Setting suns and rising stars

Succession planning in New Zealand’s Deaf education leadership workforce: A national study

Saul McKay Taylor

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Abstract
This thesis is the first national study examining succession planning in New Zealand’s Deaf education leadership workforce. The sun is setting on the working tenure of baby-boomer educators, a large proportion of these people have reached school leadership positions. This research examines workforce demographics and the succession mechanisms in place for the rising future leaders of Deaf education in New Zealand. To date this has been an area that has not been investigated within the Aotearoa New Zealand context. A small but growing body of international and New Zealand educational literature indicates mainstream workforces are skewed towards ageing due to a unique demographic turning point as baby-boomers reach retirement age. In the arena of New Zealand Deaf education, workforce ageing presents a special concern. Teaching personnel in this workforce are highly specialised and leaders in this area hold exquisitely contextual knowledge. This thesis is concerned with investigating the need to ensure the quality and quantity of future leadership for Deaf students. If many seasoned leaders and experienced teachers are due to depart in the near term, and there are insufficient succession mechanisms in place, future leadership could be at risk. Three key questions concerning the need for succession planning, were analysed as part of this study.

A mixed-methods approach was chosen that involved a quantitative survey of the three Deaf education providers in New Zealand. This was done alongside seven qualitative semi-structured interviews with the senior leaders drawn from across these organisations. Three levels of statistical analysis were applied to the quantitative data to reveal the first national demographic picture of the workforce. Thematic analysis of the qualitative findings revealed the workforce’s motivation to lead and leader’s perceptions of succession planning methods. Methodological triangulation of the findings from the two research tools revealed three main finding areas. Firstly, that an ageing workforce exists, secondly key factors in shaping motivation to lead were identified, and thirdly methods to develop future leaders were pinpointed.

The workforce in Deaf education was found to have a more severe skew towards ageing than the mainstream education sector. Amongst a largely static workforce there was found to be a small group of highly motivated individuals who strongly
aspired to leadership roles. Formal succession planning mechanisms for this workforce are needed, due to the ageing leadership. In addition to in-role development, pre-role preparatory support was required for aspirants. Specific reluctance and driving factors for leadership were uncovered and the importance of high interpersonal relational skills was emphasised to nurture aspirants and develop a leadership culture.

Four recommendations for practice and one recommendation for research are made at the end of this study. The first key recommendation was that investment in leadership preparation and development in Deaf education is worthwhile at both national and organisational level. This stems from the findings that Deaf education personnel have an extremely low rate of attrition out of the profession. Once qualified, most teachers have been found to stay for their entire career. Investment is therefore not wasted. Secondly, there is a need for formal succession mechanisms. Current focus seems to be on volunteerism, self-nomination, development and replacement management. Mechanisms need to include preparation, training and encouragement pathways to identify and nurture future leadership. The third recommendation is based on schools and the Ministry of Education building their own detailed age profiles of personnel. The final practice recommendation is for increased input into building professional self-management skills. Increasingly, aspirants are being deterred from leadership due to reluctance about being able to cope with the impact of stress and workload on their lives. Such on-going professional development for neophyte leaders will assist them to gain the tools to enjoy the challenges of leadership. In terms of a recommendation for future research, gender statistics uncovered in the findings from this study revealed an opportunity for further investigation. A new line of inquiry about gender impact on Deaf students could reveal worthwhile results.
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Chapter 1: Introduction

Lifting our eyes to the horizon – investigating a need for succession planning in Deaf education New Zealand.

A quietly lurking succession planning issue seems to be emerging in education as a peak in retirement numbers occurs. Over the coming decade more teachers than ever before will be needed to enter leadership roles, due to the retirement of the large baby-boomer cohort of school leaders (Pont, Nusche, & Moorman, 2008). The weakening of the leadership workforce, through retirement of seasoned leaders, could have serious succession planning implications for the education profession (Brooking, 2007; Rhodes & Brundrett, 2006). There is an increasing consciousness about the succession issue due to workforce ageing. Literature strongly advocates a need to be pro-active in planning about succession rather than reactive (Rhodes, 2005). A pro-active approach is imperative to manage and plan succession to ensure leadership sustainability and effectiveness (Zepeda, Bengston, & Parylo, 2011). This issue is compounded in the Deaf education arena because of the specialist skill set required by a small workforce (Lenihan, 2010). This new research provides a clear demographic picture of New Zealand's Deaf education workforce and is highly worthwhile in establishing a need for succession planning in this specialist area.

The findings of this thesis demonstrate the numbers of teachers, and in particular leaders, who are likely to be exiting Deaf education over the short and longer term. It is intended this research will be valuable to the professional community and contribute to strategic thinking to enhance leadership planning. These research findings help to make the succession issue in Deaf education more palpable. The findings also reveal the extent of likely retirement numbers and the imminence of a succession issue more apparent. While this research offers a demographic snapshot, at the current moment, it also speaks to an issue that will be significant in education for the foreseeable future. This research is timely as 2011-2012 saw the first of the baby-boomer generation (1946-1965) teachers and leaders reaching traditional

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1 Throughout this thesis (Pont, Nusche & Moorman, 2008) will be used in full to distinguish it from (Pont, Nusche & Hopkins, 2008) which will likewise be used in full instead of using et al. All other multiple author references have used et al as appropriate.
retirement age of 65 years old. This could signal the start of a retirement exodus. New knowledge gained by this study can be used by the profession to better plan for succession, enhance knowledge transfer systems and provide opportunities for leadership development initiatives to be raised, the three interlinking themes of this research.

Investigating succession planning in this specialist sector of education is also significant because there appears to be no demographic information on New Zealand’s Deaf education’s workforce nationally. Research indicating how long leaders are likely to have left in the New Zealand Deaf education workforce before reaching the traditional retirement age of 65 is as yet, an unexplored research area. Teacher morale and levels of reluctance among middle management to step into senior leadership roles have been additional relevant factors worth investigation around succession (Earley, Weindling, Bubb, & Glenn, 2009; Fink & Brayman, 2006; Rhodes, Brundrett, & Nevill, 2008). Another key term to be considered is the need for strategies to ensure transfer of institutional knowledge between current and aspiring leaders in this specialist context.

Specialist context of Deaf education in New Zealand

Within the field of New Zealand education there is the smaller area of special education, within this sector there is the comparatively minute area of Deaf education comprising nationally of a teaching workforce of approximately 200 teachers of the Deaf. There are two Deaf education centres (DECs), one in the North Island and one in the South Island. As well as day students, each DEC has a school site that houses some residential students. DECs provide education from pre-school to post year 13 students in a range of on-site, mainstream school satellite provision, and regional itinerant outreach programmes. Each DEC is independent of the other with their own Board of Trustees, although recent debate and consultation has taken place around Ministry of Education’s action to combine the Boards in the near future and this is scheduled to happen by 2013. In the regional service of each DEC, itinerant specialist teachers of the Deaf make up an outreach service providing support to DEC enrolled students who attend their local mainstream school. These teams of itinerant teachers have resource bases to work out of and plan the management of their caseload.
Within the school sector of the DEC, students are placed in Deaf provisions or units in mainstream partnership schools. DEC staff and students are deployed to these provisions in mainstream partner schools and are based there in an integrated programme with specialist support. DEC teaching staff and students are based in the partner school and para-professionals visit these sites to offer audiology support, speech therapy, counselling, and sign language specialist programmes. A small third provider in the Deaf education sector is the Ministry of Education specialist advisory service for Deaf children. This cohort is spread across the country and works with hearing impaired students who are not enrolled in the DECs.

**Worth and relevance of conducting the research.**

Investigating the potential succession problem rising in Deaf education is a worthwhile undertaking given the increasing demographic turnover in leadership highlighted in the educational literature (Fink & Brayman, 2006; Groves, 2007; Pitt-Catsouphes, 2007; Pont, Nusche, & Moorman, 2008; Rhodes & Brundrett, 2006). Furthermore, there are a number of compounding factors that amplify the need for leadership replacement planning. Technological advances in the specialised sector of Deaf education (Lenihan, 2010), tertiary course provider closures internationally and locally, the critical shortage of teachers of the Deaf and the anticipated retirement of a large number of baby-boomer professionals, makes researching succession planning an important project (Brooking, 2008; Earley, et al., 2009; Fink & Brayman, 2006). There appears to be a lack of concern amongst leaders in the profession about the particular challenges that may be faced in Deaf education over the coming decade, arising from a unique period of demographic shift. Formally planned succession structures seem to be absent presently in Deaf education.

**The noticeable absence of succession**

Research focused on leadership succession and succession planning within educational literature is sparse (Rhodes, 2005; Rhodes & Brundrett, 2006). Indeed the term 'succession' is noticeably absent from the overwhelming majority of school leadership and management literature (Altman, 2009; Rhodes, 2005). How to manage the process of transitioning individuals and how succession is actually managed in schools has had little focus (Zepeda, et al., 2011). The upcoming decade provides a finite window in the landscape of New Zealand educational leadership, during which time, knowledge can be transferred between incumbent leaders and aspiring talent. From the limited literature available, the term succession is defined
not just as a reactive response to job replacement, but as a longer term view based on forward thinking relating to leadership needs and school development (Rhodes & Brundrett, 2009).

Macpherson (2010) points to the need for further research into succession strategies for New Zealand’s mainstream education sector. His research on perspectives collected from neophyte leaders, found that there was negligible preparation for Principalship and accumulating evidence of serious issues in the quality and quantity of leadership supply in New Zealand schools. Highlighted issues were the need for sustained career path planning, prior skills training and mentoring and a need for further investment in the leadership development infrastructure (Cardno, 2003; Macpherson, 2010). This study offers to fill a space in the knowledge by investigating the need for such planned succession strategies specifically in Deaf education within the New Zealand context. As mentioned, to date no research has been done on strategic leadership replenishment needs for this niche sector.

This thesis is intended to initiate awareness and strategic thinking around planning for leadership succession so that the quality of leadership influencing teaching and learning for future students is optimised. Educational leadership is vital, policy makers and researchers agree it can make a positive difference to teaching practices, school cultures and most importantly, learning outcomes for students (Duff, 2010; Rhodes & Brundrett, 2006). Shedding light on the future of educational leadership in New Zealand, in particular Deaf education, is both relevant and worthwhile.

As noted, the purpose of researching the demographic patterns of leadership in Deaf education is to determine the necessity and urgency for systemic and structured succession planning. Thus far, educational literature has paid limited attention to leadership succession (Rhodes & Brundrett, 2006). The area seems to be marginalised and is therefore worthy of further investigation. The small amount of existing literature on succession planning is international, general education focused and dated. The research study put forward here targets a gap in the literature and would make a contribution to new knowledge by providing New Zealand based, Deaf education focused, up to date findings.
Investigating the gap in the knowledge about future leadership, presents a problem that all professionals in the Deaf education community have a stake in. Without effective leadership the staff systems of tomorrow could be compromised. If teachers across the sector are placed in an array of leadership roles prematurely, they could experience significant strain that could permeate across all levels of the school, ultimately reaching students. There is clearly an issue or concern that needs to be addressed around succession planning and this presents a robust research problem. This research problem implies there is a need to investigate something that we do not currently have a clear understanding of but should (Creswell, 2002). To summarise, the key terms associated with the research problem are firstly, establishing whether there is a need for succession planning by investigating workforce demographics. Secondly, finding current succession strategies used for transferring institutional knowledge and developing future leaders. Thirdly, discussing the applicability and effectiveness to Deaf education of current government leadership development initiatives. The worth of the study is confirmed by the rationale presented here:

**Rationale**

The world of Deaf education in New Zealand is very small. Within this sector there are concerns about leadership recruitment, retention and succession. Population demographics strongly point to an ageing workforce and this trend is expected to continue. Incumbent leaders face imminent retirement and those left in the workforce appear reluctant to move into senior leadership roles. There appears to be a finite amount of time left to transfer tacit professional knowledge to aspiring leaders. The purpose of this study is to clarify the demographic picture and investigate the implications of Deaf education's teacher, and more specifically, leadership workforce in New Zealand. Given the ageing population in general, perhaps the “yellowing leaf” (Shakespeare, 1892)² of leadership in education is beginning to be seen. Notions of training, ascension and succession need to be prioritised in school and government discussions, and especially so for the small Deaf education community.

Research internationally on succession planning for generic educational leadership is growing; however, New Zealand specific research is scarce. Special education literature and specifically literature on Deaf education's ageing leaders, appears to be

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non-existent. A clear gap in the research on succession planning in Deaf education in New Zealand has become evident. This research offers to fill that gap by generating up to date demographic data and recording key leadership perspectives on the future of Deaf education. It significantly contributes to producing a theory – practice dialectic and forum for debate on succession planning in this area. This New Zealand based, Deaf education focused, up to date research offers a clear demographic picture and a focal point for dialogue on ensuring future leadership in this highly specialised area of education. The three research questions, forming the backbone of the research study are considered worthy and relevant, as they aim to reveal the extent of the problem in the light of the literature.

**Research aims, questions and setting**

This research aims to study leadership demographics within the field of Deaf education in New Zealand in order to determine any need for succession planning or strategic thinking around leadership workforce capacity. From this practical issue a significant research problem surfaces (Booth, Colomb, & Williams, 1995) as it becomes clear there is insufficient knowledge around the current workforce demographics in Deaf education. The problem is deepened in three ways. This research aims to explore the concept of succession planning by first looking at the national demographic picture of the teacher workforce, then secondly to determine current strategies for sharing and transferring institutional knowledge. Finally, the research aims to discuss the effectiveness of current governmental initiatives in place and strategies at school level that could ameliorate workforce succession trends emerging in Deaf education.

The literature review and discussion chapters of the thesis engage with the idea of how important the nature of leadership is in Deaf education. There was a risk in assuming leadership was a fait accompli in this sector. There is no specific literature that focuses on leadership in New Zealand Deaf education, the more general literature does however, point to the importance of leadership in all aspects of education. Rhodes and Brundrett (2008) also make it clear that ensuring a supply of able middle and senior leaders is recognised to be of key strategic importance to schools.
The research design best fitted to this problem involves mixed methods. Firstly, baseline demographic data on the teacher of the Deaf workforce was collected using a web-survey questionnaire. The final five questions in the questionnaire required more subjective information regarding teacher motivation to lead and intent to remain in the profession over coming years. The web-survey was therefore largely pragmatic data but did have some interpretive elements in the last five questions. Alongside the survey a series of semi-structured interviews with current senior leaders in Deaf education took place. The interviews used interpretive methods and added to gaining a fuller picture of the state of leadership preparation needs in this specialist sector of New Zealand education. Chapter three of this thesis explains in detail the quantitative and qualitative nature of the data collected and also demonstrates the unequal weighting these sets of data. This research topic of succession planning in Deaf education can be clearly problematised with three distinct research aims and three related guiding research questions:

**Research Aims**

- To establish the current demographic patterns of leaders and the teaching workforce in Deaf Education across New Zealand's three specialist providers.
- To explore the importance and methods of transferring expertise and organisational knowledge from incumbent leaders to aspiring leaders.
- To investigate succession planning initiatives in place in the New Zealand education system and determine their effectiveness and applicability to Deaf education.

**Research questions**

- What is the current national demographic picture of the leadership and teaching workforce in Deaf education across New Zealand's three specialist providers?
- Is there a need for succession planning and, if so, what strategies could be used, by organisations to share and transfer institutional knowledge from incumbent to aspiring leaders?
- How effective are current governmental and school initiatives from New Zealand's education system in preparing leaders in the Deaf education sector?
Benefits of the research
The key benefit of this research to practice is that the quality and training of tomorrow's leaders in Deaf education will be brought into the professional consciousness of the leaders in education by pointing out whether there is a likely impending succession issue. If the issue is recognised, leaders will hopefully begin to consider succession planning as part of their strategic plans. This research provides new findings about the national workforce that can inform succession discussions. Ultimately, student learning will be benefitted indirectly through ensuring quality future leaders in Deaf education. A wider benefit of this research is that a parallel could be drawn with the mainstream education system for what it could face on a larger scale in years to come. To summarise:

Benefits of this research for the participants or community

- A clear, statistically informed, national picture of the workforce demographics of New Zealand Deaf education professionals.
- A piece of research which contributes to the discussion on the need for succession planning. The findings aim to provide a demographic snapshot that can be considered in discussions around strategic leadership replenishment over coming years.
- A piece of research which aims to indirectly benefit Deaf students' learning in the future by assisting the leaders in Deaf education to recognise the importance of succession planning.
- This research also provides some key indications of teacher's morale, level of inclination to step into management realms and the extent of strategic career thinking people currently have in the profession.

Personal interest of the author in Deaf education
As a professional working in New Zealand Deaf education, I have a vested interest in ensuring Deaf students have the highest standard available of educational leadership in the future. As a potential aspiring leader, I hope to be alongside other leaders in the future who have had appropriate experience and training, when they reach the realms of senior management.

Thesis organisation
This thesis is set out in six chapters and the remaining five chapters are organised as follows:
Chapter 2 Literature review
This chapter offers an in-depth review of the literature. Demographic dimensions both internationally and locally are explained and examined in light of the literature. The implications for the New Zealand Deaf education workforce are explored, as are methods for tacit knowledge transfer, strategies for succession and ways to identify and develop talent. At the end of Chapter 2 a brief mention of the workforce development at tertiary course level is discussed. Certain themes were uncovered in the literature, these included demographic shift in workforce populations internationally, the need and methods of transferring organisational knowledge, succession strategies used in education and finally identification of talented individuals. The issues and challenges of the major thematic strands in the literature are examined in this chapter.

Chapter 3 Methodology and methods
The methodological framework and the methods of data collection are explained in Chapter 3. A mixed methods design was chosen which allowed methodological triangulation of both sets of data to uncover deeper underlying findings as part of this national study. How the findings from the web-survey and interviews were analysed is outlined in this chapter. The three levels of quantitative analysis undertaken with the survey data are explained and the thematic analysis of the interview data are described. Ethical considerations and the related key concepts of reliability and validity are explained to complete the chapter.

Chapter 4 Findings
The two research tools are introduced in relation to the questions of this study and the structure of the chapter is explained. Part I presents the quantitative findings from the national survey, including the response rate and the three levels of analysis performed on the data. A demographic picture of the national workforce is explained. The three key sub-groups within the data that were found to have long remaining tenure are scrutinised and described. Relationships and differences found in the survey data through statistical analysis are presented.

In part II the qualitative findings from the semi-structured interviews with senior leaders are explained. Findings from the interview data on ageing leadership, the need for encouraging leadership, the quality and quantity of leadership are presented. The specific succession strategies used by leaders are identified and
presented. Leadership development initiatives, programmes and qualifications are identified and their perceived effectiveness explained. The features of future leadership that incumbent leaders perceived as vital are presented.

Part III presents the methodological triangulation of the mixed methods design. The quantitative and the qualitative findings are synthesised to reveal deeper insights into the research problem. Three key areas are revealed as synthesis factors: ageing leadership, motivation to lead and finally development of future leadership.

Chapter 5 Discussion
The findings of the study are discussed in light of the literature reviewed in Chapter two. The chapter is structured under three subheadings derived from the synthesis factors found in Chapter four; ageing leadership, motivation to lead, and development of future leadership. The unique demographic moment the literature points to is supported with statistics from the mainstream education workforce, the demographic results from this research are then compared and reveal a more acute succession issue in the small workforce of Deaf education. The uninformed optimism of senior leadership is discussed and the shallow succession pools present in Deaf education described. The chapter goes on to discuss the cultural and emotional connection the workforce in Deaf education has with students and that is demonstrated in their commitment to postgraduate training to qualify as teachers of the Deaf. Positive portrayal of the leadership role and the need to be pro-active in developing talent and creating a leadership culture concludes the chapter.

Chapter 6 Conclusions and recommendations
This final chapter presents the conclusions and recommendations for this first national study into New Zealand’s Deaf education workforce. The strengths and limitations of the research design are explained and an opportunity is pointed out for further study based on a finding in this project. The conclusions are grouped under the three headings of ageing workforce, motivation to lead, and development of future leaders. A descriptive diagram (Figure 6.1, p. 116) gives an overview of the succession mechanisms and personnel pipelines running through Deaf education. Four recommendations for practice and one for further research are presented and the chapter closes with a summative comment about the importance of interpersonal skills and relational leadership.
Chapter 2: Literature review

Introduction

There appears to be a concern in the literature that population demographics are undergoing a unique time of change. There are potential impacts on the capacity of workforces if population trends mean large numbers of people have retired. Indications in the literature strongly emphasise a dramatic and imminent increase in the number of retirees. Terminology in the literature could be critiqued as ‘alarmist’ and therefore this chapter also analyses literature that criticises such dramatic ageing workforce perspectives. Assumptions are also tested and probed about the future of education workforce needs.

From recognising global demographic trends and possible workforce implications of ageing, this chapter focuses on the New Zealand population and the workforce of education. From the field of education, specifically the specialist area of Deaf education and its small workforce of teachers of the Deaf becomes the focus. This cohort comprises of approximately 200 people nationally and very little is known of their demographic make-up, tenure lengths, motivation to lead or desire to stay in the profession. In light of the literature reviewed this study aims to reveal the links and trends around workforce replenishment in this specialist group of teachers. The literature reviewed in this chapter points out the importance of the tacit knowledge held by current members of the workforce and the significant challenge of transferring such expertise to the next generation of leaders. Strategies and methods for developing talented employees are considered in this chapter. Overall these strategies relate to building future leadership capacity and are collectively termed succession planning.

Strategies to sustain the depth of leadership skills and expertise in schools are discussed, revealing more long term structural approaches are perhaps the most effective despite being more costly and slow to establish. A possible trend noted in the literature is the accelerated pathways and career trajectories of many emerging leaders today. Questions of leadership quality are discussed in light of the literature.
The chapter covers national and school level succession approaches and the situation of New Zealand in terms of regulations for leadership qualifications. Factors that aid and hinder talent development are discussed in depth and the responsibilities of current leaders are raised.

The pros and cons of external versus ‘home-grown’ candidates are noted and the end of the chapter looks briefly at the replenishment of the Deaf education workforce through graduates from tertiary courses. This end section to the chapter reveals low applicant numbers into specialist Deaf education courses and ageing demographics of the faculty members themselves. This adds another element of concern to the succession issues already discussed in the chapter. From this literature background, the importance of research into Deaf education workforce demographics is clear and the urgency for succession planning in this area is uncovered.

**From the macro to the micro context – a unique demographic moment**

Ageing is the new population problem of our times (Mullen, 2002; Shaw, 2002). As we begin the second decade of the 21st century, a unique moment in history has arrived in terms of population ageing and the demographic transformation of developed countries (Statistics New Zealand Tatauranga Aotearoa, 2006; World Health Organisation, 2010). An 'age wave' (Hewitt, 2009) consisting of the baby-boomer generation (1946-1965) reaching traditional retirement ages has begun to arrive from 2011 and will have significant gerontological impacts across all professions and industries. Gerontology in this thesis is defined as the effects of an ageing population on societal patterns or shape (McGuire, Klein, & Cooper, 2005). Gerontologically, the shape and structure of the population has morphed over the least 50 years. The shape has moved from a traditional pyramid with a wide base of baby-boomer youngsters in the population and small number of elderly at the top. By contrast today’s population shape has a more narrow base and a wider apex, becoming more rectangular in overall shape (Mullen, 2002). In relation to this, the literature portends that globally the number of people over 60 years old will more than treble by 2050, from 600 million to two billion. In addition, by 2040 the ratio of people working to those over 65 could fall from 4:1 to just 2:1 (Shaw, 2002).
In the light of the literature this increase of retirees is potentially a demographic 'tipping point' or 'time bomb' in the composition of national workforces (Earley, et al., 2009; Pitt-Catsouphes, 2007). Organisations of all sizes and industries face incredible challenges in preparing management personnel for future leadership positions (Groves, 2007; Hewitt, 2008). These trends are happening at all spatial levels; globally, nationally and locally (Hewitt, 2009; Statistics New Zealand Tatauranga Aotearoa, 2006). It is also largely accepted throughout the literature that these ageing demographic trends are present in all advanced societies and findings are indisputable and immutable (DeLong, 2004; Shaw, 2002).

Coupled with this issue, increased longevity, decreased fertility rates and people having children typically at a later age than previous decades (Statistics New Zealand Tatauranga Aotearoa, 2009) have all meant the world's population is ageing. DeLong (2004) remarks that between 1998-2008 in the United States, numbers of workers 45 years and over have increased from 33% to 40% (an extra 17 million) at the same time workers 25-44 years dropped from 51% to 44% of the workforce – a decline of 3 million workers from the pool that would be expected to succeed those retiring. New Zealand is included in this significant demographic transition and similar trends have been prognosticated here (Altman, 2009; Pitt-Catsouphes, 2007; Statistics New Zealand Tatauranga Aotearoa, 2006). In the 1960s, the 65+ group made up just 8% of the population in New Zealand. This rose to 12% in 2005 and from the 2030s baby boomers are predicted to account for over 25% of the population (Statistics New Zealand Tatauranga Aotearoa, 2006). It is predicted that the largest increases in the New Zealand 65+ age group will occur between 2021 (increase of 223,000) - 2031 (increase of 276,000) (Statistics New Zealand Tatauranga Aotearoa, 2006).

A visual representation of the passage of the large baby-boomer generation is found in Figure 2.1 and relates specifically to New Zealand. The large base of the 1951 section of the Figure, clearly depicts the birth of the baby-boomer generation. The 2006 graph sees the baby-boomer wave reach the middle and upper strata of the demographic. Significantly, the base in the 2006 graph is much more narrow than in 1951, as the birth rate reduces. As the graph shows, forecasts for the middle of the 21st century indicate a far greater proportion of people living into their 70s, 80s and 90s with an even further reduced birth rate.
Further indications of population structure change can be found in Figure 2.2. The 2011-2021 column of Figure 2.2 is where the population stands currently; it is a
significant column because it reveals a dramatic increase in the post 65 age group, as the baby-boomer generation retirement wave arrives. The 20-year span of the baby-boomer generation sees the post 65s continue to rise in the next column before returning to previous levels around 2041. This graph visually portends to the wave in the demographic.

Figure 2.2 Source: (Statistics New Zealand Tatauranga Aotearoa, 2006, p. 4)

Similarly, Figure 2.3 offers a presage to all forms of industry and workforce areas that a large number of people are heading into retirement leaving behind a potential gap in expertise, knowledge and sheer number of positions to be filled. This Figure relates specifically to New Zealand teachers and it is evident that in 2005 the crest of the wave in the graph is in the 40-49 and 50-59 brackets. Seven years on, in 2012 this graph would look quite different with this cohort edging into the 60 plus category. The population data depicted in the graph highlights the situation and provides support for concerns raised in the educational literature where a crisis in the supply and quality of leaders in middle and senior management is predicted especially in the 2010 – 2030 decades, when the retirement of baby-boomers is set to peak (Macpherson, 2010; Stadler, 2011).
It is evident from Figure 2.3 that over half of the teachers are in the 40-59 age bracket and this Figure is now seven years old. Interestingly, the male female split is also very similar. Overall it is clear that since 2011 the baby-boomer cohort has started to edge into retirement phases and this decade will see dramatic increases in the number of older people in New Zealand’s population. Typically people reaching retirement have attained more senior positions as their career has progressed. A growing body of international evidence suggests an impending shortage of highly qualified and experienced educational leaders due to retirement. In support of this, shortages of school leaders have been reported in Australia, Canada, New Zealand, the United States (US) and an emerging leadership crisis has been reported based on teacher recruitment shortages in the Netherlands, Sweden, France and Germany (Rhodes & Brundrett, 2009). Anywhere between 40-90% of current educational leaders, are expected to retire in the next five years (Eacott, 2010).

The most compelling evidence of a succession issue rising in the New Zealand teaching workforce comes from recent New Zealand based research and Ministry of Education workforce statistics. The supply issue is brought to the fore when it is revealed in 2004 8.7% of principals were aged over 60 years and that by 2010 this had risen to 17% (Piggot-Irvine & Youngs, 2011). Looking at 2011 statistics from the
Ministry of Education it is possible to work out 475 out of 2410 principals, or 20% of principals are now over 60 years old (Ministry of Education, 2011). So this ageing cohort of principals is getting larger and this is where much of the literature has focused, on the top position and on those within five years of traditional retirement age. Looking at the data more closely some interesting figures emerge. As of April 2011 there were 52460 teachers employed in New Zealand schools, of these 14155 held either middle, senior or principal positions, this equates to 27% of the teaching workforce. As mentioned the principals over 60 years old made up 20% of the principal pool, however statistics on senior leaders who would be a source to succeed into principal positions, show 17% of them to be over 60 years old. Furthermore, the pool of middle leaders showed 17% of their cohort to be over 60 years old. So it appears across the leadership strata 17-20% of people are reaching retirement in the next five years (Ministry of Education, 2011).

Taking a five year forecast provides these figures. The literature however, predicts the heart of the baby-boom age wave to be within the next ten years. Extending the strategic view to a decade, some much more significant figures become apparent. Principals in New Zealand aged 55 years and over in 2011 made up 44% of the principal pool. Senior leaders over 55 years who were not in the principal role made up 37% of the pool and those in middle leadership over 55 years old formed 35% of their pool (Ministry of Education, 2011). Therefore, currently in New Zealand 35-44% of all teachers with leadership responsibility will be reaching retirement age within the next decade. If this is the case in mainstream education in New Zealand there is potentially a succession issue to be strategically planned for. This thesis is concerned with the age patterns and demographic picture specifically for teachers in Deaf education. The research investigates if the figures for this specialist sector of education are more or less pronounced than the indications from the mainstream sector given here.

Moreover, this leadership crisis, characterised by the demographic exodus from the profession due to the retirement ‘bulge’ especially among middle and senior leaders in the next few years, is exacerbated by falling numbers of applicants for leadership positions (Rhodes, 2005; Rhodes & Brundrett, 2009; Rhodes, et al., 2008). Employers in industry are at last becoming conscious of the ageing population and are beginning to adjust as they recognise a substantial proportion of their workforce.
may retire in the next five to ten years (Pitt-Catsouphes, 2007). The ageing baby-boom generation starting to retire is beginning to create a shortage of qualified school leaders in many educational settings and forward thinking schools are starting to realise that they could encounter a human-capital crisis if they are not prepared (Fink & Brayman, 2006; Pitt-Catsouphes, 2007). Australasian demographic research shows its teachers are ageing and ensuring succession both into the profession and into leadership positions is of vital importance (McCulla, 2007). Specifically in the New Zealand context, research by Brooking (2008) concurs, saying succession and supply is a pressing reality and an urgent challenge due to the imminent retirement of a large number of baby-boomer leaders. Education is in need of readying itself to embrace the succession challenges of finding the next generation of school leaders for the workforce.

Preparing to embrace the challenge – workforce implications

Having outlined the background of the ageing population it is pertinent to analyse where the literature is largely focused and also what the education workforce implications could be for New Zealand. Much of the literature around population ageing is focused on increased pressure on retirement funding and providing health care for the enlarged elderly population (Statistics New Zealand Tatauranga Aotearoa, 2006). The focus of this thesis instead aims to shed light on the potential issue of workforce depletion, talent identification, recruitment and retention. Collectively, these terms can all be found under the umbrella of succession planning which becomes increasingly important as baby-boomers leave a human resources gap by exiting the workforce.

In educational research literature the term succession is noticeably absent, sparse attention has been given to building leadership capacity and even less to deeply analysing leadership succession as a mechanism for school improvement (Rhodes, 2005). It can be argued in the context of an ageing demographic the topic of succession planning has been largely neglected and is in need of significant attention. Within the specialist Deaf education sector, given the potential age wave approaching, the new problem of workforce leadership sustainability, replenishment and succession is emerging. Given the specialist nature of the role and the small workforce nationally, the succession issue in this sector is also perhaps emerging
earlier and has a more pronounced impact than in the much larger general mainstream education workforce.

In addition, as baby-boomers move out of their positions they take with them tacit knowledge and that could diminish the intellectual capital of organisations. The concept of knowledge transfer is therefore an important factor. As mentioned, the highly specialised skillset of the professionals in Deaf education compounds the need to look strategically at workforce demographics to ensure the succession of sufficient and qualified leaders. The additional timeline required for professionals in this sector with regard to gaining qualifications and acquiring specialist knowledge, means to replace them would take longer than their mainstream counterparts. Therefore strategic succession thinking is even more prevalent.

Interestingly, there is currently not a compulsory retirement age in New Zealand due to the Human Rights Act (1993) (Brooking, 2007) however, 65 has become the target retirement age for many New Zealanders. Statistical analysis of a demographic teacher census in 2004, in which 91% (43,759 teachers) of New Zealand teachers took part, showed 58% were aged at that time between 40 and 59 years old (Ministry of Education, 2005). This study is eight years old and many of these teachers will now be nearing 65 years old and could retire if they wished. Indeed, as mentioned, 2011 statistics from the New Zealand Ministry of Education indicate around a third of those holding middle, senior or principal leadership responsibility in schools are now aged over 55 years (Ministry of Education, 2011). Further demographic evidence comes from Brooking (2007) who reports in 2006 in New Zealand 53% of school leaders were over 50 years old and of that number 31% of them were over 55 years old. Projecting these figures six years on into 2012 we can clearly see that it is likely a high percentage of school leaders will be reaching 65 years old in the near term. The system seems to be hard pressed to lose such large numbers of school leaders through retirement, especially when compounded with dwindling numbers of applicants and a negative perception of the leadership role due to workload (Earley, et al., 2009).

Research from American and Canadian schools points to an even more pressing situation, with 60% of principals in the US retired by 2005 and more than 80% of principals retired in Canada by 2010 (Fink & Brayman, 2006). Exact numbers of
those soon eligible for retirement from 2012 in the United States (US) is unknown but expected to be alarmingly high resulting in a ‘mass exodus of seasoned leaders’ (Zepeda, et al., 2011). Similarly in Australia in the decade from 2003, workforce projections showed that 74% of secondary and 59% of primary principals separated from the system, but also that many of the senior and middle leaders who would be the natural source of succession, also separated from the system due to their demographic profile (McCulla, 2007). Interestingly, a counter argument in the literature comes from Ingersoll (2003) who claims that teacher turnover is more of a critical factor in the teacher shortage in schools rather than the threat of a retiring ‘greying workforce’. Contrary to conventional views in the literature, he argues retirement is not an especially prominent factor, accounting for only 13% of total departures and that teacher shortages have been a cyclical threat for decades. He points instead to turnover as the main cause - people moving between schools; teacher migration, and also people leaving the profession for alternative pathways; teacher attrition, as more impacting factors.

Ingersoll (2003) appears to stand alone in the educational literature as a sole critic of the approaching age wave. The research he presents, dated to almost a decade, refuses to recognise the inexorable macro-demographic trend other researchers in field all point to. Critically analysing this evidence in light of the rest of the literature the argument could be made that his 13% retiree figure is still significant and that migration and attrition of teachers over the decades does not take into account the unique point in the present time when there is an unusually large generation of baby-boomers about to pass retirement age. The educational leader numbers heading out of the workforce over the next 20 years will never have been experienced before and so data from the past cannot necessarily lead us to make realistic forecasts about the future (Piggot-Irvine & Youngs, 2011). From the majority of the literature available there appears to be increasing concern about a pressing educational leadership succession issue beginning to be felt because the vast majority of current school leaders are baby-boomers who face retirement and will take with them organisational know how, expertise and specialist knowledge.

Critiquing this overview of the literature there are some assumptions that need to be recognised. The apparent concern in the literature over the impending crisis in workforce ageing and the need for replenishment holds the assumption that over the
coming decades there will be a need for the same number of leaders as there is currently. In addition, there is perhaps the assumption that the same type of labour will be required from leaders in schools. The amount of jobs available in future decades is also susceptible to guesswork. There is an assumption that equal numbers of jobs will be replaced as the leadership workforce shrinks. Attrition and cost savings could form part of a more streamlined future leadership picture. Looking specifically in Deaf education, technological advances have meant that the role of the teacher of the Deaf in today’s education system is radically different to what it was 20 years ago. Future advances in technology, changes in educational policy and the shifting nature of the specialist role, could mean the landscape of Deaf education appears very different in the coming decades and therefore the human resource needs could also significantly alter.

**Tacit knowledge transfer - plugging the ‘brain drain’**

People who have worked in a profession for a long time naturally accrue large quantities of corporate memory or essential skills; they become the critical talent of the organisation. Long working tenure in an organisation means people build an intimate knowledge of the company culture, how problems are solved and the processes (Bolman & Deal, 2008). The collective term for this knowledge has been ‘organisational memory’ and is defined as how organisations encode, store, and retrieve the lessons from history despite the turnover of personnel and the passage of time (Levitt & March, 1988). In practice, the journey towards leadership has traditionally been an incremental process, whereby a teacher gradually substitutes leadership and management activities into their role and the level of face to face teaching diminishes (Bush, Bell, & Middlewood, 2010). Leadership knowledge often seems to emerge from and be built upon a foundation of classroom teaching. Educational leadership organisational knowledge therefore takes a long time to accrue and is highly valuable to a school. Such built up leadership knowledge could be termed the cognitive resources of a school’s leadership team (Cardno, 2012).

As people leave their jobs, much of their tacit cultural wisdom leaves with them and there is a risk of the organisational knowledge decreasing, thus weakening the overall leadership talent pool (Hewitt, 2009; Rhodes & Brundrett, 2006). This tacit knowledge relates to complex cognitive understandings that are hard to verbalise or
transfer quickly, in this sense it is implicit. Unlike simple facts or explicit knowledge, tacit knowledge, like that of a language or musical instrument is hard to elicit and transfer quickly. Such tacit knowledge and lessons from experience form the rules, routines, procedures, beliefs and cultures of a school and are cemented in systems (Levitt & March, 1988).

Transference of such knowledge and the conservation of knowledge gained from experience come in the forms of oral transitions and systems of formal and informal apprenticeships that implicitly instruct new individuals in the lessons of the past. This has also been referred to as the process of the new leader’s inbound knowledge being complimented by the transference of the outbound knowledge from the departing leader (Fink & Brayman, 2006). Through these methods, organisational experience is sustained and traditions are transferred (Levitt & March, 1988). It appears learning is an imperative skill for educational leaders to utilise as they transfer knowledge between fellow colleagues (Piggot-Irvine & Youngs, 2011). A well thought out and strategically implemented knowledge management architecture would help ensure tomorrow’s leaders are as adept and skilled as today’s (Hewitt, 2009). The other risk identified in the literature is the promotion velocity or functional track along which teachers progress in their careers. These terms refer to the speed at which a teacher has ascended through the ranks and how long they have remained at each level (Eacott, 2010; Hewitt, 2009). Research reveals that more and more teachers are becoming middle managers having spent less time in the classroom role than baby-boom leaders did in their careers. Similarly, middle managers are moving into the ranks of senior management through necessity, after a very short time in their role (Johnson, 2004; Macpherson, 2010). Possible weaknesses here are the higher the promotion velocity the more shallow the experience of the candidate, as they have not been allowed the time to mature into each role as they have advanced. In New Zealand the appointment of relatively inexperienced principals, both in terms of teaching tenure and educational leadership knowledge, is perhaps placing schools at risk (Brooking, 2007).

Delving deeper into the literature, various demographic variables reveal a distinction between the duration a person has been in their current position and their age. Tenure and age are often viewed together however they are two distinct characteristics of the educational leader (Eacott, 2010). A teacher can be of an age
but have a short tenure having come to the profession late on. Alternatively a leader could have held a series of short tenures in positions and find themselves at senior leadership at a younger age than their colleagues. A clear relationship in the literature is made between the notion of length of tenure and the quality of leadership. It appears some of today’s educational leaders have had an accelerated turnover, in part due to the replenishment needs arising from the retiring baby-boomer generation. Rapid leadership transitions, linked to promotion velocity, limits the leader’s ability to master the skills in that role before moving on. Short stays in positions can possibly breed staff cynicism and also reduce the leader’s ability to influence the school’s community of practice, structure and most importantly facilitate attitudinal social change (Fink & Brayman, 2006).

Traditionally teachers have developed into leaders over lengthy spells at each level of the school. Some contemporary pathways to leadership offer fast-tracking from teacher to leader. There appears to be debate in educational literature around whether these intensified pathways circumvent and abbreviate the lessons of leadership, or whether they produce leaders of the same calibre as in previous years. Rapid succession of leaders as they have promotion could lead to a ‘revolving door’ process that increasingly includes inexperienced individuals who do not stay long enough to establish a culture and become immersed into the organisational fabric of the school (Bolman & Deal, 2008; Fink & Brayman, 2006). Likewise at a national level, government fast-tracking programmes and accelerant initiatives, aimed at expanding the pool of potential leaders and tackling the crisis in recruitment, can pose a risk of watering down the typical 20 year average that it takes to traditionally accumulate senior leadership expertise and knowledge (Earley, et al., 2009). Leadership trajectory and pace are therefore careful considerations when analysing succession planning and considering career pathways (Rhodes & Brundrett, 2006). Further complexities of a recruitment crisis are uncovered as research shows schools in lower socio-economic areas and schools under more challenging circumstances, have greater recruitment and retention issues than schools in more affluent areas. Therefore deeper structural layers are in play in the recruitment picture as experience and expertise flow into the most advantaged schools and turnover is less frequent there (Macbeath, 2006).
The loss of critical talent and skill gap left as baby-boomers retire further strengthens the need for meaningful succession plans to be established. In order to do this, raw data needs to be collected to show where the potential shortages may occur (Hewitt, 2009). Indeed, successful organisations are reported to be the ones taking steps to analyse their age profiles and workforce demographics in order to establish and plan for any human resource adaptations (Pitt-Catsouphes, 2007). From here, organisation-deep succession planning with horizons of two, five and ten years away can be constructed. The research tools in this thesis aim to collect such data to determine the potential leadership depletion that could occur nationally in the Deaf education workforce.

**Succession strategies**

At a time of high demographic turnover in schools, education systems need to focus on fostering school leaders and making leadership an attractive profession (Pont, Nusche, & Moorman, 2008). Succession planning aims to ensure future quality of leadership and is of vital importance for school improvement (Pont, Nusche, & Moorman, 2008). Educational leadership and management succession plans are the systematic approach to identifying and developing talented people for key positions. Succession strategies relate to plans that identify, recruit, prepare, induct and give on-going in-service education to leaders. Succession seeks to enable those with actual or potential leadership skills to be developed and enter a pool of talent to fill future positions (Altman, 2009; Fink & Brayman, 2006; Groves, 2007; Rhodes & Brundrett, 2009). The literature reveals that often succession planning in schools seems fractured and relatively *ad hoc*, lacking formal processes, is unplanned, arbitrary and relies heavily on experiential learning (Fink & Brayman, 2006; Hewitt, 2008; Macpherson, 2010; Rhodes, 2005; Rhodes & Brundrett, 2006; Wildy, Clarke, & Cardno, 2009). Close analysis of many current replacement and succession strategies reveals a high reliance on self-nomination and volunteerism, whereby it is the candidate themselves who makes a personal decision to undertake such professional development and reconstruction (Gronn, 2007). School leaders can no longer rely on a pool of naturally appearing applicants, instead succession needs careful management and planning (Zepeda, et al., 2011). Making leadership an attractive option is a 21st century challenge for the New Zealand education system. Leading edge organisations and schools are those that could be described as early adaptors to the anticipated problems with ageing workforces and knowledge transfer,
they take a far more considered approach to their succession planning (Pitt-Catsouphes, 2007; Rhodes, 2005).

At a national level many of the extrinsic motivators and current preparatory initiatives seem narrowly focused on the principal position. The broader development of a school’s leadership system seems less in focus and there is perhaps a need for urgent planning and systematic support at government level to help middle management and the wider senior management team prepare (Duff, 2010; Hewitt, 2009; Macpherson, 2010; Wildy, et al., 2009). At individual school level, constructing and embedding an organic knowledge architecture targeting all levels of leadership within the organisation and establishing a fresh career path planning and mentoring system may ensure leadership depth and quality (Macpherson, 2010; Rhodes & Brundrett, 2009). Leadership potential can be identified and nurtured within a school by customised mentoring, coaching, internship, informal and formal strategies. These are well established as important features of leadership preparation and development, resulting in powerful leadership learning experiences for aspirants (Bush & Jackson, 2002; Zepeda, et al., 2011).

Building such infrastructure in a school embeds lasting organisational change and is seen to be more successful at creating sustainable school leadership capacity (Wildy, et al., 2009). The idea, of creating an evolving, systemic succession culture gives rise to the image of the talent factory, leadership academy or leadership pipeline when framing the school within a human resources lens (Bolman & Deal, 2008; Piggot-Irvine & Youngs, 2011; Stadler, 2011). An in-house mentoring programme in a school gives the opportunity for shared contexts for adult learning about leadership. Schools with such a framework that supports greater leadership learning have an ethos where leaders give away tacit leadership knowledge and actively coach others to be successful (Rhodes & Brundrett, 2006). These notions indicate that effective succession planning requires formal construction not only at national but also school level, the current design seems unstructured, unplanned and a reactive ‘fire-fighting’ set of actions to replace existing roles (Rhodes, 2005).

Part of this more planned infrastructure could be a planned stage-by-stage exit by potential retirees, with continued membership to the organisational community after people have left. Retired leaders would then still be accessible sources of knowledge
for mentoring, collaboration support and advice. Such phased retirement also encourages people not yet ready for full-time retirement to extend their working life and also facilitates the gradual development of and hand-over to, successors (Hewitt, 2009; Pitt-Catsouphes, 2007). Technology allowing people to partially work from home are also tools that will enable a strong knowledge retention programme to be established. Indeed the literature recognises that it is inevitable technology will have an increasingly important role in school leadership development in the future (Bush & Jackson, 2002). Building a school database of retirees available for temporary, contract employment and special project work is another element of a healthy succession programme (Hewitt, 2009). In an educational context, there is a strong link between succession and school policy. Also tying in professional strategic direction to the appraisal system is an important factor in effective succession practices (Hewitt, 2009).

New Zealand specific leadership learning has been said to rely too heavily on serendipitous ‘on the job’ experiential learning, often placing leaders vicariously into a role. New Zealand principals are not required to hold any formal educational leadership qualifications or training before they assume the role, in this respect New Zealand is totally unregulated around principal supply and quality (Wildy, et al., 2009). This fits into a global educational trend that there is no mandatory requirement for a specific leadership preparatory qualification before appointing new principals. There is an implicit assumption that teachers will be able to assume leadership roles with no specific training (Bush, et al., 2010). Consequently, in many countries training for leadership roles can be uncoordinated, inadequate or worse (Bush & Jackson, 2002). In other countries preparatory qualifications are encouraged, such as Britain, where aspirants can gain the National Professional Qualification for Headship (NPQH) (Bush & Jackson, 2002; Earley, et al., 2009). In New Zealand therefore the issue is not simply one of meeting demand but also of ensuring quality applicants (Brooking, 2007; Wildy, et al., 2009). This unearths the assumption in education that good teachers can become effective leaders without specific preparation (Bush & Jackson, 2002).

A need has been highlighted for skills training prior to appointment and mentoring infrastructure after appointment, in addition to the need for national investment in succession strategies (Macpherson, 2010). Pre-principalship training and leadership
qualifications perhaps need to form part of the succession strategies for aspirant leaders. The development of school leaders is a critical component in system building, there is increasing recognition that there is a link between strong leadership and teacher motivation, in addition it has been strongly noted there needs to be a combination of pre-service and in-service specific approaches (Bush & Jackson, 2002). Leadership preparation and development are increasingly on government’s education agendas around the world and the New Zealand government has begun to recognise this need to strengthen investment in leadership development given the ageing workforce (Bush & Jackson, 2002; Piggot-Irvine & Youngs, 2011).

Many countries have been moving in recent years towards optional national programmes and tertiary qualifications for preparing school leaders (Macbeath, 2006). Looking internationally at government initiatives it is clear the leadership recruitment crisis is being taken seriously. The United States have the New Leaders for New Schools (NLNS) programme and this is mirrored in the United Kingdom by the Future Leaders (FL) programme, both schemes aim to intensively create a future cadre of school leaders in a reduced time frame to meet demand (Earley, et al., 2009). Singapore since the early 1980s have had the national programme of a diploma in educational administration and a specific middle leader development programme called the Further Professional Diploma in Education (FPDE) (Bush & Jackson, 2002). New Zealand has initiatives such as the National Aspiring Principals Programme (NAPP) which aimed to open up a development pathway from middle leadership through to experienced Principalship (Piggot-Irvine & Youngs, 2011). This programme was one of a suite of long term leadership development initiatives by the New Zealand government to build leadership capacity over the last ten years (Wildy, et al., 2009). These programmes show that New Zealand recognises middle and senior leaders in schools as key client groups but still relies on voluntary participation to meet school leadership needs (Bush & Jackson, 2002).

These drives to strengthen school leadership in New Zealand, stemmed from policy prioritising by the Ministry of Education in response to supply issues highlighted in the Organisation for Economic Co-operation and Development (OECD) school leadership report (Piggot-Irvine & Youngs, 2011). This report gives international justification about why governments are now acting on succession initiatives. The OECD states the age of school leaders has been rising over the past two decades
and the age profile is now particularly alarming in secondary education sectors of most countries (Pont, Nusche, & Moorman, 2008). The contemporary challenge of leadership is to not only improve leadership quality but also to develop clear plans for future leadership and effective processes for leadership succession (Pont, Nusche, & Moorman, 2008). Supply issues may or may not be present in Deaf education, no research has yet been done to show this. This thesis is in response to this problem.

So it is established that in most countries the leadership workforce is ageing and large numbers of leaders will retire in the next five to ten years (Pont, Nusche, & Moorman, 2008). Interestingly, the literature from Asian educational contexts depicts less of a succession crisis despite still having ageing populations. Singapore has established a strong sense of succession allied with strong central forecasting and direction through its Ministry, ensuring early talent identification and appropriately trained school leaders (Macbeath, 2006). The educational leadership regeneration in Singapore is perhaps aided by the cost of training being met by the government and candidates continuing to receive their salaries whilst on the full-time course (Bush & Jackson, 2002). Similarly, in Hong Kong, Korea and Japan government level forward planning and nurturing of leadership qualities has largely extinguished any applicant supply issues (Macbeath, 2006). This literature gives a positive message that with effective succession planning, recruitment and retention issues can be ameliorated despite an ageing workforce.

The succession strategy debate therefore seems to be two pronged. Firstly, at a school level there is need for formal succession infrastructure that seeps into a culture of supportive leadership amongst the consciousness of the staff. Secondly, the literature indicates that at national level a more coherent and comprehensive framework of preparatory succession training and qualifications is needed to build the net leadership capacity. In addition, establishing a better conceptual and practical understanding of succession planning amongst the school workforce and school culture will encourage potential leaders to become aspirant leaders and in-turn help sustain leadership capability by developing talent (Macpherson, 2010; Rhodes, 2005).
Talent identification and development

Identifying and developing cadres of talented people could be explained as a type of grooming high potential employees for future leadership positions in a school. Talent can be defined as the sum of a person’s abilities, their intrinsic gifts, skills, knowledge, experience, intelligence, judgement, attitude, character and drive in addition to their ability to grow (Stadler, 2011). These grooming or nurturing actions involve specific processes associated with the replenishment of the current personnel. The processes include methods of identification, preparation, selection, appointment and induction (Gronn, 2007). Talent identification remains an under-researched area of leadership (Rhodes & Brundrett, 2009). The small amount of research available does suggest that talent development forms a key part of overall leadership succession planning. The centre-piece of talent identification is assessing individual potential and developing a pool or pipeline of talent able to meet present and future leadership requirements in a school (Gronn, 2007; Rhodes, et al., 2008). Specific characteristics of talented practitioners are a sense of pride, a closeness to children, passion for teaching and learning, sensitivity to quality of relationships, an ability to be self-reflective and optimistic (Caldwell, 2008). Leaders who display and promote these qualities instil trust and retain thriving staff. Similarly, teachers who display these traits are identified as future talent or aspirant leaders.

Talent is a critical resource that can be managed through careful workforce planning and career development. Succession management therefore involves the preparation, retention and development of top talent with the aim of ensuring quality senior leadership in the future that meets the strategic vision and objectives of the school (Bolman & Deal, 2008; Stadler, 2011). Retention challenges in schools are multi-faceted; exceptional leaders are hard to find and holding onto them poses another challenge for schools. Interestingly, a talent enigma could be said to exist around whether gifted leaders grow successful schools or successful schools grow gifted leaders (Macbeath, 2006). There are also factors present within schools that can erode the development and retention of talented employees. Detrimental factors such as stress and workload can wear down and sap people’s abilities to manage. Leaders in education today are perhaps undertaking workloads that are all consuming, demanding unrelenting peak performance from a type of super-leader and this notion is unsustainable and asking for too much emotional labour from the
leader (Gronn, 2007; Macbeath, 2006; Wildy, et al., 2009). These factors can make leadership an unpalatable option for talented teachers.

This current perspective of practitioners in the profession, where the role of senior leader is seen as increasingly demanding and stressful, has meant applicants are being discouraged or dispirited. This reluctance to lead further complicates the critical aspect of the ageing workforce in New Zealand where a large number of leaders will be reaching retirement age in the next decade (Wildy, et al., 2009). International research further strengthens this notion by finding leadership age is increasing but also many countries are simultaneously facing decreasing numbers of applicants, seeing a drastic decline in the past decade of people applying to be leaders (Pont, Nusche, & Moorman, 2008). Perhaps the perception of unmanageable workloads for relatively meagre extrinsic rewards, contributes to reluctance to head down the leadership pathway. In order to avoid a leadership vacuum in the near term Wildy et al (2009) argue that policy shift in educational leadership development needs to occur.

Falling numbers of applicants and reluctance in the profession to lead perhaps stem from advertent and inadvertent disenchantment signals from existing leaders communicating negative messages to potential leaders. These signals could arise from administrative overburdening and stress, discouraging teachers to pursue leadership (Fink & Brayman, 2006). This perceived unattractiveness of the work of school leaders may also be due to a reluctance to take on further responsibilities, dealing with bureaucracy and the prospect of losing control over one's life (Earley, et al., 2009; Piggot-Irvine & Youngs, 2011; Rhodes, et al., 2008). In short, the succession issue is heightened as many classroom teachers and middle leaders do not wish to seek progression to senior leadership (Rhodes & Brundrett, 2009; Wildy, et al., 2009). This sentiment was echoed by the president of the Post Primary Teachers Association (PPTA) in a 2007 conference paper:

Increasingly, younger teachers look at the workload, time allowances, and management units offered to middle management and ask: “Why bother?” This observation is replicated from middle management to senior management; and again from deputy and assistant principals to principals. If these roles comprise of an impossible combination of tasks, for relatively meager rewards, why not stay in the classroom where the workload issues (though significant) are more predictable and manageable.

(Duff, 2010, p. 6)
This reference ties in with research findings that there is prevailing poor confidence in teaching and middle leadership realms concerning their ability to lead at the highest level (Rhodes, 2005). Clearly the demographic circumstances coupled with the reluctance in the profession to lead means that school leadership succession and development cannot be left to chance (Wildy, et al., 2009). International research indicates that in addition to the reluctance or abstention from leadership responsibility, teachers also struggle with the required change in professional identity from teacher to leader (Rhodes & Brundrett, 2006). Further research alludes to a more complex picture regarding teacher reluctance, explaining there is perhaps a dichotomous school-level personnel culture, where late and especially mid career teachers have disengaged from the possibility of leadership but by contrast younger teachers are willing to ‘have a go’ (Gronn, 2007). This split could be at least partially explained by young teachers still developing a clear understanding of the complexity of the senior leadership role.

Refreshingly, evaluation of the New Zealand NAPP revealed excellent outcomes for aspirant confidence, acquisition of skills and preparedness, being seen to have strongly motivated those who took part. Perhaps pilot schemes such as this are signals that New Zealand’s national educational leadership preparation, succession planning and governance are being conducted well (Pigott-Irvine & Youngs, 2011). With these schemes in mind, it is clear successful organisations do not wait for leaders to come along, they actively seek out talented high potential people (Kotter, 2001) and encourage them to get involved in initiatives such as the NAPP. Being proactive in recruitment and retention of high potential staff allows a school to take a longer-term view relating to their leadership needs and school developments (Rhodes & Brundrett, 2006, 2009).

Savvy employers look up to 10 years ahead and figure out where their key talent sits and where short and long term issues may arise (Altman, 2009). Leadership is about coping with change and major changes are more and more necessary to survive and compete in the 21st century environment (Kotter, 2001). Increasingly, the notion of schools ‘growing one’s own leaders’ is beginning to emerge, this is a process of grooming leadership successors from inside the school and is becoming a more utilised avenue for succession (Fink & Brayman, 2006; Rhodes, 2005; Rhodes & Brundrett, 2006). Identifying such existing talent within the school, carefully selecting
and nurturing future leaders or successors is one element of successful leadership and a responsibility of today’s senior leadership teams (Rhodes & Brundrett, 2009; Rhodes, et al., 2008; Timperley, Wilson, Barrar, & Fung, 2007). If that talent can be groomed and developed through internal candidates then the advantages are having someone home-grown who understands the culture, dynamics and colleagues (Altman, 2009; Macbeath, 2006; Rhodes, et al., 2008).

Succession planning is an important human resource strategy that has evolved from replacement management, it includes cultivating talent through planned development activities (Zepeda, et al., 2011). The responsibility is also on current incumbent leaders to be sufficiently skilled to look forward and bring about the necessary interest and development of staff that have shown talent. Such incumbent leadership actions need to foster those factors that aid leadership and diminish those factors perceived to hinder leadership succession, this way they will better address the future leadership needs of their school (Rhodes & Brundrett, 2009). Unlocking talent treasure from within a school, allows professional expertise to flourish and hidden talents to emerge. In addition to this home grown approach, the research suggests a complimentary development lever is to also cast a net outwards to attract fresh thinking from external candidates. These two approaches can be complimentary integrative succession strategies rather than necessarily antagonistic (Macbeath, 2006).

Developing young talent emphasises creating a culture of challenging opportunities with unusually broad job assignments, such challenges develop a wide range of leadership perspectives and skills (Kotter, 2001). Establishing a culture of leadership development perhaps ensures talent is fostered and continually developed. Creating a culture of reflective leadership and developmental learning throughout a school system can help construct a leadership framework over time (Pont, Nusche, & Moorman, 2008). Aligning a workforce to do some skill sharing and have an awareness of knowledge transfer to the next generation of leaders could also strengthen the efficiency of the succession system in a school. This notion of collectively establishing a culture where development is central relates to Collins’ (2001) overarching metaphor of a giant organisational flywheel. This metaphor refers to a collective accumulation of effort applied by everyone in a consistent direction resulting in a gradual and organic development process being created. Within this
metaphor, at first an idea is pioneered and pushed by a single leader but as culture and support develops more and more people come to push against the wheel of a vision and philosophy in the same direction and it gathers momentum (Collins, 2001).

In reality the attempt to align staff to a new change initiative can be more complex. Reluctance and resistance from employees can be common problems encountered by leaders when attempting to implement change. Human resource management research on handling the complexity of change reveals that the type of past experience an employee has had of change and also the level or amount of change they have experienced, influences how they react to change (Choi, 2011; Stensaker & Meyer, 2012). If employees have had good experiences of change and have had more extensive exposure to change, then it is more likely they will be supportive. If however experience of change is limited and negative then employees will be more resistant to change. Employees’ overall positive or negative evaluative judgements of a change initiative form the precursors to them either being supportive or resistant towards a change effort (Choi, 2011).

Change clearly evokes a variety of responses amongst employees. Employees can show cynicism or openness towards change. Those with cynicism can display strong emotional and behavioural reactions and possible attempts to sabotage the initiative. Alternatively, those with the more extensive and positive experience show more loyalty to change (Choi, 2011). Loyalty or openness to change can be split further into either a compliance mode, where employees will passively go along with changes, or they can adopt an acceptance mode where they develop a mind-set that results in actions that actively supportive and contribute to the successful implementation of the initiative (Choi, 2011; Stensaker & Meyer, 2012). Openness to change is underpinned by employees having high trust and faith in leaders and an element of involvement in the change, conversely, cynicism originates from feelings of low trust (Choi, 2011). Trust is a very fragile thing, when high trust has been achieved it enables learning to occur at both individual and organisational level (Cardno, 2012).

Further evidence of the complexity behind the flywheel metaphor can be found in the literature that recognises many organisations pay lip service to this idea of total alignment but in reality it is noted that few behave accordingly. There will always be
those who push against a vision, philosophy or initiative or who are challenged by the prospect of change (Bolman & Deal, 2008; Choi, 2011). Employees who are accepting of change are said to have developed good change capabilities and have acquired these through being listened to by managers and experienced feeling respected and being treated with dignity (Stensaker & Meyer, 2012). When implementing change and attempting to gain some alignment in a school, it is therefore important for leaders and managers to develop these change capabilities in the staff and also be aware of the reasons behind the resistance. Few employers invest the time and resources necessary to develop more collective understanding and trust amongst talented employees, perhaps because the costs of development training are immediate and the benefits are elusive and long term. The ones who do invest time and money to development have a strategic advantage as these organisations are undergirded by a long-term human resource management philosophy and have recognised the importance of sustaining specialised knowledge and they value their staff (Bolman & Deal, 2008).

Despite the complexity, those organisations that do achieve a degree of collective momentum and alignment behind an idea, find a strong supportive mentor network emerge throughout the organisation, comprising of informal relationships between managers and high potential employees (Groves, 2007). Good working relationships and interactions between leaders and those they work with can result in professional feelings of exhilaration, enchantment and high trust (Caldwell, 2008). These relationships involve leaders developing high levels of soft skills meaning inter and intrapersonal expertise. The ability to be good with language, creating opportunities for teacher talk or professional discourse, and the skill of managing relationships between professionals, are the characteristics of passionate leaders (Caldwell, 2008; Cardno, 2012). Mutual and reciprocal critical friendships between colleagues can provide sounding boards, listening ears and guidance between people of varying degrees of experience within the school (Macbeath, 2006; Piggot-Irvine & Youngs, 2011). Strong trusting professional relationships between leaders and colleagues take time to build but are a key integrating force in creating aspirational employees who develop a sense of emotional well being from working in that environment (Caldwell, 2008; Cardno, 2012). This deeper, more long term talent management approach to cultivating a culture of leader development is a more successful succession planning framework than the typical near sighted, less planned,
reactionary and perhaps rushed replacement management that many organisations opt for (Groves, 2007; Piggot-Irvine & Youngs, 2011; Rhodes & Brundrett, 2009; Stadler, 2011). In the literature this typical short-term approach has been termed emergency replacement succession management (Stadler, 2011) and is a common approach. Such short-term replacement planning occurs when an urgent need arises due to a sudden development such as a talented employee leaving an organisation. In the context of large numbers of baby-boomers retiring over the next decade it is clear this short-term approach has limitations. The long-term approach, termed talent management, is future orientated and although time consuming provides a more robust succession management strategy and a clear road map for leadership continuity (Macbeath, 2006; Stadler, 2011).

The longer term investment approach links smoothly with the suggestion all schools have a succession plan that is integral and collective, more than just grooming individual successors or identifying the next particular leader. Instead the chances of effective succession are best enhanced when the hearts and minds of many in the school are focused on developing a long term living structure that culminates in a thriving school development environment and leadership team (Fink & Brayman, 2006; Rhodes, et al., 2008; Stadler, 2011). This process of establishing a succession culture and presenting the school as a training ground for leadership, obviously takes long periods of time. Consistent effort and patience may assist leaders to establish talent identification and development into the culture of a school. This may help create an effective long-standing succession infrastructure to be built up that will endure, enabling supply, succession and continuity.

Ensuring a supply of teachers in Deaf education is more challenging than in the mainstream due to the additional post-graduate training required after initial mainstream teacher training. Those who undertake the extra study to enter this specialised area are consciously opting into their own professional learning. Such professional will is an element of leadership. Building a base of quality staff or intellectual capital is dependent on ensuring a steady supply of fresh graduates into the profession. Teachers who decide to enter into Deaf education are hopefully showing a heightened level of enthusiasm and commitment to teaching and learning and also a level of spiritual capital or heightened moral purpose. There are indications however that numbers entering into this sector are at risk.
Tertiary level workforce replenishment

The Deaf education national workforce may face significant human resource issues as the baby-boomer cohort heads into retirement, however if large numbers of newly qualified graduates are entering the profession from tertiary level courses there is hope for healthy workforce replenishment. It is therefore worth briefly looking at the research and potential issues around those newly entering the profession to counter those who are about to exit through retirement. Research from the US indicates tertiary programmes are facing challenges to meet the critical need for highly qualified teachers to specialise as teachers of the Deaf (Lenihan, 2010). Tertiary institutions typically produce small numbers of graduates per year. US research also indicates the average number of graduates per programme to be around 15 people per annum. Similar figures are reported for tertiary courses in Britain and Australasia (Johnson, 2004; Lenihan, 2010).

This shortage, identified in the US context, has been in existence for many years. Research also points out that with “the anticipated retirement of many baby-boomer professionals” it is likely that the critical shortage will continue (Lenihan, 2010, p. 119). As an aside, another risk to the preparation of teachers of the Deaf at tertiary level is the awareness in the literature that the faculty members who deliver the training are also a population in the Deaf education sector who are approaching retirement. Finding qualified faculty for teacher preparation courses is in demand and meeting this demand over the next 10 years will be a challenge (Lenihan, 2010). In US research conducted over 70 tertiary Deaf education courses, it was alarming to discover that 44% of those faculty members surveyed were baby-boomers who planned to retire during the 1999-2008 decade. This time has obviously come and gone and as feared, the retirement datum that predicted the demise of many US teacher preparation programmes is now becoming a reality (Johnson, 2004). Similarly in New Zealand, tertiary course closures in recent years have meant only one tertiary course remains for people to train to enter Deaf education.

Applicant shortages to tertiary courses and ageing faculty departments present challenges at the gateway to the profession. This adds further dimensions to the impending leadership replacement issues as many senior managers retire out of the profession. In summary, low intake at grass-roots level, reluctance at teacher/middle
leader level, and likelihood of retirement at senior management, demonstrates a strong need for succession planning to take precedence within schools, research and government discussions.
Chapter 3: Methodology and methods

Introduction

This chapter begins with an overview of ontology and epistemology then specifically looks at the Deaf epistemological considerations relevant to this thesis. Next an explanation and analysis of the mixed methods research design is presented. The research design and implementation along with all associated forms and research tools are presented and explained. The web-survey questionnaire and semi-structured interview guide are then described in detail. These two tools were the preferred data collection methods to answer the proposed research questions. The approach to analysing data from these tools is then described and explained. Key concepts of validity and reliability are examined and all ethical considerations are discussed to conclude the chapter.

Ontology and epistemology overview

Underlying this research into Deaf education’s workforce are certain ontological and epistemological foundations. The research problem requires both interpretive and empirical approaches, therefore a mixed methods design was chosen. Ontology refers to what people see as existing in the real world and how they understand their world. Different cultural groups can have different ontologies and ontological viewpoints (Cohen, Manion, & Morrison, 2007; Davidson & Tolich, 2003). Intertwined and inextricably linked to the ontological stance is the epistemological position. Epistemology refers to ways of knowing, how things are real and what should be regarded as acceptable knowledge in a discipline. Epistemological issues are concerned with how we know what we know and how it can be measured (Bryman, 2008; Creswell, 2002; Holcomb, 2010). Ontological assumptions and viewpoints give rise to epistemological assumptions that, in turn lead to methodology and ultimately the data collection methods used (Cohen, et al., 2007). The framework or net that contains the ontological and epistemological assumptions in society can be referred to as a research paradigm or tradition (Denzin & Lincoln, 2005).

Research positions can be orientated towards either end of the paradigm continuum (Creswell, 2002). At one end there is the more quantitatively orientated methodology
as the emphasis is on measurement (Denzin & Lincoln, 2005). At the other end of the continuum there is interpretive research that is directed more at subjective interpretation. This focuses on observation of people in their natural settings which stresses the socially constructed nature of reality (Denzin & Lincoln, 2005). Research shows that the hard line between the two approaches has begun to blur in some contemporary research and a mixed methodology can be productive (Cohen, et al., 2007; Davidson & Tolich, 2003; De Landsheere, 1997; Lincoln & Guba, 2005). Research involving multiple questions can require different methods to best answer them. It has been argued the shift of method from one research question to the next does not necessarily mean there is also a fundamental epistemological change (Bryman, 2008; Creswell, 2002; Keeves, 1997).

**Epistemological considerations in this thesis**

As mentioned, different cultures also can have different epistemological assumptions about what constitutes knowledge. A unique element to the epistemology underpinning this research is the consideration given to the Deaf epistemological standpoint. The 'Deaf voice' has a central role in shaping leadership succession thinking in Deaf education. All research methods used in this research are equally accessible by and incorporating of the Deaf members of this professional community. Holcomb (2010) points out, a unique part of the epistemology of the Deaf is the lack of emphasis on the importance of the ability to speak, a value held so highly in hearing centric belief systems. Historically, there were no opportunities for Deaf people to assume leadership roles in schools, with core values and beliefs being largely hearing-centric. This research aims to be mindful of both hearing centric and Deaf epistemologies. The two can be complementary rather than oxymoronic in the pursuit of new knowledge and truth (Holcomb, 2010). It is hoped epistemological balance has been achieved as data has been analysed and guidance from the Deaf community has been sought as needed.

**Methodology**

Method refers to the specific procedures or tools used in the research to collect and structure data transforming it into useful information (Bryman, 2008; Creswell, 2002; Hinds, 2000). A considered and informed selection of methodology design and strategy was needed to explore the research aims and questions in this thesis. It was important to establish the demographic landscape of today’s Deaf education
workforce in New Zealand to determine whether a succession issue existed. The problem of ascertaining whether there was a succession issue pending in the Deaf education workforce related predominantly to workforce ageing. A web-survey questionnaire was designed to collect this baseline data. This method draws on an element of pragmatism (Creswell, 2002) as gaining national baseline demographic data required some pragmatic, more quantitative, data to be collected. In addition, a series of semi-structured interviews were conducted to determine what current knowledge transfer and succession strategies were being used. In addition the interviews established the need for and applicability of current government succession initiatives to Deaf education. The questionnaire was largely quantitatively orientated, collecting demographic data in the majority (11 out of 16) of the questions. The interviews and parts of the questionnaire (five questions) relied on subjective viewpoints and opinions. Therefore, to a degree this research fits a mixed methods design.

These different aspects of the methodology have been drawn upon with the intention that they are mutually illuminating; with the quantitative data corroborating, extending and clarifying the qualitative findings or vice versa. The research design is complimentary because the questionnaire and interviews took place over the same time rather than happening sequentially (Bryman, 2008; Youngs & Piggot-Irvine, 2012). To fully investigate the succession planning issue in New Zealand’s Deaf education system it was clear that to use only one approach would have been deficient (Creswell, 2002). Instead a combination of mainly qualitative and some quantitative data gathering techniques helped to more fully address the research questions (Cohen, et al., 2007; Creswell & Plano Clark, 2007; Lincoln & Guba, 2005).

**Research design**

The research sites included the three providers for Deaf education within New Zealand. These were the two Deaf education centres, one in the North Island and one in the South Island, including their regional outreach workforces. Lastly, the Ministry of Education’s small advisory service for Deaf education were also involved. These three key providers collectively offer the provision for Deaf education across the entire country.
Sample size

The sample proposed in this study for the demographic web-survey questionnaire was the entire teaching workforce in Deaf education across New Zealand. In total this approximates to 200 teachers including part time, full time, regional, classroom-based and advisory teachers of the Deaf. The sample for the semi-structured interviews comprised of seven key senior leaders in New Zealand’s Deaf education sector. Table 3.1 gives an overview of how the research questions relate to each tool and the intended sample.

Table 3.1 Sampling frame

<table>
<thead>
<tr>
<th>Key Research questions</th>
<th>Data collection tools</th>
<th>Sampling</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the current national demographic picture of the leadership and teaching workforce in Deaf education across New Zealand’s three specialist providers?</td>
<td>Online web-survey questionnaire (Survey monkey) Data collected online and through site visits/manual entries if needed</td>
<td>No sampling involved. 200 people (National Deaf education teaching workforce – This includes part-time and full time teachers).</td>
</tr>
<tr>
<td>Is there a need for succession planning and, if so, what strategies could be used, by organisations to share and transfer institutional knowledge from incumbent to aspiring leaders?</td>
<td>Semi-structured interviews Conducted separately on 1:1 basis using recording equipment and a prepared interview guide</td>
<td>7 Key senior leaders in Deaf education New Zealand. Senior leaders from regional, school and Ministry of Education providers of Deaf education. Collectively, the candidates are representative of all Deaf education provision in New Zealand.</td>
</tr>
<tr>
<td>How effective are current governmental and school initiatives from New Zealand’s education system in preparing leaders in the Deaf education sector?</td>
<td></td>
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The two data collection tools presented in Table 3.1 provide different but complimentary data on the succession issue. As mentioned, data were collected at the same time or through single phase timing (Creswell & Plano Clark, 2007), this meant that the interviews were conducted whilst the survey link was open and responses were coming in from the workforce. The two research tools collected data separately on the same phenomenon and then the different results were converged through comparing and contrasting in the interpretation phase. In this way the
quantitative findings were used to detect corroborations and validate findings with the qualitative data (Creswell & Plano Clark, 2007).

As Figure 3.1 below shows however, the weighting in the study between the quantitative data and qualitative data were uneven. This is depicted using upper and lower case letters in the model below. The questionnaire consisted of eleven pragmatic quantitative questions and five qualitative questions. With the questionnaire this can be represented by using an upper case ‘QN’ for the mainly quantitative nature of the results, and a lower case ‘ql’ for the smaller qualitative element of the questionnaire. The interviews were purely qualitative and are represented as capital ‘QL’.

Figure 3.1 Convergence model of complimentary methodological research design

This method of presenting the weighting of research tools comes from Creswell and Plano Clark (2007). Overall there is a heavier qualitative weighting with the interviews plus parts of the questionnaire (QL + ql) and the rest of the questionnaire adding the vital quantitative data to sit alongside the qualitative. Results were expanded and validated when the two sets of results were converged and compared. This is discussed in more detail in the synthesis section of Chapter four.

The research design became a reality once organisations and leaders began to formally agree to become involved in the research. This was achieved by firstly contacting organisations with an information sheet on the research intending to be
conducted (Appendix A). In addition to this information, assurance of confidentiality was sent out. Once leaders of the organisations had absorbed this invitation and clarified any questions or concerns they had they returned the organisational consent form allowing the survey to be sent out to their staff. In addition, the individual senior leaders of each organisation were invited to take part in the semi-structured interview and those who accepted sent back the consent to be interviewed form (Appendix B). Once all permissions had been collected the research tools were ready to be implemented.

**Web – survey questionnaire**

*Explaining the survey*

The first research question was answered through the web-survey research tool that comprised of 16 questions; eleven quantitatively orientated and five qualitatively orientated questions (Appendix C). A survey aims to collect data from an identified population in order to draw conclusions about the phenomenon under investigation (Bush, 2002). In this case the identified population was the national teacher of the Deaf workforce. Given the national scope of this research and the added complexity the geographic spread of people presented, a web-survey tool was deemed most appropriate and was constructed using *Survey Monkey*. Email was an appropriate vehicle to deliver the survey link simultaneously to the entire workforce across the country. Instrument design and testing through piloting were vital components of the reliability process (Bush, 2002). Therefore the web-survey questionnaire, after ethical approval, underwent a successful trial. From this point the survey was forecast to the national workforce by sending out an introductory email about the upcoming survey. The introduction allowed staff to understand more about the purpose of the survey and told them the upcoming launch date. The web-survey launch invitation was then emailed out with an embedded hyperlink to take staff directly to the survey. Anonymity was preserved by configuring the email to *undisclosed recipients* and making sure survey settings did not save computer internet protocol (IP) addresses.

Other tools such as focus groups would not have given the necessary data to gain the national picture required to answer the research question. As mentioned, the web-survey consisted of 16 questions; the first 11 are quantitatively orientated questions and sought to gain the baseline demographic data required for the first research question. Results to questions 1 – 11 in the questionnaire revealed
variables such as; teacher’s age, geographic area of work, management level, Deaf/hearing status, working hours, gender and tenure in mainstream and Deaf education, these are the pragmatic or quantitative variables. Distinguishing between tenure in mainstream versus tenure in Deaf education was important. Long tenure, especially in the Deaf education sector, indicated possible higher levels of specific institutional knowledge in Deaf education and therefore more valuable banks of experience potentially retiring (Eacott, 2010). Age was also an important factor as it gave an indication of the possible remaining tenure teachers have in the profession and the approximate window still available for exiting leaders to transfer their tacit knowledge and expertise.

Questions 12 – 16 were qualitative, asking the workforce about their motivation to lead, their intentions to stay in the sector and their plans for the next 3 – 5 years in the profession. These questions were based on a rating scale but at some points also had an option for people to make an additional comment explaining their rating. These interpretive questions in the survey helped give insights about motivation and teacher’s strategic career intentions. These were inspired by the reluctance factors present from the literature impacting on the succession issue. Notably, the first 11 questions provided a demographic snapshot of the current workforce of teachers of the Deaf, from which findings were analysed and discussion generated. An online survey had the advantages of being quick to administer and provided closed questions through use of radio buttons where a circle required a dot to be placed in it (Bryman, 2008). This method lent itself to the research problem of this nature where it was necessary to gather quantitative data over such a wide area. This research presented new data, as to date there had been no research about New Zealand’s Deaf education leadership workforce. This thesis has filled that gap in the literature.

**Analysis of the survey**

The first stage of analysis of the web-survey data was to look at the general demographic information. This was possible from the summary read-out from the Survey Monkey software. From this a picture of what the workforce looked like could be revealed. The demographic features were summarised in a table and also the motivational responses (questions 12-16) were summarised with mean ages of key leader groups in the workforce. The next stage of analysis was to transfer the responses into an excel spread-sheet where the responses could undergo uni-variate
analysis. Through this format the data could be sorted and drilled down into and certain groups could be identified. Key groups amongst the workforce became evident from this stage of analysis.

As a final stage of analysis the data from the excel spread-sheet was transferred into SPSS statistical analysis software programme and tests were run. Three types of test were conducted. Firstly a test of reliability (Cronbach’s alpha) was performed which is discussed in more detail in the reliability section of this chapter. Secondly, tests of statistically significant correlations or relationships between the data responses were run. The method of examining associations between variables used was Pearson’s product moment correlation coefficient, that allowed relationships to be revealed and strengths of relationships made clear (Bryman, 2008; Pallant, 2004). The third type of statistical test performed on the data were independent samples T-tests, undertaken to find any statistically significant differences that arose between certain sub-groups in the workforce (Bryman, 2008).

**Issues of reliability and validity of the survey**

Validity refers to trustworthiness and the extent to which a question or variable accurately reflects or achieves the concept the researcher is actually looking for; it is the extent to which the measure achieves its aim and measures what it is supposed to measure (Bryman, 2008; Bush, 2002; Cohen, et al., 2007; Davidson & Tolich, 2003; Hinds, 2000; Lincoln & Guba, 2005). If a piece of research is invalid then it is worthless (Cohen, et al., 2007). The demographic, tenure and motivational information gathered in the survey authentically explores what the aims set out to investigate. Important critique on validity comes from Lincoln and Guba (2005) who remark that it is not only the method that ensures validity but also how the findings are interpreted. The specific steps in analysis and interpretation of the survey data outlined in this chapter go towards further demonstrating the high level of validity in this research.

Reliability refers to repeatability (Bryman, 2008) and is defined by Bell (1993) as “the extent to which a test or procedure produces similar results under constant conditions on all occasions” (p. 64). Ultimately, measures are consistent and reliable if they produce the same results when repeated (Davidson & Tolich, 2003; Hinds, 2000). Reliability can mean different things in quantitative and qualitative research. In
quantitative research reliability refers to precision and consistency, where as in qualitative research it refers to dependability of the interpretation (Cohen, et al., 2007). Questions 12-16 in the web-survey were qualitatively orientated and required participants to submit answers using a rating scale. The reliability of these items in the web-survey was checked using one of the most common indicators of internal consistency, called Cronbach’s alpha coefficient (Pallant, 2004). There was a degree of reliability in the rating scales with a Cronbach alpha reading of .635. When fewer than ten items are used, as in the case of this research, a reading of above .5 is deemed reliable (Pallant, 2004). A reading of .635 indicates a strong internal reliability for this data set. In relation to the more quantitatively orientated eleven questions in the web-survey, the measures used are demographic, relating to age, gender, tenure and working hours and geographic region of work. These are empirical measurements and therefore highly reliable in the quantitative sense.

Ethical considerations regarding confidentiality have been strictly adhered to with the collection of such sensitive demographic information. Building trust and gaining consent from Deaf education providers nationally to come on-board with the research was a challenge and limitation throughout the research. The three national providers are to be commended for fully taking part in all aspects of the research, making this the first national study. With the tools themselves, the web survey had the limitation of only ensuring a certain percentage of responses (Bryman, 2008). Typically surveys can receive around 40% response rate (Hinds, 2000). Given this it was highly unlikely to gain 100% response rate from the national workforce despite best efforts around advanced communication and reminders to staff. It was again testament to the Deaf education profession that the response rate to the survey in this research was so high, achieving just over 80% (N=162/200) of the entire national workforce. Another limitation to the online survey was there was no one present to help the respondents if they had difficulty answering questions (Bryman, 2008). To reduce the risk of this, the question format and language used were deeply considered to make the questions clear and unbiased and a trial was conducted prior to the launch. During the data collection phase I was contacted by some people asking for clarification about the survey, the contact email address was a useful method for respondents to clarify these small queries prior to completing the survey. Another solution was for respondents to submit their completed surveys on paper and for me to manually enter their responses.
In order for the online web-survey to be valid and reliable the questions had to avoid ambiguity. Careful wording was used to avoid making assumptions that people had the same understanding of certain concepts. In addition, to ensure validity, care was taken to avoid leading, presuming questions, or the use of double questions in the survey (Bell, 2007). Furthermore, in relation to all the analysis strategies mentioned, the notion of confirmability strengthened reliability and validity. Confirmability within research refers to the way the researcher has acted in good faith and not allowed personal values to sway the conduct of the research findings (Bryman, 2008). Confirmability links to conducting research in an ethical manner and the researcher has been acutely aware of this throughout the research.

**Semi-structured interviews**

*Explaining the interview*

The second method or tool highly appropriate to answer the research questions was the research interview. Research interviews are conversations that have structure and purpose and where new knowledge can be constructed through interaction between interviewer and interviewee (Kvale & Brinkmann, 2009). In the case of this thesis, a series of seven semi-structured interviews were undertaken with current senior leaders in this specialist field. Semi-structured interviews tend to be favoured in educational research as they allow respondents to express themselves at length whilst still offering shape to prevent rambling (Wragg, 2002). There is more latitude allowed in semi-structured interviews than structured interviews, though they still use a carefully worded schedule or guide (Appendix D). As discussed earlier, this was a qualitative method that entailed an epistemological shift towards interpretivist or subjectivist thinking (Bryman, 2008). After an initial question further probes or prompts to give more detail could be added by the interviewer in response to significant answers (Wragg, 2002). Throughout the data collection phase of this research a careful questioning and listening approach was used in the interviews to uncover new knowledge nuggets about the topic (Kvale & Brinkmann, 2009).

Unlike the first 11 questions of the survey that produced largely quantitative, measurable data, the information from the interviews was purely qualitative. This means subjective thoughts, opinions, feelings and expressions were being scrutinised which was more open to interpretation and debate (Pell & Fogelman, 2002). The semi-structured interview guide consisted of ten questions. Of the ten
interview questions, the first three relate to the overarching first research question. Questions 4-6 relate to the second overarching research question and likewise, questions 7-9 relate to the third research question. A final tenth question was added to ask each senior leader for their personal vision for the future landscape of leadership in Deaf education. Each interview was recorded using a digital voice recorder. Material from the semi-structured interviews was transcribed and a copy sent to the interviewee to give them an opportunity to respond with any corrections if they wished.

The ten interview questions were strategically orientated and required a variety of professional perspectives from people with extensive leadership knowledge of Deaf education. The data collected here had an emphasis on words and subjective opinions (Creswell, 2002). These leaders also had an overview of the current personnel complexities in their sector. Therefore the seven most senior leaders in respective regional and urban areas of New Zealand’s Deaf education sector were invited to give their views within the interview context, all consented to take part. I flew to different parts of the country where the senior leaders were based in order for all interviews to be conducted in similar live conditions rather than over the phone. This was because the interviewer was mindful of keeping equality for all interviews in terms of setting. Consistently creating the same relaxed atmosphere with the interviewee in each case was important (Hinds, 2000). Pre-testing of the questions helped to ensure leading questions were avoided and that vocabulary used was clear and concise. Common courtesies were shown to interviewees and the interviewer was also careful to avoid pre or post interview discussions about the purpose of the interview and the research being conducted. Undertaking thematic analysis of the interview answers gave rise to common threads and broad categories directly relating to the research aims and questions.

**Analysis of the interviews**

The systematic process of thematic analysis was deemed most appropriate to analyse the seven interviews with senior leaders. This was because ideas, identifiable patterns and themes that emerged from interviews could be better understood under the control of thematic analysis (Aronson, 1994). The first step in undertaking thematic analysis involved collecting the data and transcribing the interviews word for word. Following this, the next step was to identify all data that
related to a classified pattern. Patterns were identified in the data by close reading of the interview responses to pick up on common topics, feelings or ideas. The next step was to distil the responses further by looking laterally across transcripts, combining the related patterns and bringing together components and fragments to form themes (Aronson, 1994).

Rigorously studying responses meant coherence of ideas between leaders emerged and were linked together in a meaningful way (Aronson, 1994). The final step in thematic analysis, once themes began to emerge, was to interweave prevalent ideas from the literature to formulate thematic statements in the final chapters of the thesis (Aronson, 1994). This method of analysis was preferred as opposed to content analysis because it meant the themes had not been predetermined (Kvale & Brinkmann, 2009). Such qualitative thematic analysis of the findings from the semi-structured interviews helped reveal both the manifest and latent underlying themes and categories in the data collected (Bryman, 2008).

**Issues of reliability and validity of the interviews**

It was more difficult to ensure reliability using semi-structured interviews because of the deliberate strategy of treating each participant as a potentially unique respondent (Bush, 2002). With the qualitative findings obtained from the remaining questions in the survey and the transcripts from the semi-structured interviews, validity was maintained by trying to ensure that the interviewer had a clear understanding of what the respondent was saying, likewise, the interviewee needed to have a clear understanding of what was being asked (Cohen, et al., 2007). The interview guide created a more structured format and therefore strengthened the reliability. The senior leaders interviewed were spokespeople for their profession and theoretically had in-depth institutional knowledge of their field. As such they were highly credible people to speak on behalf of their colleagues in Deaf education (Bryman, 2008). Ensuring the interviewee had a clear understanding was also achieved by briefing in, at the start of the interview. Briefing in is where the situation is defined, the purpose briefly explained once more, the sound recorder introduced and also gives an opportunity to ask questions prior to beginning the interview (Kvale & Brinkmann, 2009).
During the interviews the researcher was aware of the risk of post interview discussions taking place where a potential bias could be created as participants communicated what they knew to other leaders yet to be interviewed (Bryman, 2008). Another practice to be aware of during the interview method was interviewees becoming ‘yeasayers’ or ‘naysayers’ defined as acquiescence. This is a tendency for respondents to consistently agree or disagree with questions being asked (Bryman, 2008).

Similarly, there was another risk to be aware of when conducting the interviews that can be termed as ‘social desirability bias’. This is when respondents give what they think is the most socially acceptable answer, or the answer they think the interviewer wants to hear. This risk closely relates to the notion of tackling talk tracks (Kvale & Brinkmann, 2009). Talk tracks can occur when interviewing experts or elite people – they are the standardised, prepared, catchphrase viewpoints that are more generic than specifically answering the question being posed. Besides these pitfalls, the semi-structured interview offered the advantage of being able to probe the candidate for more information when appropriate (Bryman, 2008). This meant asking the respondents to say a little more about their answers and the phrasing of the probe needed to be standardised and unbiased throughout all interviews by using comments such as ‘could you say a little more about that?’ (Bryman, 2008).

An important limitation to be aware of with the interviews was that there was an assumption that the professionals being questioned had an in-depth knowledge and understanding of the current government succession initiatives in place. This brings into question how validity can be maintained when analysing findings about people’s perspectives on government initiatives they may not have a detailed understanding of. Validity has been built into this research by choosing a semi-structured interview guide and selecting the most knowledgeable leaders in this sector of the profession who are the most likely to have the greatest knowledge of such initiatives (Cohen, et al., 2007). Semi-structured interviews can also be limited by the ‘interviewer effect’, whereby the way the interviewer themselves presented the questions could have an affect on the interviewee. During the interviews in this research, the interviewer was aware of keeping consistent presentation of the questions. Inevitably, the use of probes differed in response to answers from respondents. To maintain high levels of consistency the interviewer was conscious of not slipping into one of two interviewer
stereotypes alluded to in the literature. Firstly, the interviewer avoided becoming the ego-tripper interviewer, someone who has a hunch and simply manipulates the interview data to justify it (Wragg, 2002). Secondly, every attempt was made throughout the interviews not to become a guillotine interviewer; who is so intent on getting through the questions they pay no attention to the answers and chop respondents short mid sentence (Wragg, 2002). Allowing respondents time to contemplate their answers was an important strategy that resulted in interviewees giving more in depth responses to the questions posed.

**Methodological Triangulation of results**

Triangulation means comparing different sources of evidence in order to determine the accuracy of information, it is essentially a means of cross-checking data to establish validity (Bush, 2002). The sample size and the specific kinds of data collected for this research have implications for the sorts of analysis that can be conducted (Bryman, 2008). The two tools used in this mixed methods approach offered some quantitative baseline demographic data and also some subjective qualitative data. Analysis of the findings was done at multiple levels. Firstly the baseline demographic data were compiled, then analysis at a basic uni-variate level was completed, comparing variables independently of one another. Subsequently, a deeper bi-variate analysis was carried out using the SPSS statistical analysis software. Finally it was useful to triangulate the survey data and interview data to further ensure reliability and also uncover any further underlying overall thematic threads running through this research problem (Creswell & Plano Clark, 2007).

Triangulation is when one data gathering method is overlapped and layered on top of another data gathering method in relation to the same problem (Bryman, 2008; Cohen, et al., 2007; Creswell & Plano Clark, 2007; Youngs & Piggot-Irvine, 2012). The tools used in this research aimed to provide in-depth and specific information related to this research problem by expanding on the findings of one method with another method. Rather than aligning the questions to fit into one single research paradigm, the mixed methods design has been shaped by the research questions (Youngs & Piggot-Irvine, 2012). Comparing and contrasting data generated from different methods can produce fuller understandings to the research problem. Coming at the research problem from different strategic angles ensured the results were more robust and trustworthy.
These two sets of data, comprising of findings from the questionnaire and then findings from the interviews were brought together to uncover links and differences between the data. The synthesis that took place by integrating and converging both these two sets of results allowed themes and common patterns to emerge that would not have arisen using a single method (Creswell & Plano Clark, 2007; Youngs & Piggot-Irvine, 2012). The triangulation was also at a multi-level, as the teaching staff taking part in the survey and interviews came from teaching, middle and senior positions. Looking for such similarities between the survey and interview results enhanced the methodological validity of the findings.

**Ethical issues**

**Overview of major ethical principles**

The chief focus of ethical principles are the rights of the participants, any research that does not display a respect for persons involved or violates people’s rights is seen to be unethical (Bryman, 2008; Wilkinson, 2001). Research reveals the boundaries between ethical and unethical practices are not always clear-cut (Bryman, 2008). However, the central focus in research ethics is on how participants are treated and what researchers should and should not do when conducting and analysing research. A core philosophy in relation to ethics is that benefits to some does not justify burdens on others (Wilkinson, 2001). Similarly, undue intrusion into people’s lives needs to be avoided, the retrieval of important information does not override people’s cultural values and beliefs as mentioned by the SRA (Social Research Association, 2003). This key idea refers to the way even though research may be of significant benefit to the wider community it can only be carried out and seen as ethically sound if the participants are not harmed, misled or burdened. To summarise, the major ethical principles to be mindful of in this research were; harm to participants, lack of informed consent, invasion of privacy and deception (Bryman, 2008; Social Research Association, 2003; Wilkinson, 2001).

**Ethical issues relating to the organisations in this thesis**

It was acknowledged that I was an insider researcher as I currently work in the field of Deaf education and one organisation involved in the study was my employer. No inducements were made to participants. This issue was also addressed by the online web-survey being identical for all recipients in all organisations and also by having a standardised semi-structured interview guide where the same questions were asked
of all leaders across organisations. By keeping a professional distance, a clear and unbiased approach was achieved so that findings were objective and therefore reliable and valid (Sikes & Potts, 2008). Adopting this objective stance through professional detachment, especially in interviews, addressed the issues of being an insider researcher and ensured good methodological hygiene to avoid any data or analytical contamination (Sikes & Potts, 2008).

It was recognised that it was my responsibility to consult people and groups appropriately and conduct research in a culturally sensitive and respectful manner. This research did not explicitly seek to focus on Māori participants, however, if any incidental Māori cultural issues did arise during the study, then commitment to the principles of the Treaty of Waitangi were acknowledged and advice of kaumātua was sought and if necessary the Maia staff in the Māori department at Unitec. In addition, the purpose and aim of this research was brought to the attention of kaumātua of the Ruamoko Marae at one of the Deaf education centres, the only Deaf Marae in Aotearoa. Ongoing consultation was available from the Ruamoko Marae, as needed, throughout this research into Deaf education. Kaumātua were aware of the purpose of this research and as Deaf Māori elders they were extremely valuable advisors on cultural issues concerning Deaf culture and Māori culture. In addition, they were uniquely well placed kaumātua who agreed to be cultural guides throughout this research as needed, regarding any issues in the education of Deaf Māori.

Similarly, this research did not explicitly seek to focus on Deaf culture, however if any incidental cultural issues did arise, advice and guidance was sought from the Deaf community. The Deaf epistemology and its belief system had been considered during this research and the community had been consulted and informed throughout the research process as appropriate.

**Ethical issues relating to the questionnaire**

As mentioned, the web-survey questionnaire ensured anonymity by using a web link collector that was configured to not collect IP addresses. Participants were able to re-enter their survey to alter question responses up to a certain date. Questionnaire settings were also aligned so that only one response per computer was allowed. The web-survey was also configured to not save email addresses in the analyse section.
The questionnaire’s purpose was collecting the demographic statistical data related
to the workforce to create a comprehensive current picture of teachers of the Deaf in
New Zealand. This research posed a very low level of harm or threat to participants
and all data were treated with confidentiality and anonymity. Some of the categories
of information sought were of a sensitive nature as they dealt with people’s age and
their professional longevity, as such the information was treated reverently and
confidentially. It was fully understood that the identity and record of participating
subjects must be kept confidential, as explicitly explained in the SRA (2003) ethical
guidelines.

**Ethical issues relating to the interviews**

All interviews had signed consent from the individual leaders involved and were
adequately designed to meet the objectives of the project. Due care was taken to
limit deception and make sure participants were aware of the true nature of the
research. This was achieved by leaders of organisations becoming fully informed by
being given the information about the research prior to the interview and also the
invitation to take part in the research through the organisational consent form. At no
point did this research pursue methods of inquiry that were likely to infringe human
values and sensibilities (Bryman, 2008).

The participants of the interviews were given written and verbal information regarding
the nature and purpose of the research. Due consideration was given not to invade
people’s privacy and deception was avoided by making the intentions of the research
clear prior to any involvement (Bryman, 2008). Informed consent was also sought
from participants in the interview for recording equipment to be used, it was
explained that the recordings would not be used in any way that could cause
personal identification or harm (American Sociological Association, 1999) cited in
(Bryman, 2008). As explained, interviewees were sent a detailed transcript of their
interview and the opportunity to edit their answers before analysis took place. By
adhering to these core ethical principles when collecting and analysing data, this
research aimed to achieve high levels of integrity (Bryman, 2008; Wilkinson, 2001).
In order to strengthen and ensure ethical practice in this research, the ethical
guidelines of the SRA and the code of ethics from the British Sociological Association
(BSA) were referred to at any moments of uncertainty.
I was aware of the responsibility to ensure the privacy, safety, health, social sensitivity and welfare of participants were adequately protected and also to ensure that the research was conducted in a safe environment. This research did not infringe upon New Zealand laws, regulations or treaties and adhered to the eight guiding ethical principles set forth by the Unitec’s Research Ethics Committee policy and procedures. Any form of inducements was strictly avoided and prohibited during the research, and there were no enticements of excessive or inappropriate financial offers to subjects to coerce their participation in the research. In addition, any relationships that may have compromised informed consent or truthfulness of participant reports have been stated.

The concept of informed consent can be defined as participants voluntarily taking part in research with a full understanding of all the relevant information about the project and its aims (Wilkinson, 2001). Subjects were under the impression that they were not required to participate but invited, they were aware of their entitlement at any stage to withdraw for whatever reason and to refuse to answer the questions if they wished (Social Research Association, 2003). This ethical point is particularly relevant to the second research method decided upon, the semi-structured interview.

I was acutely aware of the sensitive nature of the data being sought and therefore demographic information was treated respectfully and confidentially. Age is a sensitive issue, therefore due consideration was given to the major ethical principles of making sure informed consent was sought, that no harm came to participants, and that there was no invasion of privacy or deception (Bryman, 2008; Social Research Association, 2003; Wilkinson, 2001). Anonymity was protected by making sure recorded data collection instruments did not include any information that may directly or by inference identify individuals or organisations without their consent.

All information has been stored and dealt with appropriately and access to that information has only been given to authorised persons. Research data and consent forms have been retained. All care has been taken to limit deception and make sure participants are aware of the true nature of the research. Informed consent has been sought from all education providers when collecting data and full explanation has been given to all participants included in the study (Bryman, 2008; Hinds, 2000). Honesty and openness prevailed in all methods employed in this research and
participants have been fully informed of the potential audience of the research (Hinds, 2000). Minimisation of harm or risk of harm, be it physical or psychosocial, has been managed by refraining from any situations that may cause discomfort, anxiety, pain, fatigue, embarrassment or inconvenience during the research.

**Conclusion**

This thesis stems from a largely interpretive qualitative perspective with some elements of quantitative methodology. This mixed methodology is underpinned with a consideration of multi-epistemological perspectives, namely a Deaf and hearing centric balance. The two data collection tools were designed and presented as the most appropriate to investigate the research problem. The limitations of a percentage response rate for the survey and the risks of acquiescence, social desirability bias and interviewer effect for the semi-structured interviews, were all duly noted and every effort made to reduce them. Deep and detailed analysis of the different sets of data through layers of demographic, uni-variate, SPSS analysis and synthesis, aimed to reveal underlying thematic trends and also enhance methodological validity. Adherence to ethical guidelines throughout the design and data collection stages optimised the level of ethical hygiene for the analysis and ultimately findings and conclusions chapters of the thesis.
Chapter 4: Findings

Introduction

The findings from the data collected in this study answer the research questions posed in Chapter one. The first research question asked what the national demographic picture of the leadership and teaching workforce in Deaf education looked like. The second question focused on finding the specific succession planning strategies employed by organisations to transfer expertise and knowledge from incumbent to aspiring leaders. The third research question looked at the effectiveness to Deaf education of government succession initiatives in preparing future leaders.

These questions led to a mixed methods approach. Two tools were chosen to most appropriately answer the questions. The first tool was a national demographic online survey that invited New Zealand’s Deaf education teaching workforce to provide key demographic data and indications of career motivation and intentions. The second tool was a series of semi-structured interviews with the senior management of each organisation responsible for Deaf education in the country.

This chapter is organised into three parts. Part I presents the largely quantitative results and findings from the online web-survey. Part II reports the purely qualitative findings from the interviews with the leaders. The final part of this chapter, part III, synthesises both sets of findings to uncover further insights. Layering and comparing the findings from parts I and II allows the links and differences to be brought out for discussion in Chapter five.

Part I - Web-survey findings

The online survey (see Appendix C) was sent out to all teachers of the Deaf in New Zealand and received a response rate of just over 80% (N=162/200). Three levels of analysis were performed on the data. Firstly, the baseline general demographic data was summarised and tabled. The second level of analysis used was uni-variate analysis, where specific key groups were identified and their features closely scrutinised. The final level was bi-variate analysis using SPSS statistical software to reveal significant relationships between variables and differences between sub-
A summary table of the demographic data from questions 1-11 of the survey are summarised in Appendix E. Results from motivational scale questions 12-16 of the survey are summarised in Appendix F.

**A picture of the national workforce**

A highly specialised group of people work within Deaf education and through this research we now have a demographic snapshot of the make up of this group. This is something that has never been performed on this scale ‘inter-organisationally’ before. Collectively, this workforce is solely responsible for the education of Deaf and hearing impaired students throughout the nation. The data reveals a workforce in Deaf education that is dominated by women, making up 87.4% of the total group. Of the 12.6% male contingent of the workforce, over half of them were middle or senior leaders. It is a matriarchy, at least at classroom (n=104/112, 93%) and middle management (n=29/34, 85%). Women are also strongly represented at senior management level. Of the 14 senior leaders who took part in the study, five were females, seven males and two senior leaders omitted to answer the gender question.

The workforce almost exclusively trained as teachers of the Deaf in the New Zealand context, with around 12% of overseas trained teachers enriching the diversity of this group. This is a workforce that incorporates Deaf and hearing impaired teachers of the Deaf, representing around 15% of the mainly hearing dominated workforce. It has become clear from the data that this is a profession where the personnel remain and accrue long tenure in this niche educational specialism. The figures show high percentages of teachers working 20, 30 and even 40 years in Deaf education. There appears to be a trend for teachers of the Deaf to make the transition into the specialist area soon into their careers, with 66.9% of the current workforce moving into Deaf education within their first 10 years of mainstream teaching. The workforce is led at the most senior level by just 10% of its cohort, a further 20% of the workforce operate at middle management or team leader levels nationally, leaving the majority (70%) working directly in the classrooms or itinerantly with the Deaf students. Currently, 73.5% of the workforce in Deaf education is working full-time. There also appears to be stability in the future workforce in terms of intending to work full-time, with 75.3% of those surveyed indicating they intended to be in full-time roles in the next 5-10 years.
The data from the questionnaire unpacks the issue about an ageing workforce. It is apparent from the data that Deaf education has an ageing workforce, with a skew towards the older end of the spectrum. Out of the current workforce, 58% are over 50 years old and a notable 81.5% of the workforce is over 40 years old. Just 18.5% of the workforce is aged between 20–39 years, opposed to 17.9% aged between 60-65+ years old. Notably, there is a large cohort (21.6%) of educators in the 55-59 years old age band. These teachers will reach traditional retirement age within the next decade. Collectively, those over 55 years old nationally make up just under 40% of the workforce, all of whom reach retirement eligibility within the decade.

The workforce was also asked a series of more qualitative questions (12-16 in the survey) around their motivation, aspiration and intentions for the future. The scale for these questions was 0 (Strongly disagree) – 5 (Strongly agree). A strong finding was that almost 70% of the current workforce had strong intentions to remain in New Zealand Deaf education over the next 3-5 years, with an average response rating of 3.39 out of 5. Just 6% indicated some level of dissatisfaction and intention to leave the profession. Overall, the workforce showed a low motivation to be a senior leader, with a 0.44 the mean response. However, 18.6% showed some motivation to lead at the top level and senior leaders positions only require up to 10% of the workforce. It is worth being mindful that the percentage for high motivation (18.6%) to be senior leader does include responses from current senior leaders. The average age of those strongly motivated to lead was 51.67 years old. Understandably, motivation for middle leadership was stronger, although still a low mean response of 0.98. It was found that 26.2% strongly agreed or agreed to aspire to be in middle leadership positions in the next 3-5 year period. Job satisfaction indications emerge again with 75.5% of people strongly agreeing or agreeing to remain in their current role for the next 3-5 years. Finally, an average reading of 1.93 around motivation to be a leader at any level was low, however when isolating the percentage for those who strongly agreed to want to be leaders in the future, 32.1% indicated they would like to lead at some level. This does include responses from those who are currently leaders in the field.

**Key sub-groups amongst the workforce**
Close analysis of certain sub-groups in the data produced relevant findings. Firstly, around a key group of young aspirants, secondly around the make up of a key group
of middle leaders, and thirdly the characteristics and intentions of the current senior leaders in the workforce.

The aspirants

Question 15 in the web-survey asked the workforce their intention to work in senior leadership in the next 3-5 years. This question aimed at delving into motivational levels in the workforce and stems from the notion of determining likely numbers of successors for future leadership positions. From the 156 teachers who responded to this question the average motivational score was 0.44 from a scale of 0 strongly unmotivated to 5 strongly motivated. A notable finding became apparent when specific attention was paid to those who answered “Strongly agree” (15 people) or “Agree” (14 people) to this question. This group of 29 people were highly motivated to become or continue as senior leaders. The mean age of the 15 people who strongly agreed was 51.67 years old and the mean age for the 14 people who agreed was 47.43 years. Table 4.1 isolates the 29 people who responded this way and scrutinises the exact break down of their age categories. The table identifies in particular that 17 of the 29 are between 30-54 years old and therefore will not reach retirement eligibility within the decade. These 17 motivated aspirants with long remaining tenure are of key value to the sector as they all have between 10 and 35 years left in their careers.

Table 4.1 The aspirant group of 17 identified

<table>
<thead>
<tr>
<th>Age categories</th>
<th>Mid point age</th>
<th>Those who strongly agree to want to be in senior leadership positions in the next 3-5yrs</th>
<th>Those who agree to want to be in senior leadership positions in the next 3-5yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-29yrs</td>
<td>25</td>
<td>0 (4x35=140)</td>
<td>0 (3x35=105)</td>
</tr>
<tr>
<td>30-39yrs</td>
<td>35</td>
<td>4 (4x35=140)</td>
<td>3 (4x35=105)</td>
</tr>
<tr>
<td>40-49yrs</td>
<td>45</td>
<td>1 (1x45=45)</td>
<td>4 (4x45=160)</td>
</tr>
<tr>
<td>50-54yrs</td>
<td>52</td>
<td>1 (1x52=52)</td>
<td>4 (4x52=208)</td>
</tr>
<tr>
<td>55-59yrs</td>
<td>57</td>
<td>4 (4x57=228)</td>
<td>3 (3x57=171)</td>
</tr>
<tr>
<td>60-64yrs</td>
<td>62</td>
<td>5 (5x62=310)</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total: 775/15 = 51.67yrs</strong></td>
<td><strong>Total: 664/14 = 47.43yrs</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>4+1+1+3+4+4=17 motivated aspirants between 30-54yrs</strong></td>
<td></td>
</tr>
</tbody>
</table>
The data reveals some notable characteristics about this group of 17 aspirants. Deaf teachers are representative within the group (n=2/17) that are predominantly hearing (n=15/17). Unusually for a sector dominated by females, this group of 17 are not representative of their workforce with 7 men and 10 women. It is notable that of the 17 aspirants, 6 were currently classroom teachers, a further 6 were middle managers and 5 were in senior leader positions. So there is a range of leadership experience amongst the 17 all of whom have the long remaining tenure. The vast majority of this group of 17 aspirants were working full-time (n=14/17). A proportional number of the 17 have between 1-5 years mainstream teaching experience (n=9/17). A further four had between 6-10 years in the mainstream before specialising into Deaf education. There were four teachers within the aspirant group that had a lengthy tenure in mainstream education of between 10-25 years prior to qualifying as teachers of the Deaf. All were qualified specialists with many (n= 8/17) specialising in the 2000-2010 decade and so they have up to date training in the field.

A final finding from this group of 17 aspirants aged between 30-54 years old emerged from their responses to question 12 in the survey which asked them to agree or disagree with the statement ‘I am motivated to be a leader in Deaf education in the future’. In addition to the rating scale, the question invited participants in the survey to comment about why they rated their motivation that way. Isolating the comments from the 17 motivated aspirants, common threads emerged that can be categorised under the headings experience, training and skills:

Experience
- Strong desire to gain further experience/upskill.
- Accrued experience that can help shape/direct future Deaf education.
- Passion / enthusiasm experienced by working in the sector of Deaf education.
- Desire to professionally experience having a wider/stronger influence/impact.
- Desire to experience being in a mentoring role through being in a leadership position.

Training
- Desire to deepen professional knowledge.
- Intention to gain further qualifications.
- Enthusiasm about the variety of opportunities.
Skills
- Deep skill-set amongst the group.
- Range of skills.
- Strong inclination/confidence in their ability to lead.
- Desire to use skills to improve Deaf education.

Having reported the findings from this key group of motivated aspirants with long remaining tenure the focus then turned to the current middle management picture nationally.

The middle management picture
The data were sifted through to isolate all responses from the people who were currently in middle management positions. The responses from this group of middle leaders were then perused to establish the characteristics and reveal findings. The isolated group of middle leaders consisted of 34 teachers and the mean age for the group was 49.9 years. Notably there are no middle leaders in their 20s and a relatively large number (n=14/34) who are 55 years and over. As Table 4.2 shows, of those 34 teachers, a key group of 20 were between 30-54 years old, again meaning they have long amounts of tenure left in the sector. These 20 people (highlighted red) have between 10-35 years tenure remaining.

Table 4.2 Middle leader ages

<table>
<thead>
<tr>
<th>Age brackets</th>
<th>Mid point age</th>
<th>Frequency of middle leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-29yrs</td>
<td>25</td>
<td>0</td>
</tr>
<tr>
<td>30-39yrs</td>
<td>35</td>
<td>6</td>
</tr>
<tr>
<td>40-49yrs</td>
<td>45</td>
<td>10</td>
</tr>
<tr>
<td>50-54yrs</td>
<td>52</td>
<td>4</td>
</tr>
<tr>
<td>55-59yrs</td>
<td>57</td>
<td>8</td>
</tr>
<tr>
<td>60-64yrs</td>
<td>62</td>
<td>6</td>
</tr>
</tbody>
</table>

49.9yrs = Mean age of NZ Deaf ed. Middle managers/team leaders.

These 20 middle leaders with healthy remaining tenure all answered the motivational scale questions 12-16 in the survey. Isolating this group's answers the data reveals some interesting motivational features of this group. When asked if they were motivated to be a leader in Deaf education in the future almost all (n=19/20) agreed to some degree, and of them almost half (n=8/20) ticked 'strongly agree' to wanting to be a leader. When asked if they were motivated to stay in their current middle
management role for the next 3-5 years 18/20 strongly agreed, agreed or somewhat agreed. A notable finding came from the group’s responses to whether they intended to be a senior leader within the next 3-5 years. Only 2/20 were strongly motivated with a further 7 middle leaders agreeing or somewhat agreeing. Over half the middle leaders (n=11/20) strongly disagreed, disagreed or somewhat disagreed with intending to become a senior leader. Encouragingly, all 20 of the middle leaders agreed, most of them strongly (n=17/20), that they intended to remain in New Zealand Deaf education over the next 3-5 years.

Senior incumbent leaders

The final uni-variate filtering of the data separated out the responses from the 14 senior leaders that took part in the national web-survey. Table 4.3 shows the age categories the incumbent senior leaders fall into and that the mean age of senior leaders in Deaf education in New Zealand is 56.4 years old.

<table>
<thead>
<tr>
<th>Age brackets</th>
<th>Mid point age</th>
<th>Frequency of senior leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-29yrs</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>30-39yrs</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>40-49yrs</td>
<td>45</td>
<td>2</td>
</tr>
<tr>
<td>50-54yrs</td>
<td>52</td>
<td>3</td>
</tr>
<tr>
<td>55-59yrs</td>
<td>57</td>
<td>3</td>
</tr>
<tr>
<td>60-64yrs</td>
<td>62</td>
<td>6</td>
</tr>
</tbody>
</table>

\[
56.4\text{yrs} = \text{Mean age of NZ Deaf ed. Senior leaders.}
\]

Close inspection of this group of 14 senior leaders revealed notable findings about their career intentions over the next 3-5 years. All 14 answered a rating score for the question ‘I intend to stay in New Zealand Deaf education for during the next 3-5 years’. Over half the group (n=8/14) strongly agreed, a further three agreed and another 2 somewhat agreed they would stay in the sector during this time frame. Only one senior leader showed a strong intention to separate from the profession in that time frame. Focusing specifically on the eight senior leaders who ‘strongly agreed’ to stay plus the further three who ‘agreed’, it becomes clear there were a group of 11 senior leaders who have made a clear indication that they will remain in the profession for the next 3-5 years in some form, regardless of age.
Taking this group of 11 motivated senior leaders it was noteworthy to find that two of them were between 40-49 years old, three were between 50-54 years old, another three were between 55-59 years old and a further three were aged between 60-65+ years old. All 11 of these senior leaders indicated that not only did they intend to stay in the profession but that they intended to stay in their current role as senior leaders over the next 3-5 years. When asked whether they were motivated to ‘down-size’ to middle leadership within the next 3-5 years there was strong disagreement from these incumbents (n=9/11). A final finding became evident when close attention was paid to the six senior leaders aged between 55-65+ years within this group of 11 motivated incumbents. All of these six leaders who would reach traditional retirement age in the near term either strongly agreed (n=3/6), agreed (n=2/6) or somewhat agreed (n= 1/6) with the intention to stay in their current senior leadership role during the next 3-5 years.

**Bi-variant analysis showing relationships and differences between sub-groups in the national workforce**

The data from the survey were put through SPSS statistical analysis software. The first test performed was a Pearson’s product moment correlation co-efficient test. This test revealed statistically significant relationships amongst groups in the data. Next, a series of independent samples t-tests were performed to find the statistically significant differences between specific sub-groups within the data. Some of the most compelling findings that the data tells us came from these statistical analysis tests of the responses to the survey. As the sample size for this survey was large (N=100+) even small correlations can be seen as statistically significant (Pallant, 2004). A summary table of all statistically significant relationships can be found in Appendix G.

**Relationships between variables in the workforce**

The Pearson’s product-moment correlation coefficient test was run and revealed three key statistically significant relationships amongst the data. Firstly, there was a strong significant positive relationship between the workforce’s level of motivation to be a leader in the future and the specific intention to be a middle leader. Interestingly, this relationship got stronger when motivation to be a leader and intention to be a senior leader was analysed. This link between motivation and intention to be a middle leader is statistically strong, with an $r^2$ value of 28.7%. This means the two variables have a significant shared variance, where the degree of variation in one variable is attributed to by 28.7% of the other variable. Likewise the $r^2$ value between
motivation and intention to be senior leader is 37.3%. Of those who aspire to be leaders or who are currently leaders, as the level of seniority increases so too does the strength of their motivation to lead.

Key Finding 1 (Correlation)
The relationship between motivation to be a leader in the future and motivation to be a middle leader in the next 3-5 years was measured using Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity. There was a strong positive correlation between the two variables \(r= .536^{**}, n= 153, p< .001\), with levels of motivation associated with motivation to be a middle leader.

In addition, the relationship between motivation to be a leader in the future and motivation to be a senior leader in the next 3-5 years was measured using Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity. There was an even stronger positive correlation between the two variables \(r= .611^{**}, n= 156, p< .001\), with levels of motivation associated with levels of motivation to be a senior leader.

The second key finding and the strongest statistical relationship in this study was found to be the link between the number of years since qualification as a specialist teacher of the Deaf and the number of subsequent years a person had spent in the Deaf education sector. The two variables have a shared variance \(r^2\) value of 67.7% and a strong statistical correlation of \((r= .823^{**})\). At first glance this finding may seem obvious, however it reveals that people do not enter this sector of education by chance or on a temporary ‘whim’. The data tells us that once people make the deliberate decision to undergo further training and to qualify as a teacher of the Deaf, they enter and remain in the profession for prolonged periods of time. Migration back into the mainstream sector or other areas of special education seem rare given the strength of this finding.

Key finding 2 (Correlation)
The relationship between number of years since qualified as a teacher of the Deaf and number of years worked in Deaf education was measured using Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity. There was a strong positive correlation between the two variables \(r= .823^{**}, n= 138, p< .001\), with more years since qualification associated with more years worked in Deaf education.

The third strong statistical positive relationship \((r= .671^{**})\) discovered was the link between people’s intention to remain in Deaf education and their intention to remain...
in their current position. As people’s intention to stay in the profession increased, so too did the level of their intention to remain in their current role. This insinuates a level of static or isometric tendency amongst the workforce, people remain in positions for long periods of time and movement between roles is infrequent. This finding is compounded when we see that there is only a weak statistical correlation ($r= .168^*$) between people’s intention to stay in the profession and motivation to be a leader in the future.

**A notable finding was also found between a person’s hours of work and the number of years they have worked in the Deaf education sector. A small but statistically significant negative relationship ($r= -.213^{**}$) existed between these two variables. This indicates that as the length of tenure increases there is a weak but present link that a person’s hours will decrease. This correlation must apply to those at teaching level predominantly as the data reveals that 100% of senior leaders work full time and (n=32/34 or 94%) of middle leaders work full time regardless of age, with the other two middle leaders working 4 days a week and 3 days a week. It is clear that middle and senior leadership roles in Deaf education demand full-time positions the vast majority of cases. A final finding points out that there is only a weak ($r= .230^{**}$) positive relationship between the number of years a person has worked in Deaf education and their level of intention to be a middle leader. It appears there is little difference then between length of tenure and motivation to lead in the middle management ranks.**

**Differences between sub-groups in the workforce**

Key statistical findings were established by comparing four pairs of sub-groups amongst the workforce. These findings help establish if there is indeed a succession planning issue in the sector of Deaf education. Four independent samples t-tests were performed using SPSS to determine significant statistical differences in specific sub-group answers to questions 11-16 in the survey. The first test compared all teachers at classroom level to those who hold leadership (middle or senior)
responsibility. The second test compared responses of those who intended to work full-time over the next 5-10 years with those who intended to semi-retire/retire. Thirdly, a comparison was made between all those under 50 years old in the workforce and those over 50 years old. The final test compared teachers with 1-5 years mainstream experience to those with 6-24 years experience in mainstream. A summary of all the statistically significant differences, including the effect size percentage variance from the independent samples t-tests is included in Appendix H.

**Test one: Teachers compared to leaders**

When the teacher’s responses were compared to the leader’s responses, three statistically significant differences emerged from the data. On a scale of 0 (unmotivated) – 5 (highly motivated) the teacher group were found to be less motivated than incumbent leaders to be leaders in the future. Current leaders had a very high motivational mean of 4.17 out of 5, where as teachers scored just 2.41 out of 5 for motivation to lead in the future. There was a large\(^4\) (effect size 24%) statistical variance between these two groups for their response to this question in the survey.

**Test 1: Key finding 1 (Difference)**

An independent-samples t-test was conducted to compare motivation scores for teachers and leaders. A significant difference was found for teachers (M=2.41, SD=1.91) and leaders [M=4.17, SD=1.136; t(143.40)= -7.16, p=.000]. The magnitude of differences in the means was large (effect size = 0.24).

The second finding comparing teachers to leaders revealed leaders were more motivated to lead at middle management level in the future than those currently in the classroom teaching workforce. This finding had a large statistically significant difference (16%) variance between the groups. The teacher group giving a low mean motivational score to become middle leaders of 1.48 out of 5, in comparison to current leaders who had a higher mean score of 3.18.

**Test 1: Key finding 2 (Difference)**

An independent-samples t-test was conducted to compare intention to be a middle leader in the next 3-5yrs scores for teachers and leaders. A significant difference was found for teachers (M= 1.48, SD= 1.162) and leaders [M= 3.18, SD= 1.957; t(72.066)= -5.091, p=.000]. The magnitude of differences in the means was large (effect size = 0.16).

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\(^4\) Effect size was calculated using eta squared. Eta squared can range from 0-1 and represents the proportion of variance in the dependent variable that is explained by the independent variable. Guidelines for interpreting this value are .01 small effect, .06 medium effect, .14 large effect (Pallant, 2004).
This low motivation or reluctance amongst the teacher group to lead becomes more apparent when they are asked about their intention to become senior leaders in the future. A mean score of 0.93 out of 5 shows a strong reluctance amongst the majority of the teacher group to go down this path. The motivation of current middle and senior leaders also drops to 2.69 out of 5.

Test 1: Key finding 3 (Difference)
An independent-samples t-test was conducted to compare intention to be a senior leader in the next 3-5yrs scores for teachers and leaders. A significant difference was found for teachers (M= .93, SD= 1.450) and leaders (M= 2.69, SD= 1.905; t(65.666)= -5.580, p= .001). The magnitude of differences in the means was large (effect size = 0.16).

It is worth being mindful that senior leadership does only make up 10% of the national workforce and therefore only a small number of motivated aspirants are required at this level. In summary, when comparing those at classroom teacher level with those in leadership positions, on a scale of 0-5: teachers showed motivation to lead at 2.41, then motivation to be a middle leader of 1.48 and finally motivation to be a senior leader of 0.93. This compares to leaders scores of 4.17 to lead, 3.18 to be a middle leader and 2.69 to be a senior leader.

Test two: Full-time versus semi-retire/retire in the next 5-10 years.

The next test of difference compared all those in the workforce that had indicated in the survey they intended to work full time over the next 3-5 years and those who indicated an intention to either semi-retire or retire from the profession. Four key findings arose from this test. Firstly, it was found that the full-timers were markedly more motivated to lead in the future with a mean score of 3.46 and a large variance of 22% to the semi-retire/retire group.

Test 2: Key finding 1 (Difference)
An independent-samples t-test was conducted to compare motivation to be a leader in the future scores between those intending to work full time in the next 5-10 years and those aiming to semi-retire/retire. A significant difference was found for the full-time group (M= 3.46, SD= 1.625) and the semi-retire/retire group (M= 1.41, SD= 1.902; t(57.304)= 6.053, p= .000). The magnitude of differences in the means was large (effect size = 0.22).
This finding is further supported by the second and third findings from this test that indicated a very low motivational mean of 0.72 out of 5 mean score to be a middle leader and a 0.62 score to be a senior leader over the next 3-5 years from those intending to semi-retire/retire. Contrastingly, the full-timers indicated a higher motivational mean to be middle leaders (mean score 2.46) and to be senior leaders (mean score 1.73). Notably the full-timers were more inclined to be middle than senior leaders.

Test 2: Key finding 2 (Difference)
An independent-samples t-test was conducted to compare intention to be a middle leader in the next 3-5yrs scores between those intending to work full time in the next 5-10 years and those aiming to semi-retire/retire. A significant difference was found for the full-time group (M= 2.46, SD= 1.866) and the semi-retire/retire group (M=.72, SD= 1.486; t(84.332)= 5.922, p=.000). The magnitude of differences in the means was large (effect size = 0.18).

Test 2: Key finding 3 (Difference)
An independent-samples t-test was conducted to compare intention to be a senior leader in the next 3-5yrs scores between those intending to work full time in the next 5-10 years and those aiming to semi-retire/retire. A significant difference was found for the full-time group (M= 1.73, SD= 1.827) and the semi-retire/retire group (M=.62, SD= 1.468; t(79.939)= 3.905, p=.000). The magnitude of differences in the means was moderate (effect size = 0.09).

The final finding arose when the two group’s responses were compared for their intention to stay in the profession. Understandably, the full-timers show a very high inclination towards staying in the profession (4.61). However, the finding emerges when it is apparent the difference between the two groups is less pronounced with a much smaller effect size (6%). The semi-retire/retire group indicated a motivation to stay in the profession in some capacity, with a mean score rating of 3.74 out of 5.

Test 2: Key finding 4 (Difference)
An independent-samples t-test was conducted to compare intention to stay in NZ Deaf education in the next 3-5yrs scores between those intending to work full time in the next 5-10 years and those aiming to semi-retire/retire. A significant difference was found for the full-time group (M= 4.61, SD=.932) and the semi-retire/retire group (M= 3.74, SD= 1.655; t(44.723)= 3.081, p=.004). The magnitude of differences in the means was moderate (effect size = 0.06).

The data has therefore revealed with this t-test that those intending to retire in the next 5-10 years have low motivation to lead, be middle or senior leaders in the next 3-5 years however they are motivated to remain in the profession in some capacity.
perhaps in part-time roles, phasing out their teaching workload or incrementally reducing hours at a teacher level.

**Test three: Comparison between the under 50s and over 50s**

The workforce was split into those under 50 years old and those currently over 50 years old. Mean scores for motivation to be a leader in the future were compared for both of these groups. The data found a moderate statistical difference between the two groups’ motivation scores. There was a 12% effect size for the two groups with the under 50s being more motivated (3.68) overall to be leaders in the future than the over 50s (2.39).

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**Test 3: Key Finding 1 (Difference)**

An independent-samples t-test was conducted to compare motivation to be a leader in the future scores between those under 50yrs old and those over 50yrs old. A significant difference was found for the under 50s (M= 3.68, SD= 1.332) and the over 50s [M= 2.39, SD= 2.091; t(157.724)= 4.762, p= .000). The magnitude of differences in the means was moderate (effect size = 0.12).

Those over 50 years were less motivated to be middle leaders, scoring a mean of 1.53 out of 5 for middle leadership intention. Contrastingly, the under 50s had a higher motivation score to be middle leaders in the next 3-5 years with a mean score of 2.61 out of 5.

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**Test 3: Key Finding 2 (Difference)**

An independent-samples t-test was conducted to compare motivation to be a middle manager/team leader in the future scores between those under 50yrs old and those over 50yrs old. A significant difference was found for the under 50s (M= 2.61, SD= 1.687) and the over 50s [M= 1.53, SD= 1.955; t(145.970)= 3.658, p= .000). The magnitude of differences in the means was small (effect size = 0.07).

**Test four: Low mainstream experience versus long mainstream tenure**

The final t-test that was undertaken compared those in the workforce who had 1-5 years mainstream experience with those who had spent 6-24 years in mainstream environments before specialising into Deaf education. No statistically significant differences were found between these two groups. This gives rise to the finding that the amount of mainstream tenure someone has acquired, has no significant bearing on levels of motivation for leadership in Deaf education or intentions to remain in the profession or current role. Whether a teacher of the Deaf has accrued tenure mainly in the sector of Deaf education or in mainstream, there appears to be no statistical differences around their strength of aspiration and passion for Deaf education.
The voice of the workforce – the argument for and against leadership

Question 12 in the online web-survey asked the workforce to what extent they agreed or disagreed with the statement ‘I am motivated to be a leader in Deaf education in the future’. In addition to indicating their response on a 0-5 scale, people were also invited to add a comment to explain why they were or were not motivated to be leaders. All teachers surveyed (N=162) answered the rating scale part of question 12. Of these the majority (N=112/162) also added a comment explaining their response. It became evident from the comments that there were two main driving factors towards leadership. In addition, four main barriers or factors that made people reluctant to lead also emerged.

Driving factors behind leadership

Amongst the respondents to question 12 were members from Māori and Pasifika cultures and also the Deaf cultural community. Professionals in Deaf education with this deep cultural connection and sense of pride were highly driven to become leaders in their field. The second main thematic driver for leadership arising from the workforce’s comments was a deep emotional connection to the area of education they worked in. The concept of being passionate and deriving enjoyment from being in Deaf education came through strongly in the comments. Teachers were driven to lead as they felt a sense of reward, enthusiasm and stimulation from being challenged professionally. The emotional attachment to the sector further emerged as a determination and drive in people, to influence and make a difference to Deaf education.

Reluctance factors for leadership

There were four predominant factors that inhibited people in the profession from taking on a leadership role. Commitment to family and raising children came through strongly as a factor. Secondly, people had concerns around their health and were reluctant to take on the extra stress of leadership that could be detrimental. The third factor that made leadership unpalatable was the amount of bureaucratic administration seen to be involved in the role. The fourth and final factor that made leadership an unattractive option was the indirectness of leadership. Staff repeatedly commented on their reluctance to leave the face-to-face aspect of working with Deaf children. The details of the drivers and reluctance factors for leadership are presented in Table 4.4 below.
Table 4.4 Drivers and reluctance factors for leadership

<table>
<thead>
<tr>
<th>Drivers for leadership</th>
<th>Reluctance factors for leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cultural motives</strong></td>
<td><strong>Family</strong></td>
</tr>
<tr>
<td>o Advocates from Deaf, Pasifika and Maori cultures and a deep sense of pride</td>
<td>o Constrained by family/life plans</td>
</tr>
<tr>
<td>o High levels of motivation and passion combined with a sense of ability</td>
<td>o Time poor as focus is raising/spending time with children</td>
</tr>
<tr>
<td>o Enthusiasm to mentor and transfer knowledge and understanding</td>
<td>o Career moulded around ‘family come first’</td>
</tr>
<tr>
<td>o Sense of humility – an awareness of the privilege of working in Deaf education</td>
<td>o Further leadership responsibilities seen as detrimental to family.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Emotive impulses</strong></td>
<td><strong>Health</strong></td>
</tr>
<tr>
<td>o Deep sense of enjoyment, passion, love, enthusiasm and excitement when working in Deaf education</td>
<td>o Family and personal health issues prevent motivation for leadership roles</td>
</tr>
<tr>
<td>o Strong sense of reward</td>
<td>o Feeling restricted by age and poor health</td>
</tr>
<tr>
<td>o Stimulation of challenges and variety of opportunities</td>
<td>o Wanting to safeguard health by avoiding stress of leadership</td>
</tr>
<tr>
<td>o Desire to make a difference through large influence</td>
<td></td>
</tr>
<tr>
<td>o Strong self belief that they have skills, knowledge and experience to offer</td>
<td></td>
</tr>
<tr>
<td>o Determination to self-improve</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Bureaucracy</strong></td>
</tr>
<tr>
<td></td>
<td>o Reluctance around amount of paperwork at leadership level</td>
</tr>
<tr>
<td></td>
<td>o Too many administrative duties at leadership level. People preferring to be ‘hands on’</td>
</tr>
<tr>
<td></td>
<td>o Remuneration not reflecting extra workload</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Indirect influence</strong></td>
</tr>
<tr>
<td></td>
<td>o Reluctance to move away from directly teaching the students</td>
</tr>
<tr>
<td></td>
<td>o Contentment at teaching at classroom level</td>
</tr>
</tbody>
</table>

The survey findings gave new evidence-based data about the current national demographic picture of the leadership and teaching workforce across New Zealand’s three Deaf education providers. This data directly relates to the first research question of this thesis. Motivational trends in the workforce were also uncovered. The findings from the second research method, the semi-structured interviews are now
presented. These perspectives of seven senior leaders, drawn from across the three providers, help inform the findings from the survey.

**Part II - Semi-structured interview findings**

The first research question was largely answered by the survey however some detailed questions about how leaders perceived the demographic make up of the workforce were included at the start of the interview questions. These perspectives helped to inform the survey data about the national demographic picture. The main focus for the interviews was to answer the second and third research questions. The second research question in this thesis asked what succession planning strategies were being used or could be used to transfer knowledge from incumbent to aspiring leaders. The third research question delved into how effective current government leadership initiatives were in preparing leaders in the Deaf education sector. Each research question was broken down into three more detailed questions and a final visionary question was added about the future of the profession. These formed the ten questions in the interview guide (see Appendix D).

The interviews established the leader’s perceptions of the workforce demographics, as well as specific techniques of recognising and developing talent. From the interviews five main categories became apparent as findings. The categories were firstly how leaders viewed the ageing workforce, secondly the need for encouragement to lead and in-house succession strategies used, thirdly leader’s views about the quantity and quality of leadership, fourthly the core leadership skills and finally the future features of leadership. Data are provided in the form of verbatim quotes and transcripts were each assigned a number 1-7. Quotes were formatted ‘SL’ (Senior leader) then the number between 1-7 for each leader.

**Ageing leadership**

All leaders interviewed confirmed a belief that senior leadership teams comprised mainly of leaders who were close to retirement age. This imbalance was reported to be prevalent in the leadership of regional settings as well as the urban conurbations. In addition, leaders felt that the echelons of middle management were also ageing, as indeed was the classroom teacher population in Deaf education.

*It is my belief that there is an ageing workforce.* [SL 1]
In senior leadership I would say that they are falling in the 61-70 bracket and the next middle management tier I would say they probably fall within the 61-70 bracket. [SL 2]

Most definitely, most definitely [...] we’ve got people of a similar age, in their 60s. [SL 3]

We’ve got far too many in their advanced years. [SL 4]

Senior leaders did make the point that in order to enter leadership positions, a vast amount of expertise and experience needs to have been built up. This typically takes a person to a certain later stage in their career therefore people entering senior leadership are usually of an age nearer the end of their working tenure.

You need a certain age to come into here in any case, if you have got a hearing teaching background under your belt. [SL 5]

It was found that there were few senior leaders in their 40s, people mostly came into senior leadership in their 50s and currently senior leadership teams comprised of many leaders in their 60s. A notable finding was also that each educational establishment had access to the demographic information on their staff and yet none of the organisations had developed a detailed age profile of their personnel. Their statements were based on hunches rather than accurate demographic statistical data:

That’s a best guess looking at the teaching staff. [SL 2]

I have never actually looked [...] but just from my knowledge of them and having seen them in a room. [SL 4]

Interview data confirmed that all senior leaders were informally aware that the workforce was ageing and within the decade many, particularly those currently holding leadership positions, would start to depart from the system. The data then
went on to expose the strategies used by organisations to encourage succession to occur.

**Encouraging leadership – ‘in-house’ talent development strategies**

Leaders explained the importance of adopting positive leadership behaviours that encouraged and made leadership an attractive option. Most senior leaders (n=5/7) stated people were willing and motivated to lead, however they always needed guidance and mentoring to encourage them into leadership.

> I find it easy to find people to step up, with some guidance, to the next level [...] nurturing, coaching, mentoring so they were ready at the right time [...] it’s really a matter of being proactive and going out there and actively finding people. [SL 3]

A limiting factor to leadership noted was the workload, job-size, complexity, the highly time consuming and individualised nature of the job that gave people initial reluctance and therefore they needed encouragement to be guided into the position. Reluctance factors were overcome through positive portrayal and articulation of leadership and being overtly supportive of those signalling aspiration to help groom their leadership competencies. Another reason encouragement was needed was that middle leadership positions in the large Deaf education centres translated to senior roles in regular schools.

> It is my perception that people who hold what would be regarded as middle and senior positions at these organisations, would really be translating across to senior or just the outright identifiable leadership role in any other school. [SL 1]

Therefore to step into middle leadership or senior leadership in the large organisations that are responsible for Deaf education nationally is an extra jump in job size and complexity than in more mainstream school settings. Senior positions were reported to be harder to fill than middle leadership positions, according to those interviewed. Fewer applicants for senior roles were reported to be due to people not wanting to lose their core teaching skills, family commitments, geography of the job, complexity and lifestyle factors.
It’s to do with their job size, their current job complexity and the ‘individuality’, the teaching they are doing is very individualised and so that makes the job very complex and time consuming […] so when we request someone to step up and do something else that is beyond the classroom work they see that as cutting across their prime focus of teaching and learning […] the other constraining or limiting factor is the geography of our service. [SL 2]

There is reluctance to move into middle management from some people because of their lifestyle […] they don’t want to pick up extra hours if they’ve got family commitments […] Generally if they’ve got a young family it’s too difficult to move into middle or senior management because of the workload, it’s too great. They’ve got to get passed that stage, and their children well into their teens before they start looking at that kind of thing. [SL 5]

It became apparent from the interviews that the stronger the middle management development programme, and the deeper the level of support from senior leaders to middle managers, the more reluctance levels were eased. With increased support people felt more secure to head down the leadership pathway with more ‘meaty’ senior situations and roles.

Actively finding training and support around leadership […] it’s a big job, how is a leader going to be supported […] can we tap into those types of leadership training? We certainly can. [SL 7]

Throughout the interviews senior leaders were asked to think deeply and articulate the exact strategies that they used to encourage and develop leadership talent. These strategies directly relate to the second research question of this thesis about how organisations transfer institutional leadership knowledge between incumbent and aspirant leaders. From collating the data a clear set of commonly used strategies became apparent that fall under three main headings of conversational strategies, role strategies and structural strategies. These are summarised in table 4.5 below.
Table 4.5 In-house succession strategies

<table>
<thead>
<tr>
<th>Conversational</th>
<th>Role</th>
<th>Structural</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘Shoulder tapping’ career development conversations</td>
<td>Flexibility of role with explicit support from seniors</td>
<td>Clear organisational architecture of leadership</td>
</tr>
<tr>
<td>Support and guidance through regular structured ‘sharing’ meetings</td>
<td>Small project management, testing talent with temporary responsibility roles</td>
<td>Harvesting and surveying workforce aspirations</td>
</tr>
<tr>
<td>Regular networking meetings where middle leaders and senior leaders can meet</td>
<td>Overlapping roles/Transitional preparation</td>
<td>Clear organisational strategic plans</td>
</tr>
<tr>
<td>Interpersonal skill development</td>
<td></td>
<td>Appraisal system and formal target setting</td>
</tr>
</tbody>
</table>

These encouragement strategies helped develop acceptance of responsibility amongst aspiring talent and lessened the reluctance factors that hold people back from leadership roles. One of the most dominant strategies stated by leaders interviewed was having career development conversations. This is when people with talent would be recognised and encouraged through regular mentoring and guiding conversations with incumbent leaders.

A notable strategy introduced in the Ministry of Education is the introduction of a ‘Skills progression framework’ that has been signed off by the New Zealand Educational Institute (NZEI) teacher’s union and will be implemented in 2013 for those advisors on Deaf children (AODCs) who wish to head down the clinical leadership practice pathway. Instead of becoming a service manager or district manager, the clinical pathway allows practitioner leaders to develop their skills and the framework offers remuneration for this as well as providing mentoring supervision for advisors.
Quality and quantity of future leadership

Amongst the senior leaders interviewed there was prevailing confidence (n=6/7 leaders) that there was sufficient depth and calibre in the current workforce to replace existing leaders if needed within the next decade.

_I think there are people. The school and regional service is well served with highly intelligent, highly skilled people who are able and I think pretty willing to pick up that mantle. And there are highly skilled and highly intelligent people out there in the education sector who may want to compete for those positions as well._ [SL 2]

_I am absolutely confident, it’s going to be a different Deaf education than the last twenty years and that’s great._ [SL 3]

_Perhaps 10 years down the track we’re looking at something very positive._ [SL 6]

Incumbent leaders explained that part of their confidence comes from their perception that teachers of the Deaf have made a passionate commitment to the career when they have undergone their additional specialist training.

_To become a teacher of the Deaf, you’re looking at somebody who has already made a commitment to a teaching career. Nobody becomes a teacher of the Deaf by accident, it’s always by design. Train as a teacher, practice as a teacher for a minimum of four years, then you are funded by the government to train in the postgraduate environment because you choose to, in order to come back and contribute […] so people are in there who are passionate and committed to what’s going on._ [SL 1]

Therefore leaders saw higher levels of motivation and enthusiasm amongst their staff than perhaps mainstream teachers. The confidence of leaders about the future capability and capacity of the workforce to replenish any diminishing leadership teams stemmed from a perceived awareness of this passion present amongst the workforce. A key phrase from one senior leader summarised the collective confidence of many interviewed,
There are enough people to carry the culture, the thinking, and the beliefs and the patterns, to be able to weather the storm of change and to move it into something better. [SL 2]

This thought was combined with the statement that many existing senior leaders are still enthusiastic and energetic to work past traditional retirement age.

I would in the normal course of events be due to retire in a couple of years time. I have none of that in mind at the moment because I am still enthusiastic about the job […] I am sure that a number of people that I work alongside, who are of my vintage, seem to echo those thoughts. [SL 2]

Confidence in sufficient supply and sustaining expertise stemmed from an awareness that “sea changes” [SL 2] in institutional knowledge occur incrementally, with new leaders being segwayed in and existing leaders carrying the loss of those retiring. The transitioning of senior leaders was perceived as occurring incrementally therefore concerns about a depleting knowledge bank, or a lessening of leadership quality were low. As one senior leader remarked:

Workforce demographics in the education sector at large present a risk, as senior and middle leaders are of an age. However, these people are not going to en mass decamp, it’s going to be incremental. People will phase out. I suspect that it may be problematic but it’s not catastrophic. [SL 2]

External applicants were reported to require the extra time to acculturate to Deaf education as opposed to the home-grown internal applicant. There was however a level of confidence from most leaders, that applicants from outside the sector would be interested in senior leadership positions that arose in Deaf education. This was seen in general as a positive factor, with quality outside applicants broadening the diversity of the applicant field and bringing in new thinking.
Your top leadership doesn’t have to have been in Deaf education all their life, in fact arguably people that have been around a bit and done other things bring somewhat more than someone who’s been in the sector. They’ve often had a wider range of experiences and can transfer their understandings and skills. [SL 4]

To summarise, leaders had confidence in the calibre and depth of the workforce and a positive attitude in general towards applicant pools for leadership positions being made up of internal and external candidates. This presented a rich and diverse group from which to appoint new leaders. It was agreed that all leaders would benefit from leadership training.

‘Bread and butter’ core generic leadership skills
The next category that emerged as a finding from the interview data was the importance for leaders in Deaf education to have grounding in the basic leadership skills that are applicable to all areas of the education field. Repeatedly the leaders spoke of the common ground shared between leadership challenges in Deaf education, special education and wider mainstream education settings. The basic armoury of leadership competencies that national programmes and tertiary courses offered was seen as a vital component for strong leaders in Deaf education.

The skills of leadership, relationship management are the same wherever you are, they are just darn good skills [...] they’re good basic programmes about working with people and setting up structures. [SL 5]

As one leader succinctly termed this foundational set of skills, they are the ‘bread and butter’ basics and from here the specialist overlay of Deaf education knowledge and learning is built. This next layer of specialist expertise was seen to come from the institutional knowledge of existing leaders who had the understanding of how things work and why they work in Deaf education.
Your institutional knowledge is really important, if you lose the people with the institutional knowledge about how things work [...] that’s the biggest risk. [SL 5]

What is good for a mainstream school is good for Deaf ed. as well, then there is an overlay of Deaf education knowledge and learning that needs to happen. [SL 3]

All leaders interviewed agreed the mainstream leadership initiatives and programmes were effective and highly applicable to Deaf education, this directly answered the third research question of this thesis. Good educational leadership skills were seen as applicable regardless of the educational context a leader was in. It was made clear that a Deaf education centre is still a school it simply had a lot of additional complicating features. Leaders emphasised the fact that Deaf education was still a part of the whole education system, as one leader remarked:

*We’re not ‘specially’ special, we’re different.* [SL 6]

Leaders still required the same characteristics or qualities as their mainstream counterparts. Throughout the data the essential leadership qualities that emerged were high-levels of interpersonal communication skills and relationship management characteristics.

*The job of the senior leader is a people job. The nuts and bolts of it is people management. Those skills are generic, applicable to mainstream and Deaf education. There are some specific needs to Deaf education these can be picked up. People can learn ‘operational’ but it’s the interpersonal stuff that keeps a school going.* [SL 2]

*People often don’t realise they have excellent people skills [...] there’s a way of rubbing that magic off onto other people because it’s quite unique [...] those interpersonal skills are most important.* [SL 6]

Leader’s perceptions of programmes and development courses were that they incorporated interpersonal leadership training, allowing people to rub shoulders,
learning vicariously and through personal narratives about working with people. Stepping outside of the specialist sector of Deaf education to pursue leadership training was seen as a powerful way to increase leadership skill sets.

*I think they are highly applicable [...] it’s a really powerful learning opportunity for anybody involved in a specialist sector, like Deaf education to step out of that sector when they pursue their leadership and management training.* [SL 1]

Many of those working as leaders in Deaf education had been through training programmes such as tertiary middle management diplomas, the NAPP and the First Time Principals programme. It was seen as appropriate that New Zealand’s education system offered a core generic set of initiatives that leaders from every sector of the field could tap into.

*We had a whole bunch of people who aspired but they were technically deficient. We put 10 or 15 of them through a middle management training course [...] most of these people are now in leadership positions.* [SL 1]

The recent ‘Success for all’ government four year plan of action from 2010 to achieve a fully inclusive education system, contained endeavours for sensory education. Integration of Deaf education with the mainstream only strengthened the argument for leaders in this sector to learn leadership skills alongside their colleagues based in the mainstream. The main leadership development initiatives that arose from the interview data are summarised in table 4.6 below.
Table 4.6 Leadership development initiatives and resources most noted in the interview data

<table>
<thead>
<tr>
<th>Development initiative</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tertiary level</strong></td>
<td></td>
</tr>
<tr>
<td>– Leadership and management training at tertiary institutions</td>
<td>Strong faculty based learning available with ministry support avenues of study awards and possible release for teachers to complete qualifications</td>
</tr>
<tr>
<td>– Study awards for teacher of the Deaf placements on training courses in university.</td>
<td>Increase of places on the course by $4 million re-appropriation over 3 years as part of ‘Success for all' special education action plan</td>
</tr>
<tr>
<td><strong>Leadership programmes</strong></td>
<td></td>
</tr>
<tr>
<td>– First Time Principals programme</td>
<td>Allows networking with other Principals. Potential challenge to find appropriate mentors to match context for Deaf education leaders</td>
</tr>
<tr>
<td>– National aspiring principals programme (NAPP)</td>
<td>Open to any sector in education. Coach assigned and online learning. Has a high focus on self-reflection/learning and distributing leadership. Lead a body of staff through a change. One year duration.</td>
</tr>
<tr>
<td><strong>Emerging initiatives</strong></td>
<td></td>
</tr>
<tr>
<td>– Skills progression framework</td>
<td>To be released in 2013 offering systematic/structured clinical practice leadership pathway for advisors on Deaf children (AODCs)</td>
</tr>
<tr>
<td>– Learning and change network</td>
<td>Initiative based around schools collaborating into a network, integrating leadership practices and creating successful learning relationships. Supporting school leaders who are developing practices that contribute to system wide improvement</td>
</tr>
<tr>
<td><strong>Leadership resources</strong></td>
<td></td>
</tr>
<tr>
<td>– Best Evidence synthesis</td>
<td>Dimensions of school leadership that are argued to be linked to improving student outcomes</td>
</tr>
<tr>
<td>– Leading from the middle</td>
<td>Educational leadership document aimed at middle and senior leaders including an educational leadership model</td>
</tr>
<tr>
<td>– Aoraki project</td>
<td>Ministry project aimed at developing good leadership styles through good relationship management</td>
</tr>
</tbody>
</table>

The data assembled from the seven senior leader interviews revealed these initiatives were seen to be of most use in Deaf education. They were seen as mutually beneficial to mainstream education and Deaf education, broadening leaders’ knowledge.
Features of future leadership
Throughout the interviews with incumbent senior leaders conversations often turned towards the future landscape of the profession and what features leadership would have. When asked about the assumption that leadership in the future was important or would be as necessary as it is today, all leaders were adamant that leadership was an absolutely vital ingredient to the future of Deaf education.

*Leadership is absolutely vital.* [SL 4]

*Absolutely, nothing is effective without good leadership.* [SL 7]

Leadership was perceived by the current leaders to be ability to take people forward in the profession towards better outcomes for students.

*What is leadership? Leadership is being able to take a group of people in a direction, and my sense is always in a positive direction.* [SL 2]

That positive direction was focused on raising student achievement with a strong curriculum aim and not losing sight of the fact that we are in the profession for the children.

*Leaders that are actually focused on student achievement, to me is the paramount thing.* [SL 3]

*Curriculum leadership is the most important thing.* [SL 5]

Leaders were also keenly aware of the Deaf community and wanting the direction of Deaf education to be headed where Deaf people wanted it to go. Three distinguishing features of the future landscape of Deaf education emerged from the interview data. These were firstly cultural responsiveness, secondly effective, coordinated and equitable services and lastly collaborative and flexible team environments.
Culturally responsive leaders
Leadership that was strongly representative of Māori, Pasifika and Deaf communities was hoped for in the future. Nurturing leaders from these groups would give rise to more culturally responsive leadership. It was hoped all leaders would focus on raising student achievement and working effectively within our various cultures.

**Leadership I would hope is going to be strongly representative of our community and by that I mean there would be both Māori representation within our senior leadership within Deaf education and also the Deaf community.** [SL 3]

**I would like to see Deaf education led by somebody from within their community. Somebody who is Deaf, who has the capacity, the intellect, the skills, the experience, the training, all that’s required to take Deaf education in a meaningful way in the future.** [SL 3]

Attracting people from a wide range of cultures was more likely if Deaf education was seen as an exhilarating sector to work in. A desire for diversity of culture was also coupled with a desire to have a more balanced mix of gender and age. One leader also mentioned the ideal scenario of having a workforce that was largely fluent in New Zealand Sign Language (NZSL).

**A skillset needs to happen there, everyone would benefit from being fluent in New Zealand sign language, it’s way off the truth at the moment but if we really value the language we’ve actually got to be using it.** [SL 3]

Regardless of their ethnic culture, many Deaf and hearing impaired students share a common language of learning that is NZSL. It was expressed that a future workforce that has high levels of linguistic competency in NZSL, in all its members, would enhance the quality of education for those students.

Leadership of effective, coordinated, equitable services
Leaders had a vision of a collaborative matrix of services for Deaf children that strived for early, effective and coordinated services that were equitably available throughout the country. These aspirations were influenced by the national plan for
Deaf education, the New Zealand disability strategy and the 2001-2006 service design group in Deaf education. Leaders aimed for a national Deaf education centre network that offered coordinated services and put New Zealand on a par with world best practice.

That matrix of services and that service design group was able to capture a vision for Deaf education that said ‘what we really want is early, effective, coordinated services for our kids that are equitably available throughout the country […] we’ve got some severe demographic challenges in our country in terms of where our students are situated […] We need leaders who can make sense of the individualised learning programmes whether that be at one end of the country or the other and we can do that. [SL 1]

This was to be achieved by cohesion of national governance with a unified workforce working towards an agreed overarching strategic plan. The challenge for equitability was due to the geography of where students were and where the workforce was situated or preferred to be.

Collaborative and flexible leadership teams
Leaders in this study envisaged a collaborative landscape in the future that built national and international links. There would be opportunities to develop skills through strong internal and external support systems and an ethos of sharing ideas through a rich variety of professional perspectives. Future leaders needed to be highly suited to the job by showing flexibility, responsiveness, strong information technology, communication, and relationship skills. These leaders needed to be able to deal with complexity, be change ready, and comfortable in an environment that uses increasing amounts of technology.

Collaborative leadership […] we’ve got to build those links […] opportunities that leaders can have in developing their skills, not just from the internal support but external as well […] with a wider range of teams and collaborating you’ll get there, because it’s about gathering different perspectives and different understandings […] through collaborating and talking and sharing ideas you generate a vision and a future that’s appropriate and relevant to the range of students and families and schools that you provide services to. [SL 7]
Leaders saw the existing talent pool as important to produce applicants from within the sector for leadership positions. However repeatedly, leaders commented on the desire to also attract applicants from outside the specialist area of Deaf education, to broaden and deepen the quality of leadership.

*I'd like to see partnerships with mainstream schools, because you get people who are very good leaders who won’t look into special ed. How do you get a deputy principal of a mainstream school to think ‘I'd like to get involved in the management structure there’ you don’t tend to get that, it tends to be people from within [...] you might be able to bring leadership from other schools to give us fresh blood.* [SL 6]

*Sectors can sometimes be quite insular and narrow in their thinking and someone who doesn’t necessarily accept everything which is taken as guaranteed, can kind of break things up and start some new directions.* [SL 4]

Overall, it was found that future collaborative and effective teams would need to be made up of a rich applicant field of internal and external candidates. Internal candidates bringing a wealth of specialist expertise and external candidates bringing with them mainstream leadership tenure, expertise and new thinking.

**Part III Synthesis of the web-survey findings and the interview findings**

The heart of this research set out to investigate three questions. Firstly, to establish what the current demographic picture of the teaching and leadership workforce looked like across New Zealand. The web-survey in this research provided evidence based information on the workforce. The interviews provided informal perspectives. Secondly, the study aimed to establish the succession planning strategies used to transfer leadership knowledge and develop aspirants. Evidence from the survey proved there was a group of aspirants and interview data revealed the strategies used to develop leaders. Thirdly, the research asked how effective leadership initiatives from the mainstream environment were for the specialist field of Deaf education. As mentioned, perspectives from the leaders revealed how relevant and important these were seen to be. The web-survey provided evidence for what leaders
informally understood or had ‘hunches’ about but no data to support their views. The purpose of this part of the chapter is to start the methodological triangulation that the mixed methods design of this research lends itself to. Before synthesising, it is important to summarise what parts I and II revealed:

From the survey it was found that:
- The workforce is dominated by females
- Workforce age is skewed (40% > 55 years old)
- The workforce is loyal/committed to the sector
- There are reluctance factors and driving factors for leadership
- Three key sub-groups exist in the workforce in terms of leadership succession – 17 aspirants, 20 middle leaders with tenure and 11 senior leaders with long term commitment to remaining leaders

From the interviews it was found that:
- Leadership teams are perceived to be ageing
- All aspirant talent needs to be encouraged
- There is confidence in the depth and calibre of the workforce to lead
- Core generic leadership training/skills are seen as vital
- Future leadership needs to be culturally responsive, collaborative, flexible and deliver effective, equitable and coordinated national services for Deaf children

Laying the key findings side-by-side in this way revealed new depths of understanding about the workforce. Synthesising the findings led to three main synthesis factors, reported here as findings.

**Ageing workforce**
Evidence from the survey data and the leaders’ perspectives confirm that age in the workforce is skewed towards retirement and that this skew is particularly prevalent in leadership ranks. Currently around 40% of the Deaf education workforce is over 55 years old and therefore eligible to retire within the decade. Of the middle and senior leaders who took part in the study, 48% (n=23/48) were over 55 years old. So it was clear that within the decade a large proportion of both the Deaf education leaders and indeed the workforce that would replace them would be eligible to depart from the system. The evidence from the survey confirms what the leaders informally suspected around workforce demographics but had no national data to back up their
claims. The information in the survey confirms the guesswork and estimations that the leaders made in the interviews. Leaders’ comments used uncertain and doubtful wording in their responses about demographics.

*I think it’s fair to say that there is an ageing workforce in the leadership positions.* [SL 1]

*Probably predominantly ageing.* [SL 5]

*I don’t really have a good picture of who might be in our workforce.* [SL 4]

In addition to having large numbers of the workforce over 55 years old and potentially retiring within the decade, Deaf education is a highly specialised profession that has a very small percentage of people in their 20s. There are zero people at middle and senior leadership in their 20s and of the people who took part in this study just over 2% (N=4/162) were in their 20s. This contrasts with numbers of professionals in the workforce over 60 years old that was approaching 20%. It was highly evident the profession was skewed towards the older end of the spectrum. The evidence from the survey also revealed the size and demographic make up of the young aspirant group in the workforce in addition to the middle management group and the motivational intentions of incumbent senior leaders. In the interviews the leaders had given optimistic signals of people in the workforce willing and able to succeed but their views were not based on any statistical data.

**Motivation to lead**

Leaders reported strong optimism in interviews about being able to replace senior roles in the future if large numbers of leaders exited the system. Their confidence and positive outlook was based on their professional opinions and personal judgements about the depth, calibre and motivation of the workforce.

*I’m optimistic about it, I think it will develop.* [SL 5]

*Yes I do, I have absolute confidence, absolute confidence, we’re getting there.* [SL 3]
Absolutely, I really do [...] If we can’t find 10% of that trained teacher workforce to aspire then we’ve got to come right back to the sorts of things we were discussing as behaviours. What are leaders doing about portraying this as rewarding and worthy work. [SL 1]

These perspectives were unfounded on any data from the workforce or leader’s own organisation demographic files. Despite the strong optimism from leaders the survey data revealed an average motivation to lead score of just 0.44 out of 5. So it was clear that the vast majority of the workforce was not motivated to lead. Reluctance from middle leaders to become senior leaders was also evident from the survey data and the interviews. Isolating the twenty middle leaders with long remaining tenure only 2/20 were strongly motivated to become senior leaders compared to 11/20 that disagreed to some degree. This group of middle leaders form the pool of successors to senior leadership and largely indicated they wanted to remain as middle leaders when asked. Specifically, motivating middle leaders to step into senior positions was an issue.

I feel there’s been a reluctance to go any further than that [...] anything more ‘meaty’ requires a lot more time and effort and people are reluctant to do that. [SL 6]

There is still a big step in that middle management to senior management [...] it’s a very big step up. [SL 5]

The national survey revealed that there were two main drivers for leadership in Deaf education and also four factors that made people unmotivated or reluctant to lead. The reluctance factors were what needed to be overcome with encouragement and support strategies to attract people into leadership, particularly senior positions.
Drivers for leadership
  o Cultural connection
  o Emotive impluses

Reluctance factors
  o Health
  o Family constraints
  o Bureaucracy/workload
  o Indirect influence of leadership

Reluctance factors relate specifically to stepping into leadership, they do not refer to whether a person intends to remain in the profession. The workforce in Deaf education was loyal and committed. The survey data found a very strong significant relationship \( r=0.823^{**} \) with \( r^2=67.7\% \) shared variance between the years since qualification and subsequently years spent in the profession. It was clear when people qualified they remained in Deaf education. This was further supported by the 75.1\% of the workforce who either strongly agreed or agreed to stay in Deaf education. Views of leaders also supported this notion of commitment to the profession.

Nobody becomes a teacher of the Deaf by accident, it's always by design [...] you train in the postgraduate environment because you choose to [...] so there's people in there who are passionate and committed. [SL 1]

Passion and commitment to the profession seem established however this passion did not directly prove that people were motivated to necessarily to become leaders in the sector. The reluctance factors listed relate directly to barriers for leadership.

Leaders interviewed were aware that large numbers of experienced people could soon exit the profession, they saw this as problematic but not catastrophic. Leaders had confidence that workforce replenishment and leadership sustainability were not major issues because people would leave incrementally instead of en mass. Survey data revealed a significant \( r=-0.213^{**} \) relationship between years in Deaf education and hours worked, meaning the longer a person worked the more likely they were to reduce their hours. However, evidence from the survey also revealed that all senior
leader positions were full time positions and 94% of middle leaders were currently full-time. It became clear that a leader could not reduce their hours as they neared retirement. Data also proved that senior leaders intended to stay in their positions and strongly disagreed with the idea of moving down to a more junior position. Classroom teachers in the workforce who signalled in the data they intend to semi-retire or retire within the next 5-10 years had very low motivational scores to lead but relatively high (3.74 out of 5) scores to remain in the profession in some capacity. Those at teacher level were therefore more able to taper off, reduce hours and phase into retirement in such an incremental way. However this same pattern did not pertain to leadership roles, it was clear that leaders exiting the system were likely to do so from their most senior position and from a full-time basis.

**Development of future leaders**

The first two synthesis factors of ageing leadership and motivation to lead influence this third synthesis factor of how to develop leadership talent. The trend that the workforce is ageing and that there are reluctance factors to be overcome means development of future leaders is placed in the spotlight. Leadership development opportunities were recognised as essential ingredients to making strong leaders. The survey data also revealed that aspirants were passionate and keen to develop further leadership skills.

However, both the survey and interview data found that there was no formal leadership development pathway or mandatory leadership course that aspirant leaders are asked to undergo prior to entering leadership roles. The current system of talent identification and succession planning is based on shoulder tapping, volunteerism and self-nomination. Learning on the job and being given ‘out of comfort zone’ roles and surrounding the new leader with in role support seems to be the current method of developing leaders rather than preparing them prior to being in the job.

*It’s the intensity of the experience not the duration that creates a leader […]*  
*It’s actually imperative, it’s a vital part of gaining experience to be outside your comfort zone […] intentionally putting people into a learning on the job space.* 

[SL 1]
In the workforce there is a small group of aspirants who are highly motivated to lead. This group included current teacher, middle and senior leaders. Of these 29 highly motivated aspirants the average age was 50 years old and 17 of the 29 had long tenure (between 10-35 years) remaining. There was a significant correlation between motivation to lead and level of leadership, so those who were motivated were motivated to lead at the highest level. This small, motivated group of aspirants were diverse in terms of experience, gender, age, culture, Deaf hearing mix and level within organisations. They appear to be at the heart of the sector’s future leadership development. The current mind-set of encouraging leaders is to place them in a leadership role and from there support and develop them. Internal support systems are based largely on conversational mentoring and external development options are available for the aspirants to opt into if they choose. These issues of an ageing workforce, motivation to lead and the development of future leaders form the subheadings for the discussion in Chapter five.
Chapter 5: Discussion

Introduction
This thesis has provided New Zealand based, Deaf education focused, new findings about the topic of leadership succession that has been largely marginalised and only given limited attention to in the wider educational literature (Rhodes & Brundrett, 2006). These findings are now discussed in light of the literature reviewed in Chapter two under the three main subheadings of ageing workforce, motivation to lead and development of future leadership. The three subheadings were informed by the major findings from the final synthesis section of Chapter four.

The start of this thesis recognised the risk of assuming the necessity of leadership was a fait accompli. The literature recognised ensuring a supply of middle and senior leaders was of key strategic importance (Rhodes, et al., 2008) and responses from senior leaders in Chapter four argued leadership was absolutely vital in the future landscape of Deaf education in New Zealand. In addition, it has been established that Deaf education has a disproportionally high amount of teachers and leaders who are nearing retirement eligibility over the coming decade. Leadership therefore, has a central place in the future landscape of this sector.

Ageing workforce
As explained in Chapter two, demographic statistics and research reveal that we are at a unique moment in history in terms of population ageing and demographic structure. An ‘age wave’ or ‘tipping point’ has arrived as the first of the unusually large post-war baby-boomer generation reach traditional retirement ages in workforces of the western world (Hewitt, 2009; Mullen, 2002; Pitt-Catsouphes, 2007; Shaw, 2002; Statistics New Zealand Tatauranga Aotearoa, 2006; World Health Organisation, 2010). It is widely accepted in the literature that these ageing demographic trends are present and findings are indisputable and immutable (DeLong, 2004; Shaw, 2002). In the New Zealand context the largest increases were seen to be scheduled for the 2021-2031 decade (Statistics New Zealand Tatauranga Aotearoa, 2006), so succession issues will worsen well beyond the current decade.
In New Zealand’s mainstream education workforce, statistics showed that around one third of school leaders were over 55 years old (Brooking, 2007; Ministry of Education, 2011). The findings from this study revealed that Deaf education has close to 40% of its general workforce over 55 years old in 2012 and close to half (48%) of those in leadership positions were over 55 years old. New Zealand’s mainstream statistics in 2011 showed principals over 55 years old made up 44% of the principal pool and senior leaders over 55 years old made up 37% of the pool directly down from the principals (Ministry of Education, 2011). By comparison, 64% of Deaf education’s most senior leaders were found to be over 55 years old and 41% of those in middle leadership are over 55 years old. It appears that at both principal, senior leader and middle leadership levels, the ageing leadership workforce issue is more accentuated in the Deaf education sector. Therefore the succession problem is more pronounced here than in mainstream New Zealand education. These percentages tie in with Eacott’s (2010) predications for retiring leaders over the next five years in mainstream education in Australia. In this New Zealand study, I discovered the average age nationally of senior leaders in Deaf education was just over 56 years old and the average age of middle leaders just under 50 years old. There was optimism from senior leaders that they would remain working full-time past 65 years old, however findings revealed that currently only 3% of the workforce were working past this traditional retirement age.

The literature argues that forward thinking schools have already begun to recognise that a substantial proportion of the workforce will retire in the next five to ten years and are preparing to avoid a human-capital crisis (Fink & Brayman, 2006; Pitt-Catsouphes, 2007). In reality the situation seems more complex than this, schools do seem to recognise there are issues with ageing workforces but have not made steps to determine age profiles or establish formal pro-active preparatory structures. The succession issue presented by the ageing workforce and leadership appears to be more of a national problem with policy response needed rather than individual schools being able to solve the issue. Interview data from this study exposed a lack of awareness amongst Deaf education leaders of the demographic picture in the mainstream and what demographic figures looked like specifically in Deaf education. The uniqueness of the demographic moment and the proportions of leaders and the workforce at large that were likely to be separating from the system within the decade seemed not to have been brought to leader’s attention in detail. The concerning
patterns in the data and the literature were that many of the senior and middle leaders and indeed experienced teachers, who would be the natural sources of succession, would also be leaving the system due to their age. This concern was echoed by (McCulla, 2007) in their Australian based research about professional development of a new generation of school leaders. The pools of potential successors in Deaf education look shallow. In this study, teachers of the Deaf in their 20s made up just 2% of the workforce and teachers of the Deaf in their 30s made up 16% nationally.

Leaders seemed very confident that succession processes would be manageable. Historically they had always been able to fill leadership vacancies despite never having had a situation where they had been oversubscribed. Leaders could not envisage a shortage of appropriate applicants for professional leadership roles. The assumption embedded in these perspectives was that the future demographic trends would continue to be as they have been in the past. This study and a majority of the research sourced looked a maximum of ten years ahead and indicated this is not the case. Rather, workforces are undergoing a unique gerontological transformation. Within schools there is a growing awareness they could face a human resources crisis. The literature comments that ensuring leadership succession is a pressing reality and vitally important (Brooking, 2008; Fink & Brayman, 2006; McCulla, 2007). However, recognising the importance perhaps oversimplifies the actual task of preparing for such a crisis. The complexity begins to be unpacked when we see schools are not responsible for overseeing the entry and training of people coming into the profession. In addition, people may want to retire at a later stage.

As noted, the interview data for this study showed an optimism and complacency perceived amongst senior leaders in Deaf education about the steady supply of successors. This optimism and over reliance on a naturally occurring applicant pool continuing, could lead to inaction about succession. If the demographic peak of the retirement wave is to occur in the decade after this (2021-2031) then retirees of that decade will be those who are currently aged in their 40s, assuming retirement age remains at 65. In New Zealand’s Deaf education workforce nearly 82% of people are currently over 40 years old. Ageing leadership, compounded with dwindling numbers of applicants and a negative perception of the role of leader due to workload, impact on health, and family, mean that motivation and leadership development are key
aspects of a sustainable succession structure that is becoming increasingly needed. This is supported by Earley (2009) when speaking about international trends in education workforces. This research indicates that such a planned succession structure is especially needed in Deaf education over the coming decade and beyond. Nurturing latent talent and encouraging leadership preparation and development structures are needed to increase people’s motivation to lead in Deaf education.

**Motivation to lead**

*Emotive and cultural connections to Deaf education*

Quantitative findings in this study showed a committed and passionate workforce in Deaf education, with just over 75% agreeing to stay in the sector full-time and approximately 86% of employees being content to stay in their current role over the next five years. Two patterns emerged from the workforce’s comments about why they were motivated. The comments revealed a deep emotional connection with working alongside Deaf students, in addition to each member of this workforce being connected to Deaf culture in some way. This ties in with Caldwell’s (2008) research that talented practitioners display a passion for teaching and learning. It is clear that Deaf education practitioners have a special emotive and cultural connection to the students they serve and workforce comments strongly showed part of the reluctance of moving into leadership is losing that direct contact with teaching them.

In relation to this, leaders in the interviews explained that people working in Deaf education have shown a commitment to the profession by undergoing the required additional specialist teaching postgraduate diploma to teach in this area. The strong statistical relationship discovered between the years since qualifying as a teacher of the Deaf and subsequent years spent in Deaf education ($r=0.823**$) strengthens the evidence that once people enter Deaf education they have a strong tendency to stay for the length of their career. This data based evidence refutes the argument in the literature that Ingersoll (2003) makes regarding teacher turnover in the mainstream, Deaf education in New Zealand appears not to show this tendency. Attrition and migration were seen by Ingersoll (2003) as more critical factors than the threat of a retiring or greying workforce. Firstly, the evidence discovered in this thesis reveals, teacher attrition, where people move out of the profession to seek alternative pathways, is highly unlikely in this specialist sector as people have specifically
trained. Secondly, teacher migration numbers between schools does not apply to Deaf education as this study covered the entire Deaf education network in New Zealand and the demographic figures remain the same whether people move to any of the three locations within the national Deaf education network. Loyalty to the profession and passion to work with Deaf students does not necessarily mean people in the sector are also passionate about leadership. In order for leadership motivation to take hold, a central quality was for current leaders to portray the role in a positive way.

**Portrayal of the leader’s role**

In order to encourage aspirant talent to pursue leadership pathways the leaders interviewed in this study recognised the need to portray the job of the leader as something manageable and stimulating. Incumbent leaders were hoped to be seen as role models for leadership so that aspirant leaders would see that the job is doable, rather than something to be avoided. In this way leadership would be portrayed as a positive challenge that was rewarding and fulfilling to discharge, and worth engaging in.

This positive role modelling is desired yet the literature points out that the job of the leader in education is becoming increasingly perceived as daunting and overly demanding. Internationally there is a trend of stress and workload wearing down people’s ability to manage, to a level of unsustainability as well as asking for high amounts of emotional labour. These trends result in aspirants becoming discouraged, so there is subsequent decline in applicant numbers for leadership positions (Gronn, 2007; Pont, Nusche, & Hopkins, 2008; Wildy, et al., 2009). Alongside this trend, inadvertent disenchantment signals being emitted by leaders can make talented potential leaders reluctant to face the prospect of losing control over their lives and being immersed in administrative overburdening (Earley, et al., 2009; Rhodes, et al., 2008). This thesis was no different, the workforce sighted workload and administrative bureaucracy that they perceived current leaders dealing with, as reluctance factors for applying for leadership. The challenge of incumbent leaders is to encourage aspirants by portraying the role positively and impart the skills to cope with the job. Preparation coupled with mentoring and in role support were all encouraging steps that helped overcome the reluctance barriers and weaken the perceived unattractiveness of the leader’s role (Bush, 2010).
Reluctance factors

Findings from this study revealed four key reluctance factors noted by the workforce that they perceived would inhibit their move into leadership positions. These factors were the impact on family commitments, the detrimental affect on health, the bureaucratic workload and finally the indirect contact with students. The vast majority of the workforce was reluctant to lead, producing an average motivational score of 0.44 out of 5 (0= Strongly unmotivated, 5= Strongly motivated). However, of those who were motivated it was interesting to note the significant relationship between motivation and level of leadership. As the level of leadership became more senior, the number of applicants reduced, but the strength of those aspirants’ motivation intensified. Paradoxically, as the level of motivation increased, the strength of the reluctance factors also amplified. Only the most motivated applicants with the least susceptibility to reluctance factors appeared in the applicant pool for the most senior positions.

More people were willing to overcome the smaller reluctance barriers to enter middle leadership than senior leadership where the factors intensified. Data on middle leaders from this study revealed a large proportion (n= 11/20) disagreed with the idea of entering senior leadership. In summary, the same reluctance factors were present as teachers moved through the ranks of education. The intensity of these factors increased as the level of position became more senior and consequently the applicant pool becomes smaller. Development of future leaders in Deaf education seems dependent on overcoming these reluctance factors.

A key to reducing the reluctance barriers and encouraging people into leadership was establishing a feeling of trust. Spending time and energy investing in building the strength of trusting professional relationships between incumbent leaders and talented aspirants was beneficial to unlocking feelings of anxiety about leadership responsibility. A vital ingredient to creating trusting relationships with colleagues were the soft skills or interpersonal expertise that trusted leaders were seen to possess (Caldwell, 2008; Cardno, 2012). As leaders interviewed as part of this study explained, leadership is a relational job and giving aspirants a sense of emotional well being in the environment they work in seems important to establishing trust. Once trust is established an embedded long term, the succession planning framework to retain and develop future leaders begins to emerge.
Development of future leaders

Pro-active rather than reactive

As mentioned in Chapter two, the term succession in the literature refers to long-term thinking relating to personnel leadership needs (Rhodes & Brundrett, 2009). It is based around strategic forward thinking, essentially being pro-active in creating a collaborative climate and school cultures that encourage leadership while growing a high quality talent pool. The key difference established in the literature between succession planning and replacement management is the length of time invested in developing leaders who are able, qualified and experienced enough to take over when the time is right.

Planning for succession is not just a reactive response to job replacement resulting in fire-fighting staff vacancies. It assumes that incumbent leadership is sufficiently skilled to look forward and bring about the necessary interest and development of staff who have shown talent, potential and an aspiration to develop further in this way.

(Rhodes & Brundrett, 2009, p. 393)

A key responsibility of current leaders in the field is to have foresight and the strategic leadership development skillset to pro-actively search out talent and put infrastructure in place to sustain career path planning, prior skills training and mentoring (Cardno, 2003; Macpherson, 2010; Timperley, et al., 2007). The interview findings in this study revealed current leaders in Deaf education were aware of this responsibility to an extent. Leaders knew it was a matter of pro-actively finding people and that “if you just let it happen, it won’t” [SL 7]. As noted in the literature, successful schools do not wait for leaders to come along, but instead seek out high potential people (Kotter, 2001).

Research on New Zealand’s mainstream education sector revealed negligible preparation for Principalship and raised serious issues of supply and quality (Macpherson, 2010). The consciousness that Deaf education leaders showed in interviews to be pro-active about developing leaders manifested itself in the succession strategies stated in the findings chapter (see Table 4.5, p. 77). These succession methods centred on career progression, conversations that offered support and mentoring whilst aspirants were in middle management roles. It seems
that in Deaf education the approach was more orientated towards replacement management than long term succession planning. The focus was still short term, individually focused and reliant on volunteerism and self-nomination. To be reliant on a naturally occurring pool of talent appears risky given the demographic information found in this thesis. Early adaptor schools are ones that realise true succession requires careful management and planning, taking in a broader leadership systemic mentality that embeds a sustainable preparation pipeline of school leaders (Duff, 2010; Gronn, 2007; Wildy, et al., 2009; Zepeda, et al., 2011).

Preparation of leaders

Currently there is no mandatory leadership qualification, programme or training to become a senior leader in New Zealand education (Cardno, 2003). Through the findings in this research, it has become highly apparent that within the Deaf education workforce there is a small group of highly motivated aspirants with long remaining tenure. As proven by their comments from the national survey, this group have a strong desire to improve their skills and undergo training. It appears current succession methods are based on in-role development of aspirants rather than pre-role preparation. There is little emphasis on pre-employment formal qualifications, training, or induction into the role of leader. Instead, the system seems reliant on aspirants seeking out post-employment self-directed development. Leaders interviewed repeatedly spoke of offering encouragement and support to those neophyte leaders who step up into management and the importance of feeling out of their comfort zone to provide intense learning experiences whilst in the role of manager or leader. This ties in with connotations in the literature that leaders have been found to learn to do what they are required to do on the job from their peers, where the experience gained in middle and senior management is viewed as valuable preparation in its own right (Cardno, 2003).

This current development mind-set contrasts the message coming out of the educational leadership literature that emphasises the importance of leadership preparation rather than development. Recent literature on educational leadership development is emphasising the need to ‘beef up’ training for those aspiring to leadership (Mendels, 2011). This notion of the need for formal pre-employment preparation was also pointed out nearly a decade ago in the literature, where it was strongly recommended to develop a cadre of aspirants who burnish their skills prior
to adopting the leadership role (Cardno, 2003). As pointed out, “what is urgently needed now is agreement to develop a strategy for pre-employment preparation for the future leaders of New Zealand schools” (Cardno, 2003, p. 10). It seems the literature has been pushing the idea of leadership preparation for some years (Wildy, et al., 2009), yet the focus of leadership succession methods in Deaf education has remained reliant on experiential learning and in role development.

Leaders interviewed in this research had a confidence in future cadres of talent being established due to more people entering the system as new graduate teachers of the Deaf. The influx of more graduates coming into the sector from government re-appropriation of funds is leading to the assumption that more people will want to enter leadership. Leaders seemed confident and optimistic that more people at classroom teacher level inevitably meant leadership recruitment would be eased. Fresh graduates coming into the system was welcomed, viewed as new thinking, new energy and ideas. However, findings from this research draw a distinction between people’s passion and commitment to the profession and their motivation necessarily to be a leader. As mentioned, the vast majority seem reluctant to enter leadership despite being very passionate about working in Deaf education. Ensuring new graduates are coming into the profession is therefore not sufficient in ensuring leadership succession will smoothly occur. As the literature points out, it is essential that the small group of aspirants have formalised support through implementation of a comprehensive system plan for leadership preparation (Cardno, 2003).

New people coming into the field of Deaf education can enter through gaining the postgraduate diploma in specialist teaching (Hearing Impairment) to become a teacher of the Deaf, whereas at senior leadership level they can come directly from the mainstream education sector. Advantages of the home-grown candidate who has come through the ranks of Deaf education and stayed within an organisation are that they have an intricate understanding of the specialist sector, the culture and processes. Leaders interviewed in this study accepted this and advocated for the internal candidate, but also repeatedly revealed the advantages of external candidates who brought in fresh thinking and challenged the conventional. As the literature points out, a mixture of internal and external candidates, and leaders from a diverse educational background can be complimentary rather than antagonistic (Macbeath, 2006). Formalised leadership development infrastructure would include
mentoring and evaluation of new aspirants whether they were from an internal or external background. Guidance would be given to help overcome weaknesses uncovered and information provided to the aspirant about what professional growth needs to take place in certain areas of their skill set (Mendels, 2011). Government policy also affects the requirements for Deaf education professionals and therefore impacts on the need for such succession infrastructures.

**Government policy influence**

Internationally, governments are recognising the need for national investment in succession strategies and it has been strongly noted this needed to include a combination of pre-service and in-service elements (Bush & Jackson, 2002; Macpherson, 2010). As noted, the New Zealand government has recognised the need to strengthen investment in leadership training and moved towards providing optional national training development programmes and support links to preparatory tertiary leadership qualifications (Macbeath, 2006; Piggot-Irvine & Youngs, 2011). These programmes included the First Time Principals course and the NAPP that are optional courses. However, as the literature comments, it could be conjectured that this might be a pre-cursor to a pre-employment requirement that all aspiring candidates will have to participate in some form in the future (Cardno, 2003). The fiscal environment at government level has produced fickleness to policy change. When asked about workforce planning, senior leaders in Deaf education explained that one of the big influences of volume is really how the government decides to utilise those workforces. Government policy and initiatives could unexpectedly alter the required volume for a type of professional, such as teachers of the Deaf. A new initiative could be brought out that suddenly doubled requirements, or do the opposite, that complicated future workforce planning and investment in succession structures. Data from the interviews also seemed to be focused on ensuring an adequate volume of graduates coming into the profession and not so much on quality the of these candidates. Some concern and mixed confidence was raised in the interview data about the quality of new graduates. New graduates were not perceived by leaders as having the same ability to build a programme or assess someone’s language. These skills were explained to take years to gain once in the profession and therefore workforce planning for Deaf education needed to incorporate transference of these skills to newcomers.
In terms of workforce planning there seemed to be more clarity about the role of the advisor on Deaf children with a decision having been made that advisors will be part of the government’s future workforce. A Skills progression framework has been put in place for these professionals to develop leadership skills in a practice route. This group of advisors make up approximately 15% (N= 35/200) of the national Deaf education workforce. With the role of the advisor secured and the recent government decision to combine the two DEC Boards of Trustees, it seems New Zealand is perhaps heading towards a national network that governs Deaf education and influences policy.

It has been established that Deaf education has an ageing workforce and that succession pathways need to be formalised. Examples in the literature clearly show that it is possible to have healthy applicant numbers despite an ageing workforce. An ageing workforce and succession issues are not necessarily linked. Singapore, Japan, Hong Kong, and Korea all show similar ageing workforces in education and yet the research reports that they have less of a succession crises due to formalised and well structured succession planning, workforce recruitment and demographic forecasting (Bush & Jackson, 2002; Macbeath, 2006). The survey data in this research found that 87.9% of teachers of the Deaf trained in New Zealand and none of the workforce trained in Asia where these successful models are reported. New Zealand Deaf education is therefore not getting any direct influence from the Asian education models. A policy shift in New Zealand’s educational leadership development, towards something akin to the Asian model, perhaps is needed to avoid a leadership vacuum (Wildy, et al., 2009).

**Developing a leadership culture**

As explained in Chapter two, succession planning involves ensuring leadership sustainability, talent identification, recruitment and retention. Collectively, these facets make up the organisational mechanism of succession planning. Succession is therefore not a series of single aspirants forging their own career paths independently, but creating a collaborative environment where notions of leadership preparation and development thrive (Collins, 2001; Rhodes, 2005). This collective mechanism can be perceived as a pipeline of individuals all at different stages of development. Generating succession pipelines of aspiring leaders requires a climate change to occur within a school to create a leadership preparation and development
culture. Such culture shift does not come from a fiat but instead the cooperation of many hands, and there will always be resistance to such change (Choi, 2011; Mendels, 2011; Stensaker & Meyer, 2012).

Interview data in this research found that leaders highly valued collaboration and flexibility in leadership teams. Change ready personnel and sharing skills to build up a broad set of expertise was seen to be a key ingredient for effective leadership. Survey data however, revealed reluctance factors and a significant amount (86.3%) of people wanting to stay in their current role indicating a resistance to changes in responsibility level. It appears leaders understood and attempted to establish more collaborative environments that generated flexibility, but they came up against resistance and reluctance factors in doing so. This appears to be one of the challenges of establishing a succession pipeline and leadership development minded culture.

The educational leadership literature clearly states that the traditional journey towards leadership has been an incremental and gradual process where face to face teaching is replaced with more management activities and a person’s organisational knowledge accrues over time (Bush, et al., 2010; Cardno, 2012). In addition to their basic leadership training and qualifications, leaders build up specific knowledge of the school they work in and indeed their sector of education. In this sense, leaders become contextualised specialists in the environments they manage in over time, as Bush (2010) explains: “outstanding leadership is exquisitely sensitive to the context in which it is exercised” (p.115). Findings from this thesis concurred with this notion. Interview data revealed leaders perceived the mainstream leadership competencies that development programmes such as First Time Principals and the NAPP offered, to be valuable but the leader then needed to accrue the specialist contextual overlay of expertise that were unique to leadership in a Deaf education centre.

The implication is that specialist knowledge requires time to build up and an ageing leadership workforce only provides a limited window for aspirants to attain qualifications, training and the contextual overlay before they are needed to assume leadership. It has been recognised that increasingly in education, middle managers are entering senior management through necessity after a very short functional track and rapid promotional velocity possibly over multiple school sites (Hewitt, 2009;
Johnson, 2004). Internationally, some schools are now attempting to put into place strategically implemented knowledge management architecture in response to the need for a more planned learning of context specific leadership. Aspects of such structures include programmes that pair retiring principals with talented novices in a form of mentoring that consists of at least four hours 1:1 time per month (Mendels, 2011). Succession structures that align career timelines of existing leaders with the growth of aspirant talent, help build up the pipeline of future leadership. Such effective succession planning can help overcome the many common stumbles encountered by new leaders (Mendels, 2011).

Although not the focus of this thesis, the study did uncover the disproportionate gender spread within the Deaf education workforce. The dominance of females at classroom and middle management and the high representation at senior management level presents some opportunities for further study to take place. The next chapter explores the strengths and limitations of the research design and also presents the conclusions and recommendations from this study.
Chapter 6: Conclusions and recommendations

Introduction
This research is the first national study of Deaf education in New Zealand and has focused on workforce demographics, motivation and succession planning needs. As mentioned in Chapter one, this thesis set out to investigate the quietly lurking succession planning issue that appeared to be emerging in Deaf education. No research had been done to establish any imminence concerning a succession issue in this small sector of special education in New Zealand. This research had three aims and guiding questions. In relation to the first aim, this research has uncovered the demographic profile of the workforce and consequently the timeframe and need for succession planning to replace leaders. Secondly, the research found the current school specific methods used to transfer knowledge and develop aspirant talent. Lastly, this study closely scrutinised the effectiveness and applicability to Deaf education of mainstream national leadership development initiatives.

Each research question emerged as a main finding and discussion heading in this study. Question one resulted in findings and discussion about the ageing workforce in Deaf education. The second research question raised data and discussion about succession strategies to deal with aspirant motivation to lead. Lastly, the third research question explored the need to develop future leaders through government and school succession initiatives. Collectively, these three prongs of this project have shed light on whether we are beginning to see the yellowing leaf (Shakespeare, 1892) of leadership in Deaf education in New Zealand. The study also fills a gap in the knowledge about this specific specialist sector of education, whereas previously there was no evidence-based data on the leadership capacity.

Strengths and limitations

Strengths
A major strength of this research is that it is the first national study of the population of New Zealand’s Deaf educators. The findings of this research are new. The research conducted in this thesis and the data collected breaks new ground in the knowledge about the workforce and leadership in New Zealand Deaf education. New
Zealand is now uniquely placed, as it may be one of the only countries in the world that has had research conducted on its national Deaf education workforce, gathering specific quantitative and qualitative data about its demographic features and motivational intentions. This project stands alone as the only national study into Deaf education and consequently all school and Ministry of Education strategic discussions around workforce planning can now be conducted using evidence based data. Another strength of this thesis was the mixed methods research design, it enabled me to perform methodological triangulation of the data sets. Synthesising the quantitative and qualitative data led to significant findings that would not have surfaced using purely quantitative or qualitative methods. The added overlay of using two research tools to approach the problem from different angles, strengthened and deepened the conclusions found in the study. This mixed methods design captured individual in depth views from leaders nationally, comments from educators and quantitative data on the national workforce. The quantitative data identified demographic trends of the Deaf education population of New Zealand.

Another strength was the administration of the national survey. The approach to forecasting and explaining the purpose of the survey prior to the launch of data collection was well thought out and brought each of the organisations on-board with this aspect of the research. Senior leaders and middle managers were presented with the context of the study and the nature of the national online survey, these leaders then forecast the upcoming survey to their teams and school newsletters and websites also promoted the upcoming research. Due to these thorough preparations and on-going reminders during the five weeks the online survey was available, an extremely strong response rate of just over 80% (N=162/200) was collected which strengthened reliability of the findings. In addition, securing the seven senior leaders’ consent from across all three national providers for Deaf education required a large amount of relational trust building and explaining of the worth of the research. Securing appointments in senior leader calendars and organising domestic air travel to conduct interviews face to face meant conditions for all interviews were consistent and strengthened validity of the interviews. This first national study provides new evidence-based, national data relating to succession planning, a topic marginalised in the mainstream educational literature, scarce amongst special education research and non-existent in the specific field of Deaf education.
Limitations

Three limitations were overcome during the data collection phase of the study. Firstly, three members of the advisory cohort of the workforce felt question ten in the survey did not adequately cater for their specific advisory role. In question ten (Appendix C) the three option boxes of classroom/resource/advisory teacher, middle management/team leader, or senior leader, did not accurately match their perception of their role. To solve this issue without affecting advisors who had already ticked ‘advisory teacher’ and completed the survey, an option box was added and these three people were able to write ‘Advisor on Deaf children’ and submit their response to the survey.

Secondly, the drop down box to answer question six started at ‘1971 or earlier’ and went by individual year from here down to 2011. This scale should have been the other way round starting at 2011 at the top of the drop down box and descending from here. During SPSS analysis this was picked up and solved by realising the correlation was positive \((r=.230^{**})\) rather than negative.

The final limitation to be overcome in the study was to gain ethical approval from the Ministry of Education for the research materials being used. In addition to the tertiary ethics clearance that had been gained prior to commencement of data collection, the research materials were also submitted and underwent ethical scrutiny by the Ethics Advisory Team (EAT) within the Ministry of Education, prior to being launched and put out to the advisory cohort of the workforce. Clearance of these research materials and securing the advisory cohort was key to capturing the entire national workforce within this study.

Conclusions

Firstly, there is a need to recognise and accept that amongst the workforce there were a large proportion of talented people (75.3%) that were committed and content to remain in their current position at whichever level that may be. Alongside these pools of contentment at each level of the workforce there was also a smaller group of aspirant talent that were motivated to advance along the leadership pathway as their career progressed. The following points are the conclusions made from the three major finding areas of ageing workforce, motivation to lead and development of future leadership:
Ageing Workforce

International educational research by Fink and Brayman (2006) pointed out the likelihood of a human capital crisis in schools. Similarly, Australian work by McCulla (2007) commented on the vital importance of succession and that teacher demographics pointed to ageing. In the New Zealand context, research by Brooking (2008) recognised the imminent retirement of many school leaders in the mainstream. Acknowledging these international, Australasian and New Zealand indicators about ageing in mainstream education this research specifically targeted the small specialist Deaf education workforce to see if the trends were similar. As mentioned, this study broke new ground in the knowledge of this small national workforce. The findings of this thesis confirmed that the workforce was also ageing in Deaf education, particularly in middle and senior leadership. In Deaf education close to 40% of the workforce at large are over 55 years old and reach retirement eligibility within the decade. Over 40% of middle leaders and over 60% of senior leaders in Deaf education nationally are over 55 years old and reach retirement eligibility within the decade. These figures present a more acute succession issue than the figures for New Zealand’s mainstream education system (Ministry of Education, 2011).

The Deaf education workforce has mainly trained in New Zealand (87.9%) and is structured 70% teaching, 20% at middle management or team leader positions and a final 10% at senior leadership level. Literature on succession planning strategies in the new age wave by Hewitt (2009) suggested a phased retirement method that allowed gradual handover to occur. Data from the qualitative interviews in this thesis also suggested that the succession process in Deaf education would be incremental. Evidence based data found in this study revealed however that 100% of senior leaders and 94% of those at middle management work full-time and only 3% of people currently work past 65 years old. The small negative statistical relationship (r= -.213**) between hours worked and tenure revealed that only at teacher level do people reduce hours as they reach retirement age. It was clear from this study that such incremental and gradual phasing out of role is not applicable to those in leadership positions and therefore put in doubt its effectiveness as a succession strategy. A strategy that was cited in this study (Table 4.5, p. 77) that was similar was the overlapping of roles in a way of transitioning between outward and inward bound leaders. Two people working full-time in the same role for a short overlap period allowed the transference of practice, knowledge and systems. The gradual phasing
into retirement mentioned in the literature is only applicable in Deaf education to those teachers who do not hold responsibility and can reduce their hours towards retirement.

The workforce in Deaf education have been found to be loyal and committed to the sector as they have a strong tendency to remain ($r=.823^{**} r^2 = 67.7\%$ year of qualification and subsequent tenure) once qualified for this specialist area. It is clear from the data that people have a cultural connection to Deafness and also strong emotive bonds with direct interactions from Deaf children. Passion for the profession was mentioned in the mainstream literature as a characteristic of good leadership (Caldwell, 2008). Contentment to remain a passionate classroom practitioner came through strongly in the data. There is perhaps an assumption amongst senior leaders that passion for teaching is directly linked to motivation to lead and aspirant numbers. It is clear from this research that there is passion amongst the workforce however this does not necessarily mean there is a direct link with a person’s motivation to lead.

**Motivation to lead**
Degree of motivation can be understood as low, termed reluctant, or high meaning people are driven towards becoming leaders. This thesis makes a conclusion around reluctance and another regarding driving factors for leadership:

Four reluctance factors were identified in the findings chapter that aspirants grapple with as they move along the leadership pipeline. These factors comprised of people’s family commitments, health considerations, bureaucracy/workload and lastly the loss of direct influence on students. These factors are now expanded upon. The workforce explained their commitments to raising their own families, caring for relatives, constraints of school zoning and where the family live, were serious family commitment features when considering taking on more leadership responsibility. Health considerations included the adverse affect of stress and people’s perception that age did not allow them sufficient health to shoulder a leadership role. Reluctance about health also included people in the workforce thinking about loved one’s health and the impact taking more responsibility would have on them. The workload and administrative overburdening of leadership was cited as unpalatable and something people did not enter the profession with the aim of doing. Lastly, many of the
workforce explained they were very content and attached to having direct interactions with the students and did not want to lose this through entering leadership.

Coupling the demographic circumstances with these reluctance factors it was evident the succession issue was more complex and must not be left to chance (Rhodes & Brundrett, 2006; Wildy, et al., 2009). Data from this thesis found that as the level of seniority increased so too did the strength of the reluctance factors. Those at middle leadership were split when asked about their motivation to enter senior leadership, this ties in with research in the mainstream that claimed the succession issue was heightened due to middle leaders not wanting to seek further progression to senior levels (Rhodes & Brundrett, 2009). Importantly, of the shrinking pool of aspirants who were left as the level of seniority increased, the intensity of their motivation was found to increase ($r$=.536** motivation for middle, $r$=.611** motivation for senior). Motivational driving factors were discovered from the data to be based around a strong sense of emotive connection to improving educational circumstances for Deaf students. This emotive impulse was coupled with a personal connection in either a direct or indirect capacity to Deaf culture.

Members of the workforce that felt leadership was the best avenue to have the strongest impact and influence to assist Deaf students were the highest motivated leadership aspirants. Coupled with this emotional connection to the sector, people who came into Deaf education were found to generally stay for the duration of their career (6% attrition), this refutes Ingersoll’s (2003) argument in relation to attrition rates in the mainstream. Having concluded there were motivated aspirants in the workforce to enter middle leadership and a smaller, more intensely motivated group for senior leadership, it was important to find conclusions about the succession mechanisms that would develop future leaders.

**Development of future leaders**

There was an uninformed optimism amongst leadership in Deaf education about the capacity of the workforce to keep producing applicants for future leadership positions because historically positions have always been filled. This assumption is risky given the immutable demographic trends being displayed in the research, Figure 2.2 (p. 15) clearly shows an unforeseen spike in the New Zealand post 65+ population over the coming decades (Statistics New Zealand Tatauranga Aotearoa, 2006). Current
succession planning focus is on in-role leadership development and support rather than pre-role preparation. Research from the mainstream education system does point to a growing crisis in the supply and quality of leaders. In Deaf education where the demographic skew is more severe there appears an even greater need for formalised identification, qualification and preparation pathways in addition to the development training for future leaders.

Currently Deaf education, as with the mainstream, have no mandatory formal leadership training or qualification to become a leader in New Zealand. The programmes aspirants are opting into are national initiatives such as the First Time Principals programme and the NAPP. These are seen as highly applicable and important for aspirant leaders in Deaf education and yet they are opted into through individuals nominating themselves. It was concluded in this study that over and above this mainstream training, leaders need encouragement and support once in the role to build an overlay of context specific leadership expertise. Leadership was perceived as vital in the future of Deaf education and was hoped to involve culturally responsive, equitable and collaborative features. In addition, candidate fields of internal and external applicants were viewed in the data and the literature (Macbeath, 2006) as complimentary to developing rich leadership in the sector rather than antagonistic.

Leadership preparation and development are required in today’s Deaf education system because supply and retention factors have been signalled as issues internationally in education (Pont, Nusche, & Moorman, 2008). The OECD report underscored the need to strengthen investment in leadership development given the ageing workforce in addition to the unattractiveness of the job due to overburdened roles and resultant stress (Pigott-Irvine & Youngs, 2011). An important aspect of a school wide effective succession initiative is for all those in leadership positions to portray the role positively (Pont, Nusche, & Hopkins, 2008). Transparency about the challenges of the leadership role, availability for mentoring and career guidance conversations are all assistive levers to prepare, develop and motivate aspirant talent.
A synthesis of conclusions
Knowledge of interpersonal artistry forms relational leaders. These leaders can establish trust and avenues for encouragement that unlock motivation and ease reluctance in potential talent and neophyte leaders. The need for specialised preparation for principals and all levels of leadership is being increasingly acknowledged (Bush, et al., 2010). Directing new leaders to preparatory tertiary leadership qualifications and developmental leadership programmes such as the NAPP and First Time Principals programme are important aspects of succession pathways. An essential tension for incumbent leaders is how to sustain growth, promote and engage people in strategic development whilst not losing sight or sense of the current purpose and responsibility to today’s Deaf students.

Figure 6.1 presents a crystalised overview of the New Zealand Deaf education sector and the avenues of entry into the profession as well as gateways out of the sector. This descriptive diagram gives a conclusive overview of the succession mechanism in Deaf education and the pipelines that run through the system. Three pools of personnel exist, the largest being the teachers (70%) followed by middle management (20%) and lastly senior leaders (10%). Of key importance to the succession issue is the similarity of the mean age of staff in each pool. Three entry pipelines into the profession have been uncovered, the main entrance is through new graduates and they head directly into the teacher pool. This is accompanied by two narrow pipelines, firstly of overseas teachers (currently 12% of the workforce) who enter into pools at each level, and lastly external applicants who enter into senior roles only. It is important to note that underlying each pool there is contentment, many of the workforce are content in their current role, whichever level that may be. Contented individuals could become aspirant once experience has been gained, their lifestyle changes, or they have up-skilled through encouragement.

The two reluctance barriers are of key importance for aspirant leaders to be conscious of. The first barrier is for teachers who aspire to become middle leaders, the barrier has ways of being overcome and this is achieved by encouragement, support, development and preparation strategies that are mentored and guided by incumbent leaders. Overcoming this first barrier into middle management means grappling with the resistance factors that produce anxiety amongst aspirants. In addition, teachers need to have accrued experience before heading into the middle
management pool. As experience is gained in middle management there comes a time when people in this pool may aspire to move to senior leadership. Again at this point there is a barrier to be overcome. The same reluctance factors of workload, family commitments, and health abound but are more intense than from teacher to middle leader. The reluctance barrier into senior leadership is stronger due to the seniority of the role being more demanding therefore the number of applicants at this level reduces. Similar but more intense methods of encouragement, development and support are offered to overcome this larger barrier when the system has an effective succession mechanism.

Throughout each stage of Deaf education there are people who find a role and level that they are content to stay in for a time. As discussed this can be due to lifestyle. Four pipelines run out of the profession. A small attrition (6%) pipeline is present but the three main exit avenues are through retirement and run from each pool. The teacher pool is the only pipeline where people exit either from full-time or can reduce their hours. Number of applicants motivated to formally lead decreases as seniority increases. Strength of reluctance factors has a low impact at the level of the teacher pool but a much higher impact up to the entrance of the senior leader pool.
Figure 6.1 Descriptive diagram: New Zealand Deaf education succession system

New Zealand Deaf education teaching workforce

Teachers 70% (48.8 yrs mean)

Entrance from overseas-trained teachers of the Deaf (12%)

External Applicants

Encouragement
Support
Development
Training
Initiative (NAPP)
Preparatory Qualification (PG Cert/PG Diploma ed. leadership)

Encouragement
Support
Development
Training Initiative (First-time principals)
Preparatory Qualification (Masters/PHD)

Retirement Exit from full-time (94%)
Retirement Exit from full-time (73.5%)
Retirement Exit from reduced hours (r = -.213** Deaf ed. tenure/hours worked) 3.74 motivation for non-leading role

Low impact
Strength of reluctance factors
High impact

Attrition (Survey: 6% dissatisfied, .823** stay once qualified)

Number of applicants motivated to formally lead decreases
This study into workforce demographics, motivation to lead and determining the need for succession planning has been relevant and worthwhile for Deaf education. This research has established the demographic picture of the workforce, clarified the need for formal succession planning and pointed out methods of creating effective preparation and development strategies. From the conclusions presented in this thesis, four recommendations can be made to improve practice and one recommendation for further research:

**Recommendations**

**For practice**

- Due to the low attrition level from the workforce it is worthwhile for DECs and the Ministry of Education to invest in supporting aspirants with long remaining tenure, through preparatory leadership qualifications and development programmes/initiatives. Support needs to be systemic, targeting talent at all levels of the workforce.

- It is recommended that action is taken to strengthen and formalise succession mechanisms at school and national level. A formal comprehensive system plan for pre-role preparation for aspirant leaders in New Zealand Deaf education is needed. This strategy should incorporate planned learning of context specific leadership.

- Schools are recommended to keep detailed age profiles of their teaching workforce and also do regular motivational surveys of their staff to keep in tune with demographic trends and workforce intentions. Age profiling of the Deaf education workforce at a national level (by New Zealand Council for Educational Research NCER, or by the Ministry of Education) will help keep track of human resource needs in this sector.

- Reluctance factors would be eased with professional development for aspirant and neophyte leaders on self-management skills: stress management, interpersonal mastery and building relational leadership expertise.
For research

- As mentioned, gender has not been the focus of this study, the findings in this research however have uncovered that the Deaf education workforce has a high proportion of females (87.4%). An important area of research to be undertaken in the future could be to further investigate the impact of a female dominated teaching workforce on Deaf students. Research could investigate impact of a lack of male role models or masculine influence through primary and secondary settings for Deaf students. Questions could be formed about the impact of being predominantly taught by female teachers for male students as opposed to female students and establish if there is any difference. There is no information on the ethnic make-up of the female cohort in the workforce. There is also no research at present around the family backgrounds Deaf students come from, the number of families without a father figure present. Research into gender impact on Deaf students at school and home could produce some worthwhile findings and would branch off the main focus in this study and start a new line of inquiry.

Final Summation

Leadership succession is increasingly becoming an issue due to high demographic turnover and as noted, ageing has been recognised in the literature as the new population problem of our times (Mullen, 2002; Shaw, 2002). As research from the OECD succinctly summarises, consideration for lasting future leadership is essential and needs to occur at a system level involving many mechanisms of succession. This research would argue that these succession mechanisms are held together and allowed to move by high levels of interpersonal skills and established trusting professional relationships between exiting and entering leaders.

Countries need to prepare and train the next generation of school leaders. Especially at a time of high demographic turnover in leadership, thinking and caring for the future is an essential aspect of system leadership. Lasting improvement depends on planned succession mechanisms, professionalised recruitment processes, preparatory training, mentoring of new leaders, working conditions that attract high quality graduates to educational leadership and a commitment to greater leadership density and capacity within schools from which future high level leaders can emerge.

(Pont, Nusche, & Moorman, 2008, p. 31)
A key word within the above quoted research is caring. To establish professional relationships, overcome reluctance and gain trust, leaders are required to show care towards building future leadership, and as recognised in this study, this is a part of their responsibility as leaders. The title of this national study presents an image of a setting sun with emerging stars. Metaphorically this image represents the passing mantle of leadership from incumbent to aspirant leaders. This is an apt image as it is a process that is connected; the transition is done in partnership and is a form of symbiotic mutualism. This study has re-affirmed the notion that is prevalent in the wider educational literature about interpersonal skills being essential for the school leader. A theme in the qualitative data of this study was that leadership is essentially a people job. Leadership was seen to have operational duties that needed to be learned and some specific needs to Deaf education, but the heart of good leadership was the ability to form and sustain healthy professional relationships with colleagues. This was supported by international research such as Middlewood’s (2010) study on people management that noted the most effective leaders of the future will be the ones who are able to form trusting professional relationships with a large proportion of staff.

Similarly, Bolman and Deal (2008) recognised the importance of being a relational leader and describe mastery of effective interpersonal skills as; the ability to interact well, value relationships, be emotionally intelligent, self motivating, empathetic, able to problem solve, negotiate and resolve conflict. Collectively, these characteristics make up a leader’s interpersonal skills and form the essence of creating trust that in turn allows aspirants to overcome reluctance, accept career guidance and remain loyal to the organisational context they are in. Conflict of perspectives naturally occur between colleagues at times, it is the leader’s ability to deal with conflict through productive dialogue that is the cornerstone of productive relationships (Cardno, 2012). Productive professional relationships, created through interpersonal skill, form an intricate part of a succession planning structure; the quality of discourse between incumbent and aspiring leaders allows tacit knowledge to be gradually transferred and quality of leadership sustained (Rhodes & Brundrett, 2006). High interpersonal skill allows trust to flourish and gives aspirants the
emotional confidence to overcome reluctance towards leadership responsibilities.

Transference of leadership is ceremonial, gradual and connected. At the current moment of this national study the sun has still to set on the uniquely large baby-boomer generation of seasoned leaders and teachers. Reluctant talent needs encouragement, development and support to grasp leadership opportunities during the exiting phases of the baby-boomer cohort over the next decade. Deaf education needs a rich and competitive applicant pipeline, established through collective national and organisational succession mechanisms. This will allow the sector to sustain and navigate its way through a succession crisis. Deaf education’s rising stars need to be interpersonally adept and remember that the people they work alongside and the Deaf students they serve are the most important thing.

Unuhia te rito te harakeke kei hea kōmako e kō? If the centre shoot of the flax is pulled out, where will the bell bird sing?
Kua whakatairangitia Rere ki uta, rere ki tai,
Ui mai koe ki ahau If I was to ask
He aha te mea nui what was the most important thing?
Māku e kii atu I will answer:
he tāngata, he tāngata, he tāngata it's people, it's people, it's people

whakatauki (proverb) about the Harekeke plant (Pānoho, R. (2010)
References


Shaw, F. (2002). Is the ageing population the problem it is made out to be? *Foresight, 4*(3), 4-11.


Appendices

Appendix A Information sheet

INFORMATION SHEET

Title of Thesis: Succession planning in Deaf education's leadership workforce across New Zealand

My name is Saul Taylor. I am currently enrolled in the Master of Educational Leadership and Management degree in the Department of Education at Unitec Institute of Technology and seek your help in meeting the requirements of research for a Thesis course which forms a substantial part of this degree.

The aim of my project is to study leadership within the field of Deaf education in New Zealand in terms of succession planning. This research aims to explore the concept of succession planning by first looking at the national demographic picture, then to determine current strategies for succession planning via sharing and transferring institutional knowledge. Finally, the research aims to discuss the effectiveness of current governmental initiatives in place to ameliorate the depletion of the leadership workforce in Deaf education.

I invite your participation in the following way. I will be collecting data from all teachers and leaders using an online web-survey (Survey Monkey). Anonymity will be preserved in this survey: no teachers names will be requested. Data will relate to demographics, experience, level of employment and also perspectives on current governmental succession initiatives. Data will be used to help build a national picture of workforce capacity in relation to succession planning. I will also be creating a database of demographic data from documentary analysis. Again, anonymity will be of the highest priority. Statistics from the database should give a national demographic picture of the Deaf education workforce and therefore indications of the need for strategic succession planning.

Further, I will also be collecting data from key leaders in organisations using a semi-structured interview schedule and, if you are a leader, would appreciate being able to interview you at a time that is mutually suitable. I will also be inviting you to sign a consent form regarding this event. Neither you nor your organisation will be identified in the Thesis. I will be recording your contribution and will provide a transcript (or summary of findings if appropriate) for you to check before data analysis is undertaken. I do hope that you will agree to take part and that you will find this participation of interest. If you have any queries about the project, you may contact my supervisor at Unitec Institute of Technology.

My supervisor is Mr Howard Youngs and may be contacted by email or phone. Phone: (09) xxxxxxx Ext xxxxx Email: xxxxxxxxxxxxxxxx

Yours sincerely,

Saul Taylor

UREC REGISTRATION NUMBER: 2011-1274 This study has been approved by the Unitec Research Ethics Committee from 22.3.2012 to 22.3.2013. If you have any complaints or reservations about the ethical conduct of this research, you may contact the Committee through the UREC Secretary (ph: 09 815-4321 ext 6162). Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.
CONSENT FORM – for those to be interviewed for research. (individual)

Date: 23rd March 2012

To: New Zealand Deaf education senior leader

From: Saul Taylor

RE: Master of Educational Leadership and Management

THESIS TITLE: Succession planning in Deaf education’s leadership workforce across New Zealand

I have been given and have understood an explanation of this research and I have had an opportunity to ask questions and have had them answered. I understand that neither my name nor the name of my organisation will be used in any public reports. If interviewed, also understand that I will be provided with a transcript (or summary of findings if appropriate) for checking before data analysis is started. I understand that I may withdraw myself or any information that has been provided for this project up to the stage when analysis of data has been completed.

I agree to take part in this project.

Signed: ___________________________________

Name: ___________________________________

Organisation: ________________________________

Date: ___________________________________

UREC REGISTRATION NUMBER: 2011-1274 This study has been approved by the Unitec Research Ethics Committee from 22.3.2012 to 22.3.2013. If you have any complaints or reservations about the ethical conduct of this research, you may contact the Committee through the UREC Secretary (ph: 09 815-4321 ext 6162). Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.
Appendix C Research tool 1: Web-survey questionnaire

Tena Koutou,

This email has been sent to every teacher of the Deaf in the country and is an invitation for you to participate in an electronic questionnaire. It is part of my thesis research on future workforce needs (succession planning) in NZ Deaf education. This thesis is part of the Master of Educational Leadership and Management degree that I am enrolled in at Unitec Institute of Technology in Auckland. The questionnaire has ethics approval from the Unitec Research Ethics Committee (UREC). It has been piloted and took participants 4 – 6 minutes to complete.

The questionnaire asks some questions around demographics and then some questions around your future directions in the profession. This questionnaire is an opportunity for professionals in Deaf education to collaboratively produce a demographic snapshot of the national workforce and from there discover whether there is an impending teacher shortage in the profession.

This survey is completely confidential. At no point is your name or school asked for or recorded. When the data is downloaded for this research no computer IP addresses are collected. If you need to go back and edit your responses later please use the same computer. You can complete the survey (and edit later if you wish) by clicking on the link below that will be open until the cut off date of Friday 25th May 2012. After this date the data will be analysed and the questionnaire closed off to further responses.

I invite you to click on the link below to complete the questionnaire. The link is now open and so the short questionnaire can be filled out straight away:

https://www.surveymonkey.com/s/35KHZ6V

Thankyou for taking the time to complete this questionnaire, it is always a busy time in this job. Your response will help give a clear picture of what our workforce looks like in New Zealand today and contribute to my thesis research on succession planning.

If you have any problems accessing the questionnaire, please email me at xxxxxxxxxxxxxxxx
If you have any concerns you can contact my supervisor, Howard Youngs at xxxxxxxxxxxxxxxx or contact UREC directly using the details below.

Kind regards,

Saul Taylor
Senior Teacher of the Deaf.
MEdLM student

UREC REGISTRATION NUMBER: 2011-1274 This study has been approved by the Unitec Research Ethics Committee from 22.3.2012 to 22.3.2013. If you have any complaints or reservations about the ethical conduct of this research, you may contact the Committee through the UREC Secretary (ph: 09 815-4321 ext 6162). Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.
Email: ethics@unitec.ac.nz
1. Are you male or female?

- Male
- Female

2. Where did you train to become a teacher of the Deaf?

Other (please specify)

3. Which of the following best describes your working hours?


4. Which area do you mostly work in from the above map?

- Northern Red
- Central Northern Blue
- Central Southern Green
- Southern Yellow

5. The term that best describes your cultural and audiological status is:

- Deaf
- Hearing
- Hearing Impaired

6. What year did you qualify as a teacher of the Deaf?
During data analysis the 1-6 scale was transposed to a 0 (disagree) – 5 (agree) scale.
Appendix D Research tool 2: semi-structured interview guide

Section A - Overarching question to frame context:
What is the current national demographic picture of the leadership and teaching workforce in Deaf education across New Zealand's three specialist providers?

1. Within your current organisation do you feel that there is an ageing workforce, in particular in the leadership positions?
2. Have you noticed reluctance from teachers currently at classroom level to step into management/leadership roles?
3. If many people are due to retire within the next 5 years from leadership positions and take with them a significant amount of institutional expertise, and NZ's tertiary system is currently only providing a nominal number of fresh graduates into the profession, how would you see the future leadership positions being adequately filled?

Section B - Overarching question to frame context:
What succession planning strategies are being used or could be used by organisations to share and transfer institutional knowledge from incumbent to aspiring leaders?

4. What 'in house' strategies and systems is your organisation putting in place to ensure early talent identification occurs and leaders are grown for future positions?
5. Do you feel confident you currently have sufficient staff to replace those leaders who will retire in the next 5 to 10 years?
6. How confident do you feel that the leaders of tomorrow will have sufficient experience, training and skills to lead Deaf education in New Zealand?

Section C - Overarching question to frame context:
How effective are current governmental initiatives from New Zealand's generic mainstream education system in preparing leaders in the Deaf education sector?

7. What do you see as the current most effective governmental initiative/programme that is going to help ensure strong leaders are produced in the future?
8. Is that programme and indeed all generic mainstream leadership-development initiatives applicable for teachers working in the specialist sector of Deaf education?
9. In your opinion, would it help the government to make strategic plans for Deaf education if they had a clear demographic picture of the workforce?

Concluding question:

10. What is your vision for the future landscape of leadership in Deaf education in New Zealand and is leadership important to this sector?
# Appendix E: Summary of Web-survey demographic questions

<table>
<thead>
<tr>
<th><strong>Gender</strong></th>
<th>Male 20/159 (12.6%)</th>
<th>Female 139/159 (87.4%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Trained as TOD</strong></td>
<td>NZ 138/157 (87.9%)</td>
<td>Aus 5/157 (3.2%)</td>
</tr>
<tr>
<td><strong>Working hours (FTE)</strong></td>
<td>1.0 Full time 119/162 (73.5%)</td>
<td>0.8 (4 days) 14/162 (8.6%)</td>
</tr>
<tr>
<td><strong>Cultural / Audiological status</strong></td>
<td>Deaf 17/162 (10.5%)</td>
<td>Hearing 137/162 (84.6%)</td>
</tr>
<tr>
<td><strong>Tenure Deaf education</strong></td>
<td>1-10yrs 62/162 (38.3%)</td>
<td>11-20 yrs 53/162 (32.7%)</td>
</tr>
<tr>
<td><strong>Mainstream tenure</strong></td>
<td>1-10yrs 103/154 (66.9%)</td>
<td>11-20 yrs 37/154 (24%)</td>
</tr>
<tr>
<td><strong>Age (10yr groups)</strong></td>
<td>20-29 yrs 4/162 (2.5%)</td>
<td>30-39 yrs 26/162 (16%)</td>
</tr>
<tr>
<td><strong>Age (over 50yrs in 5yr groups)</strong></td>
<td>50-54 yrs 30/162 (18.5%)</td>
<td>55-59 yrs 35/162 (21.6%)</td>
</tr>
<tr>
<td><strong>Age (over 50yrs and under 50yrs)</strong></td>
<td>Under 50 yrs 68/162 (42%)</td>
<td>Over 50 yrs 94/162 (58%)</td>
</tr>
<tr>
<td><strong>Age (over 55yrs)</strong></td>
<td>Over 55 yrs 64/162 (39.5%)</td>
<td></td>
</tr>
<tr>
<td><strong>Level</strong></td>
<td>Classroom/RTD/Advisory teacher 112/158 (70.9%)</td>
<td>Middle/Team leader 34/158 (21.5%)</td>
</tr>
<tr>
<td><strong>Intention 5-10 year</strong></td>
<td>Full-time 119/158 (75.3%)</td>
<td>Semi-retire 24/158 (15.2%)</td>
</tr>
</tbody>
</table>
## Appendix F Summary of Web-survey motivational questions

<table>
<thead>
<tr>
<th>Motivation to be a leader in the future</th>
<th>Strongly disagree (SDA)</th>
<th>Disagree</th>
<th>Somewhat Disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree (SA)</th>
<th>Mean average (0-5 scale) 0=SDA 5=SA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>30/162 (18.5%)</td>
<td>18/162</td>
<td>15/162</td>
<td>21/162</td>
<td>26/162</td>
<td>52/162 (32.1%)</td>
<td>1.93</td>
</tr>
<tr>
<td>Intend to stay in current role for the next 3-5yrs</td>
<td>9/161 (5.6%)</td>
<td>5/161</td>
<td>8/161</td>
<td>18/161</td>
<td>34/161</td>
<td>87/161 (54%)</td>
<td>3.01</td>
</tr>
<tr>
<td>Plan to be middle manager 3-5yrs</td>
<td>56/153 (36.6%)</td>
<td>21/153</td>
<td>12/153</td>
<td>24/153</td>
<td>14/153</td>
<td>26/153 (17%)</td>
<td>0.98</td>
</tr>
<tr>
<td>Plan to be senior manager 3-5yrs</td>
<td>78/156 (50%)</td>
<td>21/156</td>
<td>12/156</td>
<td>16/156</td>
<td>14/156</td>
<td>15/156 (9.6%)</td>
<td>0.44</td>
</tr>
<tr>
<td>Plan to work in NZ Deaf education over the next 3-5yrs</td>
<td>7/161 (4.3%)</td>
<td>1/161</td>
<td>2/161</td>
<td>13/161</td>
<td>27/161</td>
<td>111/161 (68.9%)</td>
<td>3.39</td>
</tr>
</tbody>
</table>

Mean age = 47.43yrs
Mean age = 51.67yrs
Appendix G Summary of correlations.

Correlation summary of statistical significant findings (derived from master correlation from SPSS)

<table>
<thead>
<tr>
<th>Variable 1</th>
<th>Variable 2</th>
<th>R</th>
<th>Sig</th>
<th>R²</th>
<th>R</th>
<th>Sig</th>
<th>R²</th>
<th>R</th>
<th>Sig</th>
<th>R²</th>
<th>R</th>
<th>Sig</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of years worked in Deaf education</td>
<td>Intention to be a middle manager/team leader (next 3-5yrs)</td>
<td>-.213**</td>
<td>.006</td>
<td>.045</td>
<td>.167*</td>
<td>.039</td>
<td>.028</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intention to be a middle manager/team leader (next 3-5yrs)</td>
<td>Number of years since qualified as a Teacher of the Deaf</td>
<td>.168*</td>
<td>.038</td>
<td>.028</td>
<td></td>
<td></td>
<td></td>
<td>.230**</td>
<td>.009</td>
<td>.053</td>
<td>.536**</td>
<td>.000</td>
<td>.287</td>
</tr>
<tr>
<td>Number of years since qualified as a Teacher of the Deaf</td>
<td>Motivation to be a leader in the future</td>
<td>.823**</td>
<td>.000</td>
<td>.677</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intention to be a senior leader (next 3-5yrs)</td>
<td>Intention to stay in NZ Deaf education (next 3-5yrs)</td>
<td>.418**</td>
<td>.000</td>
<td>.175</td>
<td>.168*</td>
<td>.033</td>
<td>.028</td>
<td>.611**</td>
<td>.000</td>
<td>.373</td>
<td>.671**</td>
<td>.000</td>
<td>.450</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

R= Pearson Correlation
R² = Coefficient of determination: x100=%. Shows degree of variation that one variable is attributed to the other variable.
**Appendix H Summary table of tests of difference**

Ttest overview of statistical differences between groups against variables

<table>
<thead>
<tr>
<th>Test</th>
<th>N (sample size)</th>
<th>Levene's test for Equality of variances</th>
<th>Sig. (2-tailed)</th>
<th>Mean (0 Strongly Disagree – 5 Strongly agree)</th>
<th>Effect size Eta Squared Variance %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ttest = Organisational level Teachers (T) vs Leaders (L)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motivation to lead</td>
<td>T: 114</td>
<td>L: 48</td>
<td>.000</td>
<td>Equal variances not assumed</td>
<td>.000</td>
</tr>
<tr>
<td>Intention to be middle leader (next 3-5yrs)</td>
<td>T: 114</td>
<td>L: 48</td>
<td>.154</td>
<td>Equal variances assumed</td>
<td>.000</td>
</tr>
<tr>
<td>Intention to be senior leader (next 3-5yrs)</td>
<td>T: 114</td>
<td>L: 48</td>
<td>.001</td>
<td>Equal variances not assumed</td>
<td>.000</td>
</tr>
<tr>
<td><strong>T-test = Intention 5-10yrs Full-time (FT) vs Semi retire/Retire (SR/R)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motivation to lead</td>
<td>FT: 119</td>
<td>SR/R 39</td>
<td>.298</td>
<td>Equal variances assumed</td>
<td>.000</td>
</tr>
<tr>
<td>Intention to be middle leader (next 3-5yrs)</td>
<td>FT: 119</td>
<td>SR/R 39</td>
<td>.000</td>
<td>Equal variances assumed</td>
<td>.000</td>
</tr>
<tr>
<td>Intention to be senior leader (next 3-5yrs)</td>
<td>FT: 119</td>
<td>SR/R 39</td>
<td>.000</td>
<td>Equal variances not assumed</td>
<td>.000</td>
</tr>
<tr>
<td>Intention to stay in NZ Deaf education (next 3-5yrs)</td>
<td>FT: 119</td>
<td>SR/R 39</td>
<td>.000</td>
<td>Equal variances not assumed</td>
<td>.004</td>
</tr>
<tr>
<td><strong>T-test = Age: Under 50yrs vs 50yrs and over</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motivation to lead</td>
<td>&lt;50: 68</td>
<td>&gt;50: 94</td>
<td>.000</td>
<td>Equal variances not assumed</td>
<td>.000</td>
</tr>
<tr>
<td>Intention to be middle leader (next 3-5yrs)</td>
<td>&lt;50: 68</td>
<td>&gt;50: 94</td>
<td>.053</td>
<td>Equal variances assumed</td>
<td>.000</td>
</tr>
<tr>
<td><strong>T-test = Mainstream exp: 1-5yrs vs 6-24yrs</strong></td>
<td>1-5yrs: 73</td>
<td>6-24yrs: 81</td>
<td>No statistical significant differences were found in this T-test between these 2 groups and the variables.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
