, Sophie made reference to the overprotection toward children with blindness that she herself once felt:

After three or four or five weeks with the long cane...suddenly they’re using this device for the purpose for which it was intended. That child would not be walking down that path on their own if they did not have their long cane because there’d be adults flushing around all over the place making sure that they didn’t drop off the slight fall off of the path.

Sophie’s own perspective toward the long cane was changed by her experiences of positive consequences of early introduction. She also expressed her thoughts toward the significance of the cane for the child, observing, “It was something that was meaningful in their life. It was made to be fun, it was made to be trendy, it was made to be something that you really wanted to do”. However, Sophie also identified a far more important aspect of early long cane mobility from her perspective, explaining, “Deep down it was something that allowed them to be independent, it was the whole package, it was everything...so why wouldn’t they want one?”
Sophie’s story is an example of how perspectives for teachers changed across time; she began her professional role as coordinator of the EIP with minimal knowledge of O&M intervention but, over a period of time, she reached a perspective that placed O&M intervention as one of the most important aspects of the expanded core curriculum. Through working in a collaborative setting with an O&M specialist, she not only developed confidence in her own abilities to reinforce and support children’s O&M intervention, she saw teachers in mainstream classrooms feeling more confident to allow children to use their O&M techniques in inclusive school settings. These factors are explored in greater detail in the following chapter.

Discussion

Interpretive studies, Denzin (2001a) argues, provide a means of developing an understanding of the value of programs such as the EIP in assisting individuals who are experiencing turning point moments in their lives. As discussed, for both the parents and teachers participating in this study the turning point in question was their involvement with a very young child with blindness, which subsequently led to their participation within the EIP. Chapters Two, Three and Four provide an understanding of how blindness has been represented within Western culture, describing the educational and rehabilitation programs developed in an attempt to provide children with blindness with opportunities to participate fully within society. However, as Denzin (2001a) points out, “programs must always be judged by and from the point of view of the persons most directly affected” (p. 2), a perspective that has not been addressed in the current O&M literature discussing early intervention. The interpretation of Melissa and Sophie’s stories provide an opportunity to identify how their perspectives toward early O&M intervention changed, and to pinpoint the particular aspects of the EIP that influenced this change.
The first two stages of perspectives identified in this chapter, *starting a new journey* and *negotiating a bumpy road*, present experiences for both parents and teachers that align with current research literature. For example, the difficulties parents experienced with obtaining information and appropriate supports for their child is, according to Sloper, Greco, Beecham, and Webb (2006), a well recognised issue within the early childhood intervention context that contributed to the development of the key worker approach. For visiting teachers, particularly in the Australian context, there is often limited contact with O&M specialists who are primarily contracted from blindness agencies to provide services (Deverell & Scott, 2014). It can therefore be difficult to establish common goals and philosophies toward O&M intervention. The following chapter explores these issues in more detail, identifying and expanding upon the components of the EIP program that enabled O&M intervention to be implemented successfully.

As O&M intervention became established within the EIP, Melissa and Sophie were able to extend their understanding of children’s O&M action to the third and fourth stages, *reaching a turning point* and *developing a new path of understanding*. The experiences and perspectives described within these stages goes beyond that which is currently presented in the O&M literature. Of particular importance is that both Sophie and Melissa begin to prescribe, in Denzin’s (2001a) words, “a new value and meaning to identities...that are marginalized and stigmatized by the larger culture” (p. 6). As children progressed in their O&M action, the long cane was seen as an essential tool for independence rather than a “stigma symbol” (Goffman, 1963, 0. 48), and blindness was perceived as a difference rather than a disability. This shift in perspective suggests that successful implementation of early intervention programs can result in individual’s adopting new and positive viewpoints toward the impact blindness can have on people’s lives. Chapter Eight expands on this thought
through an exploration of O&M intervention within the context of children’s day-to-day lives.

**Conclusion**

This chapter has presented the background information around the EIP’s establishment. Through the presentation of two individual stories, parent Melissa and teacher Sophie, the process of how perspectives toward early long cane mobility changed across time as the meaning of the long cane changed through its use, reinforcing the importance of capturing the lived experiences and views of those exposed to the process. The following chapters will examine the remaining research objectives, presenting a detailed analysis exploring social interaction within and beyond the EIP, and the significance and influence of early O&M intervention for children and families as defined by the research participants. The application of symbolic interaction theory to the findings provides a focus on the importance of social processes, shared activities and goals, and a collective definition about the meaning of the long cane that crosses social groups. Chapter Seven interprets participant experiences and perspectives within the social domains of teamwork, community and peers, whilst Chapter Eight explores the meaning and significance of early O&M intervention for the families and children involved. Each of these chapters incorporates the remaining participant voices, linking both to Melissa and Sophie’s experiences and providing a deeper analysis of the themes described in this chapter.
Chapter Seven: O&M Intervention in Educational and Community Settings

The stories of parent Melissa and teacher Sophie presented in the previous chapter demonstrated how their individual perspectives toward O&M intervention and long cane mobility changed over time. This chapter shifts from their individual perspectives to the group perspectives of all teacher and parent participants; perspectives that arise, according to Becker, Geer, Hughes, and Strauss (1961) “when people see themselves as being in the same boat and when they have the opportunity to interact with reference to their problems” (p. 36). Through the sharing of commonalities such as place, identity, culture and social relations (Fine, 2012), teachers and parents develop customary ways of thinking and acting towards the situations they face, in this case through the establishment of a group life and culture based on their involvement with a child who is blind. Importantly, Becker et al. (1961) clarify, perspectives involve actions that “become an established part of a person’s way of dealing with the world” (p. 39); understanding these actions thereby allows for an understanding of group functioning, the focus of this chapter. Specifically, this chapter explores how relationships were formed within and across participant groups, and how these relationships facilitated shared goals and actions supporting early O&M intervention. The analysis presented in this chapter addresses the second research question by identifying the effect of social interaction on the development of perspectives within an early childhood context, and the subsequent influence on the meaning of long cane mobility.

The data within this and the following chapter was obtained from the second stage of data analysis as described in Chapter Five. Basic themes coded from interview data were clustered into groups that represented larger, shared concepts (Attride-Stirling, 2001), resulting in six organising themes and two global themes. This chapter is concerned with the first global
theme: how social interaction impacts upon meaning, specifically within the social domains of (1) teamwork, (2) community and (3) children’s peers. Teamwork is discussed in depth, as this was central in developing a shared sense of meaning of O&M intervention for the participants. Experiences and perspectives around community and peers are presented more briefly in the concluding sections of the chapter.

**Teamwork**

The theme of teamwork describes the cooperation that occurred within, between and beyond individual teachers and parents who were brought together through their contact in the EIP; cooperation that enabled this group to make choices around goals and behaviours in order to achieve positive O&M outcomes for children. This theme is explored initially from teachers’ pedagogical perspectives on the development of collaboration with the O&M specialist, and subsequently extending this cooperative practice within inclusive school settings. Included within this discussion are teachers’ views on establishing a process of cooperative action between team members, setting goals in regards to children’s O&M intervention, and making decisions as to how to achieve those goals. The importance of developing a group perspective toward O&M intervention is explored, with teachers’ identifying the importance of coaching and the sharing of emotional reactions toward young children’s learning as a component of this process. Cooperative practice within inclusive settings in then discussed in terms of relationship development with school personnel, the establishment of clear communication, and teachers’ perspectives on approaches to facilitate a whole school approach commitment to the child’s O&M action. The section half of this section on teamwork explores the meaning of teamwork between parents and the O&M specialist.
**The Meaning of Teamwork for Vision Education Teachers**

It would not have been the same if we hadn’t all been able to all get together and actually watch the types of things that you would do that were different, and the techniques that worked. It was the collaboration. (Sophie, teacher)

Early childhood intervention teachers working in the itinerant context of vision education engage in teamwork at several levels. There is teamwork within the visiting teacher service itself, consisting of interactions and collaboration with other education professionals who share specialist knowledge about blindness and low vision, including fellow teachers and the O&M specialist within the EIP, as well as primary and high school teachers. EIP teachers also have interactions with related allied health professionals (for example, physiotherapists and occupational therapists) positioned outside the educational framework, with whom a cross-referral system for services exists. A further level of teamwork occurs outside of the direct visiting teacher service environment in the work undertaken in schools to support classroom teachers and paraprofessionals in facilitating inclusive education practices. The key issues discussed in this section are the two levels of teamwork identified by teachers as central in the development of their perspectives toward O&M: collaboration with the O&M specialist and collaboration with school personnel.

**Collaboration with the O&M specialist.** For long cane mobility to be successfully implemented within and beyond the EIP, a two-fold process of teamwork is necessary. Firstly, the O&M specialist must impart his or her specific skills and knowledge to visiting teachers in such a manner that teachers develop a shared perspective and philosophy toward O&M intervention; Lieber et al. (1997) confirm the importance of a shared philosophy in producing positive early intervention outcomes. Secondly, this shared perspective and philosophy needs to be extended “outward” and adopted by parents and education personnel within the home environment and inclusive education settings in order for O&M techniques
to be absorbed into the child’s everyday life. For this process to be successful, itinerant professionals must understand specialist O&M intervention knowledge and skills, and also develop the ability to communicate this knowledge to others through a process of consultation and coaching, as discussed by Dinnebeil, Petti-Frontczak, and McInerney (2009). In reality, the development of teamwork to this level can be difficult to achieve. Visiting teachers may have limited exposure to O&M sessions, as can occur when O&M specialists are contracted from blindness agencies to provide services to children. This practice is currently the norm in Australia (Deverell & Scott, 2014) and in some instances, as both Palmer (2005) and Scott (2009) have established, O&M intervention with children is restricted to taking place outside school hours, resulting in very limited contact with teaching staff.

Within inclusive school settings, Palmer (2005) has identified additional challenges in the provision of O&M intervention including a lack of recognition that this intervention is important and requires adequate funding. These factors limit opportunities for O&M specialists, teachers, parents and other education staff to develop a team approach toward implementing a common O&M framework for children at all stages of their education. As Charon (2010) has identified, a successful team approach to action, in this case incorporating O&M intervention within a child’s educational experience, requires “cooperative action” (p. 154); how this process was achieved within the EIP is now discussed.

**Establishing cooperative action.** Within the early childhood intervention context, both Lieber et al. (1997) and Soodak et al. (2002) identify that cooperative action involves fostering shared perspectives and philosophies, with all individuals involved with the child establishing a sense of personal investment, professional empowerment and responsibility toward actions ensuring the program’s success. Agreement over what is important within the
specific educational context must be reached, allowing for the development of common and complementary O&M goals. Ongoing communication and mutual role taking is essential, according to Charon (2010), as is the ability of individuals to recognise others’ identities as being important to their own actions; only then can a group establish a shared culture where members of the group can cooperatively work together to achieve these goals. The development of cooperative teamwork within the EIP and related inclusive education settings, and the subsequent influence on the development of perspectives toward O&M, is now explored.

As explained in Chapter Six, when the EIP commenced there was no O&M specialist employed within the Department of Education in Western Australia, and O&M intervention was contracted from outside agencies. Teacher understandings of O&M were therefore initially developed through their postgraduate vision education training and reinforced through contact with the outside O&M agency, where early childhood O&M intervention was unavailable and there was a particular resistance to the early introduction of the long cane. Kirsty recalled learning through her training that long cane use was “something the older kids would do and there would be someone who would come in and do that with them”. Had they not been exposed to an alternative perspective, teachers may not have considered the benefits of early introduction of the long cane. However, support from the EIP team leader and my subsequent appointment as O&M specialist within the EIP team allowed teachers to shift their thinking, beginning a process of cooperative action that was integral in changing attitudes to O&M within the group.

**Determining action towards goals.** All teachers identified the importance of independence as a primary goal for the children they were working with. This goal was initially expressed in very broad terms; Sophie, for example, said, “First intention would have
been independence”. Amy’s goal was “I wanted them not to have to rely on their peers and other adults to get around”, whilst Ella stated, “This child had to get around independently without having her mum or her dad”. As Charon (2010) explains, how such broad goals are defined is based initially on the individual’s perspectives on what is important within the specific context; therefore, prior to taking action toward achieving their goal, teachers needed to define for themselves what they meant by “independence” within their teaching role within the EIP. Amy, for example, focussed on the barrier to learning that a lack of independence presented, saying, “There are major restrictions as to why kids who are blind have difficulty learning, and one of them is movement and the access to experiences”. Alternatively, Kirsty defined independence in more functional terms that specifically considered the use of a mobility aid, explaining, “I pretty soon realised that without some sort of mobility device that these kids weren’t going to be up and moving. They were going to be sitting where they were”.

Once the broad goal of “independence” had been defined in more specific terms, Blumer (1969) explains, teachers began to “map out a prospective line of behaviour” (p. 64). Prior to my employment, these prospective lines of behaviour were limited however, with the consulting O&M agency only offering pre-cane devices as a child’s first mobility aid. Although teachers requested early long cane intervention, this option was not considered by the outside agency, an action that teachers interpreted as unsupportive and frustrating. Emily recalled feeling “so stunned by what to me seemed an archaic system, done on old research that was held together by a ‘well, we’ve always done it this way’ sort of concept”. Kirsty argued, “I don’t quite know where this whole argument comes from, they can’t do it until a certain age. Because what do you need to be able to hold a cane? Well, you just need to be able to grasp!” The negative relationship that subsequently developed between teachers and agency professionals because of these conflicting opinions on early long cane use limited the
possibility of cooperative action developing between the two groups. Alternatively, within the EIP group, the employment of an O&M specialist within the team enabled the members of the teaching group to support each other’s goals and actions. This added strength to relationships and developed loyalty within the team, which in turn, Shibutani (1955) explains, influenced the perspectives toward O&M intervention that teachers adopted. Emily recalled:

> We had a lot of respect among the teachers for each other’s skills in terms of whatever area of education we’d come from. There was not this having to compete with each other. We were all very supportive. We were prepared to try everybody’s ideas, and I think that helped us grow as a team.

This growth as a team enabled the teaching group within the EIP to begin to develop a shared group perspective toward O&M intervention, an essential step toward taking what Blumer (1969) defines as “joint action...the larger collective form of action that is constituted by the fitting together of the lines of behaviour of the separate participants” (p. 70). Joint action requires group members to create a common definition of the situation towards which they orient their acts; action toward O&M goal achievement was therefore dependent upon how teachers defined O&M intervention within the early childhood context. Exposure to specialist O&M knowledge within the EIP enabled teachers to integrate O&M specialist behaviour with their own early childhood perspective and thereby include early long cane use in their definition of O&M intervention for children who are blind. Sophie recalled:

> If it was suggested by an O&M [specialist], it was accepted and taken on board by all the visiting teachers. All the people [in the team] that these young children came into contact with totally supported the use of a long cane with very small children.

Embedding O&M specialist action within teachers daily work practices assisted with the development of teachers’ confidence in implementing O&M intervention. Emily explained, “One of the things [an O&M specialist] gave us confidence with was being able to experiment. It was, well, let’s try something, this is common sense, let’s try this and see if it’s
effective”. The use of the long cane per se was not the most important factor for teachers; from a pedagogical perspective, their goal was implementing effective strategies that promoted independent learning and inclusive practices across the curriculum. For Amy, this meant, “children being able to go to the toilet independently, retrieve their books independently, manage their own equipment”, whilst for Emily, O&M intervention included, “Spatial stuff in terms of braille, in terms of using their hands on a page, just the core concepts of left to right and the middle and top and bottom”. As children developed O&M techniques, Emily explained, “It impacted on everything they were doing. That’s orientation and mobility as far as I’m concerned, it encompassed everything that I could think of with the child”.

Long cane mobility was only one option to facilitate movement; under different circumstances teachers may have encouraged the use of a pre-cane device or supported the use of guiding techniques as the primary means of movement for the children they worked with. However as children began to use long canes, teachers found themselves experiencing significant emotional responses, which, as is now discussed, strongly influenced their perspectives toward O&M intervention.

**Emotional responses to early long cane mobility.** Emotions, according to Denzin (2009), form the basis of our social relationships, connecting us to others and influencing our actions. The very nature of teaching is built upon social interaction, and Hargreaves (1998) argues emotions are as important to teacher practice as the ability to apply practical teaching strategies. Where educational goals are not supported or cannot be achieved, as was the case when teachers attempted to work cooperatively with staff contracted through an agency, O’Connor (2008) confirms negative emotions are experienced. The role of both positive and negative emotions, particularly passionate and potentially overpowering emotions such as
“joy, excitement, frustration and anger” (Hargreaves, 1998, p. 837) are often unacknowledged in the teaching literature, when, according to Hargreaves (1998), they are critical to our understanding of teachers’ working lives. Hargreaves contends “emotions are at the heart of teaching” (p. 835), influencing how teachers work with children and shaping relationships with parents and colleagues; within the EIP, Emily explained, the positive emotions shared between teachers resonated with children too:

It was fun! It was in our voices, the children heard us laughing and enjoying being with them. For the children, it didn’t matter who was there, there was always a sense of excitement and delight of being together as a group.

Several teachers described their experiences at the EIP as “exciting”. For Kirsty, the physical presence of long canes affected her emotionally, “the excitement of having canes at the EIP”.

With O&M intervention not limited to times where an outside professional would be contracted to conduct an O&M session, Kirsty experienced a sense of professional freedom:

We were able to have a play around and see what the kids could do. We didn’t worry so much about the formalities of is this the right thing to do? It was just going with the kids. If they were picking them up, playing with it, that was ok.

Other teachers experienced similar emotions. Emily commented, “It was really exciting to watch it” and Ella remembered “that whole joy and excitement” when she observed a young child’s first use of the cane. This emotional affiliation to the introduction of early long cane mobility is important, Burke and Stets (1999) argue, because the cognitive process of self-verification, when an individual’s actions reinforce their self-views in a role or situation, is linked directly to a positive emotional response toward that action, therefore the excitement teachers experienced ensured they remained motivated and committed to early long cane mobility. As a group, this sense of commitment activated a process of trust and a structure of shared meaning resulting in “group cohesiveness...and a collective orientation” (Burke & Stets, 1999, p. 347); Kirsty illustrates this when she explains that early long cane introduction
“was never a foreign concept to me. I guess because I was surrounded by people who were like-minded in that respect”. In order for the O&M intervention process to be successful in a broader context however, teachers also needed to develop an understanding of specialist O&M intervention knowledge and skills that enabled them to feel confident in teaching and reinforcing these skills. This knowledge was gained through the process of coaching, an important component in the development of teamwork within the EIP that is now described.

**The value of coaching.** Establishing effective teamwork and cooperative action requires ongoing communication and mutual role taking; the ability, Charon (2010) explains, to “take the role of the other” (p. 104). An example of this role taking occurs during the process of coaching, defined in the early childhood intervention context by Dinnebeil et al. (2009) as the provision of “observation, demonstration, and feedback” (p. 438) to ensure skills are embedded within the child’s daily routines through consistent input from all those involved with the child. Fixsen, Naoom, Blase, Friedman, and Wallace (2005), in an extensive literature review, confirm coaching is a critical component in successful program implementation as it allows the behaviours required to implement early intervention practice to be shaped in functional educational settings. In order for coaching to be successful, both parties need to understand the others perspective; the coach needs to develop within others a “personal style that is comfortable for the practitioner while still incorporating the core intervention components” (Fixsen et al., 2005, p. 44). Emily provides an example of mutual role taking and ongoing communication that occurred during EIP sessions, saying, “We could watch your role-modelling, listen to the language you were using, the strategies you were using. Then you could, in our EIP session, ensure that we were following the same practices that you were practicing”. Emily concluded that for EIP teachers, “it was the key” to their understanding and confidence in reinforcing O&M techniques. The coaching process was
reciprocal; the following exchange with Sophie illustrates how my perspectives as the O&M specialist were also changed and shaped through ongoing social interaction with teachers:

Sophie: We’ve talked about needing to be under the guidance of an O&M, needing the development as a visiting teacher knowing what to say and do.

Bronwen: But also for me as an O&M working closely with early childhood specialists. What I should be expecting from kids of that age. Having been taught as an O&M, no, you don’t give very young kids canes, that different perspective was really valuable for me as well.

For coaching to be effective, Fixsen et al. (2005) identify that it needs to be “work based, opportunistic, readily available, and reflective” (p. 44), supporting teachers’ perspectives that working alongside an O&M specialist in their team was valuable.

**Summary.** Teachers identified independence as a broad education goal for the children they worked with; working collaboratively with an O&M specialist enabled a common definition of independence to be established. Common O&M goals were identified and teacher and O&M specialist skills and knowledge were each influenced by the other, fostering positive emotions and deepening commitment within the group to early O&M intervention. This sense of teamwork influenced how O&M intervention was extended into and supported within inclusive education environments through work undertaken in schools with classroom teachers and paraprofessionals, a process that is now discussed.

**Collaboration with Schools**

A primary role of the visiting teacher is to “ensure that students with vision impairment have access to the curriculum by advising on teaching and learning adjustments” (Department of Education Western Australia, n.d.) to personnel in inclusive school settings. This sees teachers working in isolation from EIP team peers, functioning as the “expert” (Dinnebeil et al., 2009, p. 441) in blindness and low vision within the schools they visit. Visiting teachers utilise a broad range of skills including, according to Erin et al. (2006), the ability to conduct
assessments, plan and teach programs across a variety of settings, and implement braille and basic O&M techniques; they must also impart their knowledge and skills through coaching and consultation to others working with the child (Dinnebeil et al., 2009). EIP teachers therefore aimed to provide a consultative approach to intervention, working with the classroom teacher “to establish activities and experiences in the program which supported the acquisition of children’s IEP objectives” (Odom et al., 1999, p. 194), rather than withdrawing the child from the classroom for one-to-one intervention. This style of approach was beneficial according to Amy because she “could just incidentally reinforce things as we were going about a day or a lesson...explaining why certain things were important, using spatial language and all of those things”. Amy’s perspective reinforces the importance of effective coaching in that it provided her with the confidence to reinforce O&M techniques within the context of her day-to-day professional role.

Early childhood intervention programs have been shown to be most effective, according to Soodak et al. (2002), when all stakeholders share perspectives and philosophies, work collaboratively toward achieving shared goals, and have a sense of professional empowerment at the program level. Interaction between itinerant professionals and school personnel begins with all parties establishing a clear understanding of their own and others’ roles and responsibilities in the intervention process. In WA, the process of knowledge sharing generally begins with professional development workshops for classroom teachers and paraprofessionals (known as education assistants in WA) conducted at an off-school site; collaborative work toward shared goals then continues throughout the school year as relationships between EIP teachers and individual school personnel develop. For Sophie, the inclusion of information on O&M intervention within professional development had a “big impact...putting teachers under blindfold, give them a long cane, teach them guiding...they were really quite stunned.” However, although professional development workshops are,
according to Fixsen et al. (2005), ideal for providing background information and an introduction to intervention approaches, they are not sufficient to change adult behaviour in the classroom: Fixsen et al. (2005) demonstrate ongoing coaching is the only evidence-based form of training shown to achieve this. Coaching is one of three practices identified by Dinnebier et al. (2009) as central to the establishment of a consultative approach to intervention in schools, the other two being “behavioural consultation and...the distribution of learning opportunities across daily activities” (p. 437). The following section describes how a consultative approach to O&M intervention in inclusive early childhood education settings was achieved.

**Establishing a consultative approach to O&M intervention in schools.** On the surface level, O&M intervention can be viewed as consisting primarily of a collection of practical techniques including guiding skills, self-protective techniques, and long cane mobility that enable a child to move safely around their school environment. The development of these skills requires a certain amount of one-to-one direct service delivery between the child and the O&M specialist. However there are other skills, as discussed in Chapter Three, that an individual who is blind needs to develop in order to achieve independent O&M action, including sensory awareness, concept development, echolocation skills and orientation strategies. In order to support the child’s O&M action within school settings, all school personnel working with the child need to be aware of these skills and how and why a child might be using particular O&M techniques. This process requires some degree of behavioural consultation where classroom teachers and other personnel are supported in implementing the child’s use of specific O&M techniques within the classroom and when moving throughout the school. Ella identified the importance of “asking teachers to step back and let children do things on their own...saying to the teachers, ‘She’s got to be independent’”. Once school personnel are confident in supporting the child in this way,
opportunities arise to take advantage of incidental “teachable moments”, defined by Hyun and Marshall (2003) as “the interweaving nature of learning lived through experiences...opportunities that may arise when students are excited, engaged and primed to learn” (p. 112). For Ella, once teachers understood how the child was using their O&M techniques in a range of situations, they “were very accepting of the child and their cane”, thus opening the possibilities for children to be exposed to incidental learning experiences.

Kirsty believed it was important to achieve a balance between structured one-to-one direct O&M intervention with more spontaneous learning opportunities. She said, “It was about what happened in between those times as well, and the things that would happen accidentally”. Amy also commented on the benefits of school personnel understanding the importance of teachable moments, observing, “The whole school can really respond to helping that child develop their O&M. They would know to leave that student to problem solve and use their skills without jumping in too early to rescue them”. Empowering school staff to respond to teachable moments supports the child’s O&M technique development by distributing learning opportunities across real life settings and within daily activities, a central practice in establishing effective intervention practices within schools. For Kirsty, who had experienced both a consultative approach and the more traditional method of O&M intervention involving primarily a one-to-one direct service delivery model, the latter model was ineffective. As she explained:

It’s very structured. Someone will come in for a set time because our service has paid for that to happen. It almost sets you up to fail in a way...to me, much more learning would happen in those incidental moments.

As established, EIP teachers developed a shared perspective toward early O&M intervention through the establishment of a group and shared culture based on their involvement with a child who is blind. In order for these shared perspectives to be extended into school settings,
Charon (2010) suggests relevant school personnel also need to feel they are members of this group. As Charon (2010) explains, throughout the course of daily life all individuals interact and have contact with several reference groups whose perspectives “are used to see and direct the self while in that group” (p. 76); if school personnel identify with the perspectives of the EIP reference group, Shibutani (1955) proposes a shared culture supportive of one another’s views will be created. This in turn, Dinnebier et al. (2009) establish, assists in maximising effective early intervention in early childhood settings.

**Establishing relationships with paraprofessionals.** One group within the inclusive school setting with whom it is essential to establish a shared perspective toward early O&M intervention is the paraprofessional, or education assistant, because they were most often those in the best position to promote and reinforce the child’s independent mobility. The use of paraprofessional support, where a teaching assistant is placed within the classroom to support the education of students with disabilities, has increased dramatically since the 1990s according to McKenzie and Lewis (2008); this group is one of the fastest-growing within the United States workforce (McKenzie & Lewis, 2008) and they are increasingly being employed in Western Australian schools, Gardiner (2011) confirms. Conroy (2007) reports it is now common practice, and in some situations automatic, for a paraprofessional to be “assigned” (p. 52) to support the education of students who have low vision or blindness, and Lewis and McKenzie (2010) confirm the paraprofessional role can include the provision and/or support of O&M intervention.

A common concern expressed in the literature exploring the use of paraprofessionals in inclusive classrooms is when classroom teachers rely on the education assistant to take full responsibility for the child’s educational needs. Giangreco, Cloninger, Edelman, and Schattman (1993) found some special educators and administrators encourage this action,
stating “some teachers expressed greater confidence in the abilities of untrained, substantively unsupervised, paraprofessionals than they did in their own abilities” (p. 365). Both Rice (2006) and Whitburn (2013) suggest teacher fears around the perceived difficulties of educating students with disabilities may provide one explanation for this practice; certainly participants in my study had experiences where their efforts to develop inclusive practice were hindered by teachers stepping back from this responsibility. Sophie, for example, experienced situations where “the classroom teacher has twenty-five children to look after, and ‘thank goodness this child who is blind has this person who can be stuck to them and I don’t have to worry about their safety and their education’”. Without the classroom teacher’s support, Sophie found that implementing skills of independence, both in movement and learning generally, could prove difficult. She elaborated:

You’re trying to talk about the skills and philosophies behind O&M, sometimes education assistants have not had the education to be able to understand and put that in practice. So they are untrained, unskilled workers that you were trying to teach a very important practice based discipline. That part was quite difficult with the education assistant.

Sophie’s apprehensions around responsibilities placed on “untrained, unskilled workers” are echoed in the vision impairment literature. Ferrell (2007), and McKenzie and Lewis (2008) express concern that paraprofessionals provide direct instruction in highly specialised fields that require one to two years of graduate training that a paraprofessional has not undertaken. Giangreco (2013) reports paraprofessional roles are increasingly shifting from one of support to one of direct instruction, a practice that is particularly worrying if there is inadequate supervision or training; Giangreco (2013) provides examples of a number of studies indicating paraprofessionals tend to engage in instructional practice that is educationally unhelpful, such as focussing on task completion rather than the development of conceptual understanding. In the United States, Lewis and McKenzie (2010) found a significant number of paraprofessionals are fully responsible for O&M intervention, arguing this practice is
particularly concerning “since these are highly specialised skills that require high-quality instruction and ongoing assessment to achieve positive outcomes for students” (p. 474). There is no literature on this topic within the Australian O&M field, although Whitburn (2013) reports a heavy reliance on paraprofessional support for students with vision impairment in Queensland classrooms. Certainly, a lack of supervision and adequate training represents, as Giangreco (2013) argues, a practice that would be considered unacceptable if applied to students without disabilities.

The literature does identify benefits in the use of paraprofessional support, including, according to Giangreco, Yuan, McKenzie, Cameron, and Fialka (2005), the facilitation of intervention skills and an involvement in follow-up instruction, both of which can be invaluable to the support of interventions including O&M. In my discussion with Emily, I recalled the positive results when relationships between visiting teachers, education assistants and myself worked effectively, saying, “The visiting teacher was able to reinforce what I was teaching and then the education assistants were just fabulous at picking that up and really following through”. These relationships were effective, Emily felt, because my employment within the EIP team strengthened the perception that O&M intervention was important. She explained, “If teachers were talking about O&M, they weren’t trained people in that. A trained person gave validity to what was happening...so people could accept and believe in it a lot more”. Emily’s view appears to support the recommendations from the United States literature that O&M specialists be employed as integral members of early intervention teams (Huebner et al., 2004; Skellenger & Sapp, 2010); in practice this rarely occurs in Australia, for reasons that were outlined in Chapters Three and Four.

**Establishing a whole-school commitment toward inclusion.** In order to maximise the possibilities of effective early intervention practice, it is not only relationships with
paraprofessionals and classroom teachers that are important. A whole-school commitment toward inclusion is essential, beginning with school principals. As Michelle recalled:

It was apparent at which schools the principals were supportive of what was happening. There were some schools where students were included because it was the Education Department’s policy and in some cases ‘over their dead bodies’, and others where the principals really welcomed the challenge and saw it as the child’s right to be there.

If early O&M intervention is to become standard educational practice, Fine (2012) suggests it will be through “collective action...people in common cause making it happen” (p. 165). When an itinerant professional enters an established school culture that is not supportive of inclusion, it may seem impossible to create change. However, Fine (2012) argues that members of small groups, such as the EIP, have the ability to extend and expand practices and philosophies into broader contexts through the development of interpersonal relationships; these relationships, according to Granovetter (1973), consist of strong or weak ties, depending upon the “amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services” (p. 1361) present within them. Strong ties exist between those with whom we develop close friendships, Granovetter (1983) explains, whilst weak ties occur with those who are our acquaintances but with whom we are unlikely to have an extended social involvement. Earlier in this chapter I explained how the EIP teaching group, an example of a strong tie network, established a process of cooperative action toward early O&M intervention, built upon emotional support and the development of a sense of trust, loyalty and friendship within the group. Similarly, strong tie networks exist in school communities as friendships and social relationships are established; these friendships and social relationships, along with occupational identities associated with specific roles, responsibilities, and behavioural expectations, Smith-Lovin (2007) suggests, influence perspectives toward, for example, inclusion within that school setting.
An itinerant professional entering a school initially as an outsider begins a series of professional relationships with school personnel, in particular the classroom teacher and education assistant, both of whom will initially be distanced from the philosophy and perspectives of the EIP and bound by the social structures of the school within which they work. The relationship between itinerant professionals and school staff is therefore a weak tie, with each party having their own set of knowledge and perspectives toward inclusion. Granovetter (1983) argues however that it is through these weak ties, the professional connections between the EIP and the school, that opportunities are opened up for new knowledge to be gained; in this case, knowledge and reinforcement of intervention practices that can support a child’s O&M action. However, itinerant professionals cannot expect that just by providing information and being physically present in a school, the school’s philosophy toward inclusive education will change because, as Fine (2012) explains, any subsequent action that occurs is dependent upon the meaning each strong tie network attributes to new information. Given that the practice of coaching has been demonstrated to change adult behaviour toward intervention practices in the classroom (Fixsen et al., 2005), this suggests that coaching is also effective in changing the meaning school personnel give to intervention practices. Although it was beyond the scope of my research to investigate perspectives of classroom teachers and education assistants involved with the children who attended the EIP, it is clear that relationships between EIP teachers and school personnel influenced to what extent schools gave meaning to and supported early O&M intervention. Michelle observed positive benefits of these relationship, explaining:

What was really nice about having an O&M (specialist) was that the teachers would involve O&M in all aspects of the child’s curriculum. Everyone was involved in looking at how we could involve the students as fully as possible. They did become truly a part of that classroom and that school; they weren’t the class plus one.
For Michelle, O&M intervention was seen as something that crossed all aspects of the child’s school life, a view that arose because of the O&M specialist being employed by, and therefore a member of, the educational community. This perspective again supports recommendations that O&M specialists be employed as integral members of early intervention teams.

**Summary.** The complexities and challenges for teachers working within an itinerant model supporting students with vision loss have been well documented by Correa-Torres and Howell (2004), and Wolffe et al. (2002), as has the importance of establishing effective teamwork within these models (Anthony et al., 2002; Correa et al., 2002). The discussion in this section highlights the importance of considering how social interactions influence teamwork and shape teachers’ perspectives toward their work. Social relationships in this context have not been explored in the O&M or vision education literature to date, however the discussion suggests the development of a shared professional culture between visiting teachers and O&M specialists is an essential step toward the development of independent travel skills in young children. Current practice in Australia, where O&M specialists are not routinely employed in educational settings and the majority of O&M intervention is provided contractually through charitable organisations (Deverell & Scott, 2014) therefore would appear to be a less effective means of providing O&M intervention in educational settings.

The development of cooperative action within the EIP group and outwards into schools has been described. Parents also identified strongly with the theme of teamwork, primarily from the perspective of building relationships with professionals, as is now discussed.

**The Meaning of Teamwork for Parents**

Conversations with parents on the relationships that influenced the meaning of O&M intervention centred primarily on parents’ relationships with the O&M specialist and EIP
teachers; it was beyond the scope of this study to explore other relationships such as those between parents and schools. The following section discusses how social interaction between parents and EIP team members influenced parental decision-making around the choice of a long cane as their child’s first mobility device, and why parents viewed ongoing specialist O&M intervention as essential for the development of their child’s independence.

Making decisions around mobility aid use. As described in Chapter Six, all parents experienced strong emotional reactions following their child’s initial diagnosis of blindness, reactions compounded by the subsequent process of negotiating with a range of professionals to ensure their child was referred for appropriate services and support. Grace described this experience as “overwhelming”, saying, “It was like, ‘Can you just come and do this program and this program?’ I said, ‘Oh my god, there’s too many hands in this pie! Man, can you all just stop!’” Mary became aware that her life now seemed to revolve around her daughter’s vision loss, commenting, “I mean there’s that many appointments and all that. You’re always talking about her and her difficulties and stuff.” Similar examples have been documented in the literature; Bruder (2000) presents three case studies where parents outlined frustrating and complicated relationships with a range of early intervention professionals. Sloper et al. (2006) argue that the recognition of these negative experiences of parents by early intervention professionals has contributed to the shift to a key worker service delivery model in early childhood intervention practice. Ideally, the key worker model provides a single point of contact through which all professional interventions are co-ordinated, thus supporting and empowering parents to make decisions based on their family needs (Sloper, 1999). This was not the case for parents participating in this research who were presented with differing opinions on intervention options, including toward choice of mobility aid; EIP teachers were supportive of early long cane use, whilst rehabilitation professionals believed young children should commence their O&M intervention with a pre-cane device. Parents
therefore had to form their own perspectives as to which approach they felt would be most beneficial for their child.

When making these decisions, parents, like teachers, began by defining what O&M intervention meant for their individual circumstances. Olivia remembered, “I wanted Stephanie to have a stride. Cautious, maybe slower, but still taking big steps and being graceful rather than doing shuffles. I thought it was important for her to be mobile and independent”. Mary said, “I sat down and thought, when she is older, Angela is going to need to move around eventually. She doesn’t want to rely on her mum forever to carry her around, that’s for sure”. Parents then sought advice about how best to achieve goals of independence, with varied outcomes. In the previous chapter, Melissa talked about feeling “pressured” to make certain decisions around which mobility aid her child should use, experiencing what Moore and Larkin (2005) describe as a “power-over relationship” (p. 5) with some professionals. Historically, Moore and Larkin (2005), explain, power-over relationships have dominated early childhood intervention, with professionals exerting control over parental decision-making by creating a perception of higher competence, professionalised communication and resource control. The control of resources was particularly relevant for parents in this study; as long canes for very young children were not available within the rehabilitation agency context, parents effectively could not choose long cane mobility as an option for O&M intervention if they decided this agency would be their child’s O&M service provider.

Relationships between parents and professionals have evolved, Moore and Larkin (2005) explain, from the “power-over” relationship experienced by Melissa to a “power-through” relationship incorporating “synergistic decision-making among family members, professionals, friend, and community citizens” (p. 5). Olivia experienced this
kind of relationship; although she initially considered the use of a pre-cane device, consultation with professionals, other parents, and consideration of what limited research was available empowered her to decide her daughter should use a long cane. She explained, “Somebody else had a pre-cane, but then the parent said that it got stuck in shops and it was more like a walker. You and Emily advised me. I’d read lots of stuff from America.” Olivia therefore had ownership over decisions around her daughter’s O&M intervention, saying, “I knew there was a bit of controversy between professionals but I just thought, why not, if it fails we’ll do something else”.

Once Olivia’s daughter commenced long cane mobility, it provided other parents with the opportunity to observe and develop their own opinions toward early long cane use. As described in Chapter Six, parents in this study had no previous knowledge of O&M and long cane mobility; Grace, for example, recalled, “I’d never even seen a cane before. I mean I used to sit there and think, wow, ok...I can’t see how that’s going to work”. However, through exposure to an environment where early long cane mobility was supported, the EIP, parents were presented with an opportunity, as Charon (2010) explains, to “understand the meanings...to learn immediately the shared reality” (p. 61, emphasis in original) of what O&M intervention with young children could mean. For Mary, observing Olivia’s daughter using a long cane was “really good...you know what the future may hold for your child and what they can achieve”. The utilisation of power-through relationships founded on a “collective empowerment” (Moore & Larkin, 2005, p. 5) between parents and teachers enabled a sense of trust and shared perspective toward early long cane mobility to be established; this perspective was further supported by collaboration during O&M sessions in the child’s home as the following section explains.
Collaboration with the O&M specialist. In addition to O&M techniques being incorporated within the weekly EIP sessions, children participated in one-to-one O&M sessions with the O&M specialist in the child’s home environment. For parents, this ongoing interaction was important because, as they acknowledged, they did not necessarily understand all the aspects of O&M techniques their child needed to learn. As Grace said, “You are a parent, you’ve got a house to run, you’ve got a child to look after and the child has other needs that you don’t think they need until later on it pops up”. She related an experience where, “The psychologist was saying she needs more concept input. She went ‘There’s probably a million things that she needs’. I said, ‘Wow, ok, but how am I going to know what she doesn’t have the link to?’” Neither did parents necessarily have the time to provide access to the range of real-life experiences their children required in order to gain these conceptual experiences, as Olivia explained:

How many of us walk through the shopping centre with our kids who can’t see, and they would not know that there’s a water fountain or anything like that? So if you’re missing out on those lessons they’re never ever going to learn because as a parent, you don’t have time to spend on that.

Additionally, parents highlighted difficulties with finding time within the context of daily routines to allow their child opportunities to complete tasks independently. Grace explained, “It does take extra time. Even going to the shops. It is easier to grab her and go”. Mary identified lack of time as an issue within her family’s daily routines, commenting, “That’s what I’ve particularly noticed. With all the four kids, it’s quite often that I don’t have the time to just allow her to ‘do’. To just do in her own time”. Wiart et al. (2010) support these perspectives, reporting parents of children with physical disabilities struggle to balance occupational and physical therapy intervention with other family demands. Within the early childhood intervention literature, there is recognition that a balance between direct hands-on intervention with the consultative and coaching support that enables families to promote their
child’s learning needs to be attained, although Moore (2012) acknowledges this is a significant challenge.

The following video snapshot provides one example of how an O&M session can balance hands-on intervention with coaching in order to provide parents with the confidence to support their child’s O&M action. As the O&M specialist, I am facilitating the session and introducing specific long cane mobility techniques, however Angela is responding to instructions from her mother Mary reinforcing those techniques. In addition to Mary gaining the confidence to reinforce correct techniques, Angela is also learning O&M techniques are important to her family and are not just an activity for when I visit for an O&M session.
Angela is at the top of a driveway, which runs downhill. She is holding her long cane in her right hand. She starts to run down the driveway toward her mother Mary and O&M specialist Bronwen.

Mary: Cane on the ground, Angela. Angela drops the cane tip to the ground and slows down her pace. She is able to maintain the cane position in front of her body, with the cane tip in front of her feet.

Bronwen: Good girl! Look at you!
As Angela arrives at the bottom of the driveway, she slows to a walk and drops her head down to use her residual vision to locate the edge between the driveway and the road. She then checks the depth of this edge with the tip of her long cane.

*Figure 3*: Video snapshots and transcript of an O&M session where Angela responds to an instruction from her mother whilst using her long cane.

Melissa also viewed this type of intervention positively, saying:

It gave us the confidence to know what we were doing with her...the knowledge of what she should be doing with her cane, and the things to say to her and things like that, and I think that’s also helped as well.
Wiart et al. (2010) identify that parents want to benefit from “therapists’ knowledge and past experience” (p. 254), and be provided with a range of realistic options and goals that are relevant to their family life. For Mary, professional input “from all the therapies was really good”. She explained, “It gives you another fresh professional opinion and experience and expertise. At least a starting point.” These perspectives are supported in the O&M literature by Higgins’ (1999) study, which reports participants viewed support from O&M specialists as essential in enabling them to encourage independence in their child. Perla and O’Donnell (2002) also identified lack of time as a significant issue for parents, confirming clear planning and communication between parents and O&M specialists is key to effective collaboration. Perla and O’Donnell provide practical suggestions such as creating individualised O&M booklets for families; whilst practical strategies are useful, interactionist studies including Burbank and Martins (2010), and Roe, Joseph, and Middleton (2010) establish that effective communication is more than just the sharing of information, there must be shared meaning and culture in order for the information to be of value. Individuals will take action based, Blumer (1969) argues, on the meanings this situation has for them; within my study, parents agreed individual intervention with their child by the O&M specialist facilitated a shared meaning of O&M, thereby supporting families to integrate O&M techniques within the context of their daily routines.

Long cane mobility did not only occur within the context of the EIP and children’s homes, it also occurred in inclusive school settings and public community spaces. The following section explores both parents’ and teachers’ discussions on the influence on perspectives and subsequent actions around O&M intervention as children’s long cane use became “visible” in their communities and to their peers.
Long Cane Mobility in Children’s Communities

Within the theme of community, four issues of importance emerged: community recognition of the long cane, long cane use in inclusive school settings, contact with peers who are blind, and the support of sighted peers toward the child’s O&M action. This chapter concludes with a discussion on each of these issues, presenting both teacher and parent perspectives.

Community Recognition of the Long Cane

As has been established in this chapter, parents in this study made conscious decisions that their young child would commence long cane mobility rather than use a pre-cane device. The reasons behind those decisions have been discussed, and what is now explored is how community reactions to early long cane mobility continued to influence parents’ perspectives and actions. A recurring theme from all participants was the importance of the recognition of the long cane by the community; parents felt the purpose of the long cane was self-explanatory, whereas the public would not understand why a pre-cane device might be used.

In particular parents felt uncomfortable with the physical appearance of the pre-cane, with Mike likening it to “an old people’s frame”. Grace, whose daughter Laura had commenced with a pre-cane device prior to a long cane being available, recalled, “That sled thing? Yes, I remember we got many a stare at the shops!” Alternatively, parents viewed the recognition of the long cane by the general public as advantageous, with Mary describing people responding in a manner that was “more courteous in general”. She elaborated, “I’ve really noticed when she does use it, people go around you, or they give you more time or space, instead of, ‘Pesky little thing, what are you doing?’ So the cane is like an immediate understanding for them”.

Olivia discussed similar experiences, saying, “In those large crowded group situations...there’s a little bit less of me guiding her around people and things, and a bit more of people going around her”. Olivia observed that if her daughter was not using her long
cane, “People run into her all the time, or they...they ‘tut’. Or she walks into them and they trip over and they sigh and go, “Stupid kid”.

In the previous chapter, Melissa discussed why she felt it was important for her daughter to use a recognisable tool rather than a device that may elicit “funny” looks from the public, a contrasting view from that predominantly presented in the literature that portrays long cane use as stigmatising. As discussed in Chapter Three, this literature, which primarily explores long cane use from the perspective of those with age-related acquired vision loss, argues long cane use is viewed in terms of “weakness”, “self-pity” and “self-insufficiency” (Wong et al, 2004, p. 638). Parents disagreed with this view, instead choosing to intentionally use the long cane as a symbol to communicate information about their child’s vision loss in social situations. Mary provided an example:

   We went to the Aquarium and I was trying to get her as close to the guy showing stuff as possible. I think sometimes people just think, “Who’s this pushy person?” whereas if the cane’s there, there’s none of that explaining to be done.

It is apparent that recognition of the child’s vision loss through their use of long cane mobility was viewed positively by parents because of the expectation, as Charon (2010) explains, behaviour in social situations is influenced by the socially established meanings of an object, in this case the long cane. Both Grace and Melissa’s comments indicate that they had either received a negative social reaction when their child used a pre-cane device (“We got many a stare”), or expected that they would. However, anticipation of negative social responses does not explain why parents alternatively promoted long cane use by their children. Parents could make the choice to guide their child without the use of a mobility aid, thus increasing the chance of their child “passing” (Goffman, 1963, p. 42) as a child without blindness. The earlier discussion on teamwork suggests the supportive culture of the EIP, where a cohesive and trusting set of relationships between parents and teachers was
established, was a significant factor in parents’ commitment toward identifying as a parent of a child who is blind. This suggestion is worthy of further investigation, particularly as there are currently no early intervention programs in Australia where O&M specialists and early childhood teachers are working together with parents in this way.

**Long Cane Use in Inclusive Education Settings**

For teachers, there was a perception that early long cane use challenged community preconceptions around the child’s ability to be independently mobile, because, as Kirsty said, “Parents are seeing them with canes, they’re seeing them being successful”. These “first impressions” were identified as very important when the child was initially transitioning into inclusive education settings. Amy observed that “the class, their peers’ perception of them, and adults...see that you can have similar expectations, the same expectations”, which in turn placed children who are blind “on a more equal footing” with their peers. Kirsty agreed, saying, “These kids weren’t just being taken from one point to another and just holding the cane, they were expected to be able to do that independently. [They’re] positive role models for everyone”. Establishing early positive expectations from the school community toward the ability of children who are blind to be independent was important to Amy; as she said, “What you set it up as in the young years is what will carry through”. The following chapter discusses long cane mobility in school settings in further detail, both in terms of children meeting high expectations around levels of independence, and exploring some of the limits imposed on children’s O&M action.

**Contact with Peers who are Blind**

An issue of importance emerging within the theme of community was the perception of peers toward long cane mobility, in the interactions between the children involved in the EIP who were all long cane travellers, and also in regards to how young sighted peers responded to the
child’s use of the long cane. Interaction with other long cane travellers, teachers and parents identified, was extremely valuable. Teacher Sophie explained, “I think one of the reasons we had such success was we actually did have quite a large cohort of very young children with long canes. It was such a positive experience that it was something everyone wanted to do”. For Mary, peer support was “a huge thing...that’s what really got her to use it is the other kids using it as well”.

Bandura (1982) identifies the importance of vicarious experiences in the development of self-efficacy skills, highlighting the importance of these experiences as being particularly valuable when judgements about one’s own capability are being made. With the emphasis on inclusive schooling models, children with low-incidence impairments such as blindness are likely to be the only child in their school using braille and a long cane; as Kirsty recalled, “I remember someone coming to the EIP for the first time and it was so exciting for him to come along and actually realise there were other kids there that were doing the same things”. Olivia said, “I’m all for inclusion, which you know for us it’s worked well”, however she also valued contact between her daughter and her peers who were blind, “It makes a big difference. If you’ve got something in common with somebody, it puts a bit of a bond there. I think that if they were all together using their canes daily, they would use them more”. These perspectives reflect the socio-cultural approach to learning highlighted in Vygotsky’s (1978) zone of proximal development; the understanding that learning is a social process, developed under adult guidance or “in collaboration with more capable peers” (p. 86). Vygotsky’s theoretical approach is presented in the O&M literature, for example Skellenger and Sapp (2010), however the focus is on adult-mediated teaching strategies rather that an exploration of how peers can facilitate a child’s O&M action. The perspectives of parents in my study around the value of peer supported learning in O&M suggests this is a topic worthy of further investigation.
The Australian early childhood intervention literature acknowledges the challenge of attaining balance between inclusive education and the benefits of participation in group programs designed to support children and families through interventions that are specific to a particular disability, as long cane mobility is to blindness. Moore (2012), for example, argues such programs have a place alongside family and community based interventions, however “analysing exactly how such group programs ‘work’ is a task that still needs to be tackled” (p. 27). This is an example of where symbolic interactionist theory can provide insight into the value of group programs through the recognition that children are active beings in their own socialisation; consideration of how significant others, including peer groups, influence the child’s development of a social construction of self, Musolf (1996) argues, can provide insights into the process of identity and self-concept. These are issues that my research identifies as significant in a child’s attainment of early long cane mobility, and are explored in greater depth in the following chapter.

**Support of Sighted Peers**

When considering the influence of peer groups on a child’s O&M action, both teachers and parents spoke about how sighted peers responded to a child’s long cane mobility within the inclusive early education setting. For parents such as Mary, there was value in her daughter commencing school equipped with the skills to use specialised equipment such as the long cane and a brailler. Mary found, “The kids are interested in it to start with, but then it just becomes a part of who they are”. Teacher Sophie agreed, observing children in kindergartens as initially curious about their classmate’s blindness but, in her opinion, “It’s a bit of a novelty at first, but after three or four years they’re just another one of their classmates”. In her experience, for sighted children, “I don’t think the perception was negative, especially if those children were able to move about confidently”. Emily talked about the importance of a
child moving confidently through space from their first days in formal education settings, saying, “The social structures started to change and normalise. We could see changes in their environment, children’s acceptance of the child”. This acceptance began a reciprocal process of social interaction beneficial for all children as Emily explained. She said, “The other children got more confidence interacting with the child, which gave the child more confidence to interact back again. The child was becoming a more social person because they had more confidence”. This confidence influenced other areas of the child’s learning, a theme expanded upon in Chapter Eight.

Four themes have been briefly discussed in the final section of this chapter: community recognition of the long cane; long cane use in inclusive school settings; contact with peers who are blind; and the support of sighted peers toward the child’s O&M action. Each of these points could provide a topic for research in its own right. In this context, they have demonstrated how social interactions beyond the immediate context of the EIP and children’s homes influence the meaning of O&M intervention and long cane mobility for teachers and parents, reinforcing their perspectives that early long cane mobility was a positive intervention for children.

**Conclusion**

This chapter has explored the influence of social interaction on the development of group perspectives toward O&M intervention. For teachers and parents involved in the EIP, a group life and culture was established that allowed participants to develop both a shared language and shared O&M goals for young children who are blind. For teachers, teamwork initially established within the EIP group between early childhood visiting teachers and the O&M specialist was subsequently extended outwards into inclusive school settings, influencing relationships with classroom teachers and paraprofessionals working with children. Parents
identified the importance of establishing effective relationships with a range of professionals focussing specifically on the value of ongoing intervention with the O&M specialist in developing a shared meaning of O&M intervention. The mutual trust and commitment established between parents and EIP teachers enabled the successful introduction of long cane mobility to be transferred into community settings and schools, where participants identified positive experiences associated with the use of the cane.

The previous and current chapter have explored the first two research questions, presenting the experiences and views of the adult participants of this study. The final findings chapter focusses on the significance and influence of early O&M intervention for children and families. Opinions toward the use of coloured canes and “naming” the cane are explored, and children’s experiences and stories are interwoven through the chapter.
Chapter Eight: O&M, Children and Families

The reason we want children to be meaningful participants in everyday environments is because meaningful participation is the engine of development and the key to attaining a true sense of belonging and a satisfactory quality of life. (Moore, 2012, p. 9)

In order to better understand how early childhood O&M experiences are perceived by children, parents and specialist visiting teachers, the significance and influence of O&M intervention within the context of children’s day-to-day lives needs to be explored. This final data and discussion chapter therefore focusses on themes presented in Chapter Six (Figure 1, p. 151) on reaching a turning point and moving to a new path of understanding. The analysis of data reveals that children developed a sense of ownership and agency toward their O&M action through social interaction with significant others, the use of coloured long canes, and their interactions in family and community life. From an educational perspective, this sense of agency allowed children to meaningfully participate in child-centred and child-directed learning opportunities. As long cane mobility and other O&M techniques became embedded across daily activities, children were seen to develop a self-concept as an independent active mover with a sense of control over their own lives.

In Chapter Six a typical morning at the EIP was described in order to illustrate how O&M techniques and other independence skills were embedded into the program’s routine, thereby allowing children to problem-solve, make decisions and develop good judgements toward their own independent travel, and learn to support their own and each other’s O&M action without an over-reliance on adult assistance. Figure 4 presents an example of Stephanie independently walking with her long cane to the car park at the end of an EIP session whilst another child and two teachers follow behind at a significant distance.
Stephanie is walking independently to the car park at the conclusion of an EIP morning, followed by another child using a long cane. Stephanie is walking in front, with a large backpack on her back. She is barefoot and tapping her long cane with her right hand as she walks along the footpath. Two teachers are following behind at a distance of several metres.

The child behind moves up so he is alongside Stephanie, and they continue to walk side by side down the footpath. He reaches across to feel Stephanie’s left arm as she walks beside him.

As they approach the car park, Stephanie turns left onto an intersecting pathway. Her cane locates the kerb edge, and she probes with the cane tip to judge the kerb depth.

Stephanie locates a car parked next to the kerb, and taps her cane between the kerb edge and the car tyre to determine the distance between them. Stephanie then transfers her cane to her left hand, in order to feel the side of the car with her right hand. As she turns to cross the pathway she is standing on to walk to the car on the opposite side, she loses her balance due to her large backpack. However she is able to stabilise herself. Stephanie switches her long cane back to her right hand, and, as she walks across to the other car, she locates a safety rail in the centre of the footpath. Stephanie makes contact with the safety rail with her long cane in order to safely traverse around it to the car.

*Figure 4:* Video snapshots and transcription of Stephanie independently negotiating her way from the EIP building to the car park.
Figure 4 provides an example of children “communicating, role taking, cooperating [and] problem solving along a stream of action” (Charon, 2010, p. 204), central components within the development of childhood socialisation according to Charon (2010). Childhood socialisation is a central theme within this chapter; in particular, the development of children’s sense of agency in O&M action, interactions with significant others, and involvement in family and educational life, are discussed. Firstly, the role of O&M intervention in the establishment of a child’s identity as a long cane traveller is explored, with a particular focus on the teaching strategies utilised in the EIP of using coloured canes and having children name their canes.
Figure 5: Julie’s braille story

Transcription: What is a cane? A cane is something that helps blind people get around. A cane is not a wepn (sic) or a smacking stick. A cane is speshl (sic) in every way, they are very yoosfull (sic). And sometimes can fold up. That is a cane. The End. (Julie, age eight)
Julie began long cane mobility at the age of fourteen months, and her written story (Figure 5) indicates that, for her, a long cane is a treasured tool. Her story also contests a common perspective toward early long cane mobility, identified by Pogrund and Rosen (1989) and discussed in Chapter Three, which argues young children lack the cognitive and motor ability to use a long cane correctly and may use it to harm others. The findings of this study contradict that view and are supportive of Denzin’s (2010) proposition that young children are capable of demonstrating high levels of competence and responsibility if they are encouraged, motivated and allowed to do so. The symbolic interactionist approach to child development focusses not on development as a series of sequential stages children progress through as viewed by Erikson (1965) and Piaget (Piaget & Inhelder, 1969), but rather the ability of the child to “shape, define, and negotiate its (sic) relationship to the external world of objects, others, and social situations” (Denzin, 2010, p. 10). Child development is seen as a naturalistic process where self-awareness and self-consciousness emerge as children define their own reality through the process of social interaction. As children develop a sense of self as a social object, they take on the perspective of a group culture such as with other children who are blind, and these interactions provide information on how to act across a range of situations including when using the long cane. Julie’s story indicates she has been exposed to the “weapons” argument, but understands the responsibility of long cane mobility, an understanding shaped through her early experiences and interactions.

**Developing Responsibility**

Early experiences and interactions are important, Charon (2010) explains, because the child begins to take the perspective of significant individuals, generally role models including parents, teachers and friends. Mead (1934) describes the very early years as the play stage, where children learn to attach language to objects, including themselves through their name,
and begin to develop an understanding of what is important in the lives of their role models through social interaction. The relevance of this to early O&M intervention, and particularly long cane mobility, is that during this stage, “the child acts towards objects in the world” (Charon, 2010, p. 78) in the same manner as role models do. One method of facilitating very early interaction with the long cane is through the use of a “teaching cane” (Cutter, 2007, p. 38), where the infant who is being carried by a parent is encouraged to touch and explore an adult size cane which the parent is using as they walk. As the child grows in confidence, she or he begins to mimic the parent’s action with the cane, tapping and sliding it and drawing information through the cane from the surrounding environment. In the process, the long cane takes on a new significance, ceasing to be a neutral tool and becoming an axis of independence that is central to a new way of engaging with the world. The significance of the cane may relate to its usefulness as an obstacle detector, as Stephanie’s early memory demonstrates:

Bronwen: Do you remember when you got your first cane?
Stephanie: Yes. Before I got it I think I was crawling.
Bronwen: Yeah, I think you were crawling too.
Stephanie: And I kept on bumping into everything!
Bronwen: So do you think it was good that you had your cane when you were tiny?
Stephanie: Yep!

However, as children grow older and begin to use their long canes during interaction with significant others such as family members, teachers and peers, they move into the “game stage” (Mead, 1934, p. 152), incorporating the attitudes and perspectives of significant others into a “generalised other”. The generalised other brings an understanding of how to act appropriately within society; as Charon (2010) explains, “we use what we have learned from others in many situations as to how we should act” (p. 76). Teachers in this study defined the
generalised other in terms of children developing self-awareness and responsible behaviour as they learned to interact with their long canes within varying social situations. Sophie said, “They choose to use the cane correctly because it’s important to them”, and Amy described children “learning to take responsibility for their cane. It’s part of them understanding, I think, their responsibility for keeping themselves safe”. Sophie added, “They are less likely to act up with something that’s providing them with the independence that everyone else seems to have”, indicating that independent movement was an important goal for children from a very young age. It is during the game stage that children become aware of how the long cane is perceived by others, reinforcing the importance of establishing early social interactions that extend the meaning of the cane beyond an incidental tool for independence and toward being an integral component of the child’s self-identity. Constable, Kritikos, and Bayliss (2011) argue that ownership is strongly linked with self-identity; the theme of long cane ownership emerged within teacher and parent interviews, particularly in discussions around the teaching strategies of naming the cane and choosing coloured canes as is now discussed.

**Naming the Cane**

In order to understand how a child gives meaning to an object, for example a long cane, Blumer (1969) states the social processes by which meanings are created need to be considered. Both teachers and parents saw naming the cane as a significant action toward the creation of ownership and meaning. Teacher Kirsty stated, “I think the kids being able to name it themselves is very important. It reinforces the idea that this is something that’s got meaning to me, it’s valuable to me”. Emily agreed, saying, “Giving the cane a name...was ownership. And if you have ownership of something, it becomes part of you”. Olivia felt naming the cane added to its “specialness” amongst the child’s possessions, saying, “It turned
it into this thing that’s very friendly. Gave them ownership. They have their stuffed toy, their blankey (sic) and their cane”. Denzin (2010) argues the designation of ownership by young children toward “valued social objects” (p. 101) is a necessary step toward the child perceiving themselves as a distinct social being, separate from peers and adults. Identifying a long cane by name allowed children to socially interact with others around its use, establishing that others share similar feelings of ownership. Emily explained, “They were very careful about the names they chose. There was a lot of discussion, and other children wanted to know what their cane was called”. In this way, children learned that long canes were important to their peer reference group, establishing within them a sense of shared meaning toward long cane mobility. The practice of naming canes is something children have continued; in my conversations with children about their early memories of long cane mobility, all referred to their canes by name. For Laura, the cane name was an important early memory:

Bronwen: Can you remember anything about when we very first started?
Laura: No (laughs). I don’t think I had names for the first two years.
Bronwen: Mm, I’m trying to remember.
Laura: Oh, I remember saying, ‘Can you name your canes?’ and they were like, yeah!

When I asked Laura what advice she would give parents of young children with blindness about long canes, her first response was, “They can name the cane”. Clearly, for Laura, naming the cane bestowed special value on it, an important connection in the establishment of ownership and one that children are aware of by the age of two, according to Gelman, Manczak, and Noles (2012). Additionally, ownership was reinforced through the use of coloured long canes as the following section describes.
Coloured Long Canes

The long cane carries no intrinsic meaning in itself, rather, Denzin (2010) proposes, its meaning is defined through social interaction, in how people behave toward it. This is evident from the number of studies highlighting the white cane as a “stigma symbol” (Goffman, 1963, p. 48), where reluctance to use the cane is attributed to the perception of potentially negative social reactions. Wong et al. (2004), in their research report one participant saying, “You think everyone is going to pity you; carrying the white stick or wearing the dark glasses, it’s like a symbol, ‘Look at me, I am blind!’” (p. 638). Ferguson (2004) sees the use of language such as this as reinforcing stereotyped views of blindness dominant in Western society, demonstrating the power of language as a symbol. Symbols, be they words, physical objects or acts, are always socially interpreted, and it is through this interpretation, Charon (2010) argues, that individuals come to see themselves and their role in society. Critically, Denzin (2007) explains, symbols evoke emotional responses that connect us to others and influence our actions; these emotional responses are therefore central to the development of perspectives. Symbols can be used intentionally to communicate positive ideas, values and emotional responses, potentially shifting perspectives towards blindness, particularly blindness in children. Teachers and parents viewed the use of coloured long canes as one means of achieving this change in perspective.

The long cane is conventionally white and, as discussed in Chapter Two, there is a perception that identifying the long cane traveller as blind is an inherent requirement of safe independent travel. Within the early childhood context however, the experiences of teachers and parents indicated that cane colour did not affect whether or not the long cane was recognised as a mobility aid. As Sophie explained:
I think that if a person is walking along using a long cane in the manner for which it is intended, it is pretty obvious that it is a mobility device. It’s not just the colour, it is the way that a person is walking and using it.

Emily agreed that colour was irrelevant and people would “understand the function of it if children were evidently needing it for mobility”. Parents who, as discussed in Chapter Seven, encouraged their children to use their canes in social situations because it communicated to others their child’s vision loss and made travelling in busy areas easier support this view. Mike, for example, recalled a colleague observing his daughter using a pink and green cane, saying, “He didn’t know she was blind when he first met her. It was when she was going like that [indicating arcing the cane from side to side] that he was like, ‘Oh yeah’”. Social context was central to meaning, the function of the long cane evident through the manner in which it was being used. As Blumer (1969) argues, individuals change and interpret their meanings towards objects as they define specific situations, such as modifying their definition of a long cane to include an understanding that it does not necessarily have to be white.

It could be argued that colour is an irrelevant concept to children with blindness, and that the use of coloured canes in fact reflects parent and teacher choices rather than the child’s. However, Landau and Gleitman (1985) and Shepard and Cooper (1992) demonstrate that children with blindness develop conceptual understandings of colour at a young age, and Borkowski (2009) argues “colour preference has the same importance for everyone even if colour is a surrogate concept for people who are congenitally blind” (p. 69). Emily explained, “Even children who were not able to see colour understood the wording, they knew there was something special about a coloured cane”. The interpretive perspective recognises that meaning is established through the conscious engagement of an individual with objects (Crotty, 1998), therefore the opportunity to choose a coloured cane, or decorate a white one, encourages children to construct their own meaning toward their long cane through a process of creative interaction. Ella recalled how one child, Angela, upon receiving a new cane,
“Couldn’t wait to decorate it. She loves it. I think that’s great, it’s their personalised cane”.

Stephanie’s written story (Figure 6) indicates that, for her, personalising the cane through colour and a name are important aspects of long cane mobility:

![Stephanie’s braille story](image)

**Figure 6: Stephanie’s braille story**

Transcription: One day when I was young I got my cane. My cane’s name Milly (sic). My white and black and grey cane. She was very small. I always went up and down stairs with my cane. I liked walking along my backyard path. Sudden (sic) it started to rain. I got inside and went up and down the stairs again. The colourful and wet cane, by “Stephanie”, year 4, 9 years old. The End.
For young children, social interaction around long cane mobility is particularly important because, as Stryker (1959) emphasises, “we come to know what we are through others’ responses to us” (p. 116). The use of coloured canes influenced adult interactions with the child, particularly in those who were possibly uncomfortable with the child’s blindness. Amy observed the use of bright colours “makes it easy for other people to share something in common, makes it easier for people to relate”. Emily agreed, saying, “I think the cute factor was good. I know that’s not what we do it for but it helped, it absolutely helped in people’s acceptance of it”. The use of coloured canes therefore appeared to shift the focus away from preconceived notions of blindness, evoking instead positive emotional reactions that in turn influenced the child’s action. Emily explained:

You could hear language, you could see body positions change, you could see heads come up. We watched behaviours change, we watched tantrums decrease, frustrations minimalise. The impacts were all encompassing in absolutely everything.

Visual responses to long cane use are not meaningful to children with blindness so it was significant these responses were most often communicated verbally, allowing children to interpret how others viewed their cane. Sophie explained it was cane colour that often drew reactions, saying, “Even the kids with no vision whatsoever loved the fact that their cane was being talked about in terms of, ‘Wow, look at the colour of that’”. These findings suggest therefore, that for children to develop a self-identity as a long cane user, personalising canes through colour and names is a powerful intervention strategy. Teachers and parents believed that developing a sense of ownership towards the cane also strengthened children’s sense of empowerment and responsibility toward their own long cane mobility. Ultimately this enabled children to become active, engaged learners participating fully in their school community and family life, as described in the following section of this chapter.
Developing a Self-Concept as an Independent Traveller

Central to this discussion is whether early O&M intervention helps the child develop a self-concept as an independent active mover. Self-concept, from an interactionist perspective, is the product of the reflexive self that defines how an child views him or herself within the social world, according to Gecas (1982). Developed through an ability to assess our own actions, to self-communicate and make judgments about these actions, the formation of a “socially recognised and validated” identity (Charon, 2010, p. 84) requires role taking and is strongly influenced by relationships with significant others and reference groups. The importance of a shared perspective amongst significant others and reference groups toward O&M intervention and long cane mobility is highlighted here. The development of identity, Gecas (1982) explains, influences how we control our actions, both individually and as a member of a group. Developing a self-concept as an independent active mover therefore requires an identity built on the child having the skills, ability and confidence to execute independent O&M action. Self-concept in young children, Denzin (2010) proposes, emerges through play, therefore it is during this developmental phase that O&M techniques need to be embedded. The following section describes how current practices in early childhood education support the embedding of O&M techniques at a stage where children are also developing their own sense of self.

Child-Centred Approaches to Early O&M Intervention

As established in Chapter Three there is extensive literature identifying the importance of concept development in children who are blind, including the work of Fazzi and Klein (2002), and Warren (1984, 1994). However, the literature on early childhood concept development tends to recommend adult-directed structured opportunities for learning; Skellenger and Sapp (2010), for example, use language such as “take the child to...and
provide systematic instruction…” (p. 199). Whilst there are occasions when systematic instruction is necessary, the application of symbolic interactionist theory suggests the development of self-concept benefits from the child’s ability to independently interact with and learn from their environment. The Australian Government has recently released the first national curriculum document targeting early childhood education (Grieshaber, 2010) with the publication of the Australian Early Years Learning Framework (Council of Australian Governments, 2009). The Framework adopts a child-centred approach to education that includes an emphasis on free play and play-based learning (Grieshaber, 2010), an approach promoting choice and independence and recognising, as Musolf (1996) explains, that “children are active in their own socialisation” (p. 304). Celeste and Grum (2010) cite numerous studies on the play behaviour of children who are blind that show they engage less frequently than sighted peers in manipulative and symbolic play, and there is a high risk that participation in child-initiated learning activities will be limited, particularly if independent travel skills have not yet been established and there is an over-reliance on adult intervention. Children’s ability to utilise a range of O&M techniques within their daily routines was therefore identified as a significant outcome of early O&M intervention by teachers, as it enabled the implementation of a child-centred approach to learning within the EIP. The following video snapshot provides an example.

Figure 7 shows Julie spontaneously playing with several canes during an EIP session. Her self-initiated play provides an opportunity for her to interact with canes of different sizes and with different tips. I am observing and verbally encouraging Julie to make connections between the canes, prompting Julie to extend her conceptual understanding of a “long cane”. Julie demonstrates an emerging sense of self as she explores differences between the canes, identifying her own cane and comparing it to others. Through taking the role of the other (Mead, 1934) and developing an understanding that peers also use long canes with
similarities and differences to her own, Julie attaches meaning to the long cane beyond her own individual experience. O&M intervention has allowed Julie to not only develop functional O&M techniques, but also to actively construct her own social reality of what it means to be a long cane traveller.

Julie is outside during an EIP session, exploring three long canes that are lying on the ground. O&M specialist Bronwen is verbally interacting with her. Julie’s own long cane, “Rosie”, is one of the canes on the ground. Julie is holding a long cane upside down. There are two other long canes on the ground, one short (Julie’s own cane), and one much longer cane belonging to an older child. Julie holds the cane she has with her right hand about halfway down the shaft, whilst feeling the round tip on the end of the cane with her left hand.

Bronwen: It’s different to yours, isn’t it?
Julie starts to mouth the cane tip as she turns around to face Bronwen. As she turns, she steps on the longer of the two canes lying on the ground.
Julie: That’s Julie’s Rosie, isn’t it?
Tess continues to hold the first cane upside down. Positioning both hands one on top of the other so they grasp the cane shaft, she bangs the cane grip up and down on the ground, whilst keeping the cane vertical.
Bronwen: There’s Julie’s Rosie on the ground.
As Julie attempts to balance her feet on the longer cane that is lying on the ground, she steps forward and onto the third shorter cane that is her own.
Julie: That’s Julie’s Rosie.
Bronwen: That’s Julie’s Rosie, isn’t it?
Julie discards the cane she is holding by dropping it to her left side. She bends down to locate her own cane, now under her right foot. She picks it up and manoeuvres it so her right hand is on the cane grip. She immediately drops her right hand down, still holding the cane, so she can use her left hand to feel for the cane tip.

Once she has felt the tip, she lets go with her left hand, maintaining contact on the cane grip with her right hand.
Bronwen: Oh look, they’re different, aren’t they?
Julie bends down and, whilst continuing to hold her own cane in her right hand, uses her left hand to reach between her feet and feel the longest cane that is lying on the ground.
Bronwen: We’ve got three canes!
Whilst the longest cane is still on the ground, Julie runs her left hand along it to locate the cane tip. She then pulls this cane out from between her feet by holding onto the cane tip.
Whilst continuing to hold onto her own cane with her right hand, she uses both her hands to turn the longer cane around so her left hand is holding the cane grip.

Julie then places the longer cane on the ground briefly in order to position her hand correctly on the cane grip. Throughout, she continues to hold her own cane in her right hand.

Bronwen: Look, you’ve got two canes! Oh, you’re clever!

Once Julie has the correct grip on both canes, she begins to walk, tapping each cane.

Bronwen: Oh, look at you!

Julie starts tapping the canes faster, bouncing the tips quite high as she walks. She has a big smile on her face as she listens to the different sounds the cane tips make, due to the different cane lengths.

Bronwen: Look at you, Julie! Are you trying two canes?

After three or four steps, Julie drops the longer of the two canes on the ground, and continues to walk tapping her own cane.

Bronwen: What a clever sausage!

Figure 7: Video snapshots and transcript of Julie playing with and manipulating a number of long canes during an EIP session.

The reflexive behaviour demonstrated by Julie in Figure 7 shows she is developing what Denzin (2010) describes as the “ability to stimulate and respond to (her) own behaviour” (p.
Through alternating between others’ roles and her own, she begins to understand her own sense of self and identity more clearly. Julie also demonstrates that, given the opportunity to learn O&M techniques at a young age, children who are blind can initiate their own conceptual learning, an approach that Grieshaber (2010) explains is considered to be more meaningful for young children than more formal teaching approaches. This is the basis for the beginnings of self-determined behaviour.

The Foundations of Self-Determination

Julie exhibits the beginnings of self-determined behaviour as she starts to learn how her actions can assist her to reach her goals. Self-determination in this context reflects Wehmeyer’s (1996) concept of self-determination as “acting as the primary causal agent in one’s life and making choices and decisions regarding one’s quality of life free from undue external influence or interference” (p. 24). Self-determination, in Wehmeyer’s (1996) view, is a key educational outcome for children with disabilities, and it is also a core domain within the expanded core curriculum as outlined by Sapp and Hatlen (2010). Self-determination emerges across the lifespan, but Wehmeyer and Palmer (2000) stress the foundational elements need to be implemented during the early childhood years in the “formation of a personal identity” (p. 469). Self-determination, and expression of human agency, Wehmeyer and Schalock (2001) establish, involves choice-making, problem-solving, decision-making, goal setting and attainment, self-management skills, self-advocacy and leadership skills, perceptions of control and efficacy, and self-awareness and self-knowledge. Agency, the ability to intentionally use action to exercise control over one’s own life is, as Bandura (2001) describes, “the essence of humanness” (p. 1).

Research from both the United States (Lohmeier et al., 2009; Sapp & Hatlen, 2010) and Australia (Brown & Beamish, 2012) has consistently found teachers struggle to find time to
implement the skills of the expanded core curriculum, including, Agran, Hong, and Blanskenship (2007) identify, self-determination skills, indicating the importance of early intervention in this area cannot be underestimated. The discussion in this chapter now turns to the role of early O&M intervention in the development of two foundational skills of self-determination, self-efficacy and choice-making, before discussing limits to children’s agency and reviewing the place of O&M intervention in the early childhood expanded core curriculum.

**Self-efficacy and choice-making.** Laura expressed her understanding of self-efficacy as, “I can get to and from lunch by myself and I don’t need anyone to help me”. Self-efficacy, according to Bandura (1982), is achieved when a combination of behavioural, cognitive and social abilities allow an individual to function effectively within their environment, and is strongest when skills are developed within the context of authentic experiences. Therefore it is essential to provide opportunities for children to independently interact with their environment using the appropriate O&M techniques and tools. In my research, teachers observed self-efficacy as children developed the ability to independently shift between O&M techniques in different contexts. Emily explained:

They would actually transfer between using the cane, between trailing, between doing sighted guide. It wasn’t a conscious thing between, ‘I’m going to stop doing this and do the next thing’. It was just core moving through space and using whichever strategy at the point of time was the most appropriate one.

Kirsty felt long cane mobility was a particularly valuable O&M technique as children could independently respond to environmental cues that interested them, rather than relying on adult or peer intervention to travel from one location to another. She explained, “You’d be doing something, and then all of a sudden there’d be an opportunity to go, ‘Oh, what’s over there?’ and to go in a different direction”. For Kirsty, this was “very exciting” because, as she
said, “That didn’t necessarily happen in other [educational] things but it did with being able to use the cane.” The ability of children to respond independently to environmental cues enabled them to make choices, one of the earliest skills that can be introduced to promote self-determining behaviour, according to Wehmeyer and Schalock (2001). Examples of how choice-making opportunities were implemented within the EIP setting were illustrated within Chapter Six, and the use of coloured canes was another strategy teachers used to facilitate active participation in O&M intervention. Emily explained:

They’re making the choice about what they want to use. To have a pink cane, a green one, or a white one, what a great way to give them a choice! Because there’s a lot of stuff that kids who are blind don’t get a chance to have a choice with because it’s non-negotiable.

The following two examples taken from my conversations with children demonstrate how children choose from and adapt different O&M techniques to make conscious decisions about their movement through space. In the first example, Angela is talking about needing to be guided in unfamiliar areas, whilst also using her long cane “Roley”. If Angela did not have well-established O&M techniques it is likely that, rather than being guided, someone would be holding her hand and taking responsibility for Angela’s movement, behaviour that has been identified by Cutter (2007). Instead, Angela adapts guiding techniques to suit the height of the person with whom she is walking, and also chooses to receive sensory information about her environment via the long cane:

Bronwen: So do you have to have somebody guide you?

Angela: Somebody helps me.

Bronwen: Do you just hang onto their wrist?

Angela: Um...yeah, their elbow.

Bronwen: Oh, to their elbow? So you’re doing really good guiding then.

Angela: And in the Year One class, all around it I use Roley and I hang onto their shoulders up here.
Stephanie demonstrates leadership, a sense of efficacy, self-awareness and knowledge about her own vision loss in comparison to others when she explains, “I can see a bit so, when I was at the intensive braille days, I’ve been helping other people get around because they...they’re fully blind. They hold my wrist coz I know where I’m going.” Interactions such as these, Charon (2010) explains, provide opportunities for children to actively extend their thinking and define their own social world, reinforcing in this situation their self-concept as an independent traveller with agency over their own O&M action. Laura’s experiences demonstrate the importance of agency; she described how, as she grew older and moved into the upper years of primary school, she needed to rely more on her own skills, saying, “If you don’t have a cane, you won’t go anywhere. Because when you’re older, no-one’s really going to guide you that much, so you’re really not going to go anywhere.” Laura told me, “Some people say they absolutely hate using their cane”, however her written story presented in Figure 8 suggests she found value in “getting used” to long cane mobility at a young age.
Figure 8: Laura’s braille story

Transcription: My cane’s name is Lila. I think it is a lovely name. I kind of like using my cane. Everyone in my family can see except me but I’m used to it. I don’t really remember using my cane at a young age but I did. It is good to start at a little age because then they will like it more. (Laura, age 12)

The children’s comments and stories indicate that their independent travel skills allowed them to actively engage and participate in school and family life, for the most part on their own terms. However some children’s choices about long cane use were restricted due to circumstances beyond their control.
Situational limits to children’s O&M agency. For children there are limits to agency and an important component of childhood socialisation, according to Charon (2010), is the understanding that society has rules within which decisions about action and behaviour must sit. Decisions about when and where children who are blind can utilise long cane mobility can be removed from them and placed in adult hands. The previous chapter discussed the challenges of working cooperatively with school staff in order to establish a shared perspective toward O&M intervention that supported the facilitation of long cane mobility. A larger challenge in the Australian context, and one affecting the children in this study, is the lack of availability of O&M specialists to provide consistent O&M intervention in educational settings as identified by Wells (2008) and Scott (2009). The effect of this was apparent during my visits to all the children in this study. For example, both Stephanie and Angela talked about rules being imposed on their long cane mobility within their school environment. Stephanie explained, “On grass, I’m not really allowed to use it, because it will get stuck in there. And definitely not when I’m running!” Angela said, “We don’t use him when we go on the oval or the playground. I’m not allowed on the sandpit with Roley”. Rules such as these can be imposed because of a perception that long cane use on certain surfaces is risky, or because of a lack of understanding of long cane mobility due to limited O&M intervention between school personnel and the O&M specialist. Stephanie talked several times about her cane “getting stuck”, explaining she didn’t like to use her cane a lot because “sometimes if I hit a crack, it hurts”. My notes following my school visit with Stephanie recorded:

First thought was that her long cane is too short and...a very old style, which looks quite dirty and horrible. Stephanie told me that the cane got stuck in cracks, which given the length of it is not surprising. Disappointing to hear that, when I asked who her O&M (Specialist) was, she said “nobody”. Confirmed with mum that she is not getting O&M services at all at the moment. (Notes from school visit 28/07/2011)
I made similar observations with all four children (Notes from school visits 04/08/2011, 10/08/2011); all were using canes that they had outgrown and none were receiving ongoing O&M intervention within their school environments at that time. Lack of ongoing O&M intervention not only prevents school staff from understanding and supporting children’s independent travel, the use of long canes that children have outgrown restricts their ability to safely use O&M techniques. Despite these difficulties, I observed that all children were confident in travelling around school environments independently utilising their long cane mobility as best they could with incorrectly sized canes (Notes from school visits 28/07/2011, 04/08/2011, 10/08/2011). These observations supported teacher and parent perspectives that O&M techniques were embedded at a young age and had become, as Emily described, “A natural movement thing for them”. However, the lack of ongoing O&M support raises questions about how children who are blind maintain their skills. These findings suggest that the expanded core curriculum be seen as critical in the early childhood years, for reasons now outlined.

O&M and the Early Childhood Expanded Core Curriculum

If the development of O&M techniques is foundational to the child’s self-concept as an independent active mover as the findings suggest, then it is essential that O&M intervention is centrally positioned within the early years expanded core curriculum. Teacher Kirsty felt, “Braille and O&M to me are the two most important things. They would sit on a level above other sorts of needs.” Kirsty identified the development of young children’s O&M techniques as “absolutely critical...because without that there’s no independence”. Emily described O&M techniques as “the core basket of knowledge” to which all other skills relate, saying “social skills, social development, self care, independence, literacy, numeracy...they all relate
to how they use their hands, how they move through space, how a child is able to find things”. She elaborated:

I watched children absolutely blossom. From kids who were doing the cane to kids who were excelling in their language, their social skills, their self-care skills. You could just see a whole change in actually how they functioned in the world.

These findings may appear self-evident, supporting the importance of the expanded core curriculum in affording children who are blind, as Hatlen (1996) eloquently says, “the opportunity to be equal and the right to be different” (p. 25). However, the existing literature on the expanded core curriculum focusses primarily on the school-age years (for example, Fazzi & Naimy, 2010); authors discussing O&M skill implementation in early childhood, such as Skellenger and Sapp (2010), do not position this within the context of the expanded core curriculum, reflecting the fact that some domains, including O&M, have not traditionally been included within the early years context. The United States, through relevant legislation such as the 2004 Reauthorization of the Individuals with Disabilities Act (United States Department of Education, n.d.), appears to be better positioned than Australia to effect change in this area. However, as is also the case in Australia, it is acknowledged that significant hurdles need to be overcome, including, Skellenger and Sapp (2010) identify, broadening awareness of the importance of O&M intervention and ensuring sufficient numbers of appropriately qualified O&M personnel are trained. It must also be recognised that profound social changes over the past few decades have significantly changed the nature of early childhood education and intervention. Moore and Skinner (2010) argue it is increasingly challenging for service delivery providers to meet the needs of families and their children with disabilities, and this is particularly the case for children with low incidence disabilities such as blindness. However, the results of my study indicate that implementation
of foundational components of the expanded core curriculum within the early childhood years is a challenge that should be met.

This section has concentrated on educational approaches to O&M intervention that facilitate within children a self-concept as an independent active mover. What follows is a discussion of the significance and influence of this intervention within the context of children’s family lives.

**Family Life**

As stated in the introduction to this chapter, the significance and influence of O&M intervention within the context of children’s day-to-day lives must be considered if we are to fully understand child, parent and teacher perspectives. The experience of every family is unique, with families participating in this study differing in terms of socio-economic status and educational background. However, when discussing the influence of early O&M intervention on their family lives, there are commonalities of experience including the inclusion of siblings in the O&M intervention process, the embedding of O&M techniques within daily family life, and a general sense of optimism for children’s futures.

**Siblings and O&M**

A recurrent theme amongst parents was the active involvement of siblings in O&M intervention. O&M sessions with Angela in the home environment, for example, always involved her siblings observing and participating, thereby developing a family-wide perspective of the long cane. My case notes from that time commented that Angela’s sighted younger brother was so interested in the cane I took a second one for him to use during visits (Department of Education Western Australia personal case notes, 6 July, 2007). Angela’s mother Mary remembered, “It’s great that they’re so accepting of things like the cane. I remember when we started, it was a fight over who was going to get to use it!” Olivia also
remembered Stephanie’s siblings responding well to her early long cane mobility. She recalled, “The other kids loved having the cane! They had the cane and they were tapping. I think because of it being so little, it’s not anything scary”. The importance of family to Angela was illustrated in her written story, dictated to me as she had an injured wrist when I visited and was unable to use the brailler. It describes our walk around her school, where her siblings’ classrooms were Angela’s first choice of destination. It also indicates the importance to Angela of having opportunities to decorate her cane, and establish her cane’s place within her family life.

I went for a walk with Roley. Roley is colourful. I went for a walk with Bronwen. I went with Mrs I. and Mrs S. We went to see K... and we went to see J... and J... showed his crab. We went to the library and the high school. And we came back to here. I hang Roley up on the hook outside Year One and I put my hat in my chair bag. And we came back to a kitchen and we went through the kitchen to where we work. Where Mrs S. works with us.

We put some stickers on it a long time ago. Her got a ball on the end, it helps me find people and poke people with the ball. Found Roley and poke everyone. I poke people’s feet. We fold her up in my school bag and then we take it home. Put her in my school bag. Roley stays up on my hook at night at home. (Angela, age seven)

Including siblings in early O&M intervention supports current early childhood practice through a focus on a family-based approach to intervention, as identified by Dunst and Trivette (2009). It also enables learning to occur, as Bruner (1986) stresses, within “a community of those who share his sense of belonging to a culture” (p. 127). Mary explained Angela’s siblings, “Spur her on. ‘I’m going to do this, so she’s going to do it too’”. A social culture becomes established within the family where blindness is seen not as limiting, but rather, requiring different actions such as long cane use to enable participation.
O&M in Daily Family Life

Conversations with parents indicated that children made active decisions around O&M action in family environments. Stephanie talked about using her long cane in different social settings, saying, “When I go out to dinner and that, I use her”. Both Julie and Laura identified they liked using their canes in busy environments because, as Julie said, “People get out of the way”. Using her long cane in shopping centres was helpful for Laura in that it made moving through crowded areas easier for both her and her family:

In the shops, the good thing is that when I’m using my cane, some people move out the way. But when I haven’t got my cane with me and I’m just holding mum’s hand or on the pram or on her arm, then nobody moves out of the way. So mum has to turn the pram this way and that way.

Julie’s family travels extensively, both within Australia and abroad. Julie’s cane was useful in these unfamiliar situations because, “There’s lots of stuff…like there’s stuff in the way.” However, Julie explained her cane also created difficulties “at holidays and stuff. It’s just like, it’s hard because I want to go play, but then I have to carry my cane everywhere.”

Active decisions toward cane use included children making decisions about when not to use their long cane. Parents were sometimes frustrated by this behaviour; Mary said, “My biggest struggle has been getting her to use it and not relying on me. Sometimes she’s used it with me, and then after a while she’s like, ‘Well, what do I need this for, I’ve got Mum!’”, however parents recognised constant long cane use could restrict as well as enhance opportunities for participation. Whilst Olivia encouraged Stephanie to use long cane mobility in conjunction with guiding skills in complex shopping environments for the purposes of identification and ease of travel, this imposed other limitations:

I think the reason she doesn’t use it as much is because when she’s using the cane and then holding my wrist, there’s no hand for chips or feeling what she can buy or ‘ooh, what’s that toy over there?’
For both children and adults, effective O&M action requires making decisions relevant to individual situations. The establishment of early O&M techniques provides opportunities to make these decisions, allowing children active participation in their own socialisation.

**A Sense of Hope for the Future**

Parents of children with impairments, according to Moore and Larkin (2005), look to early intervention practitioners to “impart a sense of hope for the future, with an emphasis on *ability* rather than *disability*” (p. 26, italics in original). In Kirsty’s experience, during the early years following their child’s diagnosis some parents “literally see themselves as a permanent attachment to their child”, fearing that independent mobility will be difficult or impossible for their child to achieve. Early long cane mobility, Kirsty explained, allowed parents to gain “a glimpse of the future, to see the hope that ‘One day I won’t be holding their hand’”. The development of confidence in their child’s ability enabled parents to, as Sophie said, “Encourage their child to be more independent...it was excitement rather than ‘They couldn’t possibly do that’”. For parent Melissa, this independence meant, “If we’d go somewhere that she didn’t know, I’d say to her, ‘Go get your cane, go for a walk around the house and get an understanding of where you are’”. From an educational perspective Emily felt a focus on the child’s ability was important because, “Families took great pride in their children. It showed them that their child was a child. Their child wasn’t this poor kid who was blind, their child was a child and they had the ability to do.”

Having established the value of early O&M intervention in the day-to-day lives of the children and families in this study, the final section of this chapter turns to a broader discussion of how children who are blind perceive space. The notion of the long cane as a natural extension of the body is explored; the section concludes by reviewing the potential of
new research in fields other than O&M to contribute to the knowledge base of those working in orientation and mobility.

**The Embodied Space of O&M Action**

Think of a blind person tap-tapping his or her way around a cluttered space, perceiving that space by touch, not all at once, but through time, by skilful probing and movement. This is, or at least ought to be, our paradigm of what perceiving is. (Noe, 2004, p. 1)

One of the most significant themes that emerged from this study is the connection between early O&M intervention and the concept of what Parr and Butler (1999) define as “mind and body space” (p. 14). Body space refers not only to the physical body itself, but also the “immediate envelope of space which the body occupies in moving around and ‘doing things’...an always situated physical presence and actions which both reflect interpretations of the social world and are themselves interpreted in a multitude of ways” (p. 13). Body space for young children who are blind therefore involves not only their physical body but includes the space occupied by the long cane which is in turn interpreted by social perspectives toward long cane use. Mind space relates in this context to the internal composition of self and identity; ‘mind and body space’ therefore refers to “the mutual importance and interrelationship of physicality and emotion, of the corporeal and the imaginative, and of the bodily and of identity” (Parr & Butler, 1999, p. 14). As a concept, it reinforces the notion that O&M action is more than the attainment of the cognitive and physical skills of orientation and mobility but is rather more multi-dimensional in nature.

With the exception of Berndtsson (2006; I. Berndtsson, personal communication, September 18, 2008), the processes of O&M acquisition and particularly long cane mobility have not been explored from this perspective in the O&M literature.

The field of social geography has begun to explore the concept of mind and body space in terms of the body’s “agency to overcome disadvantages” (Allen, 2004, p. 719, emphasis in
Allen (2004), Seamon (1979) and MacPherson (2010) specifically investigate vision loss from this perspective, which, rather than viewing people with disabilities as disadvantaged by the environmental spatial structure, explores how mind and body space are used to exercise agency and independence. Allen’s (2004) work for example explores how children with vision impairment experience home and urban space, explaining mind space is initially used in the conscious generating of cognitive maps in new environments, but through familiarity this knowledge becomes embedded within body space. Mobility becomes “intuitive” (p. 727), with children negotiating these environments relatively effortlessly. Allen does not explore mobility aid use, although he explains mobility for the children in his study became more difficult when “mobile objects, unpredictable movement, and an intensity of movement” (p. 730) were added to the environment. This is a situation where mobility aid use is beneficial.

From a phenomenological perspective, the concept of mind and body space is also referred to as “embodied space” (Anvik, 2009, p. 146) or “body-in-the-world” (Merleau-Ponty, 1945/2005, p. 163). This concept recognises the different ways in which space and surroundings are experienced by people with disabilities, focussing on the connection between “the active body and its surroundings...a way of perceiving and engaging in the world” (Anvik, 2009, p. 148). Without vision, children interact with their environment through other senses and tools including the long cane. This interaction goes beyond using the long cane to identify obstacles and negotiate space; the cane becomes “an instrument with which he [sic] perceives. It is a body auxiliary, an extension of the bodily synthesis” (Merleau-Ponty, 1945/2005, p. 176, emphasis in original). The experience of body-in-the-world, Allen (2004) explains, occurs when “the body actively appropriates space through its intentional activity so that its experience of space becomes manifest within the body” (p. 724,
emphasis in original). For the competent long cane traveller therefore, the cane becomes the means of perception. Merleau-Ponty (1945/2005) explains:

The blind man’s stick has ceased to be an object for him, and is no longer perceived for itself; its point has become an area of sensitivity, extending the scope and active radius of touch, and providing a parallel to sight. In the exploration of things, the length of the stick does not enter expressly as a middle term: the blind man is rather aware of it through the position of objects than of the position of objects through it. (p. 165).

Although teachers did not use this language, they observed children engaging with their physical environment through what Sophie described as an “instinctive” manner. She viewed this as a direct consequence of very early long cane mobility, saying, “They’re been given a long cane when their body is learning which muscles to use to walk. For them, it’s which muscles to use to walk and manage a long cane as well”. Kirsty described how she observed, “The cane as an extension of their hands. That’s what I thought was really exciting...the way they were moving their hands with the cane, it was like it was attached to the end of their arm.” Long cane use was seen to be intuitive, an unconscious action embedded within children’s very being.

The development of instinctive long cane use enabled Laura to focus on other perceptive techniques such as echolocation. She explained:

I like places where it echoes really, really well. It makes a vibration on the wall. Every time I nearly, I’d nearly hit the office and then I’d hear the sound of the office, the sound bouncing off the office door, so I’d know I was close. I wouldn’t even have to hit the office with my cane.

Echolocation and blindness has been well researched; Kolark, Cirstea, Pardhan, and Moore (2014) provide a comprehensive review of more than sixty years of findings in this area. Whilst confirming that children with congenital blindness can develop echolocation skills early in life even with limited specific echolocation training, the authors acknowledge that there is still much research to be done in this area. Laura’s experience suggests children have
the opportunity to develop a range of perceptual abilities including echolocation skills through the early establishment of O&M techniques to a level where they become intuitive. It is for this reason that Kish (2010), renowned within the O&M profession for his practical application of echolocation skills to both his own O&M action and in teaching this skill to others, advocates the very early introduction of long cane mobility with children. He refers to the long cane as a “perceptual extension” (p. 39), and certainly the findings in my study support this concept. Recent research in the medical field (Fiehler & Rosler, 2010; Kupers & Ptito, in press), discussed in Chapter Three, that makes use of functional magnetic resonance imaging (fMRI) technology to investigate how the brain adapts to a modal loss such as blindness offers great potential in developing our understanding of how individuals with blindness perceive their world and intuitively incorporate O&M techniques into O&M action.

These findings have profound implications for O&M service provision in Australia. An integrated approach is clearly needed to ensure that early O&M intervention is available from infancy, with change required at a policy, organisation and individual level. The importance of the expanded core curriculum within the early childhood years has yet to be supported through adequate funding, and, as identified by Deverell and Scott (2014), ongoing challenges remain in Australia around the provision of suitably qualified O&M specialists to work in this area. However, if children who are blind are to participate meaningfully within their everyday environments, developing what Moore (2012) describes as “a true sense of belonging and a satisfactory quality of life” (p. 9), then these are implications that need to be considered in greater depth.

**Conclusion**

This chapter has explored how, by acknowledging Watson’s (2012) view that children are “social agents who actively negotiate their lives” (p. 194), early O&M intervention
can facilitate a self-concept within the child as an independent active traveller. The acquisition of O&M techniques at a young age, including long cane mobility, enabled children in this study to exercise choice and develop a sense of self-efficacy toward their O&M action as they independently accessed learning opportunities within their educational and home environments. The application of symbolic interactionist theory highlights the importance of understanding how a teacher, parent or child’s individual actions and interactions influence meaning toward the child’s independent travel needs, their use of a long cane, the development of their self-concept as a long cane traveller, and their future potential as active agents in their own O&M action.

The following final chapter focusses on the key contributions of this study to the initial research question: how are the orientation and mobility experiences of very young children, including early long cane mobility, perceived by parents and specialist visiting teachers? The findings from the three data chapters are reviewed, before the implications for O&M intervention with very young children are discussed. The strengths and limitations of the study are outlined, followed by recommendations for future research.
Chapter Nine: Conclusion

The aim of this study was to explore how children, parents and specialist visiting teachers perceived their experiences of O&M intervention within the context of a specific Australian early childhood setting. The study began by establishing that, although orientation and mobility is a key domain within the expanded core curriculum for children who are blind, these children are often denied opportunities to undertake long cane mobility until they move beyond early childhood and into formal educational settings. O&M intervention with children in Australia is primarily delivered by professionals with a range of undergraduate qualifications and situated within an allied health environment in charitable blindness agencies (Deverell & Scott, 2014), and within the Australian education context there remains a lack of clarity as to how O&M intervention should be delivered. The nature of the O&M profession in Australia, as Deverell and Scott (2014) explain, creates difficulties with recruiting and training O&M personnel who are qualified to work within the education sector. All these factors, along with historical preconceptions about the ability of young children to acquire O&M techniques, have limited the availability of O&M intervention in the early childhood sector in Australia.

This study made use of a qualitative research methodology, interpretive interactionism, to explore experiences within a unique early childhood program incorporating O&M intervention implemented in Western Australia between the years of 2004-2007. This program has, to date, been the only one of its kind in Australia where an O&M specialist was employed as an integral member of an early childhood intervention teaching team. My in-depth participation as the O&M specialist within this program allowed the development of this study with a view to understanding how O&M intervention, including early long cane mobility, was experienced and perceived by the children, parents and specialist visiting
teachers involved with the program. In order to reach that understanding, the broad research aim was broken down into the following questions: (1) what were parents’ and teachers’ experiences and perspectives of early childhood O&M intervention, (2) how did social interaction enable participants to construct meaning toward O&M and long cane mobility, and (3) what is the significance and influence of early O&M intervention for children and families? This final chapter revisits these questions, presenting the key implications from the findings, and illustrating the significance of the research to O&M practice. The chapter concludes by discussing the limitations of the study, followed by some personal reflections and suggestions for future research.

Revisiting the Research Questions

An interpretive interactionist approach assists in establishing the connections linking social actions and interactions between the child, their family, professionals, peers, and the community, and the child’s resultant O&M action. Prior to embarking on this study, no knowledge existed about how children, parents and teachers experience early childhood O&M intervention. What is now known is that the meaning of O&M intervention for parent and teacher participants evolved as a process of cooperative action and teamwork was established, enabling a sharing of common O&M language and goals for the children attending the EIP in question. As these goals were implemented across all aspects of the child’s daily educational and family life, children learnt a range of O&M techniques, including long cane mobility, that facilitated a sense of agency toward their own O&M action and resulted in them becoming active independent movers at a very young age; teachers and parents came to develop an understanding of O&M action as being an embodied process encompassing all aspects of a child’s day-to-day educational and family experiences.
The first research question, exploring parents’ and teachers’ experiences and perspectives of early childhood O&M intervention, focussed on how key role models in a young child’s life, their parents and specialist early intervention visiting teachers, acquired perspectives toward early O&M intervention. What emerges from the data is that perspectives changed significantly over time, influenced by the child’s growing competence in early long cane mobility techniques. The O&M literature continues to present contrasting views on the ability of young children to acquire these techniques, emphasising the importance of a child’s acquisition of motor, cognitive, and conceptual skills prior to the introduction of long cane mobility. Skellenger and Sapp (2010), for example, recommend the use of adapted mobility devices either prior to or in conjunction with early long cane use. Alternatively, literature grounded in the personal experiences of individuals who are blind, such as Cutter’s (2007) promotion model of O&M, suggests that young children should be exposed to the long cane as a mobility tool from as young an age as possible. The personal accounts of participants in my research support this second view by establishing that young children are capable of achieving high levels of competence and responsibility toward long cane mobility if given opportunities to do so. This finding illustrates that, in order to develop an understanding of early childhood O&M intervention, there is value in grounding research in the everyday life of the child and making use of qualitative methodologies that explore individual experiences and perspectives.

The second research question explored the influence of social interaction on the construction of meaning toward O&M intervention and action, with participants establishing the importance of cooperative action and teamwork in influencing how O&M goals for children are identified and achieved. The importance of collaborative practice and teamwork when working with the early childhood age group is emphasised in the current O&M literature (Skellenger and Sapp, 2010), however there is a focus on the fixed characteristics on the
“role” of the O&M specialist, the “role” of the early intervention teacher, the “role” of the family, and so on. The application of symbolic interaction theory when exploring these issues is useful as it demonstrates how individuals move beyond these fixed characteristics of predefined roles in order to accomplish shared goals. This suggests research needs to continue to consider the dynamic processes of social interaction that occur between an O&M specialist, families and other professionals when early intervention service delivery models are being developed, in order that shared understandings of O&M practice can be reached. Current Australian models of service delivery to this age group do not support social interaction to such a degree, the implications of which are discussed below.

The final research question asked what the implications and significance of early O&M intervention are for children and families, with the findings capturing how the acquisition of O&M techniques provides young children with the agency to independently access learning opportunities, facilitating a self-concept as a long cane traveller with the ability to influence their own O&M action. This reflects Cutter’s (2007) promotion model of O&M that argues children who are blind need to develop the responsibility for their own independent travel through the development of a self-concept as an active mover. The application of symbolic interaction theory as it applies to child development focusses on the ability of children to shape and define action through a process of social interaction, a rather more fluid process than the sequential stage development approaches of Erikson (1965) and Piaget (Piaget & Inhelder, 1969). O&M action for the child occurs as the child develops the ability to combine long cane mobility skills, use perceptual skills, and make active choices toward travel mode. However, it must be recognised that O&M action for young children is influenced and controlled to a large extent by the actions of others: the O&M specialist and early intervention professionals, family, and the child’s school and community. O&M action for a young child will be contained within the boundaries of these external influences, however the
findings suggest that O&M intervention can be successfully interwoven through all aspects of a young child’s life and young children do have the capacity to develop the full range of O&M techniques at developmentally appropriate ages.

**Significance of the Research**

The application of an interpretive interactionist approach to the study of early childhood O&M intervention provides an original contribution to the field by questioning taken for granted assumptions about the nature of O&M intervention with children and developing new understandings as to how parents, teachers, and children themselves develop meaning toward O&M. From these understandings, the study suggests four specific implications significant to the field of O&M in Australia. Firstly, the findings demonstrate that children can successfully learn O&M techniques including long cane mobility from a very young age, and secondly, the acquisition of these techniques facilitate the outcomes of the Australian Early Years Learning Framework (Council for Australian Governments, 2009) with children who are blind. The third contribution has implications for the training of O&M specialists in Australia, raising questions as to how the O&M and education professions work together to ensure O&M intervention is a foundational domain within the expanded core curriculum and implemented from infancy. Finally, there is discussion as to how the introduction of long cane mobility at a young age can potentially change perspectives toward blindness through children becoming confident independent movers independently accessing their own learning. Each of these contributions and their significance to the O&M field, both within Australia and internationally, will now be discussed.
Key Implications

**Acquisition of Early O&M and Long Cane Mobility Skills**

Firstly, the findings establish that children who are blind can learn O&M techniques, including long cane mobility, at a very young age. This contrasts with much of the O&M and blindness literature presented in Chapter Three that argues children need to progress through a series of developmental milestones prior to commencing long cane mobility, but is supportive of Cutter’s (2007) promotion model of O&M. The most obvious implication of this finding is that O&M specialists require a greater understanding of early childhood theory and development than is currently the case. In particular, the socio-cultural theories of Vygotsky (1978) and Bruner (1986), which consider the importance of social interaction and the child’s active agency in the establishment of meaning and self-identity, have significant implications when considering how and when long cane mobility should be introduced to children. Additionally, there is a place within the O&M pedagogy to explore how O&M specialists, in addition to providing direct teaching and instruction of O&M techniques, can mediate experiences to promote long cane mobility within a range of social contexts. Key ideas from symbolic interactionism illustrate that it is through social interaction that meanings toward long cane mobility are interpreted and developed. Consequently, if we wish to promote an understanding that young children who are blind are capable of confident, independent travel, the influence of cultural and social contexts must be acknowledged. This can be achieved through further research based on the varying life experiences of children who are blind and their families.

In order for early O&M intervention and long cane mobility to be implemented successfully, the findings support current Australian recommendations for early childhood intervention practice, as presented by Moore (2012). These recommendations include developing
strategies that provide opportunities for both parent-mediated and community-based everyday learning opportunities; working with parents through the development of family-centred, capacity-building practice (Dunst & Trivette, 2009) that utilises a key worker and transdisciplinary service delivery model; and working in other settings where coaching and consultation strategies must be implemented to support interventions (Moore, 2012, p. 25).

Within the blindness field, Chen (2014) provides general suggestions as to how coaching and consultation can be implemented by a range of early intervention professionals, although specific interventions such as O&M are not discussed in detail. For O&M intervention, a significant challenge to be overcome is the attainment of a balance between the provision of direct hands-on teaching with children by O&M specialists, and the provision of skills and knowledge to parents, teachers, and others who come into contact with the child in the course of their daily life. The application of symbolic interactionist theory in this study has highlighted the importance of social interaction that builds upon a process of trust and recognises emotional connections (Denzin, 2007) in the development of shared action and goals; however as Wells (2008) has established, O&M specialists in Australia tend to work in isolation from other service providers, concentrating primarily on skill development. This suggests the efficacy of current service delivery models in working with the early childhood age group need to be reconsidered, particularly if skills such as long cane mobility are to be implemented successfully within the child’s everyday routines.

A particular challenge identified in the early childhood intervention sector by Moore (2012) concerns how group-based programs designed for children with specific impairments, such as the EIP, fit with outcomes-based approaches such as those presented within the Australian Early Years Learning Framework (Council of Australian Governments, 2009). The findings of this study indicate the attainment of early long cane mobility was positively influenced by the relationships with significant others and reference groups that included peers who are also
long cane travellers, thereby suggesting group-based programs have a important role to play in the development of blindness specific skills such as O&M. However, as indicated in Chapters Three and Four, there are numerous difficulties in the implementation of such programs in Australia, including the low incidence of blindness, the geographic isolation of many families, lack of funding, and a continuing shortage of qualified personnel in both the vision education and O&M professions. A question for future research could be establishing how a balance between inclusive education programs and the establishment of expanded core curriculum skills with peers who are blind is attained.

Recent developments in Australian funding models such as the Better Start for Children with Disability (FaHCSIA, 2011), which includes children with blindness within its funding scope, continues to focus on the direct provision of therapy services; O&M intervention is funded under this scheme only when delivered as a component of medically based interventions such as occupational therapy or physiotherapy. However, my findings suggest that for children to successfully develop early O&M techniques that include long cane mobility, all those working with the child need to have a shared philosophy, language, and goals; O&M intervention delivered on a contractual or consultancy basis makes this difficult to achieve. The implication is that O&M in the early years is not a rehabilitative intervention, but rather a core educational goal, however recognition of this requires rethinking how O&M specialists are trained and where they are employed in Australia. Additionally, further research is required in order to determine how O&M intervention fits with current funding initiatives such as the National Disability Insurance Scheme (http://www.ndis.gov.au/) and Better Start for Children with a Disability (FaHCSIA, 2011), and whether these funding models are effective.
O&M and the Australian Early Years Learning Framework

The second contribution this study makes to the field of O&M in Australia is through demonstrating how O&M intervention can facilitate the learning outcomes of the Australian Early Years Learning Framework (Council of Australian Governments, 2009): children have a strong sense of identity, children are connected with and contribute to their world, children have a strong sense of wellbeing, children are confident and involved learners, and children are effective communicators. The value of a qualitative research approach is demonstrated here, as the presentation of individual experiences can provide examples of how specific O&M techniques support these outcomes. Connecting with outcomes such as these requires that O&M specialists and other professionals think clearly about their perspectives and beliefs toward blindness: what sense of identity are we seeking for children who are blind? The findings in this study imply that the development of early O&M techniques can foster within a child a sense of self-identity as an independent active traveller who is blind, and that this sense of identity can be positively supported through social interactions experienced throughout daily life. The use of coloured canes was seen as one method of promoting positive social interactions; how coloured canes can influence both the cane user and wider community perceptions of blindness is an area worthy of further research. Again, there is a clear implication that O&M intervention with children needs to be closely aligned with early childhood education rather than being perceived as a “therapy” provided on an intermittent basis. Therefore further research is required to identify how O&M intervention can be incorporated within the Australian education system to ensure adequate professionals are trained, and teaching staff receive regular and appropriate professional training and development.
O&M within the Early Years Expanded Core Curriculum

In order for O&M specialists to impart the knowledge and skills to children and significant others that allow the learning outcomes of the Australian Early Years Learning Framework (Council of Australian Governments, 2009) to be achieved, there needs to be a reconsideration of how the expanded core curriculum is implemented within the early childhood context. Participants within this study identified the provision of O&M and braille skills as the two core domains that were essential in the early years, arguing that all other core and expanded core curriculum outcomes are dependent upon early mastery of these two areas. This perspective raises several implications for practice. Firstly, there needs to be a consideration of how referrals for O&M intervention can be generated via ophthalmologists and other medical specialists families may come in contact with in the early years so O&M intervention can begin early. Parents participating in this study indicated they experienced difficulties in obtaining information about appropriate services from medical sources, suggesting the role of the O&M profession is not well known outside the direct service provision agencies. The O&M profession therefore could consider whether lifting the profile of the profession is a responsibility of employing agencies, or a role of the professional body, the OMAA. Given the very small number of O&M specialists in the Australasian region, and the lack of certification to add “credibility” to the profession (Deverell & Scott, 2014), this is a significant challenge at this point in time.

The second implication for practice raised here is that, if O&M intervention is to be included in the early years curriculum, more O&M specialists with early childhood skills need to be trained and employed within educational settings. This involves considering how O&M specialists are currently trained with consideration given as to how the O&M and early childhood professions work together in order to establish the cooperative action and shared
perspectives toward O&M intervention that enable intervention to be successful. The third implication is that an early years framework and curriculum for O&M intervention that is linked specifically to the Australian Early Years Learning Framework (Council of Australian Governments, 2009) would a useful addition to the literature in the field, and could provide a basis for further research that builds a body of knowledge around O&M intervention strategies founded on practice-based evidence.

**Changing Perspectives Toward Blindness**

The final contribution this study makes to the field is the implication that early O&M intervention can potentially change perspectives toward blindness. Within this study, this is supported through the personal accounts of teachers’ and parents’ journeys as they developed perspectives toward early childhood O&M intervention that resulted in their ultimately viewing the long cane as a natural extension of the child’s body. Although it was beyond the size and scope of this study to explore perspectives beyond parent and teacher participant groups, broader research could be conducted exploring how the development of early competent long cane mobility influences how classroom teachers or members of the community view young children who are blind. With regards to O&M practice, this requires O&M specialists and others working with the child to question their own assumptions around the ability of young children to develop skills of independence, and ask why opportunities to develop long cane mobility techniques are not more readily available.

The structured discovery learning approach to O&M developed by Mettler (1998) and discussed in Chapter Three argues that the O&M profession needs to move away from a vision dominated perspective and understand that those with blindness perceive their world differently to individuals with vision. This has yet to be explored in depth within the O&M field, although other disciplines such as social geography (Allen, 2004; Anvik, 2009) provide
new knowledge on the embodied experience of moving through space without vision. Additionally, new developments in fields such as neuroplasticity have the potential to contribute additional knowledge that builds on findings such as those identified in this study through the provision of evidence quantifying how the brain adapts and reorganises itself in individuals who are blind. For O&M specialists, connecting with this research presents an exciting opportunity to shift traditional ways of thinking and learning about O&M intervention, as well as expanding upon our knowledge of what it means to be blind.

**Implications for Future Research**

The findings identify the possibility for expansion of this study to gather information around early intervention O&M programs in other regions of the world. A comparative study of children who have not received early intervention services would provide valuable knowledge within the O&M field, in particular toward developing comprehensive knowledge and understanding about when O&M, and the long cane, should be introduced to children who are blind. There is an ongoing need for further research exploring O&M action from the participant perspective, both child and adult, to ensure O&M programs meet required needs, and there remains much to be learnt about how individuals who are blind use O&M techniques to perceive their world. Within all areas of O&M, and especially within the early childhood context, there is also a need for research documenting O&M practice that challenges preconceptions around blindness, and continually develops new and effective models of O&M intervention.

It would be valuable to return to the children in this study at a later stage in their lives when they are better able to understand and articulate the meanings of their early experiences. It would be an interesting undertaking to continue to explore their perspectives toward long cane mobility as they progress toward adulthood and move through different contexts of their
lives. There would also be value in exploring the views of sighted peers who have grown up alongside the children in this study, to determine whether their views on blindness are different to previous generations. These are areas that are beyond the scope and size of this study.

The O&M field is currently limited by the lack of evidence-based practice supporting early long cane mobility. Within the field of special education generally, Odom et al. (2005) identify the difficulties in undertaking research with complex participant groups impacted by individual differences in impairment and the educational context of any interventions. The very small numbers of children who will become long cane users further challenges research in the field of O&M, particularly in Australia. However studies such as the one presented in this thesis can, according to Odom et al. (2005), provide a beginning point for further research through the identification of intervention practices that can then be further examined through “experimental group, correlational, single subject, and qualitative designs” (p. 138). It is hoped that, by presenting the experiences and perspectives of parents, teachers and children involved in an early intervention program that included the successful introduction of early long cane mobility skills, others will be inspired to investigate some or all of the practices described, thereby building on the O&M knowledge base.

In addition to raising questions and identifying areas for future research in early childhood O&M, as discussed in the points above, several other questions emerge from the findings that are possible areas of future research. These include developing an understanding of how medical and allied health professionals understand O&M intervention and considering how these related services can be better integrated in a country such as Australia where blindness and low vision is a very low incidence disability. There are a number of issues relating to long cane mobility that could benefit from further research: exploring whether issues of
stigma around long cane use is influenced by age, onset of blindness and when the long cane is introduced; issues of safety associated with the use of coloured canes; how long cane travellers and the community perceive coloured canes; the concept of “ownership” toward long cane mobility, and how O&M specialists can best work with their students to establish this. It would also be valuable to explore the findings in this study in regards to O&M intervention practices for young children with additional physical and/or cognitive disabilities. These questions can potentially be explored using a range of research methodologies, both qualitative and quantitative, offering opportunities for the field of O&M to continue to grow and develop new understandings toward O&M practice.

**Conclusion**

The process of undertaking this research has allowed me the opportunity to reflect deeply on my own professional practice as an O&M specialist. Although my perspectives toward O&M intervention had been changed by my experiences of working within an early childhood educational framework, the research journey has provided me with a far deeper understanding of the disability rights discourse and the difficulties individuals with blindness and their families experience in obtaining appropriate intervention. It has been frustrating to acknowledge that young children who are blind continue to be denied opportunities to develop early O&M skills because of the dominant medical and rehabilitative context within which the majority of O&M specialists in Australia work. However, through the grounding of this research in the personal experiences of children and families, and viewing O&M intervention through an interactionist framework rather than a rehabilitation perspective, I aim to contribute to a new understanding of O&M intervention; an understanding that recognises the rights and ability of children who are blind to develop the skills of independent mobility at a young age if given the opportunity.
The profession of O&M is one where relationships are central; relationships between the O&M specialist, the individual who is blind or has low vision, significant others such as family, stakeholders including education providers and employers, and broader relationships within the community. Previous research has been dominated by quantitative approaches, which, whilst centrally important to the development of the profession, tend to overlook individual stories and experiences related to the O&M experience. Through the application of an interpretive interactionist approach which explored the turning points in participants’ lives associated with the birth of a child who is blind, this study has specifically focused on the meaning of O&M intervention and action for the participants involved. An example of a successful early childhood intervention program incorporating O&M intervention has been provided, with multiple perspectives and experiences presented to illustrate how the meaning of O&M intervention, long cane mobility, and, ultimately, blindness is determined through the individual’s actions, reactions and interactions with others. The study demonstrates that there is value in researching small groups and programs, as every individual involved in the process of O&M intervention and subsequent O&M action can contribute to building on our body of understanding as to how individuals who are blind perceive and travel through their world.
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Appendix A

Government of Western Australia
Department of Education Ethics Approval

Dr Lesley Scanlon
Faculty of Education & Social Work
Room 431, Building A35
The University of Sydney
NSW 2006

Dear Dr Scanlon

Thank you for your completed application received 22 September 2010 to conduct research on Department of Education sites.

The focus and outcomes of your research project, A Journey to Independence: Orientation and Mobility Experiences of Young Children with Vision Impairment, their Parents and Specialist Teachers, are of interest to the Department. I give permission for you to approach site managers to invite their participation in the project as outlined in your application. It is a condition of approval, however, that upon conclusion the results of this study are forwarded to the Department at the email address below.

Consistent with Department policy, participation in your research project will be the decision of the schools invited to participate, individual staff members, the children in those schools and their parents. Researchers are responsible for providing site managers with a copy of this letter and are required to sign a confidential declaration upon arrival at the Department of Education site.

Responsibility for quality control of ethics and methodology of the proposed research resides with the institution supervising the research. The Department requires a copy of a letter confirming that you have received ethical approval of your research protocol from The University of Sydney Human Research Ethics Committee as soon as it is available.

Any proposed changes to the research project will need to be submitted for Department approval prior to implementation.

Please contact Ms Liz Harrison, Policy and Planning Officer, on 08 9264 5168 or researchandpolicy@det.wa.edu.au if you have further inquiries.

Very best wishes for the successful completion of your project.

Yours sincerely

ALAN DODSON
DIRECTOR
EVALUATION AND ACCOUNTABILITY

23 September 2010

151 Royal Street, East Perth Western Australia 6004
Appendix B

Human Research Ethics Committee Ethics Approval

Ref: IM/PE
4 March 2011

Dr Lesley Scanlon
Faculty of Education and Social Work
Education Building - A35
The University of Sydney
Email: lesley.scanlon@sydney.edu.au

Dear Dr Scanlon

Thank you for your correspondence dated 21 February 2011 addressing comments made to you by the Human Research Ethics Committee (HREC). The Executive of the HREC, on 1 March 2011, considered this information and approved the protocol entitled “A Journey to Independence: Orientation and mobility experiences of young children with vision impairment, their parents and specialist teachers”.

Details of the approval are as follows:

Protocol No.: 13339
Approval Period: March 2011 to March 2012

Authorised Personnel: Dr Lesley Scanlon
Dr Ilektra Spandagou
Ms Bronwen Scott

Documents Approved:
- Parental or Guardian Consent Form Version 2 27/1/2011
- Child Information Statement Version 2 15/12/10
- Child Consent Form Version 2 27/1/2011
- Letter of Invitation to Participate Version 2 19/2/2011
- Information Letter Template for Department of Education Site Managers Version 2 19/2/2011
- Consent Form Template for Education and Training Site Managers Version 2 19/2/2011
- Participant Information Statement (Teachers) Version 2 27/1/2011
- Semi-Structured Interview Questions Version 1 20/10/2010

The HREC is a fully constituted Ethics Committee in accordance with the National Statement on Ethical Conduct in Research Involving Humans-March 2007 under Section 5.1.29.

The approval of this project is conditional upon your continuing compliance with the National Statement on Ethical Conduct in Research Involving Humans. A report on this research must be submitted every 12 months from the date of the approval or on completion of the project, whichever occurs first. Failure to submit reports will result in withdrawal of consent for the project to proceed. Your report is due by 31 March 2012.
Chief Investigator / Supervisor’s responsibilities to ensure that:

1. All serious and unexpected adverse events should be reported to the HREC within 72 hours for clinical trials/interventional research.
2. All unforeseen events that might affect continued ethical acceptability of the project should be reported to the HREC as soon as possible.
3. Any changes to the protocol must be approved by the HREC before the research project can proceed.
4. All research participants are to be provided with a Participant Information Statement and Consent Form, unless otherwise agreed by the Committee. The following statement must appear on the bottom of the Participant Information Statement: Any person with concerns or complaints about the conduct of a research study can contact the Manager, Human Ethics, University of Sydney on +61 2 8627 8176 (Telephone); + 61 2 8627 8177 (Facsimile) or ro.humanethics@sydney.edu.au (Email).
5. You must retain copies of all signed Consent Forms and provide these to the HREC on request.
6. It is your responsibility to provide a copy of this letter to any internal/external granting agencies if requested.
7. The HREC approval is valid for four (4) years from the Approval Period stated in this letter. Investigators are requested to submit a progress report annually.
8. A report and a copy of any published material should be provided at the completion of the Project.

Please do not hesitate to contact Research Integrity (Human Ethics) should you require further information or clarification.

Yours sincerely

[Signature]

Associate Professor Ian Maxwell
Chair
Human Research Ethics Committee

Copy: Bronwen Scott  bsco5139@uni.sydney.edu.au
Title: A Journey to Independence: Orientation and mobility experiences of young children with vision impairment, their parents and specialist teachers
Protocol No: 13339

The HREC Executive Committee seeks clarification of the following to be reviewed at HREC Executive meeting:

1. Do the researchers have permission from the original participants for the use of the videos? If the original permission did not cover the use of the videos in subsequent research, then the original participants must be asked to re-consent to the use of the videos. Please comment.
2. Please provide a copy of the original ethics approval, Participant Information Statement and Consent Form relating to the videos.
3. The Participant Information Statement supplied appears to refer to interviews and not the analysis of the videos. Please comment.

1. Permission was gained from participants for the original videos to be taken during the period from 2004-2007. These consent forms are stored in the student files at the Vision Education Service (previously Vision Impairment Service) at the Department of Education Western Australia. An example of one of these consent forms is attached. Consent did not include the use of video for future research so re-consent is being sought for use in this research.

2. Original ethics approval and an updated Participant Information Statement and additional Consent Form relating to the videos is attached.

3. A new Participant Information Statement has been attached, referring to the inclusion of video material.

APPROVED 7 Jun 2012

[Signature]

DATE RECEIVED 7 Jun 2012
Appendix C

Department of Education Western Australia Vision Education Service
Information Letter

Dear [insert name],

“A Journey to Independence: Orientation and mobility experiences of young children with vision impairment, their parents and specialist teachers.”

My name is Bronwen Scott and I am writing to you on behalf of The University of Sydney. I am conducting a research project that aims to explore the early Orientation & Mobility (O&M) experiences of children, parents and specialist teachers during the period between 2004 - 2007, when I was working as the O&M Specialist for the Vision Education Service. I am particularly interested in the experiences around the early introduction of the long cane, an area that is still controversial within the O&M field. The project is being conducted, under the supervision of Dr Lesley Scanlon, as part of a Doctor of Education degree at the University of Sydney.

I would like to invite the Vision Education Service to take part in the project. This is because I am particularly interested in researching the early childhood program of which I was a member. The Vision Education Service is the only site across Australia approached for their participation.

What does participation in the research project involve?

I seek access to five children who received early long cane training, their parents and the Visiting Teachers who were involved with ‘Braille Nest’ during the period from 2004 - 2007. The children will be invited to participate in a semi-structured interview, which will take approximately one hour. I plan to conduct this interview in their school setting, with their Visiting Teacher present. Interviews will be recorded for transcription purposes. They will also be asked to write a story about themselves and their cane. I plan to collate these stories into a tactile book which could then be part of the Vision Education Service tactile book resource library.

The parents of the children will be invited to participate in two semi-structured interview sessions, of a maximum of 1 1/2 hours per interview, at a location of mutual agreement. Interviews will be recorded for transcription purposes. Visiting Teachers will also be asked to participate in two semi-structured interview sessions, also at a maximum of 1 1/2 hours per interview. I anticipate

“A Journey to Independence” Vision Education Service Information Version 2 19/02/11  Page 1 of 4
that these interviews will take place in a suitable office at the Vision Education Service. Interviews will be recorded for transcription purposes.

I will keep the Vision Education Service’s involvement in the administration of the research procedures to a minimum. However, it will be necessary for the Vision Education Service to send the information letters and consent forms to teachers, parents and students, and to provide me with information regarding the relevant Department sites that I will need to contact. I will also require the assistance of administrative staff to locate archival records relating to the O&M program.

To what extent is participation voluntary, and what are the implications of withdrawing that participation?

Participation in this research project is entirely voluntary. If any member of a participant group decides to participate and then later changes their mind, they are able to withdraw their participation at any time. There will be no consequences relating to any decision by an individual or the Vision Education Service regarding participation, other than those already described in this letter. Decisions made will not affect the relationship with the research team or the University of Sydney.

What will happen to the information collected, and is privacy and confidentiality assured?

Information that identifies anyone will be removed from the data collected. The data is then stored securely in a locked filing cabinet at the University of Sydney Department of Education and Social Work and can only be accessed by the researcher and supervisor. The data will be stored for a minimum period of 7 years, after which it will be destroyed. This will be achieved by the shredding of documents and erasing of interview recordings. The identity of participants and the schools involved will not be disclosed at any time, except in circumstances that require reporting under the Department of Education Child Protection policy, or where the research team is legally required to disclose that information. Participant privacy, and the confidentiality of information disclosed by participants, is assured at all other times. The data will be used only for this project, and associated conference presentation and journal articles, and will not be used in any extended or future research without first obtaining explicit written consent from participants.

Consistent with Department of Education policy, a summary of the research findings will be made available to the participating site(s) and the Department. You can expect this to be available in July 2014.

Is this research approved?

The research has been approved by [insert relevant ethics body or institution responsible for supervising the research, and approval number, if appropriate], and has met the policy requirements of the Department of Education and Training as indicated in the attached letter.

Do all members of the research team who will be having contact with children have their Working with Children Check?

Yes. Under the Working with Children (Criminal Record Checking) Act 2004, people undertaking work in Western Australia that involves contact with children must undergo a Working with Children Check. The documents attached to this letter include a list of the research team who will be having contact with children through your service, along with current evidence of their checks.
Who do I contact if I wish to discuss the project further?

If you would like to discuss any aspect of this study with a member of the research team, please contact me on the number provided below.

Any person with concerns or complaints about the conduct of a research study can contact The Manager, Human Ethics Administration, University of Sydney on + 612 8627 8176 (Telephone); + 61 2 8627 8177 (Facsimile) or ro.humanethics@sydney.edu.au (Email).

How do I indicate my willingness for the Vision Education Service to be involved?

If you have had all questions about the project answered to your satisfaction, and are willing for the Vision Education Service to participate, please complete the Consent Form on the following page.

This information letter is for you to keep.

Bronwen Scott  
**Doctoral Student**  
Room A35.431  
University of Sydney NSW 2006  
AUSTRALIA  
Telephone: + 61 2 9351 6380  
Facsimile: + 61 2 9351 4380  
Email: bsco5139@uni.sydney.edu.au  
Web: [www.usyd.edu.au](http://www.usyd.edu.au/)

“A Journey to Independence” Vision Education Service Information Version 2 19/02/11  Page 3 of 4
Consent Form Template for Department of Education and Training Site Managers

Consent Form

- I have read this document and understand the aims, procedures, and risks of this project, as described within it.

- For any questions I may have had, I have taken up the invitation to ask those questions, and I am satisfied with the answers I received.

- I am willing for the Vision Education Service to become involved in the research project, as described.

- I understand that participation in the project is entirely voluntary.

- I understand that the Vision Education Service is free to withdraw its participation at any time, without affecting the relationship with the research team or The University of Sydney. Data can be withdrawn from the study up until December 2012.

- I understand that this research may be reported in a thesis, conference presentation and journal article as part of the requirements for a Doctorate of Education, provided that the participants or the school are not identified in any way.

- I understand that the Vision Education Service will be provided with a copy of the findings from this research upon its completion.

Name of Site Manager (printed):

Signature:

Date: / /
Appendix D
Teacher Participant Information Statement and Participant Consent Form

7th May, 2011
Dear ________,

"A Journey to Independence: Orientation and mobility experiences of young children with vision impairment, their parents and specialist teachers."

My name is Bronwen Scott and I am writing to you on behalf of The University of Sydney. I am conducting a research project that aims to explore the experiences of children, parents and specialist teachers in relation to Orientation & Mobility (O&M) training (particularly the introduction of the long cane) in Western Australia between 2004 – 2007. I am particularly interested in the experiences around the early introduction of the long cane, an area that is still controversial within the O&M field. The project is being conducted, under the supervision of Dr Lesley Scanlon, as part of a Doctor of Education degree at the University of Sydney.

I would like to invite you to take part in the project. This is because you were a Visiting Teacher with the Vision Education Service in the early childhood area during the period 2004 – 2007. The Vision Education Service is the only site across Australia approached for this project.

**What does participating in the research involve?**
You are invited to participate in two interviews asking you about your views on O&M training. The purpose of the second interview is to make sure information you have given in the first interview is accurate. These interviews will also be recorded for transcription purposes. Interviews will take between one to one and a half hours.

**Do I have to take part?**
No. Participating in this research project is entirely voluntary. This decision should always be made completely freely. All decisions made will be respected by members of the research team without question.

**What if I wanted to change my initial decision?**
If you wish to participate, the decision will need to be made by June 30, 2011 for you to be included in the project.
Once a decision is made to participate, you can change your mind at any time. Data can be withdrawn from the study up until June 2012.

There will be no consequences relating to any decision you make regarding participation, other than those already described in this letter. These decisions will not affect your relationship with the University of Sydney or the researcher.

What will happen to the information I give, and is privacy and confidentiality assured?
Participant privacy, and the confidentiality of information disclosed by participants, is assured at all times, except in circumstances that require reporting under the Department of Education and Training Child Protection policy, or where the research team is legally required to disclose that information. Information that identifies anyone will be removed from the data collected. The data is then stored securely in a locked filing cabinet at the University of Sydney Department of Education and Social Work and can only be accessed by the researcher and supervisor. The data will be stored for a minimum period of 7 years, after which it will be destroyed. This will be achieved by the shredding of documents and erasing of interview recordings.

The data will be used only for this project, and will not be used in any extended or future research without first obtaining explicit written consent from you and your child.

It is intended that the findings of this study will be presented as a thesis as part of the requirements for the degree of Doctor of Education. A summary of the research findings will also be made available upon completion of the project. You can access this by contacting me through the University of Sydney and expect it to become available in February 2014.

Is this research approved?
The research has been approved by The University of Sydney Human Research Ethics Committee Protocol No.: 13339 and has met the policy requirements of the Department of Education and Training as indicated in the attached letter.

“How do I know that the people involved in this research have all the appropriate documentation to be working with children?”
All persons undertaking research activities on Department sites must complete a Confidential Declaration. Also, under the Working with Children (Criminal Record Checking) Act 2004, people undertaking research that involves contact with children must undergo a Working with Children Check. Evidence that these checks are current for each member of the research team has been provided to the Principal of your school.

Who do I contact if I wish to discuss the project further?
If you would like to discuss any aspect of this study with a member of the research team, please contact me on the number provided below. If you wish to speak with an independent person about how the project is being conducted or was conducted, please contact The Manager, Human Ethics Administration, University of Sydney on + 612 8627 8176 (Telephone); + 61 2 8627 8177 (Facsimile) or ro.humanethics@sydney.edu.au (Email).
How do I become involved?
If you have had all questions about the project answered to your satisfaction, and are willing to become involved, please complete the Consent Form on the next page.

This information letter is for you to keep.

Bronwen Scott
Doctoral Student
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University of Sydney NSW 2006
AUSTRALIA
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Mobile: 0405 411263
Facsimile: +61 2 9351 4380
Email: bsco5139@uni.sydney.edu.au
Web: www.usyd.edu.au/
PARTICIPANT INFORMATION STATEMENT (TEACHERS)

Research Project Title: "A Journey to Independence: Orientation and mobility experiences of young children with vision impairment, their parents and specialist teachers."

(1) What is the study about?

This study aims to explore the experiences of children, parents and specialist teachers in relation to Orientation & Mobility training, particularly the introduction of the long cane, in Western Australia, between 2004 – 2007.

(2) Who is carrying out the study?

The study is being conducted by Bronwen Scott, Doctoral candidate at The University of Sydney, and will form the basis for the degree of Doctor of Education at The University of Sydney under the supervision of Dr Lesley Scanlon, Professional Doctorates Coordinator.

(3) What does the study involve?

The study will involve interviews that will be audio taped. Interviews with adult participants will be held at a mutually agreed venue. Interviews with children will be conducted at school, with the child’s Visiting Teacher also present. I will also be asking children to take me on a ‘tour’ of their school, as a way of ‘breaking the ice’ and using their cane. Our conversation on this ‘tour’ will be recorded and the data transcribed and analysed. Children will also be asked to write a story about themselves and their long cane. Stories will be brailled and made into a tactile book at the completion of the project.

(4) How much time will the study take?

Interviews will take between one to one and half hours with adults. Interviews with children will take a maximum of one hour. A second interview will occur at a later date to discuss the first interview and make sure views expressed are correctly interpreted. Participants will be given a copy of interview transcripts for review and to provide the opportunity to withdraw or amend any information prior to its use.

(5) Can I withdraw from the study?

Being in this study is completely voluntary - you are not under any obligation to consent and - if you do consent - you can withdraw at any time without affecting your relationship with the University of Sydney, the Vision Education Service or with the
researcher.
You may stop the interview at any time if you do not wish to continue, the audio recording will be erased and the information provided will not be included in the study.

(6) Will anyone else know the results?
All aspects of the study, including results, will be strictly confidential and only the researchers will have access to information on participants. The results of the study will be published in a thesis as part of the requirements of a Doctor of Education degree. A report of the study may be submitted for journal publication or conference presentation, but individual participants will not be identifiable in such a report.

(7) Will the study benefit me?
The study will provide you with an opportunity to share your experiences (positive and negative) of Orientation & Mobility, and the early introduction of the long cane from a Specialist Teacher point of view.

(8) Can I tell other people about the study?
You can tell people that you are involved in a study that is exploring your experiences and that of your student toward early O&M and long cane training.

(9) What if I require further information?
When you have read this information, Bronwen Scott will contact you by phone to discuss it with you further and answer any questions you may have. If you would like to know more at any stage, please feel free to contact Dr Lesley Scanlon on (02) 9351 6380.

(10) What if I have a complaint or concerns?
Any person with concerns or complaints about the conduct of a research study can contact The Manager, Human Ethics Administration, University of Sydney on + 612 8627 8176 (Telephone); + 61 2 8627 8177 (Facsimile) or ro.humanethics@sydney.edu.au (Email).

This information sheet is for you to keep
PARTICIPANT CONSENT FORM (PARENTS & TEACHERS)

I, .............................................................................[PRINT NAME], give consent to my participation in the research project:

“A Journey to Independence: Orientation and mobility experiences of young children with vision impairment, their parents and specialist teachers.”

In giving my consent I acknowledge that:

1. The procedures required for the project and the time involved have been explained to me, and any questions I have about the project have been answered to my satisfaction.

2. I have read the Participant Information Statement and have been given the opportunity to discuss the information and my involvement in the project with the researcher(s).

3. I understand that I can withdraw from the study at any time, without affecting my relationship with the researcher(s) or the University of Sydney now or in the future. Data can be withdrawn from the study up until December 2012.

4. I understand that my involvement is strictly confidential and no information about me will be used in any way that reveals my identity.

5. I understand that being in this study is completely voluntary – I am not under any obligation to consent.

6. I understand that I can stop the interview at any time if I do not wish to continue, the audio recording will be erased and the information provided will not be included in the study.

7. I consent to: –
   i) Audio-taping YES o NO o
   iii) Receiving Feedback YES o NO

“A Journey to Independence”. Participant Consent Form (Parents and Teachers) Version 2 27/01/11 Page 1 of 2
If you answered YES to the “Receiving Feedback Question (iii)”, please provide your details i.e. mailing address, email address.

**Feedback Option**

**Address:**

____________________________________________________  
  
____________________________________________________  

**Email:**

____________________________________________________

**Signed:** ………………………………………………………………………………………………………………………………………………….

**Name:** ………………………………………………………………………………………………………………………………………………….

**Date:** ……………………………………………………………………..

“A Journey to Independence”. Participant Consent Form (Parents and Teachers) Version 2 27/01/11 Page 2 of 2
Appendix E

Parent Information Statement, Participant Information Statement
(Parent/Guardian) and Participant Consent Form

Dear Parent/Carer,

A Journey to Independence: Orientation and mobility experiences of young children with vision impairment, their parents and specialist teachers

My name is Bronwen Scott and I am writing to you on behalf of The University of Sydney. I am conducting a research project that aims to explore the experiences of children who received early long cane training, along with the views of their parents and Visiting Teachers. Within the field of Orientation & Mobility, there is very little research that includes the views of children and families receiving O&M services. The project is being conducted as part of a Doctor of Education degree at the University of Sydney.

I would like to invite you and your child to take part in the project. This is because [child name] was one of the children who received early long cane training and attended Braille Nest between 2004 and 2007. The Vision Education Service is the only site across Australia approached for their participation. Your child has also been provided with a letter from us that we encourage you to discuss with her.

What does participation in the research project involve?
Your child is invited to participate in an interview, which will be recorded. I will visit [child name] at school with her Visiting Teacher to conduct the interview. I will also ask her to write a story about her cane. The interview and story should take no more than an hour.

Also, you are invited to participate in two interviews asking you about your views on O&M training. The purpose of the second interview is to make sure information you have given in the first interview is accurate. These interviews will also be recorded for transcription purposes.

Do my child and I have to take part?
No. Participation in this research project is entirely voluntary. This decision should always be made completely freely. All decisions made will be respected by members of the research team without question.

7th May, 2011

Dr. Lesley Scanlon
Senior Lecturer in Education
Doctor of Education Programme Director
MTeach Programme Director

Faculty of Education & Social Work

ABN 15 211 513 464

Room 431
Building A35
The University of Sydney
NSW 2006 AUSTRALIA
Telephone: +61 2 9351 6380
Facsimile: +61 2 9351 4768
lesley.scanlon@sydney.edu.au
What if either of us was to change our mind?
If a decision is made to participate, it will need to be made by June 30 2011 for you and your child to be included in the project.

Once a decision is made to participate, either you or your child can change your mind at any time. Data can be withdrawn from the project up until June 2012.

There will be no consequences relating to any decision by you and your child regarding participation, other than those already described in this letter. These decisions will not affect your family’s relationship with your child’s teacher, your child’s school, the Vision Education Service or future O&M training.

What will happen to the information collected, and is privacy and confidentiality assured?
The identity of participants and the school will not be disclosed at any time, except in circumstances that require reporting under the Department of Education and Training Child Protection policy, or where the research team is legally required to disclose that information.

Information that identifies anyone will be removed from the data collected. The data is then stored securely in a locked filing cabinet at the University of Sydney Department of Education and Social Work and can only be accessed by the researcher and supervisor. The data will be stored for a minimum period of 7 years, after which it will be destroyed. This will be achieved by the shredding of documents and erasing of interview recordings.

Participant privacy, and the confidentiality of information disclosed by participants, is assured at all times, except in circumstances that require reporting under the Department of Education Child Protection policy, or where the research team is legally required to disclose that information.

The data will be used only for this project, and will not be used in any extended or future research without first obtaining explicit written consent from you and your child.

It is intended that the findings of this study will be presented as a thesis as part of the requirements for the degree of Doctor of Education. A summary of the research findings will also be made available upon completion of the project. You can access this by contacting me through the University of Sydney and expect it to become available in February 2014.

Is this research approved?
The research has been approved by The University of Sydney Human Research Ethics Committee Protocol No.: 13339 and has met the policy requirements of the Department of Education and Training as indicated in the attached letter.

“How do I know that the people involved in this research have all the appropriate documentation to be working with children?”
All persons undertaking research activities on Department sites must complete a Confidential Declaration. Also, under the Working with Children (Criminal Record Checking) Act 2004, people undertaking research that involves contact with children must undergo a Working with Children Check. Evidence that these checks are current for each member of the research team has been provided to the Principal of your school.

Who do I contact if I wish to discuss the project further?
If you would like to discuss any aspect of this study with a member of the research team, please contact me on the number provided below. If you wish to speak with an independent person about how the project is being conducted or was conducted, please contact The Manager, Human Ethics Administration, University of Sydney on + 612 8627 8176 (Telephone); + 61 2 8627 8177 (Facsimile) or ro.humanethics@sydney.edu.au (Email).
How do my child and I become involved?

Please ensure that you:

• discuss what it means to take part in the project with your child before you both make a decision; and

• take up my invitation to ask any questions you may have about the project.

Once all questions have been answered to your satisfaction, and you and your child are both willing for him/her to become involved, please complete the Consent Form on the following page (your child is also asked to complete the Consent Form attached to his/her letter).

This project information letter is for you to keep.
PARENTAL INFORMATION STATEMENT

Title of project: “A Journey to Independence: Orientation and mobility experiences of young children with vision impairment, their parents and specialist teachers”

(1) What is the study about?
You are invited, along with your child, to participate in a study of early Orientation and Mobility (O&M) experiences. We hope to learn how the early introduction of the long cane was experienced by young children, their parents and the specialist teachers from the Vision Education Service. You and your child were selected as possible participants in this study because your child received early long cane training between the years of 2004 – 2007 in Western Australia.

There is very little research in O&M that asks for the opinions and feelings of the child using the cane, and this research will give you and your child the opportunity to express your views about a program delivered to them.

(2) Who is carrying out the study?
The study is being conducted by Bronwen Scott, Doctoral candidate at The University of Sydney, and will form the basis for the degree of Doctor of Education at The University of Sydney under the supervision of Dr Lesley Scanlon, Professional Doctorates Coordinator.

(3) What does the study involve?
If you decide to participate, I will interview you at a mutually agreed venue and ask some questions about how early long cane use by your child was experienced by your family. I will interview your child at school about how they feel about using the long cane. I will ask your child to take me on a ‘tour’ of their school, as a way of ‘breaking the ice’ and using their cane. Our conversation on this ‘tour’ will be recorded and the data transcribed and analysed. Your child will also be asked to write a story about their long cane. The interview and tour will be conducted in the presence of your child’s Visiting Teacher (from the Vision Education Service) and will take no longer than one hour. If practical, the story will also be written during that time frame, otherwise a second visit will be arranged in order to do this. Stories will be brailled and made into a tactile book at the completion of the project.

(4) How much time will the study take?
The interview with you will take between one to one and a half hours, and will be recorded for transcription purposes. Interviews with children will take a maximum of one hour. A second interview will be arranged for a later date to discuss the first interview and make sure views expressed are correctly interpreted. You will be given a copy of the interview transcripts for review and will have the opportunity to withdraw or amend any information prior to its use.
(5) Can I withdraw from the study?
Being in this study is completely voluntary – you are not under any obligation to consent and – if you do consent – you can withdraw at any time without affecting your relationship with the University of Sydney, the Vision Education Service or with the researcher.

You and your child may stop the interview at any time if you do not wish to continue, the audio recording will be erased and the information provided will not be included in the study.

Your decision whether or not to participate will not prejudice you or your child's future relations with The University of Sydney, the Vision Education Service or any future O&M training. If you decide to participate, you are free to withdraw your consent and to discontinue you and your child's participation at any time without prejudice.

(6) Will anyone else know the results?
Any information that is obtained in connection with this study and that can be identified with you or your child will remain confidential and will be disclosed only with your permission. If you give us your permission by signing this document, we plan to publish the results in a Doctor of Education thesis, relevant journals and conference papers. In any publication, information will be presented in such a way that you or your child will not be able to be identified.

(7) Will the study benefit me?
We cannot and do not guarantee or promise that you or your child will receive any benefits from the study. The study will provide you and your child with an opportunity to share your experiences (positive and negative) of O&M and the early introduction of the long cane.

(8) Can I tell other people about the study?
You can tell people that you are involved in a study that is exploring your experiences, and that of your child, toward early O&M and long cane training.

(9) What if I require further information?
If you have any questions, we expect you to ask us. When you have read this information, Bronwen Scott will contact you by phone to discuss it with you further and answer any questions you may have. If you have any additional questions later, Dr Scanlon (02 9351 6380) will be happy to answer them.

(10) What if I have a complaint or concerns?
Any person with concerns or complaints about the conduct of a research study can contact The Manager, Human Ethics Administration, University of Sydney on + 612 8627 8176 (Telephone); + 61 2 8627 8177 (Facsimile) or ro.humanethics@sydney.edu.au (Email).

This information sheet is for you to keep.

“A Journey to Independence” Parent Information Statement Version 2 27/01/11 Page 2 of 2
PARTICIPANT CONSENT FORM (PARENTS & TEACHERS)

I, .......................................................... [PRINT NAME], give consent to my participation in the research project:

“A Journey to Independence: Orientation and mobility experiences of young children with vision impairment, their parents and specialist teachers.”

In giving my consent I acknowledge that:

1. The procedures required for the project and the time involved have been explained to me, and any questions I have about the project have been answered to my satisfaction.

2. I have read the Participant Information Statement and have been given the opportunity to discuss the information and my involvement in the project with the researcher(s).

3. I understand that I can withdraw from the study at any time, without affecting my relationship with the researcher(s) or the University of Sydney now or in the future. Data can be withdrawn from the study up until December 2012.

4. I understand that my involvement is strictly confidential and no information about me will be used in any way that reveals my identity.

5. I understand that being in this study is completely voluntary – I am not under any obligation to consent.

6. I understand that I can stop the interview at any time if I do not wish to continue, the audio recording will be erased and the information provided will not be included in the study.

7. I consent to: –
   i) Audio-taping YES o NO o
   iii) Receiving Feedback YES o NO

“Jason to Independence”. Participant Consent Form (Parents and Teachers) Version 2 27/01/11 Page 1 of 2
If you answered YES to the "Receiving Feedback Question (iii)", please provide your details i.e. mailing address, email address.

Feedback Option
Address:____________________________________________________

____________________________________________________

Email:______________________________________________________

Signed: ..........................................................................................

Name: ................................................................................................

Date: ............................................................................................

"A Journey to Independence". Participant Consent Form (Parents and Teachers) Version 2 27/01/11 Page 2 of 2
28th May, 2012

Dear Parent/Carer,

A Journey to Independence: Orientation and mobility experiences of young children with vision impairment, their parents and specialist teachers

Thank you for your participation in this research project to date. During the period between 2004-2007, you provided consent for myself and other Visiting Teachers from the Vision Education Service to take video and photos of your child <insert child name> undergoing Orientation & Mobility training. I am writing to request your permission to re-use these videos as part of the data analysis for this project.

The material in the videos will be used for research purposes only, and will only be viewed by the researchers. Video material will be coded in the final research document to preserve your child’s anonymity. Data from the videos will be used to supplement the material that was collected from you and your child during the interviews conducted in 2011.

Do my child and I have to continue to take part?
No. Participation in this research project is entirely voluntary. This decision should always be made completely freely. All decisions made will be respected by members of the research team without question.

What if either of us was to change our mind about the use of video?
If a decision is made to allow the use of video, it will need to be made by August 1, 2012 for you and your child to be included in the project.

Once a decision is made to allow the use of video, either you or your child can change your mind at any time. Data can be withdrawn from the project up until December 2012.

There will be no consequences relating to any decision by you and your child regarding participation, other than those already described in this letter. These decisions will not affect your family’s relationship with your child’s teacher, your child’s school, the Vision Education Service or future O&M training.

“A Journey to Independence” Parent or Guardian Consent Form Video Version 1 28/03/2012
What will happen to the information collected, and is privacy and confidentiality assured?
The identity of participants and the school will not be disclosed at any time, except in circumstances that require reporting under the Department of Education and Training Child Protection policy, or where the research team is legally required to disclose that information. Information that identifies anyone will be removed from the data collected. The data is then stored securely in a locked filing cabinet at the University of Sydney Department of Education and Social Work and can only be accessed by the researcher and supervisor. The data will be stored for a minimum period of 7 years, after which it will be destroyed. This will be achieved by the shredding of documents and erasing of interview recordings.

Participant privacy, and the confidentiality of information disclosed by participants, is assured at all times, except in circumstances that require reporting under the Department of Education Child Protection policy, or where the research team is legally required to disclose that information.

The data will be used only for this project, and will not be used in any extended or future research without first obtaining explicit written consent from you and your child.

It is intended that the findings of this study will be presented as a thesis as part of the requirements for the degree of Doctor of Education. A summary of the research findings will also be made available upon completion of the project. You can access this by contacting me through the University of Sydney and expect it to become available in February 2014.

Is this research approved?
The research has been approved by The University of Sydney Human Research Ethics Committee Protocol No.: 13339 and has met the policy requirements of the Department of Education and Training as indicated in the attached letter.

“How do I know that the people involved in this research have all the appropriate documentation to be working with children?”
All persons undertaking research activities on Department sites must complete a Confidential Declaration. Also, under the Working with Children (Criminal Record Checking) Act 2004, people undertaking research that involves contact with children must undergo a Working with Children Check. Evidence that these checks are current for each member of the research team has been provided to the Principal of your school.

Who do I contact if I wish to discuss the project further?
If you would like to discuss any aspect of this study with a member of the research team, please contact me on the number provided below. If you wish to speak with an independent person about how the project is being conducted or was conducted, please contact The Manager, Human Ethics Administration, University of Sydney on + 612 8627 8176 (Telephone); + 61 2 8627 8177 (Facsimile) or ro.humanethics@sydney.edu.au (Email).

“A Journey to Independence” Parent or Guardian Consent Form Video Version 1 28/03/2012
This project information letter is for you to keep.

Bronwen Scott  
*Doctoral Student*  
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Mobile: 0405 411263  
Facsimile: +61 2 9351 4380  
Email: bsc05139@uni.sydney.edu.au  
Web: [www.usyd.edu.au](http://www.usyd.edu.au)
PARENT/GUARDIAN INFORMATION STATEMENT

Title of project: “A Journey to Independence: Orientation and mobility experiences of young children with vision impairment, their parents and specialist teachers”

(1) What is the study about?
You are invited, along with your child, to participate in a study of early Orientation and Mobility (O&M) experiences. We hope to learn how the early introduction of the long cane was experienced by young children, their parents and the specialist teachers from the Vision Education Service. You and your child were selected as possible participants in this study because your child received early long cane training between the years of 2004 – 2007 in Western Australia.

There is very little research in O&M that asks for the opinions and feelings of the child using the cane, and this research will give you and your child the opportunity to express your views about a program delivered to them.

(2) Who is carrying out the study?
The study is being conducted by Bronwen Scott, Doctoral candidate at The University of Sydney, and will form the basis for the degree of Doctor of Education at The University of Sydney under the supervision of Dr Lesley Scanlon, Professional Doctorates Coordinator.

(3) What does the study involve?
We are asking your permission to include video that was taken with your permission between 2004-2007 by staff from the Vision Education Service. These videos will be analysed and the information used alongside the interview data which has already been collected. Data will be coded to preserve the anonymity of those involved.

(4) How much time will the study take?
There is no additional time required from you, as the video that we are seeking permission to use was taken between 2004-2007 when your child was undergoing early orientation and mobility training.
(5) Can I withdraw from the study?
Being in this study is completely voluntary – you are not under any obligation to consent and – if you do consent – you can withdraw at any time without affecting your relationship with the University of Sydney, the Vision Education Service or with the researcher.

Your decision whether or not to participate will not prejudice you or your child’s future relations with The University of Sydney, the Vision Education Service or any future O&M training. If you decide to participate, you are free to withdraw your consent and to discontinue you and your child’s participation at any time without prejudice.

(6) Will anyone else know the results?
Any information that is obtained in connection with this study and that can be identified with you or your child will remain confidential and will be disclosed only with your permission. If you give us your permission by signing this document, we plan to publish the results in a Doctor of Education thesis, relevant journals and conference papers. In any publication, information will be presented in such a way that you or your child will not be able to be identified.

(7) Will the study benefit me?
We cannot and do not guarantee or promise that you or your child will receive any benefits from the study. The study will provide you and your child with an opportunity to share your experiences (positive and negative) of O&M and the early introduction of the long cane.

(8) Can I tell other people about the study?
You can tell people that you are involved in a study that is exploring your experiences, and that of your child, toward early O&M and long cane training.

(9) What if I require further information?
If you have any questions, we expect you to ask us. When you have read this information, Bronwen Scott will contact you by phone to discuss it with you further and answer any questions you may have. If you have any additional questions later, Dr Scanlon (02 9351 6380) will be happy to answer them.

(10) What if I have a complaint or concerns?
Any person with concerns or complaints about the conduct of a research study can contact The Manager, Human Ethics Administration, University of Sydney on + 612 8627 8176 (Telephone); + 61 2 8627 8177 (Facsimile) or ro.humanethics@sydney.edu.au (Email).

This information sheet is for you to keep.

“A Journey to Independence” Parent Information Statement Video Version 1 29/05/12 Page 2 of 2
PARENTAL (OR GUARDIAN) CONSENT FORM

I, ........................................................ agree to permit .................................................., who is aged ......................... years, to participate in the research project –

“A Journey to Independence: Orientation and mobility experiences of young children with vision impairment, their parents and specialist teachers.”

In giving my consent I acknowledge that:

1. I have read the Information Statement and the time involved for my child’s participation in the project. The researcher/s has given me the opportunity to discuss the information and ask any questions I have about the project and they have been answered to my satisfaction.

2. I understand that I can withdraw my child from the study at any time without prejudice to my or my child’s relationship with the researcher/s now or in the future.

3. I agree that research data gathered from the results of the study may be published provided that neither my child nor I can be identified.

4. I understand that if I have any questions relating to my child’s participation in this research I may contact the researcher/s who will be happy to answer them.

5. I acknowledge receipt of the Information Statement.

6. I have discussed with my child what it means to participate in this project. He/she has explicitly indicated a willingness to take part, as indicated by his/her completion of the child consent form.

“A Journey to Independence” Parent or Guardian Consent Form Version 2 28/03/2012 Page 1 of 2
7. I consent to:

i) Audio-taping YES ☐ NO ☐

ii) Video recordings from 2004-2007 YES ☐ NO ☐

being used as a source of data

ii) Receiving Feedback YES ☐ NO ☐

If you answered YES to the "Receiving Feedback Question (iii)", please provide your details i.e. mailing address, email address.

Feedback Option

Address: __________________________________________

_______________________________________________________

Email: ________________________________________________

.................................................................
Signature of Parent/Guardian

.................................................................
Please PRINT name

.................................................................
Date

.................................................................
Signature of Child (if able to sign)

.................................................................
Please PRINT name

.................................................................
Date

“A Journey to Independence” Parent or Guardian Consent Form Version 2 28/03/2012 Page 2 of 2
Appendix F

Child Information Statement, Child Consent Form (print versions), and Parental (or Guardian) Consent Form

Hello (name)

My name is Bronwen Scott. I have a project that you might like to participate in.

The project is about getting to know how you feel about mobility and using your cane.

Would you like to participate for about one hour?

I will visit you at school with your Visiting Teacher to talk you. That means I will ask you questions.
I will record your voice on a tape. I will also ask you to write a story about your cane.

If you want to stop at anytime, that’s OK, you can.

I won’t tell anyone what you say while helping me with the project, unless I need to tell someone like your teacher if you tell me that you have been hurt by someone lately.
I won't use your real name when I write my report. My report will help other children who use a cane.

Your parents, or the person who looks after you, has talked with you about helping with the project.

If you would like to take part in the project, please put a sticker next to the word YES on the next page.

If you don't want to take part in the project – that's OK too. Please put a sticker next to the word NO on the next page.

Bronwen Scott
Doctor of Education Candidate
Room 431 A35
University of Sydney
NSW 2006
Telephone: 02 9351 6380
Facsimile: 02 9351 4768
Child Consent Form

• I know I have a choice whether or not I want to do this project

• I know that I can stop whenever I want.

• I know that I will be answering some questions about my cane as part of the project.

• Bronwen will record my voice on a tape when I talk to her.

• I will write a story about my cane.

• I know that I need to put a sticker next to the word YES before I can take part in the project.

• If I don’t want to take part in the project, I can put a sticker next to the word NO.
YES
I would like to take part in the project

NO
I do not want to take part in the project

Name of child: ___________________________ Today’s Date: / /
Feedback Option

Address: ____________________________________________

_______________________________________________________

Email: _______________________________________________

Signature of Parent/Guardian

Please PRINT name

Date

Signature of Child (if able to sign)

Please PRINT name

Date

“A Journey to Independence” Parent or Guardian Consent Form Version 1 27/01/11 Page 2 of 2
Appendix G

Information letter and consent form for Department of Education Site Managers

Dear [Insert Title and Surname of Site Manager]

A Journey to Independence: Orientation and mobility experiences of young children with vision impairment, their parents and specialist teachers.

My name is Bronwen Scott and I am writing to you on behalf of The University of Sydney. I am conducting a research project that aims to explore the experiences of children, parents and specialist teachers in relation to Orientation & Mobility (O&M) training (particularly the introduction of the long cane) in Western Australia between 2004 – 2007. I am particularly interested in the experiences around the early introduction of the long cane, an area that is still controversial within the O&M field. The project is being conducted, under the supervision of Dr Lesley Scanlon, as part of a Doctor of Education degree at the University of Sydney.

I would like to invite [insert Department site] to take part in the project. This is because a student at this school (insert name) received Orientation & Mobility training as a young child. [Insert Department site] is one of [insert total number of sites approached and type of Department site, e.g. 20 schools] in Western Australia approached for their participation.

What does participation in the research project involve?
I seek access to [insert student name]. [Student name] will be invited to participate in a one hour (maximum) session with myself and [student name] Visiting Teacher (Vision). [Student name] will be asked to take me on a short ‘tour’ of the school, in order to ‘break the ice’ and also so that I can observe them using their long cane and record their conversation. They will then participate in a short semi-structured interview asking them about their experiences of using the long cane, and asked to write a story about their cane.

I will keep the school’s involvement in the administration of the research procedures to a minimum. Information letters and consent forms for parents and the student will be distributed via the Vision Education Service. I will ensure that the session is conducted at a mutually agreed time between myself and [student name] classroom teacher so as to minimise disruption to the school program.

"A Journey to Independence” Site Manager Information Version 2 19/02/11 Page 1 of 4
To what extent is participation voluntary, and what are the implications of withdrawing that participation?

Participation in this research project is entirely voluntary. If any member of a participant group decides to participate and then later changes their mind, they are able to withdraw their participation at any time. There will be no consequences relating to any decision by an individual or the Vision Education Service regarding participation, other than those already described in this letter. Decisions made will not affect the relationship with the research team or the University of Sydney.

What will happen to the information collected, and is privacy and confidentiality assured?

Information that identifies anyone will be removed from the data collected. The data is then stored securely in a locked filing cabinet at the University of Sydney Department of Education and Social Work and can only be accessed by the researcher and supervisor. The data will be stored for a minimum period of 7 years, after which it will be destroyed. This will be achieved by the shredding of documents and erasing of interview recordings.

The identity of participants and the school will not be disclosed at any time, except in circumstances that require reporting under the Department of Education Child Protection policy, or where the research team is legally required to disclose that information.

Participant privacy, and the confidentiality of information disclosed by participants, is assured at all other times.

The data will be used only for this project, and associated conference presentation and journal articles, and will not be used in any extended or future research without first obtaining explicit written consent from participants.

Consistent with Department of Education policy, a summary of the research findings will be made available to the participating site(s) and the Department. You can expect this to be available in July 2014.

Is this research approved?

The research has been approved by [insert relevant ethics body or institution responsible for supervising the research, and approval number, if appropriate], and has met the policy requirements of the Department of Education as indicated in the attached letter.

Do all members of the research team who will be having contact with children have their Working with Children Check?

Yes. Under the Working with Children (Criminal Record Checking) Act 2004, people undertaking work in Western Australia that involves contact with children must undergo a Working with Children Check. The documents attached to this letter include a list of the research team who will be having contact with children through your school, along with current evidence of their checks.

Who do I contact if I wish to discuss the project further?

If you would like to discuss any aspect of this study with a member of the research team, please contact me on the number provided below.

"A Journey to Independence" Site Manager Information Version 2 19/02/11 Page 2 of 4
Any person with concerns or complaints about the conduct of a research study can contact The Manager, Human Ethics Administration, University of Sydney on + 61 2 8627 8176 (Telephone); + 61 2 8627 8177 (Facsimile) or ro.humanethics@sydney.edu.au (Email).

How do I indicate my willingness for the school to be involved?
If you have had all questions about the project answered to your satisfaction, and are willing for the school to participate, please complete the Consent Form on the following page.

This information letter is for you to keep.

Bronwen Scott
Doctoral Student
Room A35.431
University of Sydney NSW 2006
AUSTRALIA
Telephone: +61 2 9351 6380
Facsimile: +61 2 9351 4380
Email: bsco5139@uni.sydney.edu.au
Web: www.usyd.edu.au
Consent Form Template for Department of Education and Training Site Managers

Consent Form

- I have read this document and understand the aims, procedures, and risks of this project, as described within it.

- For any questions I may have had, I have taken up the invitation to ask those questions, and I am satisfied with the answers I received.

- I am willing for the [insert Department site] to become involved in the research project, as described.

- I understand that participation in the project is entirely voluntarily.

- I understand that [insert Department site] is free to withdraw its participation at any time, without affecting the relationship with the research team or The University of Sydney. Data can be withdrawn from the study up until December 2012.

- I understand that this research may be reported in a thesis, conference presentation and journal article as part of the requirements for a Doctorate of Education, provided that the participants or the school are not identified in any way.

- I understand that the [insert Department site] will be provided with a copy of the findings from this research upon its completion.

Name of Site Manager (printed):

Signature:

Date: / /
### Appendix H

#### Data analysis stage 1: Stages of perspectives identified from basic themes

<table>
<thead>
<tr>
<th>Stage</th>
<th>Interview question, basic coded themes: parents</th>
<th>Interview question: teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Starting a new journey</strong></td>
<td>How did your family become involved with O&amp;M training?</td>
<td>How did you come to be involved with vision education, how did you learn about O&amp;M? (Teacher responses to this question were not coded, with information used as background material).</td>
</tr>
<tr>
<td></td>
<td><strong>Coded themes:</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. When the child was first born, parents didn’t know what to expect.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Parents had never thought about O&amp;M and didn't realise it was more than using the cane.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. The large number of professionals involved can be overwhelming.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Basic coded themes: parents</th>
<th>Basic coded themes: teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Negotiating a bumpy road</strong></td>
<td>1. Expecting children to master a set of skills prior to being given a cane doesn’t fit with how we know young children learn.</td>
</tr>
<tr>
<td></td>
<td>2. The cane is generally used correctly because it is seen as by the child as something important and valuable.</td>
</tr>
<tr>
<td></td>
<td>3. Working with a trained O&amp;M Specialist is an essential aspect of the team approach.</td>
</tr>
</tbody>
</table>
cane balanced by not having to 'explain' child’s behaviour.
9. The cane should be introduced prior to school because there is so much else to be introduced then.
10. Very young children are 'sponges', introducing the cane early helps them to get used to it.

| Reaching a turning point | 1. Key concepts around O&M are 'confidence' and 'independence'.
|                         | 2. Seeing peers using a cane is motivating and inspiring for children and parents.
|                         | 3. It becomes harder to motivate the child use the cane if they're the only one at school using one.
|                         | 4. The cane should be coloured or decorated, adds to the 'fun' of it.
|                         | 5. Parents were excited and proud of their child’s progress.
|                         | 1. Confidence in O&M generalises to all aspects of the child’s life.
|                         | 2. Good O&M techniques can change stereotypical views about blindness.
|                         | 3. Good O&M techniques allow the child to take responsibility for their own learning.
|                         | 4. Parent and school acceptance of the cane reinforce each other.
|                         | 5. The development of early O&M skills give parents confidence and hope for their child’s future.
|                         | 6. Developing early skills makes families excited.
|                         | 7. O&M skills increase expectations of children with blindness.
|                         | 8. O&M is meaningful and needs to be shared with peers.
|                         | 9. O&M is exciting and children learn from each other and much as from teachers.
|                         | 10. Young sighted children are curious and interested in O&M and the cane.
|                         | 11. O&M skills increase social interactions between sighted and blind children.
|                         | 12. Having a coloured cane.
13. Naming the cane develops a sense of ‘ownership’ and the cane becomes a ‘significant other’ in the child’s life.
14. Naming/decorating the cane allows others to ‘share’ by providing a talking point.
15. Being surrounded by peers who were blind normalised the cane.
16. ‘Competition’ between cane users was healthy and resulted in pride in the child’s own mobility.
17. Coming into the educational setting already using the equipment normalised it for sighted peers.
18. Sighted peers developed a pride in the child’s achievements.
19. The child being confident resulted in increased acceptance and increased social integration with peers.

A new path of understanding

1. Confidence in O&M takes the stress off families and siblings so they could continue to plan ‘everyday’ activities.
2. The cane is part of everyday life—early introduction helped with acceptance by siblings.
3. O&M is just ‘part of the package’ of being blind.

1. O&M encompasses every aspect of learning.
2. O&M is a natural skill that ‘opens up the world’.
### Appendix I

**Matrix of basic, organising and global themes for all participants**

<table>
<thead>
<tr>
<th>Themes as basic themes (teachers)</th>
<th>Organising themes</th>
<th>Global themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Collaboration with the O&amp;M Specialist</td>
<td>Teamwork</td>
<td>Social interaction</td>
</tr>
<tr>
<td>2. Collaboration with schools</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Good O&amp;M skills send a positive message re a child’s capabilities - changes stereotypical views</td>
<td>Community</td>
<td>Social interaction</td>
</tr>
<tr>
<td>4. Coming into the educational setting already using the equipment normalised it for peers and teachers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. A confident child results in increased acceptance and social integration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. O&amp;M skills increase people’s expectations of children who are blind</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. O&amp;M is meaningful in children’s lives and needs to be shared with peers</td>
<td>Peers</td>
<td>Social interaction</td>
</tr>
<tr>
<td>8. Being surrounded by peers who were blind normalised the cane - everyone wanted one</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. ‘Competition’ between cane users was healthy and resulted in pride in the child’s own mobility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. O&amp;M is exciting and children learn from each other as much as from teachers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Young sighted children are curious and interested in O&amp;M and the cane</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Sighted peers developed a pride in child’s</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Coloured canes</td>
<td>14. Naming the cane</td>
<td>15. O&amp;M encompasses every aspect of learning</td>
</tr>
<tr>
<td>Themes as basic themes (parents)</td>
<td>Organising themes</td>
<td>Global themes</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>1. The large number of professionals involved can be overwhelming</td>
<td>Teamwork</td>
<td>Social interaction</td>
</tr>
<tr>
<td>2. Formal O&amp;M training is needed to expand the child’s experiences beyond what a parent has time for</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Parent’s don’t have time to think about the cane, or to always allow their child to be independent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. The pre cane is ‘disabling’ because of its appearance - a sled, a walker, an old people’s frame</td>
<td>Community</td>
<td>Social interaction</td>
</tr>
<tr>
<td>5. Public stared when the child used the pre cane and didn’t understand the purpose of it</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. The cane is seen as a socially accepted and understood tool</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. The public generally responds to the cane with understanding and acceptance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. ‘Obviousness’ of the cane is balanced by not having to ‘explain’ child’s behaviour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Seeing peers using a cane is motivating and inspiring for children and parents</td>
<td>Peers</td>
<td></td>
</tr>
<tr>
<td>10. Support from peers and the school was important in encouraging cane use</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. The cane should be decorated or coloured, adds to the ‘fun’ of it which is a critical aspect of learning</td>
<td>Coloured canes</td>
<td>Children and family</td>
</tr>
<tr>
<td></td>
<td>Influence on child</td>
<td>Influence on family</td>
</tr>
<tr>
<td>---</td>
<td>-------------------</td>
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</tr>
<tr>
<td>12.</td>
<td>There seemed little point in using a pre cane when a child could learn a long cane.</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>The cane should be introduced to school because there is so much else to be introduced then.</td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>Very young children are 'sponges', introducing the cane early helps them get used to it.</td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Parents were excited and proud of their child’s progress with the cane.</td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>Key reasons for wanting O&amp;M are ‘confidence’ and ‘independence’.</td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>Parents wanted O&amp;M because they didn’t want their child to walk/move like other blind people they had seen.</td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>The cane is part of everyday life for everyone in the family - early introduction meant acceptance by siblings too.</td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>Confidence in O&amp;M takes the stress off families and siblings so they could continue to plan ‘every day’ activities.</td>
<td></td>
</tr>
<tr>
<td>Themes as basic themes (children)</td>
<td>Organising themes</td>
<td>Global themes</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>1. Children liked decorating and having coloured canes</td>
<td>Not coded to this level</td>
<td>Not coded to this level</td>
</tr>
<tr>
<td>2. Naming the cane was and remains important to children</td>
<td>Not coded to this level</td>
<td>Not coded to this level</td>
</tr>
<tr>
<td>3. The cane is useful in unfamiliar, busy areas but not used often in very familiar areas</td>
<td>Not coded to this level</td>
<td>Not coded to this level</td>
</tr>
<tr>
<td>4. Lack of ongoing O&amp;M has made it difficult to maintain skills</td>
<td>Not coded to this level</td>
<td>Not coded to this level</td>
</tr>
</tbody>
</table>
Appendix J

Example of written memo used to aid data analysis

Describe-compare-relate teachers (05.03.15)

Four of the teachers in this study had no background in vision impairment prior to working for the service. Three came into the job as experienced teachers in the areas of early childhood or special education, and one was a newly qualified teacher. There are no courses in Western Australia to train teachers in the specific needs of children who are blind. All completed a post graduate qualification in vision impairment education whilst working for the service. For some, their first experience of O&M was at the EIP. They had few expectations, and there was little understanding as to the depth of O&M. Many thought it was just about teaching the cane, and there were comments around not understanding why areas like concept development were important, or how that fitted into the O&M component of the ECC.

Emergent themes:

1. O&M is more than ‘moving independently’ and more than a ‘therapy’: Teachers expressed excitement at how they felt that O&M was an all encompassing aspect of the children’s lives. From thinking that it was just about learning techniques of guiding or independence, they felt that the use of the long cane crossed over into all aspects of the child’s life. It was seen as something that needed to be included in all aspects of the child’s day to day life, and that when presented as a ‘therapy’ - that is, something paid for by the hour, and delivered by an outside agency, this didn’t really work. The spontaneity of children’s learning once they were confident in moving independently with the cane was something that was seen as exciting and essential to their self confidence and education. A key point was that the child became a confident and natural mover, and was then able to access the classroom or their world as their peers would, lack of mobility wasn’t holding them back. Informal exploration was seen as important, and O&M was seen as something that the children, once they were confident with using their canes, just did without thinking about. They were therefore able to learn other things, especially through exploration of their world, as other young children with vision were. The impact on social interactions was seen as highly important, both with their peers and with adults. Being confident in space and mobility meant they could interact with their peers more
spontaneously. Adults had different expectations once they saw how well the child moved through space.

2. Movement is natural and essential to humans/Independence is valued highly by the child: The key words that emerged here were ‘instinctual’ and ‘natural’. The cane was being used as an extension to the child’s arm, and teachers found that exciting and fascinating to watch. Teachers could see the cane being used as a tool to discover space in a very natural way. Comments were that the children walked with natural and comfortable gaits, and were confident and graceful moving through space. Teachers who had contact with other children who had no received early O&M commented on the obvious difference between the two groups. There were also comments that how we move through space influences other’s perceptions of us - that having an unnatural gait or poor mobility meant that people often assumed an intellectual disability as well. Peer interaction and modelling was also seen as important, and often the children would join in with each other’s O&M ‘lessons’, having fun with the cane, not really thinking about using them as a ‘cane’, but rather just as a way of being able to play and explore with their friends.

3. O&M is integral to education: O&M and braille were seen as the two most important aspects of the ECC. O&M was seen as crucial and having an effect on every other educational thing the child learned. The benefits of a child being confident and able to move freely in space were seen to be that they could access their own learning far more easily. It wasn’t so much the O&M skills themselves, but the freedom those skills gave to the child to access all other parts of the curriculum. The importance of starting early was stressed, with the understanding that if a child didn’t have these skills in the early years, they would have developmentally moved beyond what the O&M was giving them at a young age, particularly in terms of what they learnt through play and the development of language in the early use of the cane.

4. O&M is meaningful development to be shared with peers: Peer interaction with other children using canes was essential. It made using the cane a normalising experience, with children enjoying comparing cane tips, colours, skills etc. Again, it was the incidental learning that was seen to be
important - hearing another child using their cane, which made them want to
go and get their own cane to join in. This linked with the cane becoming just
a tool to help them explore and also with the child having the choice of when
and where to use their cane, which was seen as empowering and very
important.

5. O&M is empowering/acceptance: Teachers felt that children quickly
felt responsible for their own mobility which was empowering for them. This
had a big impact on their social interactions, and also on other’s perceptions
of them which then had the circular effect - increased expectations led to
increased performance etc. Giving the child choice was also seen as very
important, and once good skills were developed, the children were
empowered to make their own choices about their mobility - whether or not
to use the cane, where to use the cane etc. This then reflected into areas such
as developing a positive self image.

6. Ownership of the cane: Having coloured canes and naming the canes
were seen as allowing the child to have ownership of the cane. Naming the
cane made it special to them - one teacher talked about how it was like they
were talking about a guide or a buddy. It also made it easier for sighted peers
and adults to relate to the cane - being able to discuss the colour for example,
or talk about the name, acted as an ‘ice-breaker’ for those not comfortable in
knowing how to facilitate a conversation. There was a sense of pride in the
canes when the colours were remarked upon or compared. Ownership also
linked closely back into empowerment for the child.

7. O&M provides empowerment for the parents: For teachers, this was a
very important point. It was strongly felt that parents went on to become
strong advocates for O&M and their child once their child was confident in
the skills. It was also commented on that it gave parents a sense of hope and
a glimpse into the future of what might be possible for their child.

What’s not included: Safety was a word that did not get mentioned as
much as I expected. It was added on almost as an afterthought, a ‘given’, but
not really seen as the most important reason for giving a child a long cane.
Far more important was giving them the ability to learn to be confident in space, to take responsibility for their own mobility and to be able to explore and access all aspects of learning through that. Teachers were aware that children were generally in a safe space and would be under some level of supervision at this age, and felt that by introducing the cane early, the child would be very familiar and comfortable with the aid by the time they were needing to learn more formal O&M techniques and be more independent and therefore need the cane to keep them safe.