Inclusion or Illusion: 
A Mixed Methods Study of 
Pedagogical Practices to Enhance 
Pre-service Teachers’ Preparedness 
for Contemporary Inclusive Teaching

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Statement of Authentication

I hereby declare that this work has not been submitted, either in full or part, for a degree at this or any other institution. I also certify that this thesis is an original piece of work, written by me and the result of my own research endeavours. Any information sources used have been appropriately acknowledged.

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Abstract

Over the last three decades the practice of including students with additional needs and disabilities in regular classes has gained momentum and is now contemporary practice in most Australian schools. However, research and government reports indicate that teachers feel ill-prepared and ill-equipped for their roles as inclusive class teachers with likely consequences for all classes. Despite concerns about the preparation of pre-service teachers for inclusive teaching there is a paucity of empirical evidence detailing how to shift negative attitudes, convey knowledge and impart skills during initial teacher education. This study aimed to identify and generate curriculum and pedagogy that effectively prepare pre-service primary teachers during initial teacher education for including students with additional needs in regular classes.

A mixed methods approach (explanatory sequential with an intervention) was adopted. The intervention comprised a mandatory one semester inclusive unit in an initial primary teacher education course in an Australian university. Pre-service, beginning and experienced teachers provided questionnaire and interview data collected in three stages. Pre-service teachers (n=119) were surveyed at commencement and completion of the intervention. Experienced teachers (class teachers, principals, school counsellors and support teachers, n=326) were surveyed to ascertain their views about preparing pre-service teachers for inclusive education. Interviews were conducted with five beginning teachers, who in the previous year participated in the intervention, and ten experienced teachers. Quantitative data were analysed using parametric and non-parametric techniques. Thematic analysis was used to analyse interview data and the open-ended questionnaire responses.

Results showed positive effects for the inclusive unit used in this study, with pre-service teachers reporting significantly increased levels of preparedness for inclusive teaching. Their self-reported attitudes, knowledge, and skills also improved significantly; nearing those of experienced teachers. On some aspects of inclusive education, pre-service teachers reported more positive attitudes than experienced teachers. In keeping with previous literature, many experienced teachers indicated that their initial teacher education had not adequately prepared them for inclusive teaching.
Further, the findings revealed the major challenges beginning teachers experience in creating positive inclusive environments. The effect of social disadvantage was found to compound these challenges.

The study identified priority topics for inclusive curriculum planning. The findings highlight the need to ensure that learning experiences provided to pre-service teachers are relevant and connected to their future needs. Details of learning experiences linked to learning theories, pedagogical frameworks and to the themes of attitudes, knowledge and skills are presented. Importantly, an eclectic cluster of practices were generated describing how to prepare pre-service teachers for contemporary inclusive teaching. Further, pre-service teachers’ preferred modes of delivery of inclusive content were (in order) tutorials, lectures, assignments, and lastly, online.

The integrated findings provide a comprehensive overview for effectively preparing pre-service teachers for inclusive teaching during initial teacher education. Approaches are proposed for enhancing pre-service teachers’ preparedness for contemporary inclusive teaching. These include three tools for delivering inclusive pedagogy and curriculum during initial teacher education. Importantly, the findings suggest that the preparation of pre-service teachers for inclusive teaching requires a shared vision within initial teacher education to ensure that delivery of inclusive principles and practices embraces the philosophy of pedagogy for all.
Personal Narrative

My professional life as a “teacher of the deaf” has led me to observe that kids in what is known as “the western suburbs” can have it tough; that kids with hearing loss in the western suburbs can have it tougher; and that Aboriginal kids with hearing loss in the western suburbs can have it tougher still.

My background as a teacher and academic together with my family life, especially having a sister with a disability, has influenced me to undertake a PhD about preparing pre-service teachers for inclusive teaching. In many ways, aspects of my life correspond with changes in the provision of education for students with disabilities. In this narrative, I present an account of personal influences together with my observations and experience of segregation, integration and inclusion of students with disabilities.

Growing up on the family farm in the western suburbs of Sydney in the 1960s and 1970s gave me the opportunity to witness the personal impact of economic, political and social change. Having parents who were active in the local community and committed to social and political reform influenced my desire to contribute to society in my own way. I have been a teacher since 1980, and have worked in areas of social disadvantage predominantly with students with disabilities. This background combined with having a sister with a disability has shaped my views and provided me with insights that have influenced my attitudes and practices regarding my work as a teacher and academic.

The 1960s and 70s was a time of economic growth and social change in Australia. Social change occurred as a result of the women’s, civil rights and the peace movements. At the same time, the western suburbs of Sydney were burgeoning owing to a growing population and the need for low-cost housing. The family farm was down-sized as a result of pressures from development. Housing commission estates in western and south western Sydney were established to provide affordable housing for families with low incomes.
Political changes saw government funding channelled into education. Many young people were for the first time able to access free tertiary education. Along with many of my friends, I won a teacher’s scholarship and attended the newly opened Milperra College of Advanced Education (now Bankstown Campus at Western Sydney University) to train as a teacher. I chose to go into teaching believing that I could make a difference to the lives of young people.

For some years I worked as a primary school teacher in the south western suburbs of Sydney. Inspired by having a personal understanding of the impact of disability, I trained to be a teacher of the deaf. My subsequent roles in this area have been many and varied including: an early intervention teacher; a supervising teacher of a support unit (support classes); assistant principal (itinerant support teacher – hearing), responsible for coordinating educational support for students with hearing loss in regular classes (from babies to Kindergarten through to Year 12), early childhood centres, support classes and schools for specific purposes; and a consultant providing advice to teachers and community members about the implications and educational needs of Aboriginal students with conductive hearing loss. In consultation with Daruk Aboriginal Medical Centre and Mt Druitt Community Health, I initiated a hearing screening program and implemented an educational program to address the effects of conductive hearing loss on Aboriginal students.

After gaining a Master of Arts (looking at “The Effect of Conductive Hearing Loss on Phonological Awareness, Reading and Spelling of Urban Aboriginal Students”) and believing that I could share my knowledge and expertise with pre-service teachers about teaching generally, I commenced teaching as a tutor at a university. I pondered the relevance and authenticity of content and material that was being presented to pre-service teachers about inclusive education. While working simultaneously in schools and coordinating the mandatory inclusive unit in an initial primary teacher education program, I designed and implemented learning experiences that I deliberated on with colleagues. Having witnessed the compounding effects of social disadvantage in schools (such as refugee backgrounds, inexperience of teachers, students with challenging behaviours) and having a commitment to the communities of Sydney’s western suburbs, I aimed to design learning experiences for pre-service teachers that
augmented their capacity to successfully implement inclusive pedagogy. Having observed class teachers struggle with aspects of inclusive teaching, I believe that I can make a positive contribution to pre-service teachers’ preparedness by teaching at university and building on research about effectively preparing pre-service teachers for inclusive teaching; thus contributing to improving outcomes for all students especially in areas of social disadvantage. Further, having experienced success at including students with disabilities in regular classes and after working collaboratively with teachers in their classrooms, I acquired insights and accrued knowledge about how to successfully implement inclusive education. I observed what teachers did that worked and what they did, that did not work.

My experience of working as a teacher in leadership roles while simultaneously working as an academic, positions me to conduct research with an understanding of the changing circumstances of both school and university environments. As I became more immersed in literature about inclusive education, I found that a large proportion of research addressed the need to change teachers’ attitudes towards students with disabilities. My experience, however, was that in the main teachers felt that they did not have the necessary knowledge or skills to enable them to be effective as inclusive teachers. This observation led me to consider the “chicken and egg” analogy. Having a lack of skills may result in negative teaching experiences that perpetuate negative attitudes.

My sister is deaf as a result of my mother contracting rubella in the first trimester of pregnancy. After being informed of Nell’s deafness, my mother commenced early intervention with her at a special school in Sydney (Farrar School for the Deaf in Croydon) once a week for an hour of therapy. Because the round-trip by public transport took the entire day, my mother along with other parents of the “rubella period” lobbied to have a support class (Opportunity Deaf) established in Liverpool. The advice at the time was that Nell should enrol in a special oral school for deaf girls as a boarder in Newcastle (Waratah School, approximately 4 hours north of Sydney). However, Nell thrived in her support class at Liverpool Public School and was considered an “oral success”. She was consequently “placed” in a Year 3 mainstream class, but this attempt to integrate Nell was regarded a failure and she returned to the
“opportunity class” the following year (see photos in thesis). I suspect this was a result of expecting the child to fit into the environment rather than adapting the environment and style of teaching to meet the needs of the student – in this case, Nell. I incorporate photos of Nell’s classes as primary sources in my lectures so that pre-service teachers consider concepts such as belonging, adapting environments and teaching to meet the needs of students. Although I believe Nell received a quality education from committed teachers, placement in a support class may inadvertently lead to learned dependency.

I wonder if history is repeating itself. As a teacher of a support class (students with hearing impairment and additional needs), I recall the surprised reactions when I began negotiating with mainstream class teachers to commence integrating students. As the executive teacher of support classes, I observed students being “placed” into support classes who I felt would receive a more appropriate education if they attended a regular class. However, I faced opposition in my attempts both to gain regular class enrolments and integrate (part of the day) students in regular classes. Such resistance was predicated on a need to maintain support class numbers and a prevailing attitude aimed at maintaining the practice of placing students in special classes based on categorisation of disability. For example, I recall strong resistance to my recommendation that a student with a moderate hearing loss only and no need for sign language, transition to a regular class rather than remain in the support class. This example, along with many others, made me aware that decisions about people with disabilities are often based on a “medical view of disability” rather than their individual needs.

Much of my teaching has been in the Mt Druitt area in western Sydney, an area with a high concentration of public housing. As assistant principal (itinerant support teachers – hearing), one of my responsibilities was to conduct assessments of students. More often than not I found that my recommendations for students to attend regular classes were at odds with other professionals. I questioned the automaticity of enrolling students into support classes based on the child’s diagnosis rather than on his or her needs. Although many parents expressed a preference to have their child attend an inclusive setting, they were advised by some professionals that their child would be
better served in a support class. It became clear that many professionals provided advice to parents based on categories of disability. It also became apparent that as soon as a teacher encountered difficulties including a student with a disability, alternative class placements (i.e., support classes) were sought rather than considering how the school could create a supportive and inclusive environment.

It was during the 1990s that an advocate of inclusive education made an appointment with me to discuss inclusive education. She was damning of support classes for children with disabilities and was particularly critical of support classes for children with hearing loss. Her zealous views challenged some of my assumptions. I compared her views with those of the Deaf community, who regard support classes as contributing to the continuation of Deaf culture – that is, shared language, shared history and shared traditions. This conversation highlighted to me the many facets of ongoing debates about special and inclusive education.

Aspects of my life, as Nell’s sister and my experiences as a teacher and academic, correspond with endeavours to improve educational provision for students with disabilities. Having been active in advancing inclusive education I hope that, while maintaining objectivity, my understanding of associated issues permeate this study and lead to enhancing pre-service teachers’ preparedness for contemporary inclusive teaching. In the words of Kemmis (2010) “In the end, educational praxis can only be changed from within, by those whose work – whose individual and collective praxis – is education” (p. 25).
Chapter 1: Introduction

The past three decades have seen multiple shifts in the provision of education for children with a disability and who experience difficulties in learning. The automatic practice of the past was to enrol students regarded as requiring special attention in segregated settings. However, many concerns have been raised about the adverse consequences of excluding members of its community from regular education. In recognising the legitimacy of these concerns, alternative approaches to segregated schooling were implemented, including integration\(^1\) and inclusive education.

For this thesis, inclusive education is defined as the full participation of students with additional needs in all aspects of regular classes and school settings. It involves teachers adapting and adjusting teaching approaches to cater for the needs of all students (Loreman, Deppeler & Harvey, 2011). This philosophy and practice embraces the use of specialist personnel (e.g., itinerant support teacher – vision) to support students’ learning.

Inclusive education requires that schools adapt to meet the needs of individual students rather than expecting students to adapt to the established environment (Loreman & Deppeler, 2001). Class teachers are also responsible for catering to the needs of students who are gifted; giftedness being an area that requires adjustments to teaching. While this study includes students who are gifted\(^2\), they were not a particular focus.

To understand the notion of inclusive education it is important to understand how the provision of education for students with additional needs has evolved in NSW. Common to many western countries, Australia, over the last few decades has moved towards a policy of including students with additional needs in regular classes (Armstrong, Armstrong, & Spandagou, 2011; Florian & Linklater; 2010; Forlin, Keen, & Barrett, 2008; Graham & Jahnukainen, 2011; Graham & Sweller, 2011; Hodkinson, 2009).

\(^1\) The notion of integration preceded that of inclusion. It deems that certain students with disabilities will fit into a regular class. There is no expectation that the school will adapt to meet the needs of students. Often the student will attend a regular class on a part-time basis.

\(^2\) The term gifted refers to a student whose potential is distinctly above average in one or more of the following domains of human ability: intellectual, creative, social and physical while the term talented refers to the emergence of that talent.
Schooling in NSW is similar to that of many western countries. The 1950s saw the emergence of special schools, followed by the establishment of support classes in schools within educational districts. However, such classes are not necessarily located at the local school, thus requiring students to be “transported” to support classes. Recognition that students were not able to access and benefit from the broadened regular curriculum led to policy that promoted integration. In the mid-1990s, proponents of inclusive education challenged special education (essentially, segregation) and integration by questioning the values that promote exclusion (Goodley, 2017).

Yet, provision for the exclusion of students persists in NSW schools. Children with disabilities are still “placed” in special schools and classes based on classification and diagnosis (Graham & Sweller, 2011; Slee, 2014). This exclusionary model of education represents special education. This will be explored further in the next chapter.

Currently, the NSW Department of Education offers a continuum of educational settings for students with additional needs (Graham & Spandagou, 2011). These include enrolling students in segregated settings such as special schools (Schools for Specific Purposes) and support classes within regular schools or regular classes (Graham & Spandagou, 2011). These are often based on categorisation of disability by medical or other qualified personnel (e.g., audiologists assess hearing, school counsellors assess intellectual quotient based on psychometric tests). Although this range of provision has existed in NSW for decades, as in other western countries, the assumptions underlying the provision of education for students with additional needs has gone through significant change.

The notion of inclusive education has gained worldwide momentum resulting in a shift in public perception and policy about the most suitable learning environment for students with additional needs (Armstrong, Armstrong, & Spandagou, 2011; Florian & Linklater; 2010; Forlin et al., 2008; Graham & Jahnukainen, 2011; Graham & Sweller, 2011; Hodkinson, 2009). However, confusion prevails about what constitutes inclusive education (Graham & Spandagou, 2011). Graham and Spandagou (2011) for example, found that NSW school principals were unclear about the meaning of inclusion, confusing it with the practise of integration. This highlights a concerning gap in principals’ understanding of the philosophy underpinning inclusive education. It further suggests a failure of universities and schools (i.e., academics, school authorities and
leaders) to ensure that those working in schools are clear about what constitutes inclusive education. While ever school leaders fail to challenge customary practices of segregating children based on classification, it remains unlikely that inclusive education will be realised. Further, it seems that practices attesting to be inclusive need to be scrutinised and their effectiveness evaluated. In addition to confusion about the meaning of “inclusive education”, teachers state that they do not have the skills to include students with diverse learning needs. Important to the current study, evidence suggests that pre-service teachers and teachers do not feel adequately prepared to implement inclusive education (e.g., Desutter, 2015; Kurth & Foley, 2014; Sharma & Sokal, 2015).

The inclusion of students with additional needs in regular classes is a worldwide development that began approximately 30 years ago and continues to gain momentum (Armstrong et al., 2011; Florian & Linklater, 2010). Parents, educators and lobby groups began to question the value of segregated educational settings for students with additional needs. They exerted pressure that led education policy makers to question the value and practice of automatically placing students with additional needs into segregated classes and schools (Foreman, 2017).

In investigating the preparation of pre-service teachers for inclusive teaching, it is necessary to consider how social structures and institutions, such as schools, impact the experiences both socially and systemically of people with additional needs. Critical disability studies is a framework with origins in critical theory. Critical theory aims to identify and explain what is wrong with a society and then transform it in order to improve the lives of people (Goodley, 2014). Critical disability studies aims to understand and challenge what Thomas (2007) refers to as disablism – that is, demeaning societal responses that impose social and economic barriers on the lives of people with disabilities.

The philosophy of inclusive education is closely allied to social justice and is based on the view that children with additional needs have the right to take their place and be educated in regular classes (Loreman et al., 2011; Sharma, Forlin, Loreman, & Earle, 2006; Ballard, 2012). Runswick-Cole and Hodge (2009) argue that positioning students as having “special needs” leads to exclusionary practices that stratify students inappropriately. They propose the phrase “educational rights” as an alternative to special needs which they argue shifts the focus from perceived deficits to improving
educational opportunities for children. Nonetheless, they acknowledge that changes in language alone do not necessarily change practice. Norwich (2008; 2010) identifies existing tensions within the areas of special and inclusive education about whether or not to recognise and acknowledge differences. He examines “dilemmas of difference” and suggests that recognition of difference can lead to marginalisation and stigmatisation while the opposite can lead to homogenisation resulting in a failure to cater for the needs of individual students. He proposes a balanced approach that recognises “dilemmas of difference” to assist in resolving issues about responding to difference.

The aim of the current study is to investigate one vital component associated with the success of inclusive education by examining how to effectively prepare pre-service teachers for inclusive teaching. In this way the study draws on social practice theory, which seeks to enhance practice to improve the lives of people (Williams et al., 2018). It proposes that pre-service teachers who complete initial teacher education with a clear understanding of and commitment to inclusive education as well as attaining the relevant skills, are more likely to adopt inclusionary practices.

For this study, it is important to appreciate that language use reflects the context of the times and signals important sociolinguistic changes (Mackelprang & Salsgiver, 2016). The last two decades have seen debates over the use of disability language; specifically the use of person-first (e.g., student with disability) versus disability first (e.g., disabled person). These debates concern whether to use disability identity language (e.g., disabled person) or whether to adopt language that positions the person first to highlight that people are not defined by their disability. Mackelprang and Salsgiver (2016) state that currently “there is no consensus on the use of person-first versus disability first” (p.25).

As NSW schools increasingly cater for a diverse range of learners and in order to maintain the focus of this study, the broad term students with additional needs will be used to refer to students with disabilities and/or additional needs. This includes students labelled as having learning difficulties, challenging behaviours or disorders such as attention deficit hyperactivity disorder as well as students with disabilities. The more specific term disability will also be used and refers to,

a student who has been assessed by a person with a relevant qualification as
having intellectual, sensory, physical, social-emotional or multiple impairments to a degree that satisfies the criteria for enrolment in special education services provided by the government of the state /territory in which the student is located. (Shaddock et al., 2007, p. 288)

The Disability Discrimination Act 1992 (DDA; Commonwealth [Cth]) and Disability Standards for Education 2005 (the Standards; Cth) had a major impact on practices and policies of educational institutions in Australia. The DDA was enacted to make discrimination based on disability illegal (Disability Discrimination Act 1992). Subsequently, after political struggle, the Standards were formulated in 2005, to provide detail about the right of individuals protected by the DDA. Importantly, the Standards clarified the obligations of education providers. This legislation stipulates that education providers must ensure that students with a disability are able to access and participate in education on the same basis as other students (Disability Standards for Education 2005). Further, it specifies that schools and teachers are required to make reasonable adjustments to accommodate the needs of students with a disability. However, where such obligations cause unjustifiable hardship or fail to protect the health and welfare of other people, the education provider may apply for an exemption (Disability Standards for Education 2005).

The enactment of these two important pieces of legislation not only mandated against discrimination based on disability, but also resulted in a greater awareness among education providers about the necessity to make classes more inclusive. Education providers, such as the New South Wales (NSW) Department of Education are required to inform staff of their legal obligations; for example, providing adjustments and accommodations for students with additional needs. Training packages, such as Countering Discrimination (NSW Department of Education and Training, 2000) and Everyone Counts and Everyone Belongs (NSW Department of Education and Training, 2001), designed to educate school staff about discrimination, legislation and inclusive practices are evidence of the significance of these laws.

As a result of legislation and changing views, increasing numbers of students with additional needs are educated in regular classes (Hsien, Brown, & Bortoli, 2009). However, these important pieces of legislation have not generated the level of awareness required to bring about significant change. The Review of the Disability
Standards for Education 2005 (Australian Government Department of Education and Training, 2015) identified major shortcomings in their implementation including insufficient awareness of and unsatisfactory compliance with the legislation. The exclusion of people with disabilities across all educational settings was identified as a key area of concern. Teachers described the challenges they face in making the curriculum accessible and expressed concerns about their ability to differentiate the curriculum, while parents report education providers attempting to exclude rather than include their children. Families recounted events indicating that education providers disregard their legal obligations. For example, parents reported that regular schools resisted enrolling students who present with challenging behaviours (Children with Disability Australia, 2015). A key recommendation was that:

the Australian Government work with professional bodies for educators (and education administrators) to strengthen access to and uptake of substantive training in disability in pre-service and in-service training, to support the effective implementation of the Standards. This should include skills-based training focused on effective conversations in the context of the Standards’ intent to engage and retain students with disabilities in education (Australian Government Department of Education and Training, 2015, p. 4).

Recognising that legislation alone cannot ensure the upholding of students’ educational rights, a review of the standards recommended that (Urbis, 2015) reform to structures and policies to address discriminatory practice is required. These include addressing: inadequate resourcing of the education system; the practise of secluding and excluding students and the systemic culture of low expectations. They also point out the need to promote: practices that lead to effective student-parent-school partnerships; pre-service teacher and teacher preparedness; and leadership to advance inclusive education practices. These three issues are particularly pertinent to this study.

Background to Preparing Pre-service Teachers for Inclusive Education

Three key organisations provide guidelines for schools and initial teacher education providers about curriculum and teaching practices in NSW and Australia. These are: the Australian Curriculum, Assessment and Reporting Authority (ACARA, 2013), an independent statutory authority that aims to improve the learning of all young Australians; the Australian Institute for Teaching and School Leadership (AITSL,
2012), which provides national leadership for Commonwealth, state and territory
governments in the profession of teaching; and the recently established NSW Education
Standards Authority (NESA; NSW Government, 2016). ACARA reinforces the legal
obligations outlined in the Disability Standards for Education 2005; AITSL outlines the
Australian professional standards that pre-service teachers and teachers are expected to
meet at varying stages of their careers – graduate, proficient, highly accomplished and
lead teachers. Part of NESA’s responsibility includes accrediting teachers and tertiary
teaching degrees and improving teacher quality in NSW (e.g., minimum entry standards
to initial teacher education programs, pre-graduate literacy and numeracy test). Teacher
education providers are required to demonstrate to NESA that their initial teacher
education programs comply with national accreditation standards.

However, standards (as outlined in AITSL documents) are general in nature and do not
provide guidance. Further, there is insufficient information in the literature about
curriculum or learning experiences that lead to achieving these standards. In particular,
the standards do not provide detail about attitudes, knowledge and skills that pre-service
teachers require in order to effectively include students with additional needs. It is,
therefore, the responsibility of academics to determine how to deliver curriculum and
pedagogy so that graduates of initial teacher education programs develop attitudes,
acquire knowledge and attain skills that enable them to include students with additional
needs in regular classes.

For example, under the area of professional knowledge, Standard 1 states that teachers
should “know students and how they learn” (AITSL, 2012, p. 8). Under this standard
graduate teachers are required to: “(1.5) Demonstrate knowledge and understanding of
strategies for differentiating teaching to meet the specific learning needs of students
across the full range of abilities” and “(1.6) Demonstrate broad knowledge and
understanding of legislative requirements and teaching strategies that support
participation and learning of students with disability” (p. 9). Standard 7 is concerned
with collaborative skills and states that teachers should “engage professionally with

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3 The Australian Institute for Teaching and School Leadership (AITSL) is funded by the Australian
government and provides national leadership for the Australian, State and Territory Governments in
promoting excellence in the profession of teaching and school leadership.

4 NSW Education Standards Authority (NESA) replaced the Board of Studies, Teaching and Educational
Standards (BOSTES) on 1 January 2017.
colleagues, parents/carers and the community” (p. 21). Standard 7.3 for example, states that graduate teachers “understand strategies for working effectively, sensitively and confidentially with parents/carers” (p. 21).

Concerns about Preparing Pre-service Teachers for Inclusive Teaching

As a result of increasing enrolments of students with additional needs in regular classes and heightened awareness that teachers are required to cater for a range of student needs, it became mandatory from 1994 for NSW initial teacher education programs to include a one semester “special/inclusive education” unit5 (Board of Studies Teaching and Educational Standards NSW, 2014a). However, the terminology “special/inclusive education” in NSW Department of Education only added to confusion about what inclusive education entails. The conflation of these two different educational philosophies, as if they were one approach, points to a lack of clarity regarding the purpose of the mandatory unit. Perhaps this terminology reflects how the aim of the unit changed over time, progressing from a unit designed to raise awareness about the needs of students with additional needs to a unit promoting inclusive education. Slee (2013) contends, however, that although educational authorities around the world have adopted the lexicon of inclusive education, evidence suggests that exclusion remains an ever present danger. As this study is concerned with preparing pre-service teachers for inclusive teaching, from this point on the terms inclusive education and special education will be used to denote these as two different approaches.

Documents intended to guide academics in the development of inclusive education units lack sufficient detail related to curriculum and pedagogy, leaving inclusive coordinators without adequate direction. In 2014, The Board of Studies Teaching and Educational Standards NSW (2014b) nominated “Students with Special Education Needs” as one of a number of priority areas in which pre-service teachers ought to acquire knowledge and skills. Unlike curriculum areas, however, little detail is provided about inclusive curriculum and pedagogy. AITSL provides guidelines for the development of the mandatory inclusive education unit. Yet, these are general and lack detail about curriculum and pedagogy that effectively prepares pre-service teachers for inclusive

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5 The term special/inclusive education is taken directly from Board of Studies Teaching and Educational Standards NSW. (2014a). Classroom management and students with special education needs
teaching. Further, although governing authorities\textsuperscript{6} have merged, it appears that there has been little impact on the delivery of curriculum to prepare pre-service teachers for inclusive teaching.

There is mounting evidence highlighting concerns about teacher preparedness to include students with additional needs in regular classes. In an inquiry into the provision of education to students with a disability or special needs (Parliament of NSW, 2010) the committee recommended a review of the mandatory unit offered to pre-service teachers in NSW with a view to including content that equips pre-service teachers with skills and practical strategies to cater for students with additional needs. In a review of educational outcomes for students with disability (Parliament of Australia, 2016), the committee identified a major research-practice gap in relation to improving educational outcomes for students with disabilities. The authors recommended that initial teacher education providers ensure pre-service teachers graduate with best-practice inclusive education skills.

Evidence suggests, however, that teachers feel under-resourced and ill-prepared for their inclusive role. Many teachers report that they have insufficient knowledge and expertise to cater for students with diverse learning needs (Forlin & Chambers, 2011; Kurth & Foley, 2014; Parliament of NSW, 2010; Shaddock, Smyth King, & Giorcelli, 2007). Areas identified as causing teachers major concerns were inclusion of students with disabilities and managing students with challenging behaviours (Savolainen, Englebrecht, Nel, & Malinen, 2012; Sharma & Sokal, 2015; Vinson, Johnston, & Esson, 2002). Teachers indicate that they struggle to provide a welcoming environment and report having difficulty adjusting content so that students engage in meaningful learning. While the majority of teachers are in favour of inclusive education, they indicate that they are unclear about inclusion (Parliament of NSW, 2010) and report that their initial teacher education did not adequately prepare them for the role of including students with disabilities (Desutter, 2015; Kurth & Foley, 2014; Shaddock et al., 2007; Vinson et al., 2002). Teachers’ concerns about inclusive education indicate that

\textsuperscript{6} All mandatory units in inclusive education in NSW were assessed by the NSW Institute of Teachers as meeting the standards (Board of Studies Teaching and Educational Standards, NSWa, 2014). In 2014, the NSW Institute of Teachers and the Board of Studies NSW merged to form Board of Studies Teaching and Educational Standards (BOSTES). Since that time initial teacher education providers are required to demonstrate their compliance with national standards for graduate teachers through their state/territory accrediting authority (e.g., BOSTES in NSW, now NESA).
preparation during initial teacher education warrants examination (de Boer, Pijl, and Minnaert, 2011; Savolainen et al., 2012; Sharma & Sockal, 2015). This study focuses on the “how to” of preparing pre-service teachers for inclusive teaching.

Moves toward inclusive education have necessitated many changes for schools and teachers (Florian & Linklater, 2010; Graham & Jahnukainen, 2011; Graham & Jahnukainen, 2011). As schools become progressively more inclusive of students with diverse learning needs, class teachers are required to have the skills to successfully implement inclusive education (Sosu, Mtika, Colucci-Gray, 2010). Academics have a pivotal role in ensuring that pre-service teachers are adequately prepared for inclusive teaching (Carroll, Forlin, & Jobling, 2003; Slee, 2010). Slee (2010) contends that academics should ensure that pre-service teachers are presented with courses that develop their critical capacities so they are able to identify and dismantle disabling barriers. These views and findings informed both the intervention used in the current study and the aim of the study.

In a project funded by the Department of Education, Employment and Workplace Relations, Shaddock et al. (2007) examined ways to improve the learning outcomes of students with additional needs in regular classes in Australia. The authors found that teachers nominated having insufficient knowledge and expertise, and inadequate training as barriers to inclusive education. In conclusion, the authors raised questions about the effectiveness of mandatory so called “special/ inclusive education” units offered at universities:

How effective is the “mandatory Special Education unit” at pre-service level in preparing teacher education students for inclusive practice? What improvements are necessary? Should alternative approaches to pre-service preparation be considered? (p. xvii)

In his analysis of inclusive education Slee asks “How do we prepare teachers for inclusive schooling?” (2001, p. 119) and “How do we build the capacity of schools to grow with and to work with a difference?” (2013, p.905)

At a time when the enrolment numbers of students with additional needs in regular classes is increasing (Graham & Sweller, 2011) ongoing reviews raise concerns about teacher preparedness for inclusive teaching (Forlin & Chambers, 2011; Parliament of
NSW, 2010; Shaddock et al., 2007; Sharma & Sockal, 2015; Vinson et al., 2002). To date, a plethora of studies exist that investigate the attitudes of pre-service teachers and teachers towards including students with additional needs in regular classes (e.g., Hsien et al., 2009; Loreman, Sharma, Forlin, & Earle, 2005; Sharma et al., 2006; Spandagou, Evans, & Little, 2008). However, there remains a paucity of research investigating how to effectively prepare pre-service teachers for inclusive teaching across the areas of attitudes, knowledge and skills. The current study is concerned with how to shift attitudes, increase knowledge and enhance the skills of pre-service teachers such that they feel prepared for inclusive teaching.

Aim and Scope of the Study
This study aimed to identify and generate a set of approaches on curriculum and pedagogy that may be used to enhance pre-service teachers’ preparedness during initial teacher education so that they possess the requisite attitudes, knowledge and skills to plan and manage successful learning for students with disabilities and additional needs in regular classes in NSW.

The following questions guided the research to address this aim:

1a. Do the self-reported attitudes, knowledge and skills of pre-service teachers change as a result of undertaking a specifically designed mandatory unit in inclusive education in an initial primary teacher education program?

1b. After completing the inclusive unit, how similar are pre-service teachers on these characteristics compared to experienced teachers?

2a. What content needs to be covered in initial primary teacher education programs to prepare and equip beginning teachers for inclusive teaching?

2b. What mode of delivery optimises the effectiveness of preparing pre-service teachers for inclusive teaching?

3. How can educational learning experiences during initial teacher education be effectively organised to prepare pre-service primary teachers for inclusive teaching in NSW?

What characterises educational learning experiences during initial teacher education that effectively prepare pre-service primary teachers for inclusive teaching.
This study was limited to examining the responses and perspectives of pre-service, beginning and experienced teachers within NSW. The pre-service teachers undertook a one semester unit in inclusive education in an initial teacher education program in a NSW university. The study also sought the views of experienced teachers working in primary schools in urban and rural areas of NSW (Australia), across a range of roles; namely, class teachers, support teachers, executive teachers and school counsellors. Most of the participants worked in the NSW Department of Education; however, a small number of teachers from Catholic schools also participated in the study.

**Research Design and Method**

The key purpose of this research was to build on and generate knowledge about how to effectively prepare pre-service teachers for inclusive teaching. The research questions devised for this study sought the perspectives of pre-service, beginning and experienced teachers to identify curriculum and pedagogy to better prepare pre-service teachers for inclusive teaching. A mixed methods approach (two phase explanatory sequential with an intervention) was adopted because multiple data collection methods were required to answer different research questions. The data were then integrated to gain a comprehensive understanding of the issues that were central to the key research questions.

The first phase of the study involved collecting questionnaire responses from: (a) pre-service teachers, before and after undertaking the inclusive unit, and (b) experienced teachers in NSW. The second phase involved conducting face-to-face interviews with 15 participants who responded to the questionnaire from the first phase. The quantitative and qualitative approaches generated complementary information that shed light on how to effectively prepare pre-service teachers for inclusive teaching. A glossary of the most commonly used terms in this thesis is provided in Appendix A.

**Significance of the Study**

The study is significant in a number of ways. Firstly, the findings yielded valuable insights about facilitating learning, and designing and delivering curriculum to prepare pre-service teachers for inclusive teaching. The findings can be used to guide the development of online learning courses, improve existing courses and design professional development for a range of educators.
This study attempts to identify and detail approaches during initial teacher education that effectively prepare pre-service teachers for inclusive teaching in the areas of attitudes and knowledge with an emphasis on skill development. The research led to the design and development of tools, a theoretical model and a curriculum model for enhancing pre-service teachers’ preparedness for inclusive education.

Secondly, an innovative questionnaire was developed to address the questions formulated for this research. Importantly the questionnaire provides items addressing specific skills relevant to inclusive teaching. This questionnaire was designed to allow statistical comparisons between the views of pre-service teachers (pre-and post-inclusive unit) and a range of teachers (e.g., principals, school counsellors).

It was also used to determine whether after undertaking the inclusive unit pre-service teachers’ self-reported capacity to include students with additional needs became more similar to that of experienced teachers. This provided a method for evaluating the effectiveness of the intervention, by gauging pre-service teachers’ self-efficacy against that of experienced teachers. The results of these comparisons present the evidence for this component of the research. This information provided insights about enhancing pre-service teachers’ self-efficacy beliefs for inclusive teaching – thus making a unique contribution to the field and addressing a critical challenge in contemporary education.

**Structure of the Thesis**

This thesis comprises seven chapters. Chapter 2 examines the theoretical underpinnings of inclusive education as conceptualised for this study and situates the research within literature about inclusive education and the preparation of pre-service teachers for inclusive teaching. Chapter 3 describes the research design used in this study and provides a rationale for using a mixed methods approach. As part of this study is concerned with changes in pre-service teachers’ self-reported attitudes, knowledge and skills after undertaking an inclusive unit, the chapter details the intervention. It also explains the integration of the quantitative and qualitative data sets to answer the research questions. Methods of data collection and analyses are also presented in that Chapter.

Chapters 4 and 5 focus on the findings of the study. Chapter 4 reports the results for phase one of the study; that is, findings from the questionnaires completed by pre-service and experienced teachers. It presents changes in the self-reported attitudes,
knowledge and skills of pre-service teachers after undertaking the inclusive unit; compares pre-service and experienced teachers perceptions of their general preparedness and skills for inclusive teaching; as well as identifying inclusive content that pre-service and experienced teachers believe should be covered during initial teacher education to prepare pre-service teachers for inclusive teaching. While recognising that unit content alone does not ensure more effective inclusive teaching, this component of the research addresses concerns of some scholars regarding inclusive curriculum, including topics covered, learning experiences, professional experience, mode of delivery and theory (e.g., Desutter, 2015; Fuchs, Fahsl, & James, 2014; Hsien, 2007; Kurth & Foley, 2014; Sharma & Sokal, 2015, Moore & Slee, 2012).

Open-ended responses from the questionnaire are also presented. Chapter 5 presents the findings of the second phase of the study. It builds on the questionnaire findings by examining data from the interviews. This chapter reports the findings of thematic analysis conducted on interview data collected from beginning and experienced teachers about how to effectively prepare pre-service teachers for inclusive teaching. The face-to-face interview data provided details about the kinds of learning experiences that participants felt would contribute to pre-service teachers’ preparedness for inclusive teaching. Nuanced insights were revealed.

Chapter 6 integrates and discusses the findings from questionnaire and interview responses. It presents key findings and offers a template and models to advance the preparation of pre-service teachers for inclusive education. Implications for policy and practice and strengths and limitations of the study are discussed and directions for future research are suggested. Chapter 7 concludes this research by presenting a general overview of the study’s main findings; drawing together the themes of the thesis and highlighting its contribution to the field.
Chapter 2: Background

Legislation together with policy changes that espouse inclusive education have resulted in a move away from the automatic practice of educating students with additional needs in segregated settings, such as support classes. Instead educational provision in regular classes, even though not fully implemented, is considered to be the norm both in Australia and internationally (Florian & Linklater, 2010; Forlin, 2010; Graham and Sweller, 2011).

Nonetheless, the exclusionary practice of assigning students to special classes continues. Ideological debates prevail over practices that diagnose, categorise and segregate students (Slee, 2011). Proponents of inclusive education argue the rights of all children in a democratic society to be included (Goodley, 2017; Slee, 2005; Tomlinson, 2012). In contrast proponents of special education (and therefore segregation) believe that segregated contexts better cater for the needs of students with disabilities and provide alternative options for children who would otherwise be marginalised. Goodley (2017) contends that special schools are part of a system that fails to accommodate difference.

Slee (2011) argues the importance of decoupling special education and inclusive education. Such a demarcation would likely create greater clarity about the principles that underpin inclusive education. While education systems such as NSW Department of Education, provide a continuum of education settings (segregated and regular classes as well as support services e.g., itinerant support teachers), it seems that the coexistence of inclusive and special education will endure (Tomlinson, 2012). Even under the banner of inclusive education erroneous practices are still carried out, such as grouping students with vastly different learning needs and withdrawing them from class (Tomlinson, 2012). Such practices seem to be based on perfunctory decisions under the misguided belief that inclusive education is being implemented.

Critical researchers (Goodley, 2017; Moore & Slee, 2012; Slee, 2005) argue the need to examine and address school cultures and structures that support inequalities by challenging the “disabling philosophies of all mainstream schools” (Goodley, p. 173). Such an approach necessitates reform of schooling through reconceptualising curriculum, examining teacher practices and improving pedagogy (Slee, 2005).
Proponents of inclusive education point out the compounding disabling effects of special education and integration while striving for a society, in particular a schooling system that accepts and embraces difference and diversity. Inclusive education demands that educators reconceptualise education and disability (Goodley, 2017). Exclusion of students prevails because of practices that categorise and assign students to different educational settings and by political agendas that emphasise academic results over equity (Goodley).

In NSW initial teacher education prepares pre-service teachers for inclusive teaching within a context comprising a continuum of educational settings for students with additional needs. Teachers are increasingly required to meet the needs of students with additional needs in regular classes who in the past have been educated in segregated settings. A sea-change is occurring, however, many teachers indicate that they do not have the requisite knowledge or skills to teach classes of students with such diverse needs8 (Florian & Linklater, 2010).

This mixed methods study aims to identify curriculum and pedagogy that effectively prepare pre-service primary teachers for inclusive teaching. Addressing this aim requires an understanding of how initial teacher education can effectively prepare pre-service teachers for the challenges of inclusive teaching. Accordingly, this review explores two key areas: teachers’ perceptions and experiences of inclusive education and the preparation of pre-service teachers for inclusive teaching. The review also considers methodological approaches of studies that have investigated the preparation of pre-service teachers for inclusive education.

This chapter begins by providing the context of the current study. It then reviews literature about the preparation of pre-service teachers for inclusive education. Evidence is drawn from a wide range of empirical literature including peer reviewed literature and government reports. Lastly, it examines Australian research about the concerns of pre-service teachers and teachers regarding inclusive education.

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8 In this dissertation the term diversity refers mainly to students with disabilities and/or additional needs and students who are gifted. However, this term also reflects the wide variation in needs of students in contemporary inclusive classes and the “need to be aware of factors related to their ethnic, cultural and social backgrounds” (Foreman & Arthur Kelly, 2014, p. 558).
Prevalence of Students with Additional Needs and Disability in New South Wales

This section presents figures showing the increasing enrolments of students with additional needs in regular classes. These together with evidence highlighting teacher concerns about their ability to teach inclusively, point to a need to scrutinise the effectiveness of initial teacher education to prepare pre-service teachers for inclusive teaching. While some scholars contend that the use of population categories advances the notion of disability as a medical issue (e.g., Titchkosky, 2007) for this study statistics are presented to show how schools are evolving.

The United Nations (UN) estimates that 10% of the world’s population has a disability (United Nations, 2006). The UN Convention on the Rights of Persons with Disabilities (2006), to which Australia is a signatory, recognises that people with disabilities have a right to a quality and inclusive education (United Nations, 2006, Article 24). The Convention states that education systems should foster respectful attitudes and establish learning environments that are inclusive by providing appropriate support and accommodating the needs of individuals at all levels of education. Further, it proclaims that “states’ take appropriate measures to train and employ teachers who are qualified to facilitate the effective education of students with disabilities and to ensure that they have equal access to activities within the school systems” (e.g., recreation, appropriate augmentative and alternative formats of communication). However, policies and laws are hard to translate into practice (Williams, et al., 2018).

In NSW, where the current study is set, there has been a change in the pattern of student enrolments that has important implications for class teachers and schools. Figures from the Australian Bureau of Statistics (ABS) show that in NSW, the most populated state of Australia, there has been a significant increase in the number of students with a confirmed disability or additional need enrolled in regular classes (ABS, 2013). Although all education systems in NSW take responsibility for educating students with additional needs, figures suggest that NSW government schools have the highest percentage of enrolments. In 2009 there were approximately 100,000 children with disabilities and/or additional needs attending State, Catholic and Independent Schools in NSW (Parliament of NSW, 2010). The Department of Education is the largest education provider for school age children in NSW, enrolling approximately 745,000 students
(NSW Department of Education and Communities, 2012). Approximately 90,000 students with additional needs and disabilities were enrolled in 2,200 NSW public schools. Of these students, approximately 35,000 were confirmed as having a disability and approximately 55,000 had additional needs (Parliament of NSW, 2010). In NSW Catholic schools in 2009 approximately 10,000 students with a confirmed disability and 24,000 students with additional needs attended regular classes. In the same year, approximately 2,000 students with confirmed disabilities and 23,700 students with additional needs attended regular classes in NSW Independent Schools (Parliament of NSW, 2010).

In NSW government schools, the percentage of students with a confirmed disability increased from 1.9% in 1988 to 6% in 2011 (NSW Department of Education and Communities, 2012). In particular, the number of students with autism spectrum disorder and mental ill health increased substantially. The number of students with autism spectrum disorder in NSW government schools increased from approximately 4,000 in 2005 to 8,000 in 2011 while students diagnosed with mental ill-health increased from approximately 5,000 to 8,000 in the same period (NSW Department of Education and Communities, 2012). Graham and Sweller (2011) compared the enrolment figures of students with disabilities in regular classes, support classes and schools for specific purposes (segregated setting) between 1997 and 2007 in NSW government schools. They found the number of students with a disability enrolled in regular classes rose from approximately 5,000 in 1997 to approximately 26,500 in 2007, an increase from 2.7% to 6.7% of total enrolments. Notably, ABS (2013) figures show that approximately 65.9% of students with a disability attend regular classes.

Evidence shows that children with additional needs are more likely to attend government schools, particularly in areas of social disadvantage (Gonski et al., 2011). The compounding affects of these factors on learning outcomes present teachers with further challenges.

Overall, the above figures show the development of inclusive education practices. This evidence highlights the need to ensure that all pre-service teachers are provided with learning experiences that effectively prepare them for contemporary inclusive teaching.
The Influence of Changing Perspective on Educational Provision

It is increasingly evident that an inclusive approach to educating students with additional needs has social, academic and financial benefits (Loreman, 2007). A major concern is that educating children in segregated settings based on perceived needs compromises children’s access to curriculum and educational opportunities (Lindsay, 2010). Hence, discourse has shifted away from justifying inclusive education to investigating its successful implementation (Loreman, 2007).

Given the very clear direction of international policy towards inclusive education, together with evidence suggesting that teachers feel ill-prepared for inclusive teaching, the current study focuses on identifying approaches to enhance pre-service teachers’ preparedness rather than justifying inclusive education. Nonetheless, to appreciate the progression towards inclusive education, it is important to understand perspectives that underpin inclusive education and special education.

As previously discussed (see Chapter 1), critical disability studies challenges restrictions imposed by society on people with disabilities. Rather than viewing disability as an individual issue, it locates disability in the social, cultural and economic sphere (Goodley, 2014). Critical disability theorists contend that in order to realise inclusive education, it is necessary to reconceptualise education systems (Slee, 2005). Critical disability studies identify discrimination and exclusionary practices. Inclusive education is concerned with changing educational cultures. For example, embracing difference rather than regarding it as source of difficulty; broadening the curriculum by promoting disability studies in initial teacher education; promoting conscientisation by challenging normative ideas about the definition of a successful learner (Goodley, 2017) and enhancing teacher pedagogy and practices (Slee, 2005). While acknowledging the contribution of the social model of disability in promoting the rights of people with disabilities, critical disability studies has advanced the field of scholarship (Goodley, 2017; Shakespeare, 2013).

The following section outlines two models of disability that have influenced the provision of educational services for students with disabilities. Firstly, the medical model of disability is discussed followed by the social model of disability.

Essentially, the medical model reflects a medical view of disability. It focuses on differences and limitations, resulting in diagnoses and referrals of students (Mertens,
Sullivan, & Stace, 2011; Slee, 2010). Assessment and remediation is often conducted outside the classroom and consequently occurs out of context. Historically, the medical model of disability has been a major influence on determining where students with additional needs were educated (Moore et al., 1999). Although there has been a trend towards inclusive education, the medical model remains influential in determining whether students are educated in special education or inclusive settings (Slee, 2014).

Up until relatively recently the medical model of disability was the prevailing philosophy determining where students with additional needs were educated (Moore et al., 1999). In accepting this philosophical approach, educators believe that students should “fit” into class and school contexts. Schools and teachers are therefore not required to adjust teaching nor adapt learning environments to cater for the needs of all students. Figures 2.1 to 2.3 illustrate class placement of a student based on the medical model of disability.

Supporters of the medical model of disability perpetuate a view that teachers require special training and special skills to teach students with additional needs (Loreman, 2010a). When students are enrolled in special schools and support classes based on disability or perceived need, regular schools are not required to adapt to meet the needs of students with additional needs.

In direct contrast, proponents of the social model of disability argue that a student with an additional need should be regarded as any other child; that is, one who reflects diverse influences (Shaddock et al., 2007).
Figure 2.1. Photo illustrating enrolment of students into support classes based on medical model of disability. This photograph shows Nell (front row; 1st left; sister of researcher) enrolled in the Opportunity Deaf (OD) class based on her hearing impairment in 1962 at Liverpool Public School. Printed with permission; these images are not to be reproduced.
Figure 2.2. Student moved to mainstream class. In 1963 owing to Nell’s academic achievements in the Opportunity Deaf class, she was moved to a regular class at Liverpool Public School (back row; 2nd right).

Figure 2.3. Student with hearing impairment returned to Opportunity Deaf class. This photograph shows that in the following year of 1964, Nell (back row 2nd right) returned to the support class. The photograph highlights the practice of expecting students to fit into the environment rather than adapting the environment and teaching methods to include students.
The social model of disability focusses on the strengths of people with disabilities, rather than on deficits (Mertens et al., 2011). This model parallels the lived experiences of people with disabilities with that of other oppressed minority groups (e.g., ethnicity, class and gender) (Mertens et al., 2011). This model posits that barriers encountered by people with disabilities are imposed by society (Loreman et al., 2011; Mertens et al., 2011; Slee, 2010). Proponents implore educators to review the limitations of instructional environments and urge them to modify their instructional approaches. They contend that schools and teachers should create environments that support the social and educational needs of all students. Further, they argue that the task of educators is to adapt and seek to improve educational settings and organisations.

The current study positions itself within a context that recognises the need to move beyond the prevailing models of disability. Critics of the social model of disability (e.g., Shakespeare, 2013) argue that in blaming oppression and the impact of social barriers for exclusion, the model discounts that disability creates limitations for people. Shakespeare contends that “social and individual aspects are almost inextricable in the complexity of the lived experience of disability” (p. 218) resulting in many disadvantages.

Having an understanding of the historical influences on the provision of schooling for students with additional needs has informed this study. Notably, that it is important to acknowledge the barriers imposed on and opportunities denied to people while also recognising and responding to individual differences.

Ongoing developments in research about educating students with additional needs have also informed this thesis. This includes disability studies in education that have progressed the dialogue regarding disability and equity by asking practitioners (e.g., teachers, academics, educational leaders) to consider notions of difference within children (so that children are not viewed as a homogenous group), as well as tensions and contradictions that exist within school systems. This shift in thinking, away from the social model, recognises that children have complex identities and questions accepted approaches adopted by professionals (Davis, 2012). This post-modern stance acknowledges the complexity of social structures, such as schools, but implores those working in the field to examine attitudes and practices that result in exclusion (e.g., creating social victims by adopting patronising approaches).
Inclusive education has been shaped by the philosophy of numerous scholars (e.g., Zygmunt Bauman, Paulo Freire, Dan Goodley, Tanya Titchkosky, Katherine Runswick Cole, Roger Slee). In his seminal work *Pedagogy of the Oppressed*, Freire (1970) argues that educators should understand and apply concepts of human rights to recognise systemic discriminatory practices and injustices that occur in the institutions in which they work. Others attend to the social, cultural, political and structural aspects of society that lead to exclusion of people with disabilities (Goodley, 2012). Bauman (2012) argues that inequality of educational opportunities is a political matter and contends that economic structures and cultures foster exclusion by categorising students and assigning them to other settings.

**Factors that Impact on the Success of Inclusive Education**

Class teachers increasingly face challenges associated with including students in regular classes who were previously enrolled in support classes (Florian & Linklater, 2010). In addition to class teachers reporting that they are not adequately prepared for this role, other factors impact the successful implementation of inclusive education. Poor implementation of inclusive education is likely to result in “mainstream dumping” (Vinson et al., 2002, p. 253); a consequence of poor planning whereby students with additional needs are placed in regular classes without considering how to cater for their educational needs. Adequate planning time and access to professional development and resources are examples of issues that require consideration when discussing teachers’ capacity to implement inclusive education (Parliament of NSW, 2010; Vinson et al., 2002).

A government inquiry into the provision of education to students with additional needs recommended that teachers be provided with additional provisions such as relief time to develop individual learning plans (Parliament of NSW, 2010). Yet, teacher union representatives contend that governments are still not providing sufficient resources to support inclusive education, leaving teachers to struggle with including diverse learners (Simpson, 2010; Vera, 2016). They also argue that governments are not meeting their human rights obligations to children with additional needs. Vera (2016) asserts that schools are being denied funding to support students with additional needs.

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9 Support classes are based in regular schools and are specifically for students diagnosed with a disability.
Some authors argue that given the increasing numbers of students with additional needs in regular classes, academics have a responsibility to ensure that pre-service teachers are effectively prepared for their inclusive roles (Carroll et al., 2003; Slee, 2010). Slee (2010) claims that academics should present courses that develop pre-service teachers’ critical capacities, so that as future teachers and potential leaders they are able to identify and dismantle barriers. To this end, learning experiences need to enlighten pre-service teachers about the rights of children so that they recognise and address exclusionary attitudes and practices. This requires academics to carefully design learning experiences that engender within pre-service teachers a commitment to dismantling barriers that result in exclusionary environments.

The evidence presented in the next section highlights some concerns advanced by scholars about preparing pre-service teachers for inclusive teaching. Approaches to prepare pre-service teachers for inclusive education, as required by the state regulatory authority, differ across Australian states. For example, some states such as Victoria intersperse subject matter related to inclusion across all units while other states such as NSW and Western Australia offer a separate unit of study in the area of inclusive or special education (Sharma et al., 2006).

Some scholars are critical of the mandatory inclusive unit that pre-service teachers are required to undertake in some states of Australia (Hsien, 2007; Loreman, 2010a; Slee, 2001). Slee argues that presenting inclusive education as a separate unit perpetuates a view that teaching students with additional needs requires separate programs and teachers with specialist skills. Similarly, Hsien (2007) supports a unified pre-service program in which philosophies, content and program delivery are embedded across the entire initial teacher education course.

Conversely, Avramidis, Bayliss, and Burden (2000) argue that embedding inclusive content throughout other units leads to an ad hoc and incoherent coverage of the issues. These contrasting views underlie ongoing debates about how to effectively prepare pre-service teachers for inclusive education.

**Research about Preparing Pre-service Teachers for Inclusive Education**

There have been numerous studies on the preparation of pre-service teachers for
inclusive education with specific regard to attitudes, curriculum and pedagogy, and teacher concerns. Despite legislation, notably the *Disability Discrimination Act 1992* and *Disability Standards for Education 2005*, that supports inclusive education, and research about preparing pre-service teachers for inclusive teaching, teachers continue to report feeling ill-prepared and ill-equipped to include students with additional needs in regular classes (Forlin et al., 2008; Forlin & Chambers, 2011; Parliament of NSW, 2010; Shaddock et al., 2007; Sharma & Sockal, 2015). Ongoing studies and government reports suggest that teacher training is not adequately addressing the needs of teachers for teaching in contemporary inclusive classes (Forlin & Chambers, 2011; Parliament of NSW, 2010; Shaddock et al., 2007; Teacher Education Ministerial Advisory Group, 2014; Vinson et al., 2002). Further, findings indicate that pre-service teachers and teachers have concerns about their ability to cater for students with diverse learning needs (Forlin & Chambers, 2011; Forlin et al., 2008).

Interestingly, these issues are not limited to Australia. There are historical parallels between how inclusive education in England and Australia has evolved. In a literature review of the English government’s response to the preparation of pre-service teachers for inclusion, Hodkinson (2009) found that although there has been a dramatic increase in the enrolment numbers of students with additional needs in regular classes, initial teacher education for inclusive education has changed only marginally. He concluded that the British government needed to ensure that higher education providers prepare pre-service teachers with the attitudes, knowledge and skills for catering to the broad range of learners who were previously excluded. This finding is supported by the recommendations of the (Australian Government’s) Teacher Education Ministerial Advisory Group10 (2014) that all teachers should have skills to work effectively with students with additional needs.

Although much research has been conducted on the preparation of pre-service teachers for inclusive teaching (Forlin & Chambers, 2011; Fuchs, Fahsl, & James, 2014; Hodkinson, 2009; Lancaster & Bain, 2010), in the main it has not detailed approaches that lead to effective pre-service teacher preparation. Further, studies to date have tended to examine the attitudes of pre-service and experienced teachers, related to inclusive education rather than investigate how to shift attitudes. This study aims to fill

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10 Appointed by the Australian Federal Minister for Education to make recommendations about improving initial teacher education in Australia.
a gap in the literature by focussing on how to shift attitudes, increase knowledge and enhance the skills of pre-service teachers so that they feel prepared for inclusive teaching.

A review of pertinent studies about teacher attitudes, curriculum and pedagogy, and teacher concerns about inclusive education follows.

**Addressing negative attitudes about inclusive education.** Having positive attitudes about inclusive education is believed to play a crucial role in teachers’ ability to successfully include students with additional needs. A number of researchers have focussed on pre-service teachers’ level of comfort when interacting with people with disabilities and their concerns about inclusive education (Loreman et al., 2005; Sharma et al., 2006) while others have investigated the impact of teacher preparation on pre-service teachers’ attitudes towards inclusive education (Sosu et al., 2010; Spandagou et al., 2008).

The majority of these studies show that many teachers have concerns and reservations about aspects of inclusive education. Some studies found that teachers question the concept of inclusive education while others found that some teachers have a level of discomfort regarding disability. The following section critically examines studies that have investigated teacher attitudes about inclusive education.

As far back as the 1980s, Australian researchers have investigated the attitudes of pre-service teachers and teachers about integrating students with additional needs. One study found that teachers did not feel confident about their own instructional skills or the quality of support offered to them (Center & Ward, 1987). Further, the attitudes of teachers changed markedly according the degree of presenting challenges and the extent to which teachers were required to modify their teaching (Center & Ward, 1987; Ward, Center, & Bochner, 1994).

In comparing the attitudes and degree of comfort of pre-service teachers when interacting with people with additional needs in Australia, Hong Kong, Singapore and Canada, Sharma et al. (2006) found that pre-service teachers in Canada had the most positive attitudes and were the most comfortable with people with disabilities. Pre-service teachers in Singapore and Hong Kong had the least favourable attitudes and those in Singapore reported the lowest level of comfort. Pre-service teachers in
Australia ranked in the middle on both attitudes and degree of comfort. The authors suggest a number of approaches to address negative attitudes about inclusive education. For example, Forlin, [cited in Sharma et al., 2006] suggests involving students with intellectual disabilities in tutorials in initial teacher education. However, this suggestion lacks authenticity and is of questionable value to students and pre-service teachers. Caution is recommended when generalising these results because the study was restricted to only some parts in each country. For instance, in Australia only pre-service teachers in Victoria and Western Australia were surveyed; Victorian teachers are not required to complete a unit about inclusive education while Western Australian teachers are required to undertake a unit in educating students with diverse needs. Nonetheless, these findings suggest that pre-service teachers need to engage in well-conceived rights-based learning experiences that address attitudes to inclusive education. The current study investigates ways to provide such learning experiences.

Another survey study conducted in Victoria compared the attitudes and beliefs of general and special education teachers towards inclusive education (Hsien et al., 2009). The authors found that teachers with postgraduate qualifications in special education had more positive attitudes towards inclusive education and believed that inclusion was achievable. Interestingly, these teachers also believed that inclusion did not disadvantage other students. The authors suggest that the more positive attitudes of teachers with postgraduate qualifications in special education may be related to their more extensive understanding of child development and experience of working with students with additional needs. Although the authors may have a professional interest in finding positive results for postgraduate courses, the findings offer further insight into teacher attitudes and related influencing factors. Such factors are investigated in the current study.

In a study examining the views of in-service teachers in Finland and South Africa, Savolainen et al. (2012) found that teachers had many concerns about inclusive education. Notably, the research showed a positive connection between attitudes towards inclusive education and teachers’ self-efficacy beliefs. The authors argue that this finding has implications for pre- as well as in-service teacher training and concluded that much still needs to be achieved in terms of self-efficacy of pre- and in-service teachers in relation to inclusive teaching. One suggestion was to engage pre-service teachers in learning that addresses perspectives and attitudes about inclusive
education. Further, they emphasised the importance of training in the area of collaboration and argued for the establishment of collaborative support networks to support inclusive education. However, the authors did not provide details as to how positive attitudes, increased self-efficacy and collaborative skills might be achieved. The current study seeks to illuminate these details.

Of concern are the findings of de Boer et al. (2011) who reviewed 26 studies about teacher attitude towards inclusive education. They found that the majority of teachers hold neutral or negative views about including students with additional needs in regular primary classes. Further, they found that teachers are most negative about students who require greater commitment and who test teacher skills, such as students with higher support needs (de Boer et al., 2011). These findings add to the evidence showing a link between teacher attitudes and capacity to manage inclusive classes. This link is investigated in the current study.

In summary, the studies reviewed here show that teachers have concerns about inclusive education. Notably, the findings highlight the importance of ensuring that pre-service teachers engage in learning experiences that address teacher attitudes and lead to enhanced self-efficacy. While teachers hold negative attitudes towards inclusive education, it is unlikely that they will strive to be inclusive of all students (Sharma & Sokal, 2015).

Unfortunately, the majority of the studies fail to offer suggestions as to how to change teacher attitudes. One aim of the current study, therefore, is to propose approaches that raise pre-service teachers’ consciousness about exclusionary attitudes.

**Curriculum and pedagogy for preparing pre-service teachers for inclusive education.** Various documents can be used by academics to inform their decisions about content presented in initial teacher education units. The Board of Studies Teaching and Educational Standards NSW (2014c) (BOSTES; now NSW Education Standards Authority) produces syllabus documents that inform teachers of the content to be covered in curriculum areas (e.g., Science, Mathematics) for students in schools (Kindergarten through to Year 12\(^{11}\)). Similarly, these documents provide academics in

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\(^{11}\) In NSW children generally begin Kindergarten at five years of age and complete Year 12 (Higher School Certificate) at approximately 18 years of age. Schooling in NSW is organised into six stages of Learning e.g., Stage 1 = Kindergarten to Year 2 (Kindergarten is referred to as Early Stage 1).
initial teacher education with guidelines about the content to cover in curriculum areas as well as information about the attitudes, knowledge and skills that students are expected to acquire at different stages of learning.

However, there are no documents providing the same degree of detail for more general units in initial teacher education programs, such as those dealing with pedagogy, diversity and inclusive education. This has led to a situation in which personal ideas or preferences guide the choice of content and delivery of material for those units in some university courses (Barnett & Coate, 2005). It has been suggested that academics use data from pre-service teachers pre- and post-unit to identify effective content and inform modifications to course delivery (Sharma & Sokal, 2015).

Moreover, there is a paucity of detail provided in the literature about the kinds of learning experiences that would effectively prepare pre-service teachers for inclusive teaching. Numerous scholars offer suggestions to enhance the preparation of pre-service teachers for inclusive teaching (Hsien et al., 2009; Jordan, Swartz, & McGhie-Richmond, 2009; Loreman, 2010b; Sharma et al., 2006; Westwood & Graham, 2003). For example, some scholars recommend that pre-service teachers engage in learning that addresses pre-conceived dispositions about people with disabilities (Hsien et al., 2009; Jordan et al., 2009) as well as promote the acquisition of competencies (Jordan et al., 2009; Sin, Tsang, Poon, & Lai, 2010) in areas such as collaboration (Harvey, Bauserman, & Merbler, 2010).

The majority of studies suggest that teachers question their ability to cater for a range of student needs. Skills deemed necessary for inclusive teaching include the ability to work collaboratively with a range of stakeholders (Harvey et al., 2010) and teaching in inclusive ways (Loreman, 2010b). An aim of the current study is to add to the body of literature that academics may use to inform them when designing curriculum and learning experiences to prepare pre-service teachers for inclusive teaching.

The following section presents and critiques selected studies that investigate the skills that teachers require in order to successfully implement inclusive education. Of note, while these studies identify skills areas, the majority do not spell-out approaches that lead to the attainment of such skills.
In a study that investigated pre-service teachers’ preparedness for inclusive teaching the authors found that although pre-service teachers were positive about inclusive education they expressed concerns about their abilities to implement inclusive pedagogy (Sosu et al., 2010). Using both surveys and interviews, they examined the extent to which pre-service teachers felt prepared for inclusive education after undertaking a four-year Bachelor of Education program in Scotland. It seems that while it is important to change pre-service teachers’ attitudes about inclusive education, it is fundamental that this is complemented with skill development.

Academics involved in teacher training across the United States were surveyed (quantitative and qualitative) to determine perceptions of the effectiveness of initial teacher education for inclusive teaching (Harvey et al., 2010). Based on their findings the authors concluded that pre-service teachers should be provided with opportunities to work with diverse learners and be trained in collaboration and co-teaching to equip them to teach all students. They also recommended that teacher training courses adopt a philosophy of shared practice and vision and introduce an integrated approach to delivering inclusive education across faculties and subjects or majors. Although the study sheds light on issues related to the preparation of pre-service teachers for inclusive education, it garnered the views of academics only. Further, responses were received from only 41 states (nine states and territories did not respond), with response rates varying across states (7%-100%) and a low overall average return rate (19%).

Given the low average return rate it is possible that only those academics committed to reflecting on their practice responded. Nonetheless, the study has relevance to the Australian context because Australia and the US share some commonalities with regard to mandating legislation aimed at preventing discrimination against people with disabilities and implementing inclusive education policy. For example, although there are differences between the Disability Discrimination Act 1992 and the Americans with Disabilities Act of 1990 both make it illegal to discriminate against a person with a disability in areas of life such as access to employment, education and public buildings.

Importantly, the study showed that collaborative skills need to be specifically targeted during initial teacher education. This informs an aspect of the current study.

By conducting a review of the literature and analysing government education policy documents for Alberta, Canada, Loreman (2010b) identified attributes, knowledge and skills that pre-service teachers should develop during initial teacher education to enable
them to work effectively in inclusive classes. The author identified seven key areas that he posits pre-service teachers should master in order to have success in inclusive classes. Academics in the field of inclusive education and a senior education bureaucrat provided comments on the set of skills and subskills that he devised (e.g., understanding inclusion and respecting diversity, and instructing using inclusive approaches). Loreman aligned the skills and subskills with the Teacher Quality Standards and the Standards for Special Education of Alberta. Although the list is comprehensive, there are no details about how to actualise learning experiences that lead to attitudinal change and skill acquisition. For example, detail is not provided about the kinds of learning experiences that would best achieve the outcome “articulate an understanding of the benefits of and principles behind inclusion” (p. 129) in a typical university course – whether delivered as a separate unit or integrated across subjects.

Scholars suggest that the task of academics is to provide pre-service teachers with an education that enhances understanding of theoretical perspectives about inclusive education (Shaddock et al., 2007; Slee, 2010) and to present learning experiences that develop their abilities to cater to a wide range of student needs (Parliament of NSW, 2010; Sin et al., 2010). Academics play a crucial role in ensuring that pre-service teachers understand legal obligations and ethical issues associated with inclusive education. They also have a responsibility for devising approaches that address fixed views of some pre-service teachers’ as well as presenting learning experiences that ensure that pre-service teachers feel equipped to include a range of learners. Although scholars recommend content area such as collaboration (Harvey et al., 2010; Savolainen et al., 2012) and classroom management they do not propose approaches to actualise these goals. Evidence to date, however, indicates that teachers feel unprepared for their inclusive roles (Forlin & Chambers, 2011; Harvey et al., 2010; Kurth & Foley, 2014; Parliament of NSW, 2010; Shaddock et al., 2007; Sharma & Sockal, 2015; Vinson et al., 2002).

Considering ongoing and mounting evidence showing that pre-service teachers and experienced teachers do not feel adequately prepared for inclusive teaching, this study aims to identify approaches that enhance pre-service teachers’ preparedness such that they understand theoretical concepts, recognise their ethical responsibilities and acquire requisite skills in readiness to implement inclusive education.
Pre-service and teacher concerns about inclusive education in Australia.

Australian and international research conducted over approximately the last 15 years continues to show that pre-service teachers and teachers have concerns about inclusive education (Desutter, 2015; Forlin & Chambers, 2011; Kurth & Foley, 2014; Parliament of NSW, 2010; Shaddock et al., 2007; Sharma & Sokal, 2015; Teacher Education Ministerial Advisory Group, 2014; Vinson et al., 2002). Investigating teachers’ views about their initial teacher education may shed further light on how to improve pre-service teachers’ preparedness. In particular, by providing academics with instructive information about designing courses (selecting content and designing learning experiences) to prepare pre-service teachers for inclusive teaching (Desutter, 2015; Fuchs et al., 2014; Hsien, 2007). Such research may contribute to the design of initial teacher education programs that better equip future teachers for the changing demands of teaching in contemporary inclusive schools. The current study addresses this recommendation by interviewing and surveying pre-service and experienced teachers (mixed methods) to garner their views about their initial teacher education in order to improve teacher preparedness.

The following section provides an overview of studies that ascertained the views of pre-service teachers and teachers about inclusive education. These studies identified barriers to inclusive education related to inadequate training and participants’ concerns about their abilities (Forlin et al., 2008; Forlin & Chambers, 2011; Shaddock et al., 2007; Sharma & Sockal, 2015).

In an Australia-wide study teachers nominated insufficient knowledge and expertise, problems with managing student behaviour, and inadequate training as barriers to inclusive education (Shaddock et al., 2007). The aim was to identify approaches that would improve outcomes for students with additional needs in regular classes. While the authors focused on the professional development needs of teachers, attention was also given to the knowledge and skills required of teachers to effectively implement inclusive education. The authors commended approaches that respond to diversity in contemporary classes and recommended that teachers shift their focus from differences between individuals to universal pedagogy. Although not directly concerned with initial teacher education, the findings contribute to the body of literature that suggests pre-service teachers and teachers feel unprepared for inclusive teaching.
A survey of 228 class teachers in Western Australian who had taught a student with an intellectual disability in a regular class setting found that teachers were most concerned about: (a) behaviour management related to students’ inability to concentrate and limited communication skills, and (b) their ability to monitor and cater for the needs of all students in the class (Forlin et al., 2008). Teachers reported that maintaining a sense of humour and adopting approaches such as: collaborating with colleagues and seeking professional support for students; focussing on problem-based scenarios and implementing action plans; setting realistic expectations; and working towards priorities were effective strategies when implementing inclusion. While this study identified teacher apprehensions and offers some suggestions to address their concerns about inclusive education, a qualitative component may have yielded more nuanced information about the kinds of learning experiences that may address such concerns. The current study uses a mixed methods approach to address this inadequacy.

It has been shown that pre-service teachers require opportunities to develop skills and strategies that equip them to implement inclusive education (Forlin & Chambers, 2011). To evaluate a unit of study about disability, gender and culture, 67 pre-service teachers in Western Australia were surveyed on their attitudes, concerns and sentiments towards inclusive education. In addition to lectures and tutorials, pre-service teachers were offered a choice between either interacting with people with a disability or critiquing an inclusive community program. After engaging in these experiences pre-service teachers showed increased concerns about inclusive education. Although pre-service teachers’ awareness about inclusive education had increased, their attitudes about including students with additional needs had not improved. The authors suggested that pre-service teachers require opportunities to acquire skills that alleviate their concerns and boost their confidence. However, little detail was provided about learning experiences that lead to skill acquisition. Interviewing pre-service teachers may have provided a more comprehensive understanding of the kinds of learning experiences that would likely lead to skill development. The current study includes interviewing teachers in an array of roles to garner nuanced information.

In a more recent comparative study of Australian (one university in Victoria) and Canadian pre-service teachers, it was found that after undertaking a stand-alone university course both groups were less concerned and had enhanced teaching efficacy regarding teaching inclusive classes (Sharma & Sokal, 2015). However, while the
Australian cohort became more positive the Canadian pre-service teachers became more apprehensive. The authors maintain that in order to cater for the needs of diverse learners, teachers require positive attitudes, enhanced teaching efficacy and lower levels of concerns. They recommended placing pre-service teachers with competent inclusive teachers while undertaking professional experience. They suggested that initial teacher education courses that focus on teaching skill development, such as learning how to manage challenging circumstances rather than adopting a medical focus, are more likely to effectively prepare pre-service teachers for their inclusive role. The current study evaluates these recommendations.

Although ample literature exists about preparing pre-service teachers for inclusive education, much of it focusses on addressing negative attitudes (e.g., Hsien et al., 2009; Loreman et al., 2005; Sharma et al., 2006; Sharma & Sockal, 2015; Spandagou et al., 2008). In particular, there is a lack of research that details how to shift pre-conceived negative attitudes towards including students with additional needs in regular classes.

There is also a paucity of research about effectively conveying knowledge and imparting skills that prepare pre-service teachers for inclusive teaching. A role of initial teacher education providers is to prepare and equip pre-service teachers sufficiently to commence teaching with a sense of confidence in their ability to manage inclusive classes. The challenges involved in designing courses, units and learning experiences that lead to pre-service teachers developing requisite dispositions and acquiring competencies are considerable. Research to date has provided little detail about the kinds of learning experiences that effectively change pre-service teachers’ self-reported preparedness for including students with additional needs. Moreover, investigations have not focused on the specific areas of attitudes, knowledge and skills, or the interplay of these in preparing pre-service teachers.

The current study uses a mixed methods approach, employing both surveys and interviews with pre-service, beginning and experienced teachers to address elements that warranted further investigation and to expand on the current evidence-base for preparing pre-service teachers for inclusive education. Combining these different techniques offers the potential for conducting a broad, structured investigation with a deeper, more nuanced exploration of the issues.

This mixed methods study aims to make a significant contribution by addressing issues
identified in the literature about preparing pre-service teachers in the areas of attitudes, knowledge and skills for inclusive teaching. While building on research about teacher attitudes, an aim of this study is to go beyond exploring teacher attitudes by, in particular, addressing how to equip pre-service teachers with skills for including students with additional needs.

The next chapter outlines the research approach and provides a rationale for the design adopted to address the research questions.
Chapter 3: Research Design and Method

The two preceding chapters outlined the topic under investigation, established the context and situated the research within literature about inclusive education and the preparation of pre-service teachers for inclusive teaching. In addition, it provided a rationale for the study.

This chapter outlines the research approach and provides a rationale for the design adopted to address the research questions. Most studies have used either surveys or interviews alone to investigate pre-service teachers’ preparedness. The current study, however, uses a mixed methods approach – employing both surveys and interviews with pre-service, beginning and experienced teachers. Combining the different techniques offers the potential for conducting a broad, structured investigation with a deeper, more nuanced exploration of preparing pre-service teachers for inclusive teaching. This sheds light on the research topic in ways that are not possible when using quantitative or qualitative approaches in isolation.

Previous research has paid little attention to the kinds of learning experiences that bring about changes in pre-service teachers’ self-reported preparedness for including students with additional needs. Moreover, investigations have not focused on the specific areas of attitudes, knowledge and skills, or the interplay of these in preparing pre-service teachers.

This chapter details the methodology and methods used in this thesis. The first section describes the theoretical framework underpinning the study. The second section outlines and justifies the approach adopted. As part of this study is concerned with changes in pre-service teachers’ self-reported attitudes, knowledge and skills after undertaking an inclusive unit, this chapter details the intervention. The third section provides a description of the design of the research and outlines the approach taken to integrate the quantitative and qualitative data sets in order to answer the research questions.

Theoretical Perspectives

A number of theoretical perspectives informed this research. This is consistent with the characteristics of high quality research (Creswell, 2013; Hesse-Biber, 2010). Both ontology and epistemology play an important role in understanding theoretical perspectives and the principles underlying any field of enquiry. Ontology refers to “the
nature of reality and its characteristics” (Creswell, 2013, p. 20). Schwandt (2007) defines ontology as “The worldviews and assumptions in which researchers operate in their search for new knowledge” (p. 190). Ontology attempts to make sense of reality and existence. Epistemology is concerned with the nature and scope of knowledge. It questions what knowledge is and how it can be acquired. Ontology and epistemology are inseparable and influence the shaping of enquiries. Essentially, there are different ways of viewing the world and equally different approaches to discovering knowledge. An overview of the major perspectives influencing the evolution of inclusive education was presented in Chapters 1 and 2. A goal of this research is to demonstrate that it is the responsibility of everyone associated with education to advance inclusive education.

Quantitative and qualitative paradigms are underpinned by different ontological and epistemological assumptions. Hence, methods adopted to research a phenomenon can involve opposing assumptions about the nature of the social world (ontology) and “how it can be understood” (i.e., epistemology; Hammersley, 2008, p. 27). The view that these opposing assumptions necessitate different research approaches has been the source of ongoing methodological debates (Bryman, 2012; Creswell, 2014; Erzberger & Kelle, 2003; Hammersley, 2008; Teddlie & Tashakkori, 2011). However, a growing number of scholars propose another view; they argue that using different types of data provides complementary information that sheds light on a phenomenon and allows researchers to make valid interpretations (e.g., Bryman, 2012; Creswell, 2014; Hammersley, 2008; Teddlie & Tashakkori, 2011). That perspective informed the approach chosen for this study.

A mixed methods approach (i.e., using both quantitative and qualitative approaches) was adopted to conduct this research. The quantitative data yielded statistical results while the qualitative data provided nuanced and detailed information. Integrating the two sets of data produced a comprehensive understanding of issues and challenges about preparing pre-service teachers for contemporary inclusive teaching. More particularly, the research aims and questions dictated the methods and approaches adopted to conduct this study (Bergman, 2008; Hesse-Biber, 2010; Teddlie & Tashakkori, 2011). Data were generated through post-positivist and constructivist approaches. Post-positivism is a scientific logical approach; however, it takes into account that there are no certainties in studying human affairs (Patton, 2015). Post-positivist researchers seek to establish patterns to support generalisations and aim to
show cause and effect (Creswell, 2014). Nonetheless, they are also aware that “discretionary judgement” (Patton, 2015, p. 106) is required in the social sciences. Social constructivism or interpretivism, on the other hand, seeks to understand a phenomenon by relying on naturalist methods such as interviews and observation to capture the multifaceted nature of humans (Lincoln, Lynham, & Guba, 2011). This research seeks to identify and advance approaches that facilitate the engagement of all students in regular schools. It aims to move those with influence, such as academics and teachers, to reflect on and adopt approaches that better cater for changing contexts and diversity of student needs.

To answer the research questions in this study data were collected from a range of stakeholders using post-positivist and constructivist approaches. That is, questionnaires yielded quantitative data that were statistically analysed to identify patterns and differences, as well as open-ended responses; interviews provided data that captured the more nuanced layers of participants’ views. Each approach produced a complexity of responses that required interpretation by the researcher. A basic tenet of this mixed methods approach involves combining data that captures pre-service, beginning and experienced teachers acquired knowledge and insights to create a comprehensive picture of how to effectively prepare pre-service teachers for inclusive teaching. It is expected that this study’s finding will elevate awareness about exclusionary and inclusionary practices.

Researchers need to recognise how their own backgrounds and experiences (i.e., axiology) shape their interpretation of phenomena and position themselves within the research (Creswell, 2014). This researcher’s background as an academic, education consultant, assistant principal of inclusive programs, executive teacher of support classes and teacher in inclusive and segregated settings (babies to Year 12), as well as the lived experience of having a sister with a disability, is acknowledged (as described in the personal narrative presented earlier in the thesis). The researcher was therefore cognisant of attitudes and acquired knowledge that she brought to the topic while investigating the perspectives of others. Measures to address the possibility of researcher bias are discussed later in this Chapter.

**Interpretive Framework, Questions and Hypotheses**

The interpretive framework for this study was based on a critical review of the relevant
literature and the researcher’s experience of implementing inclusive practices in schools and determining content and pedagogy to prepare pre-service teachers for inclusive teaching. The framework provides a plan of how the research was conducted; namely, formulating the research questions, linking the research questions to data sets, collecting and analysing data and integrating the findings. The framework evolved as the research process unfolded (see Table 3.1).

These background considerations gave rise to the research aims and three overriding research questions. The first research question sought to determine whether there was a change in pre-service teachers’ self-reported attitudes, knowledge and skills after undertaking the mandatory unit in inclusive education in an initial primary teacher education program; and how these responses compared to those of experienced teachers. This identified the first conceptual category as “improving pre-service teachers’ preparedness for inclusive teaching”. The second research question aimed to identify content that prepares pre-service teachers for inclusive teaching and addresses modes of delivery to optimise effectiveness of training. Conceptually this related to “establishing curriculum priorities: attitudes, knowledge and skills” and “modes of delivery”. To address concerns about pre-service teachers’ preparedness for inclusive teaching in NSW, Australia, the third research question focused on the design of educational learning experiences that facilitate pre-service teachers’ preparedness for inclusive education. This led to the conceptual category of “learning experiences that facilitate pre-service teachers’ preparedness for inclusive teaching”.

To address the quantitative components of the study three research hypotheses were constructed, as follows:

1. As a result of undertaking the inclusive unit that formed the study intervention, pre-service teachers will self-report increased levels of preparedness for including students with disabilities and/or additional needs in regular classes.

2. After undertaking the inclusive unit, pre-service teachers self-reported attitudes, knowledge and skills will be more similar to those of experienced teachers.

3. After engaging in outcome-focused learning experiences that were designed to be intellectually engaging, underpinned by learning theory and connected to learning needs, pre-service teachers will report increased levels of preparedness for including students with disabilities and/or additional needs in regular classes.
In summary, a questionnaire was designed and pilot-tested, generating data for variables and themes related to the three main concepts under investigation. Qualitative questions were devised following review of the questionnaire responses. Analysis and interpretation of interview data provided nuanced insights. Some themes altered and others evolved during analysis. Integrating quantitative and qualitative results was critical to establishing the significance of the findings. To date, there is a paucity of literature detailing content, pedagogy and delivery of material to effectively prepare pre-service teachers for inclusive teaching. This study aimed to make a significant contribution to the field by detailing curriculum and pedagogy. Further, this is the first Australian study to compare attitudes, knowledge and skills of pre-service teachers following an inclusive unit with those of experienced teachers to inform teacher preparation for inclusive teaching. More detail of data collection and analysis is provided later in this chapter.
Table 3.1 *Overview of Interpretive Framework*

<table>
<thead>
<tr>
<th>Conceptual categories and research questions</th>
<th>Method</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Convergence, divergence, explanation, causal</th>
<th>Interpretation, comments, understanding, causal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept 1: Improving Pre-service Teachers’ Preparedness for Inclusive Teaching</td>
<td>Quantitative and qualitative data</td>
<td>Quantitative: predominantly Attitudes, Knowledge</td>
<td>Beginning teacher interview data compared to pre-service teacher data post-inclusive unit questionnaire</td>
<td>Contrasting responses on commencing teaching/ struggle—personal appraisal</td>
<td>Quantitative: statistically significant changes/improvements</td>
</tr>
<tr>
<td>Do the self-reported attitudes, knowledge and skills of pre-service teachers change as a result of undertaking a mandatory unit in inclusive education in a primary initial teacher education program?</td>
<td>Class management Collaboration Skills Differentiation Resource use</td>
<td>Qualitative: differences in group responses</td>
<td>Qualitative: experiences; commencing teaching.</td>
<td>Qualitative: similarities and differences?</td>
<td></td>
</tr>
<tr>
<td>Following completion of the unit, how similar were pre-service teachers and educators on these characteristics?</td>
<td></td>
<td></td>
<td></td>
<td>Qualitative: differences in group responses—convergence or divergence</td>
<td></td>
</tr>
</tbody>
</table>

(continued)
<table>
<thead>
<tr>
<th>Conceptual categories and research questions</th>
<th>Method</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Convergence, divergence, explanation, causal</th>
<th>Interpretation, comments, understanding, causal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Concept 2: Curriculum Content—Attitudes, Knowledge and Skills and Modes of Delivery</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What content should be covered and prioritised in primary initial teacher education courses to prepare and equip beginning teachers for inclusive teaching?</td>
<td>Quantitative and qualitative data</td>
<td>Quant/survey data (pre-service teachers on post-unit questionnaire and experienced teachers)</td>
<td>Questions about extent of coverage</td>
<td>Quantitative analysis</td>
<td>Forced ranking: Convergence/divergence between groups regarding the extent to which topics require coverage.</td>
</tr>
<tr>
<td>What mode of delivery would optimise effectiveness of the training?</td>
<td>Quantitative and qualitative data</td>
<td>Class management Collaboration Skills Differentiation Resource use Forced ranking</td>
<td>Class management Collaboration Skills Differentiation Resource use</td>
<td>Interviews for detailed responses</td>
<td>Likert scales: extent to which topics should be covered.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Forced ranking results and qualitative results The qualitative data adds richness and provides nuanced information and detail.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Open-ended responses in questionnaires corroborate and enhance interview data</td>
</tr>
</tbody>
</table>

(continued)
<table>
<thead>
<tr>
<th>Conceptual categories and research questions</th>
<th>Method</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Interpretation, comments, understanding, causal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept 3: Learning Experiences that Facilitate Pre-service Teachers Preparedness for Inclusive Teaching</td>
<td>Qualitative open ended responses to questionnaire and interviews</td>
<td>Questionnaire data: qualitative</td>
<td>Interview data</td>
<td>Interview data provides detail and richness.</td>
</tr>
<tr>
<td>How can educational learning experiences during initial teacher education be effectively designed and organised to prepare pre-service primary teachers for inclusive teaching in Australia?</td>
<td></td>
<td></td>
<td>Beginning teachers, counsellors and support teachers principals and teachers</td>
<td>Theme of struggle; Attitudes; Knowledge; Skills; Learning experiences; Context and inclusion</td>
</tr>
</tbody>
</table>
Outlining the Design

An “explanatory sequential” design (Creswell, 2014) with an intervention was adopted to conduct this research. Fetters, Curry and Creswell (2013) refer to this approach as an explanatory sequential design with advanced multi-stage and intervention framework. Figure 3.1 shows the data collection method.

Quantitative results informed the qualitative questions. The two sets of data provided different yet complementary information. The inclusive unit that pre-service teachers undertook formed the study intervention and is described later in this chapter. A facet of this study investigated the impact of the intervention on pre-service teachers’ self-reported attitude, knowledge and skills to include students with additional needs in regular classes.

Questionnaire data were collected first, followed by collection of interview data. The first phase of this research used a questionnaire comprising Likert scales, ranking items and open-ended questions to seek the views of participants. The questionnaire was developed by the researcher to generate quantitative and open-ended responses about inclusive education and teacher preparation. Multiple items relating to topics such as collaborating with colleagues, differentiating instruction and evaluating suitability of resources were included. The quantitative approach enabled variables and factors related to the preparation of pre-service teachers for inclusive education to be identified, quantified and analysed. Further, the quantitative data provided a representation and an understanding of pre-service and experienced teachers’ attitudes about initial primary teacher education for inclusive teaching.

The second phase involved interviewing participants to gain a deeper understanding of the topic (Creswell & Plano Clark, 2011). Interviews were conducted to garner subtle and more in-depth data. Both types of data were considered important for this research as each set of findings helped to develop an overall understanding of how to effectively prepare pre-service teachers for inclusive teaching.
The researcher was interested in the statistical patterns and the themes (from the open-ended responses) that emerged from the questionnaire data as well as the complexity of opinions that the multiple stakeholders (e.g., support teachers, principals, beginning teachers) offered in interviews. The questionnaire generated data that, for example, could show changes in pre-service teachers’ self-reported preparedness for inclusive teaching after undertaking the inclusive unit while thematic analysis of the interview data identified emerging themes and captured nuanced and unique insights about the subject under investigation. Further, interview data helped to explain some of the results.
from the questionnaires. The mixed methods approach exploited the many possibilities of combining both paradigms (Bergman, 2008). The generalised findings obtained by conducting quantitative analyses were combined with the nuanced findings that explored the social context (Hesse-Biber, 2010). In adopting a mixed methods approach the researcher made use of both post-positivist and constructivist viewpoints in order to investigate how to effectively prepare pre-service teachers for inclusive teaching. Tashakkori and Teddlie (2008) assert that researchers should have clear rationales for choosing a mixed methods approach. The reasons for using mixed methods for this research include:

- **Complementarity**: The complementary nature of combining quantitative results and qualitative responses provided the opportunity to compare findings about the topic (Guest, MacQueen, & Namey, 2012; Tashakkori & Teddlie, 2008).

- **Completeness**: By integrating the two approaches a more thorough picture of the topic was established (Guest et al., 2012).

- **Expansion**: By integrating the two approaches the explanatory power was increased. The qualitative data and analysis helped build-on, refine and explain statistical results from the quantitative data; for example, the questionnaire included questions about the extent to which topics should be covered to prepare pre-service teachers for inclusive teaching. Whereas the interview data provided detailed information and garnered subtle insights about learning experiences to enhance pre-service teachers’ preparedness for inclusive teaching.

- **Corroboration and confirmation**: The researcher sought convergence, divergence and corroboration of results from the different methods (Creswell & Plano Clark, 2011) to verify the credibility of inferences obtained from the different strands.

**Quality of design.** Design quality including validity and reliability was considered from inception and throughout this research. Tashakkori and Teddlie (2008) maintain that well-designed studies that attend to detail generate reliable findings and contribute to the quality of inferences. Validity refers to confidence in the truth of the findings, including an accurate understanding of the context, while reliability is concerned with whether the research process is consistent and carried out with careful attention to the rules associated with the methodology adopted (Guest et al., 2012).
Further, integrating the data sets was given considerable attention (see later in this Chapter “Integrating Data to Address the Research Questions”). The following standards as outlined by Tashakkori and Teddlie (2008) guided the research process.

- **Design Suitability.** The research questions were conceived with regard to collecting data to answer questions at the commencement and during the design process. For example, consideration was given to the type of data required to answer different research questions.

- **Design Adequacy.** Particular attention was given to sampling and data collection. For example, views were sought from a range of experienced teachers (e.g., principals, class teachers, school counsellors); advice was taken from a researcher with expertise in methodology and survey design; the questionnaire was trialled with numerous groups resulting in refinements of the tool; and ways for capturing high response rates were considered (e.g., questionnaires were presented to pre-service teachers as hard copies resulting in high response rates).

- **Within Design Consistency.** The cohesiveness and compatibility of the components of the design were considered from the outset. The study was planned so that there was a smooth transition between the quantitative and qualitative phases (e.g., only participants who responded to the survey were interviewed).

- **Analytic Adequacy.** A plan to analyse the data was created. For example, specifying the questions that the statistics would answer mainly and then choosing the most suitable statistical techniques for these purposes (Cone & Foster, 2006).

Further detail about analysis of the questionnaire and interview data is provided later in this chapter.

**Ethics**

Ethics approvals were granted by: the Human Research Ethics Committee (HREC at University of Western Sydney [UWS] 12 H9445; 6\(^{th}\) July 2012); the State Education Research Application Process (SERAP at NSW Department of Education [DoE] 13; 2012159, 15\(^{th}\) August, 2012); and the Catholic Education Diocese of Parramatta (28\(^{th}\) August, 2012) [see Appendix B; B1, B2 and B3 respectively]. Following initial approval, an amendment was sought from HREC and SERAP to use alternative approaches to distribute the questionnaire (see Appendix C; C1 and C2). All

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12 Now known as Western Sydney University
13 Known as the Department of Education and Communities at the time approval was granted.
participants were provided with written information about the research. In addition, all pre-service teachers were provided with a verbal explanation by a senior academic. Those who agreed to be interviewed were provided with verbal and written information, reminding them of the purpose of the research. They were also provided with a consent form that was signed before proceeding with the interview (see Appendix D; D1 and D2).

From inception, the guiding principle of equity and fairness with the aim of improving educational outcomes for all students was at the heart of this research. Virtues of open-mindedness and humility, concern for the feelings of participants and awareness of power relationships were considered throughout the collection of the data (Brooks, Te Riele, & Maquire, 2014). All names were changed so that participants could not be identified.

Given that I was both the researcher and the unit coordinator delivering the inclusive unit, there were issues related to hierarchical relationships and perceptions of positional power that needed to be addressed (Brooks et al., 2014). At the time the questionnaire was disseminated to pre-service teachers, I (the researcher) was the unit coordinator of the mandatory inclusive unit offered as part of an initial primary teacher education course. Part of this study involved surveying pre-service teachers who undertook the inclusive unit. To address concerns that the pre-service teachers may have felt obliged to respond to the questionnaire, a senior member of the academic staff informed pre-service teachers that participation in the questionnaire was voluntary. The senior academic read to potential participants a script (see Appendix E) prepared by the researcher and checked by a supervisor explaining the nature of the research. Potential participants were informed that the questionnaires (pre- and post-) would not be viewed until after all assessments were completed and marks were finalised. Participants could indicate, whether they were willing to take part in a follow-up interview by providing their name and contact details. All the questionnaires were packaged, taped and locked in a secure store room in a research centre (Centre for Positive Psychology) immediately after each set of questionnaires (pre- and post-) was collected. The researcher had no access to the store room. The questionnaires were not collected until the start of the following year after all marks had been finalised and released.

When conducting interviews, especially with beginning teachers who in the previous
year had completed the inclusive unit, I was aware of being perceived as having positional power. Participants were informed that their identities would not be disclosed and they were asked to respond openly and frankly. In regard to beginning teachers there was no longer a student/lecturer dynamic and they were mature enough to assert themselves, if necessary. Pseudonyms were used to conceal the identities of participants.

Interviews followed a structure; beginning with an introductory statement (“thank you for agreeing to participate in this research”), an explanation of the research and a request for frank responses (e.g., “I want you to know that I am taking my lecturer’s hat off”). It was important that I was not sensitive to or defensive about comments made by beginning and experienced teachers about their experiences at university. I tried to ensure that I maintained a passive countenance in order to elicit uncensored responses. I conveyed to the participants that I was open to their views and was not taking a particular stance. Having extensive experience as a teacher who has worked in a variety of roles and in schools in areas of social disadvantage for decades, I am familiar with and cognisant of the challenges that teachers face. As such, I bring to the research an inherent understanding of the working life of teachers. I believe this understanding allowed me to be receptive and open to hearing the views of other teachers.

**Addressing potential researcher bias.** As a lecturer and unit coordinator of a unit about including students with additional needs in regular classes, I was cognisant of my attitudes about inclusive education. Preparing a personal narrative (see pp. xviii – xxii) on commencing this research resulted in reflexivity; that is, developing self-awareness about my own perspective (Patton, 2015). Further, Patton recommends that researchers engage in a “mental cleansing process” (p. 700). As a researcher, I consciously endeavoured to develop and apply open-mindedness towards participants’ contributions and think more holistically about inclusive education generally. This meant that during the analysis of the interviews, I was conscious of personal biases, remained receptive to all data and avoided judgement until sufficient evidence emerged. Further, statistical analysis of data supported efforts to address possible researcher bias during analysis of the qualitative data.

Although statistical analysis was conducted by the researcher, statistical support was sought to ensure the integrity of the quantitative results (Brooks et al., 2014). For
example, assistance was sought in the use of the Statistics Package of Social Sciences (SPSS) and with statistical analysis. I sought to rigorously and objectively analyse the data as outlined later in this chapter.

The principles of equity and fairness have guided the entire research process. The overarching aim of the research was to identify curriculum and pedagogy that effectively prepare pre-service teachers for inclusion of students with additional needs in regular classes. It is expected that in turn, improved teacher preparation will lead to improved educational outcomes for all school students.

The Intervention: Description and Context of the Inclusive unit

The inclusive unit that is a focus of this study formed the study intervention. The following section provides an overview of this mandatory inclusive unit; including the application of theory to the design of teaching and learning experiences. Details of the learning experiences are provided in Table 3.2.

The unit is routinely undertaken in the final semester of study of the Master of Teaching – Primary course. The Master of Teaching – Primary is a professional teaching qualification for tertiary students possessing an appropriate bachelor’s degree (e.g., Bachelor of Arts). It prepares graduates for careers as teachers in primary education. At the time of this research, the standard time to complete the course was one and a half years full-time for UWS graduates or two years full-time for non UWS graduates or the equivalent completed either part-time or accelerated mode. The course is accredited with NSW Education Standards Authority (previously BOSTES) and pre-service teachers are required to meet the Australian Professional Standards for Teachers as set out by AITSL (2012) on graduation.

The course units are offered in sequence and include English, Mathematics, Human Society and its Environment, Science and Technology, Creative Arts, Personal Development, Health and Physical Education as well as subjects about pedagogy, sociology and educational psychology. By the time pre-service teachers undertake the inclusive unit they have generally completed one professional practice of three weeks with additional observational day visits at schools. After completing the unit, pre-service teachers undertake a final three week professional practice before graduating. Most of the pre-service teachers have limited knowledge about approaches to support students with additional needs prior to undertaking the inclusive unit.
The inclusive unit relates to the general aims of the Master of Teaching – Primary course which predominantly are concerned with preparing pre-service teachers to begin and develop a career of teaching for quality learning in primary schools. Overall, the course aims to develop pre-service teachers’ commitment to personal and professional learning. In addition, it aims to develop their capacity to work as global educators and citizens. Other aims of the course include developing pre-service teachers’ pedagogical knowledge, interpersonal skills and commitment to socially just schools and classrooms.

At the unit level, the overarching goal of the inclusive unit is to prepare pre-service teachers to include students with additional needs in regular classes. Learning experiences were designed to meet the following outcomes of the unit as stated in the learning guide:

- policy and legislation to support inclusion;
- systems and services to effectively support students with diverse learning needs;
- identification and documentation of individual behaviour and academic needs incorporating curriculum-based assessment for learning;
- research based approaches and strategies for including students with additional needs;
- individualised learning plans to meet the needs of students with additional needs; and
- behaviour management strategies and plans for inclusion.

**Mode of delivery.** In accordance with the usual time-tabling, this unit consisted of 9 x 1 hour lectures and 5 x 2 1/2 hour tutorials. Lectures were designed so that pre-service teachers gained an understanding of theory, research and practice in relation to the establishment and maintenance of inclusive classes to meet the diverse psychological, physical and cognitive needs of learners with additional needs. Tutorials were designed to build on lecture material so that pre-service teachers developed attitudes and acquired knowledge and skills to enable them to successfully include students with additional needs in regular classes. The unit was developed and coordinated by the researcher. All lectures were presented by the researcher. Tutorial content and material was prepared by the researcher and tutorials were delivered by the researcher and one other tutor.
The unit also used blended learning (i.e., online platform for communication and sharing content) to facilitate pre-service teachers’ engagement in independent study. General and assessment related discussions and blogs were established, and online readings were available to consolidate knowledge and understanding of lecture and tutorial information about inclusive education. The unit coordinator engaged in the discussions, providing feedback and posing questions on which pre-service teachers could reflect.

To achieve the unit aims, the learning experiences and assessment tasks were designed to align with, and relate to the unit outcomes. Moreover, all components of the unit were designed to overlap and support each other – a principle known as constructive alignment (Biggs & Tang, 2011). For example, attitudes to inclusive education were addressed through learning experiences that were interspersed across the entire unit. According to Biggs and Tang, aligning elements of a program, along with adopting a constructivist approach to learning, presents opportunities to engage participants in deep learning. Further, learning experiences were designed to encourage active participation. For example, in tutorials pre-service teachers were shown segments from movies (e.g., “Mary and Max” an animation about a man with high functioning autism; “Ray” a movie about the life of Ray Charles, a musician with a vision impairment) that were carefully selected to capture important issues related to people with additional needs.

Using a scaffold (or table divided into sections) prepared by the lecturer, pre-service teachers collaborated to formulate responses about learning strengths and areas of need (curriculum, communication, mobility, and living skills), and to devise approaches to facilitate student participation in inclusive classes. The focus was on how to cater for individual needs of students and not on disability.

Further, the design and selection of learning experiences was based on an understanding that for effective learning and teaching to ensue, learners need to be offered a variety of methods and strategies (Print, 1993). Lecture material dealt with themes related to inclusive education (e.g., assessment, collaboration with stakeholders, inclusive instruction). In addition, some topic areas of additional need were covered (e.g., conductive hearing loss and its implications particularly for Aboriginal and Torres Strait Islander students, autism spectrum disorder, gifted and talented education). Given the time constraints of the unit, learning experiences were designed to have impact and resonate with pre-service teachers. All learning experiences were supported with well-
considered stimulus materials and resources. For example, National Assessment Program – Literacy and Numeracy (NAPLAN)\textsuperscript{14} tests in Braille and frequency modulation systems (FMs) were sourced. In some instances, learning experience presented to pre-service teachers were designed to replicate what takes place in classrooms (e.g., to demonstrate how to establish routines, visual schedules were used in tutorials; that is, pictures were attached to the whiteboard to provide an outline of the learning experiences). A feature of the learning was linking theory with practice.

**Learning theories that shaped the unit design.** This section presents an overview of the learning theories that underpinned the design of the unit and shaped the learning experiences. The researcher/unit coordinator employed, modelled and highlighted an eclectic array of teaching approaches emanating from theory to demonstrate to pre-service teachers how to cater to a range of learners.

**Social model of disability.** This unit is based on a social model of disability. This philosophical approach aims to provide pre-service teachers with learning experiences that build their capacity to recognise and address processes and structures that lead to exclusion (Slee, 2010). This approach focusses on the strengths of people with disabilities rather than on deficits (Mertens et al., 2011). It parallels the lived experiences of people with disabilities with that of other oppressed minority groups (e.g., ethnicity, class and gender; Mertens et al., 2011). Pre-service teachers were immersed in learning experiences that led them to reflect on limiting attitudes and consider approaches that sustain inclusive education. For example, pre-service teachers were presented with carefully selected stories of people with disabilities’ lived experience from the media with the aim of challenging negative views and stereotypes.

**Social cognitive theory.** Social cognitive theory stresses that learning takes place in social environments and that people acquire attitudes, knowledge and skills by observing and modelling the behaviour of others (Schunk, 2012). Modelling inclusive attitudes and explicitly highlighting and demonstrating inclusive teaching strategies were features of this unit. The concept of self-efficacy is allied to social cognitive theory. An aim of this unit was to augment the instructional self-efficacy\textsuperscript{15} of pre-...

\textsuperscript{14} National Assessment Program – Literacy and Numeracy (NAPLAN) is an annual, nationwide assessment for students in Years 3, 5, 7 and 9.

\textsuperscript{15} Instructional self-efficacy refers to personal beliefs about one’s capabilities to support students’ learning (Schunk, 2012).
service teachers so that they felt prepared to include students with additional needs in regular classes.

**Constructivist learning.** Constructivism involves structuring environments to promote learning through social interactions so that learners construct their own understanding (Schunk, 2012). For this inclusive unit, learning experiences were designed to enable pre-service teachers to interact and engage in student-centred learning. Moreover, constructivism harmonises with the philosophy of inclusive teaching and the concept of *Universal Design for Learning*. Schunk suggests that a constructivist approach leads to multidimensional classrooms which facilitate a teacher’s ability to cater for the diverse needs of students, differentiate tasks, group students and create authentic assessments. For example, pre-service teachers engaged in learning experiences where they were required to scaffold learning, collaborate with their peers, apply the concept of zone of proximal development\(^{16}\) to learning and engage in self-reflection.

**Cognitive learning processes.** Metacognitive skills enable learners to know how and when to apply previously learned knowledge or skills required to perform a learning task (Knowles, Holton, & Swanson, 2015). Put simply, metacognition involves learners thinking about the thinking process. For example, to challenge preconceived attitudes, a “flipped classroom”\(^ {17}\) activity was used in which pre-service teachers researched a famous person with an additional need. Pre-service teachers were asked to consider the achievements of people with disabilities while reflecting on their own expectations of (self-fulfilling prophecies) and attitudes towards people with disabilities. They were asked also to consider the rationale for engaging in this particular learning activity.

**Inclusive unit content, learning experiences and assessment.** Table 3.2 details many of the learning experiences that formed the unit. In particular, it shows the alignment of learning experiences with learning theories. In keeping with the study’s focus on how to effectively prepare pre-service teachers for inclusive teaching in the areas of attitudes, knowledge and skills, the last column aligns learning experiences with these specific areas. Assessment details are also outlined.

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\(^{16}\) The zone of proximal development is a concept developed by psychologist and social constructivist Lev Vygotsky. It refers to the difference between what a learner can do without help and what he or she can do with help.

\(^{17}\) The flipped classroom describes a reversal of traditional teaching where students are first exposed to new material outside a class setting.
Participants: Pre-service, Beginning and Experienced Teachers

The participants included pre-service teachers (i.e., university students who were studying at a university in Sydney to become primary school teachers), as well as primary school personnel predominantly from government schools, and a small number from Catholic schools.

The pre-service teachers in this study were enrolled in the Master of Teaching program offered to postgraduates who were training to become primary school teachers. The pre-service teachers were undertaking the unit “Inclusive Teaching for Effective Learning” in 2012 Semester 2. This is a mandatory core unit aimed at preparing pre-service teachers for including students with additional needs in regular classes. All pre-service teachers in NSW are required to undertake this unit.

Initially 313 students enrolled in the mandatory unit for 2nd semester, 2012 at the university where this study was conducted. However, 28 of these students withdrew during the semester; resulting in a final enrolment of 285 students. To capture a high response rate, questionnaires were issued as hard-copy to students in attendance at the two data collection time-points. Responses of pre-service teachers were sought to determine whether after participating in the inclusive unit, there had been a change in their self-reported attitudes, knowledge and skills.

Based on attendance at the first lecture 280 pre-unit questionnaires were disseminated. After a data cleaning process (assessment for missing, illegible, or incomplete answers), 235 (84% of pre-unit questionnaires) were found to be suitable for analysis. Based on attendance at the final lecture of the unit, 135 post-unit questionnaires were disseminated. After data cleaning, 128 (95% of post-unit questionnaires) were found to be suitable for analysis. The pre-service teacher sample thus comprised 285 students, of which pre-unit data was available for 235 (82% of the sample), and post-unit data was available for 128 (45% of the sample). Pre-service teacher identity was concealed; however, pre- and post-unit questionnaires were matched using student identification numbers. This yielded matched data for 119 pre-service teachers (42%).
Table 3.2 *Alignment of Learning Theories, Unit Learning Experiences and Curriculum Areas (Attitudes, Knowledge and Skills)*

<table>
<thead>
<tr>
<th>Learning Theories</th>
<th>Topic</th>
<th>Unit Learning Experiences</th>
<th>Curriculum Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>e.g., <em>ZPD (Vygotsky)</em></td>
<td>Attitudes and language</td>
<td>Movie clips (e.g., <em>Ray</em>, a movie about the life of Ray Charles (<a href="https://www.youtube.com/watch?v=hkmvuV6PK20">https://www.youtube.com/watch?v=hkmvuV6PK20</a>), a musician with a vision impairment, <em>Mary and Max</em> (<a href="https://www.youtube.com/watch?v=v-4C6FUS4I">https://www.youtube.com/watch?v=v-4C6FUS4I</a>) an animation about a man with high functioning autism) used as stimulus followed by collaborative discussions (using a matrix to support learning) in which pre-service teachers were required to address the following; strengths, areas of need in curriculum, communication, mobility, living skills and how to facilitate participation.</td>
<td>Knowledge</td>
</tr>
<tr>
<td>Constructivism</td>
<td>Collaborating with stakeholders</td>
<td>Active listening: newspaper articles about people with disabilities, work in pairs – each person reads the article silently and recounts the article to their partner while the partner employs active listening skills.</td>
<td>Attitudes and skills</td>
</tr>
<tr>
<td>Metacognition, Constructivism, Social model of disability</td>
<td>Attitudes</td>
<td>Researching a famous person with a disability/additional need: work collaboratively; Consider rationale for doing this activity.</td>
<td>Attitudes</td>
</tr>
</tbody>
</table>

(continued)
<table>
<thead>
<tr>
<th>Learning Theories</th>
<th>Topic</th>
<th>Unit Learning Experiences</th>
<th>Curriculum Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metacognition, Social model of disability</td>
<td>Language</td>
<td>Rephrasing language activity. Sentences provided with inappropriate language (taken directly from media, conversations and real life sources, such as, The Spastic Centre [renamed Cerebral Palsy Alliance in 2011]); participants required to rephrase sentences to reflect inclusive attitudes.</td>
<td>Attitudes and knowledge</td>
</tr>
<tr>
<td>Constructivism e.g., Discovery learning (Bruner)</td>
<td>Inclusive approaches</td>
<td>Simulations – empathy tasks with follow-up debriefing: vision, hearing, learning difficulties. Pre-service teachers reflect on implications for learning, and devise teaching strategies, adjustments and accommodations collaboratively (scaffold offered with researched strategies) in reference to UDL.</td>
<td>Attitudes, knowledge and skills – differentiation</td>
</tr>
<tr>
<td></td>
<td>Adaptive and assistive technology</td>
<td>21st Century Learning. &amp;ICT and &amp;UDL; flipped classroom – pre-service teachers research inclusive technology; share on blended learning site and present in tutorials.</td>
<td>Knowledge and skills</td>
</tr>
<tr>
<td>Social model of disability</td>
<td>Understanding diversity and inclusive approaches</td>
<td>Assessment: Case study and preparation of day book that demonstrates planning based on literature to include student case with an additional need; applying concepts of differentiation, adjustments and accommodations and UDL, as well as considering environment, teaching and learning experiences, tasks, assessment, outcomes and technologies.</td>
<td>Attitudes, knowledge and skills</td>
</tr>
<tr>
<td></td>
<td>Inclusive classroom management</td>
<td>Vignettes contrasting teacher responses to challenging circumstances in which students’ behaviour can be defused or escalated, followed by discussion and role-play (e.g., popular media character Jonah from Summer Heights High. Retrieved from <a href="http://www.hbo.com/summer-heights-high">http://www.hbo.com/summer-heights-high</a> – drawing attention to student support needs, stereotyping and teacher reactions).</td>
<td>Skills – classroom management</td>
</tr>
<tr>
<td></td>
<td>Understanding inclusion, legislation, inclusive approaches</td>
<td>Assessment: demonstrate an understanding of inclusion, legislation as applied to educational settings, and practical implications of inclusion (teacher attitude, UDL, adjustments, accommodations and differentiation).</td>
<td>Attitudes and knowledge</td>
</tr>
<tr>
<td></td>
<td>Inclusive classroom management</td>
<td>Analysing least to most intrusive teacher behaviours – working in pairs to discuss and reflect.</td>
<td>Skills – classroom management</td>
</tr>
</tbody>
</table>

(continued)
<table>
<thead>
<tr>
<th>Learning Theories</th>
<th>Topic</th>
<th>Unit Learning Experiences</th>
<th>Curriculum Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social model of disability</td>
<td>Inclusive classroom management</td>
<td>Videoed case study of student with challenging behaviour in regular class, authentic behaviour management plans/risk assessment provided. Pre-service teachers required to devise strategies collaboratively (with support materials provided).</td>
<td>Skills –classroom management</td>
</tr>
<tr>
<td></td>
<td>Collaboration with stakeholders</td>
<td>Role-plays of learning support team meetings with pre-service teachers assuming allocated roles e.g., parent, support teacher, student, classroom teacher.</td>
<td>Attitudes and Skills – collaboration</td>
</tr>
<tr>
<td>Social Cognitive Learning Theory e.g., Bandura/modeling</td>
<td>Collaborative learning</td>
<td>Modelling and explicitly explaining how to organise rotational group work while engaging in experiences about students with low vision and consolidating understanding of UDL (e.g., Braille books, large print books, brainstorm adjustments, accommodations and differentiation).</td>
<td>Attitudes, knowledge and skills – differentiation, classroom management, collaboration, resource use</td>
</tr>
<tr>
<td>Multi-modal, Social model of disability</td>
<td>Attitudes</td>
<td>Use of cartoons to highlight discriminatory attitudes. Use lecturers’/researchers’ personal collection of photos to explain history of special and inclusive education, and changing perspectives and practices (e.g., support and regular classes)</td>
<td>Attitudes and knowledge</td>
</tr>
<tr>
<td></td>
<td>Attitudes</td>
<td>Audio/visual materials embedded into lectures and presented in tutorials that show case studies and raise issues related to inclusive education (e.g., ABC Catalyst; Retrieved from <a href="http://www.abc.net.au/catalyst/stories/2488950.htm;BBC">http://www.abc.net.au/catalyst/stories/2488950.htm;BBC</a> documentary about students with autism spectrum disorder Make Me Normal [Smith, 2005] –7 minute clip of one case study. Retrieved from <a href="http://documentaryheaven.com/only-human-make-me-normal">http://documentaryheaven.com/only-human-make-me-normal</a>)</td>
<td>Attitudes and knowledge</td>
</tr>
</tbody>
</table>

(continued)
Learning Theories | Topic | Unit Learning Experiences | Curriculum Area
--- | --- | --- | ---
Social model of disability | Attitudes, labelling | Media and popular culture (satire) used to illustrate negative attitudes and concepts such as self-fulfilling prophesy and stereotyping, followed by interactive game (replicating classrooms) and discussion. *The Simpsons*’ clip; Bart gets an f. Retrieved from “The Simpsons: 10 classic episodes”. BBC News (5 minute clip only). | Attitudes and knowledge

Metacognition | Attitudes and inclusive approaches | The Diversity Game is a hands-on activity that requires participants to reflect on their own and others’ thinking styles and was used to develop pre-service teachers’ understanding and appreciation of individual differences within classrooms. The Diversity Game. Available from [http://www.hbdi.com/WholeBrainProductsAndServices/details/000123.php](http://www.hbdi.com/WholeBrainProductsAndServices/details/000123.php) | Attitudes, knowledge and skills

Inclusive approaches | Demonstrating at commencement of lecture/tutorial how to commence lessons by explaining outcomes and providing the sequence of learning experiences. | Skill

Choice Theory | Inclusive classroom management | Glasser’s Choice Theory that humans make choices about behaviour based on a number of needs (e.g., the concept of fun and belonging is achieved by commencing with sign language as a way to introduce each other and to put the focus on disability). | Knowledge, skills – classroom management

Note. #ABC = Australian Broadcasting Corporation; *ZPD* = zone of proximal development; % = BBC; &UDL = *Universal Design for Learning*; @ICT = information and communication technologies.
For the purpose of reporting the next phase of this study, the term “beginning teachers” is used to refer to the five teachers who completed the study’s inclusive unit in the previous year and who agreed to an interview.

The experienced teacher sample comprised primary school personal drawn from NSW Department of Education schools (n=281) and Catholic schools (n=36) within the Parramatta Diocese (schools in Western Sydney – Springwood to Parramatta). Nine other teachers who worked in non-government schools also responded to the online questionnaire – bringing the total sample of experienced teachers to 326 (n=326). Responses were sought from teachers working in these two distinctly different and large education systems (the NSW Department of Education and the Catholic Education systems) because it was anticipated that this may provide different perspectives; contributing to a richer understanding of the context and complexities associated with preparing pre-service teachers for inclusive teaching. In addition, responses were sought from teachers across NSW to garner the views of a broad and representative sample. Experienced teachers completed the questionnaires between 28th November 2012 and 19th September 2013. The sample included primary school executive staff ( principals and assistant principals), class teachers, school counsellors and support teachers (e.g., itinerant support teachers, learning and support teachers, support class teachers18).

An online survey meant that teachers responded to the survey if they chose to (details provided later in this Chapter). The views of a range of experienced teachers was sought about the preparation of pre-service teachers including: principals and executive teachers who may provide broad perspectives; class teachers who work directly in inclusive classes; and school counsellors and support teachers who collaborate with class teachers about the learning needs of students with additional needs as well as work directly with students.

Sample characteristics. The following provides the characteristics of the pre-service teachers who responded to both pre- and post-unit questionnaires (n = 119). This sample was used to investigate the impact of the intervention. The majority of pre-service teachers were female (105/119, 88%), aged less than 30 years (92, 78%), aged less than 30 years (92%, 78%), most

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18 School counsellors are qualified teachers with psychology registration; itinerant teachers have postgraduate qualifications in areas of expertise (e.g., hearing); learning and support teachers and support class teachers often have qualifications in inclusive or special education.
held a bachelor degree without postgraduate qualifications (113, 95%), and the majority knew a person with a disability or additional need (79, 67%).

Of the experienced teachers (n=326) the majority were female (277/326, 85%) and taught in metropolitan schools (245, 76%). Half were aged over 50 (164, 51%), and just over half had taught for more than 20 years (167, 51%); there were approximately equal numbers of class teachers (109, 33%) and support teachers (106, 33%); 156 (48%) had general primary training (73, 22% – no inclusive unit; 83, 26% with an inclusive unit) and 89 (27%) had postgraduate qualifications in special education or school counselling. The majority worked in schools in areas that were not socially disadvantaged (169, 52%) while 130 (40%) worked in schools in areas of social disadvantage. The majority (305, 94%) knew a person with a disability or additional need. Detailed sample characteristics for pre-service teachers with matched pre- and post-unit data and experienced teachers are reported in Appendix F (Table F1 and Table F2, respectively).

Fifteen teachers were interviewed. Five of these were beginning teachers (four females and one male), all of whom were working in western and south western Sydney schools. This was expected as they had undertaken their initial teacher education in south western Sydney. All had been teaching for approximately three terms. Three were working as full-time class teachers and two were working as casual teachers at different schools and on different classes. Four of these five teachers were mature age (over 25 years of age) when they undertook their initial teacher education studies. In the main, the schools they were teaching at are located in socially disadvantaged areas.

The remaining ten experienced teachers interviewed, comprised two groups; one group is referred to in this study as principals and class teachers (three principals, and three class teachers – two of these were assistant principals; n=6) and the other group is referred to as school counsellors and support teachers (two school counsellors and two support teachers; n=4).

In an effort to secure a varied and representative cross-section, prior to contacting the teachers who, on the questionnaire, indicated a willingness to take part in a follow-up interview, consideration was given to the following factors gleaned from their questionnaire responses – their role (e.g., principal of primary school, itinerant support teacher – hearing), how conversant they were with the topic (e.g., thoughtful and unique...
responses and informative insights), representativeness of gender working in primary schools (females n = 9, male = 1), years of experience (very experienced and less experienced teachers) and location of school. While most of the experienced teachers worked in western and south western Sydney, the researcher also secured interviews with some teachers who worked in different parts of NSW (e.g., mid-north coast and northern Sydney). All the teachers interviewed worked in the public education system. At the time of interview, one teacher worked in a private school but had completed the questionnaire while working in the public system; this teacher also worked as a university tutor in inclusive education, as such it was thought that her views could offer additional insights.

**Designing the questionnaire.** The questionnaire was designed to: determine whether, after undertaking the inclusive unit, the self-reported attitudes, knowledge and skills of pre-service teachers changed; compare pre-service with experienced teachers on their perceptions regarding their general preparedness, attitudes, knowledge and skills for inclusive teaching; and identify content that pre-service and experienced teachers believe should be covered during initial teacher education to prepare pre-service teachers for inclusive teaching. Existing questionnaires were considered for use in this study. However, these were unlikely to elicit data that would directly address the research questions posed in this study. Hence, a questionnaire was developed specifically for the purpose of the current study, with the overarching aim of identifying content and pedagogy that equip pre-service teachers with the necessary knowledge, attitudes and skills to be effective in inclusive classes.

A review of the literature revealed key topics about initial teacher education and inclusive education that were incorporated into the questionnaire (Alahbabi, 2009; Harvey et al., 2010; Hsien, 2007; Hsien et al., 2009; Loreman, 2007, 2010b; Loreman et al., 2005; Shaddock et al., 2007). These topics fell into the areas of attitudes, knowledge and skills and were used to inform the selection of the content of the questionnaire. Further, these reflect the areas that form the basis of the Australian Curriculum for schools. It is the relationship between these areas that allows schools and teachers to “promote personalised learning that aims to fulfil the diverse capabilities of each young Australian” (Ministerial Council on Education, Employment, Training and Youth

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19 In the Australian curriculum these three areas are known as knowledge, understanding and skills and are referred to as dimensions (ACARA, 2013).
In addition, studies show that certain topics related to skill acquisition (e.g., classroom management, collaboration, differentiation, selection and use of resources) should be included in curriculum for preparing pre-service teachers for inclusive education (Alahbabi, 2009; Loreman, 2007, 2010b; Shaddock et al., 2007). As a focus of the current research is on improving pre-service teachers’ skills to implement inclusive education, the skills section of the questionnaire is more detailed.

A single version of the questionnaire was developed and used to gather data from both pre-service and experienced teachers. Both samples (pre-service and experienced teachers) completed this version, with minor modifications to the wording based on whether the tool was used to collect data from pre-service teachers at the commencement (pre-) or at end (post-) of the inclusive unit, or from experienced teachers (see Appendix G; G1, G2 and G3 respectively). This enabled direct statistical comparisons of data between groups. Questions relating to demographic information were tailored to each group. In the pre-service teachers’ post-unit questionnaire five additional questions were included to gather information on pre-service teachers’ perspectives about their preparedness for inclusive teaching after completing the inclusive unit.

The questionnaire was designed using the online tool Qualtrics (https://www.qualtrics.com/au/). Because it has been reported that mixed mode surveys usually result in higher response rates (Dillman, Smyth, & Christian, 2014), both online and hard-copy questionnaires were used in this study. To capture data from as many willing participants as possible it was disseminated in hard-copy to pre-service teachers attending the first and last lecture. Experienced teachers responded to the online version of the questionnaire. On trialling the pre-service teachers’ hard-copy version, it became apparent that the instructions for ranking items by numbering were open to possible misinterpretation and therefore could result in corrupt or unreliable data. This was not a concern with the on-line version where respondents were able to rank items by “drag and drop” methods.

The questionnaire was divided into four sections and was designed to obtain the following information:
• Section 1. Demographic information such as age, gender and qualifications as well as some attitudinal questions;

• Section 2. General attitudes about including students with additional needs and self-belief about ability to implement inclusive education;

• Section 3. Perceptions about:
  1. the importance of specific topics and the extent to which they should be covered during initial teacher education to prepare pre-service teachers for inclusive education in the areas of attitudes, knowledge and skills.

  2. their ability to perform particular skills (e.g., manage cooperative learning groups, differentiate the curriculum, implement risk assessments).

• Section 4. General and open-ended responses about the preparation of pre-service teachers for inclusive education (e.g., “What concerns or comments do you have about initial teacher education to prepare pre-service teachers for inclusive education?”). A final question allowed participants to provide contact details if they were willing to take part in a follow-up interview.

Section 3 comprised items about Attitudes, Knowledge and Skills. The Attitudes and Knowledge categories each comprised four items while the skills section included the subsets of Classroom Management, Collaboration, Differentiation and Resource Use. Each of these comprised four to five items except for the differentiation subset which had nine items. To avoid the possibility of cognitive overload in participants required to rank more than five items, the nine differentiation items were separated into two categories (i.e., four and five items within each differentiation category, respectively). One differentiation category included items concerned with skills to cater to a diversity of learners while the second category comprised items about general practices for inclusive teaching. Each of the differentiation categories contained a “distractor” item – this is explained later in this chapter under the heading “construct validity”.

The questionnaire underwent continuous and rigorous review resulting in numerous iterations. Initially the tool was critiqued by five colleagues participating in a research writing group. The questionnaire was piloted twice: initially with nine pre-service teachers who were in a final tutorial of an inclusive unit (not related to this study). Their responses highlighted where some questions had failed to generate a spread of data
across Likert scales. Notably, participants tended to select very important for all the items. To address this issue, some Likert scale questions were rephrased and a ranking section was included as a strategy for enhancing discernment.

This iteration of the questionnaire was trialled with a different tutorial group of 22 pre-service teachers who provided verbal and written feedback about the design of the questionnaire. The instrument was further refined after consulting with individuals who had knowledge about the topic or who were able to offer other relevant contributions (e.g., academics who work in the field of inclusive education, university students not undertaking the inclusive unit and teacher colleagues of the researcher).

**Designing the interview questions.** Face-to-face interviews were used to collect qualitative data from beginning and experienced teachers. The interview questions were devised to generate responses that identified curriculum and pedagogy that effectively prepares pre-service teachers for inclusive teaching during initial teacher education. Considerable attention was given to the development of the interview questions, as “structure facilitates reliability” which improves “comparative analysis” (Guest et al., 2012, p. 88). The phrasing and structure of questions were developed to elicit responses enabling comparisons to be made between individuals and the three groups of teachers (beginning teachers, principals and class teachers, and school counsellors and support teachers). Further, the questions were presented to the participants in a consistent way. Such considerations contribute to reliability and validity (Guest et al., 2012).

The interview questions (see Appendix H) emanated from the key questions of the research as well as from themes that arose from the open-ended responses in the questionnaire. When devising the interview questions for the qualitative phase, a table was prepared listing all of the research questions (further information provided in this chapter in the section “Integrating Data to Address the Research Questions”). Interview questions were devised that corresponded to each qualitative research question. The interview questions were revised, improved and sequenced in a logical order. They were discussed at length with an academic colleague who teaches in a secondary initial teacher education program and who was previously a secondary teacher. The questions were fine-tuned before presenting them to a supervisor; subsequently some of the questions were further modified (e.g., broken into smaller questions, so that participants
were able to more easily process and therefore answer the questions in a meaningful manner).

**Questionnaire psychometrics – validity and reliability.** The questionnaire was designed to generate responses that answered the overarching research question; that is, to identify curriculum and pedagogy that prepare pre-service teachers for inclusive teaching during initial teacher education. Items were included that generated data to answer each of the contributing quantitative questions (Leacock, Warrican, & Rose, 2009). To ensure face validity, a table was prepared in which items in the questionnaire were mapped against contributing questions. By drafting a table and ensuring that all research questions corresponded with multiple items within the questionnaire, face validity was achieved (see Appendix I).

External validity was enhanced by consulting numerous research papers (Alahbabi, 2009; Loreman, 2007; Loreman, 2010b; Shaddock et al., 2007) to ensure that important topics related to inclusive education were included. In addition, advice was sought from a research methodologist resulting in improvements to the design of the instrument (e.g., removing side by side questions enabling participants to process the information more easily, adding items so that at least four items corresponded to each category – Attitude, Knowledge and the Skill areas of Classroom Management, Collaboration, Differentiation and Resource Use). These additional items were related to topics presented as part of the inclusive unit such as diversity, disability specific knowledge and inclusive classroom management. The researcher’s experience as an academic, consultant, assistant principal and teacher in the field of inclusive and special education influenced decisions regarding the content and delivery of the unit. Further, these items were included because pre-service teachers from years preceding, informed the unit coordinator/researcher of the benefits of these topics (e.g., develop strategies that research findings suggest are effective with reference to specific disabilities, adopt teaching strategies that cater to different learning styles).

**Construct validity.** Exploratory factor analysis was conducted for the purpose of determining construct validity of the questionnaire instrument. Moreover, this technique explored the broad constructs (factors) underlying correlations within the data that

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20 Side by side questions allows the researcher to collect data on two or more dimensions using the same question, however, they can be confusing or result in cognitive overload for participants.
accounted for relationships between the variables (Kline, 1994), looking at those most pertinent to pre-service and experienced teacher groups separately. Although the factors identified for pre-service and experienced teachers differed slightly, for the most part there were strong similarities. Data were considered suitable for factor analysis, with appropriately strong inter-item correlations (Pallant, 2011). Sample sizes and the ratio of participants to number of variables for both pre-service and experienced teacher groups were sufficient for factor analysis (Kline, 1994; Tabachnick & Fiddel, 2013). In addition, in both pre-service and experienced teacher groups there were low correlations between the factors, suggesting that these were discernibly independent constructs.

Exploratory factor analysis was run on items that asked, to what extent participants believed topics should be included in inclusive units, using the extraction method of principal component analysis with a Varimax rotation and Kaiser normalisation (Field, 2009; Tabachnick & Fiddel, 2013). Pre-service (post-unit questionnaire) and experienced teacher data were analysed separately. As the sample sizes were between 120 and 300 an absolute loading value of .45 was selected (Field, 2009).

Exploratory factor analysis was performed separately on the two groups, based on recommendations by leading authors in the field. When performing factor analysis, Tabachnick and Fiddel (2013) and Hills (2011) caution against pooling the results of different samples for the following reasons: firstly, the groups are likely to be different with regard to a variable; in this case the teachers are more experienced than the pre-service teachers. Thus, pooling results is likely to mask differences between groups (Tabachnick & Fiddel, 2013). Secondly, the underlying factor structure may change as a result of experience or intervention (Tabachnick & Fiddel, 2013). As such, Tabachnick and Fiddel (2013) suggest that the differences between the groups on exploratory factor analysis may be revealing.

Results show that the majority of items loaded onto similar factors for both groups (see Appendix J; Table J1 and J2). The conceptual constructs underlying these factors were found to be similar; this evidence supports the questionnaire’s construct validity. For example, the same four items in each sample loaded onto a factor called “Embracing Inclusive Principles”.

Two distractor items were included in the questionnaire. Reassuringly, there was a significant moderate correlation between these two items ($r = .609, p = .000$), and no
significant correlation of these with other items. Importantly, these results further
support the questionnaire’s construct validity and the use of factor analysis. Both pre-
service (post-unit questionnaire data) and experienced teachers showed low levels of
agreement with the statements “adopt strategies that ignore the individual differences of
students” and “assess all students using the same methods”. Further, these results
suggest that questions were interpreted correctly. That is, participants were attentive to
the questions and answered honestly (see Appendix K).

**Reliability.** Internal consistency (reliability) was explored using Cronbach's
alpha coefficient. These were calculated for subscales comprising items that loaded
together on factors identified by factor analysis. Cronbach’s alpha was calculated for the
pre-service teachers (post-unit questionnaire data) and experienced teachers’ subscales
separately. The majority of subscales showed good to very good internal consistency
(alpha’s ranging from .785 to .914), with minimal redundancy of items (see Table 3.3
and Table 3.4). For the pre-service teachers, two subscales were identified on which one
item was redundant. Deleting these items resulted in minimal increases in reliability,
therefore no items were deleted.

<table>
<thead>
<tr>
<th>Subscale title</th>
<th>Number of items</th>
<th>Cronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborative interactions</td>
<td>6</td>
<td>.885</td>
</tr>
<tr>
<td>Embracing inclusive principles</td>
<td>5</td>
<td>.804</td>
</tr>
<tr>
<td>Differentiating for student needs</td>
<td>6</td>
<td>.849</td>
</tr>
<tr>
<td>Inclusive classroom skills</td>
<td>6</td>
<td>.834</td>
</tr>
<tr>
<td>Promoting inclusive capacity</td>
<td>4</td>
<td>.807</td>
</tr>
</tbody>
</table>

The experienced teacher data showed redundancy for only one item on one subscale. As
deleting the item made only minimal increase in reliability and as all of the items had an
item correlation above .3, no items were deleted (Hills, 2011).
Table 3.4 Cronbach’s Alpha for Factors from Experienced Teacher Data

<table>
<thead>
<tr>
<th>Subscale title</th>
<th>Number of items</th>
<th>Cronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inclusive classroom skills</td>
<td>8</td>
<td>.914</td>
</tr>
<tr>
<td>Resourcing and supporting inclusion</td>
<td>6</td>
<td>.903</td>
</tr>
<tr>
<td>Inclusive strategies for individual needs</td>
<td>6</td>
<td>.887</td>
</tr>
<tr>
<td>Embracing inclusive principles</td>
<td>5</td>
<td>.830</td>
</tr>
<tr>
<td>Inclusive organisational procedures</td>
<td>3</td>
<td>.785</td>
</tr>
</tbody>
</table>

Enhancing validity and reliability of interview data. A description of the processes to collect and analyse the interview data is presented next. The researcher was the only person to code the data. When there is one coder Guest et al., (2012) recommend two possible courses of action, both of which were adopted, to ensure that the interview transcripts were coded consistently and with rigour. Firstly, they suggest that an individual may serve as primary and secondary coder by conducting initial coding on some of the data, and revisiting the codes after some time has lapsed. This break provides the coder with the opportunity to refresh one’s perspective and mitigates effects of distortion that immersion in the data may cause (Guest et al., 2012). Further, the data collected from beginning teachers were coded by the author twice; once in December 2013 and again in November 2014. The data fell mainly into the same themes indicating that the coding of the data was consistent and therefore reliable. Nonetheless, identification of themes was an iterative process and categories were fine-tuned as the process of thematic analysis continued (see Appendix L). The second method that Guest et al., suggest involves asking a colleague to critically review a random sample of coded text to determine whether the raw text and the code definitions are logical and intuitive. In the current study, an academic colleague reviewed the coding of some transcripts. The codes were discussed until agreement was established. Finally, the themes and codes were presented to, and discussed with supervisors and agreement was reached about the themes and categories developed (see Appendix M).

Collecting the data. The following section outlines the data collection methods used in this study.

Collecting questionnaire data. Pre-service teachers were invited to respond to the questionnaire at the commencement and at the conclusion of the inclusive unit while experienced teachers were asked to respond to the questionnaire once only. The tool
was developed so that direct comparisons could be made between pre-service teachers’ pre- and post-unit questionnaire data and experienced teachers’ data.

Pre-service teacher pre-unit data was collected by distributing hard-copies of the questionnaire to those attending the first lecture of the unit. The first part of the lecture was presented in a regular format. New terms were explained in the first lecture only to ensure that pre-service teachers were familiar with terminology used in the questionnaire (e.g., adjustments, accommodations, differentiation). The piloting of the questionnaire had identified that it was necessary to take steps to prevent the possibility that pre-service teachers may treat ranking items as Likert scales. For this purpose, the researcher used a PowerPoint to demonstrate to pre-service teachers how to rank items (i.e., items 18, 19 & 20; see Appendix N). Pre-service teachers were required to place a “1” next to the item they considered most important, “2” next to second most important and so forth. A few participants, however, made slight errors by placing the same numeral next to two items. Two approaches were adopted to ensure that the data captured were a true reflection of what participants intended. 1. Each error was shown to a university colleague and a discussion ensued about the participant’s intent. 2. Following a discussion with a supervisor, it was decided that if a participant accidentally placed the same numeral next to two items the initial response was accepted. This happened on five occasions only. Ranking in the online version involved dragging and dropping the items, therefore additional instructions for experienced teachers were not required.

Pre-service teachers appeared to understand the questions, although one participant in the first lecture indicated a desire to have greater familiarity with some of the concepts. As incentives have been found to increase response rates (de Leeuw, Hox, & Dillman, 2008) small tokens of appreciation were given to all who attended the lecture, regardless of whether they responded to the questionnaire. De Leeuw et al. suggest that incentives be tailored to the participants’ interests. Hence, the incentives related to primary school teaching and areas of disability (e.g., stickers, stamps, highlighters, vision impairment simulation goggles).

The hard-copy responses were scanned and the data collected was recorded digitally. The questionnaires were matched by scanning student identification numbers recorded on grids. There were 235 pre-unit questionnaires and 128 post-unit questionnaires.
collected; 119 questionnaires provided matched data. Some participants either dropped out of the unit or initial teacher education course or were not able to attend the final lecture. The matching procedure was hampered in part by some pre-service teachers either not recording their student identification number or not recording it correctly on the grid provided. However, cross-checking partially filled out student identification numbers with the unit enrolment spread sheets resulted in an increased number of matched pre- with post-unit questionnaires. To ensure confidentiality when entering data, names were not associated with identification numbers. Thereafter, apart from contacting beginning teachers who indicated a willingness to participate in a follow-up interview, questionnaires were referred to using the questionnaire numbers, not student numbers.

Various approaches to distribute the online questionnaire to experienced teachers were pursued. These included contacting the President of NSW Primary Principals Association who agreed to send the online questionnaire to all primary principals in NSW. Although the questionnaire was trialled in a Department of Education site, an unexpected firewall prevented teachers opening the questionnaire. The online survey was subsequently distributed using online education communities such as Moodle. While the use of an online questionnaire is an efficient way to collect data, its use presented unanticipated challenges. Figure 3.2 shows the steps to collect the questionnaire data.

In order to disseminate the questionnaire to teachers working in Catholic schools, letters explaining the nature of the research together with a copy of the ethics approval were sent to each primary principal in the Parramatta diocese. De Leeuw et al. (2008) suggest that pre-notification results in higher response rates. Follow-up emails with the questionnaire link were sent to principals within one week of mailing the letter (see Appendix O; O1 and O2). Forwarding the link within a few days of the pre-notification increases response rates (de Leeuw et al., 2008). A reminder, with the link, was resent to the principals approximately two months later. Response rates from Catholic schools, however, were low. It is possible that given time constraints, principals of Catholic schools prefer to support research conducted by Catholic Universities.

Prior to analysis, data went through a cleaning process – that is, checked for missing, incomplete, or invalid answers. Questionnaires that were not completed or where
participants responded to a limited number of questions, such as providing demographic information only, were removed.

**Collecting interview data.** Semi-structured interviews were used to garner the views of beginning and experienced teachers. This method of data collection ensured interaction with the participants on a one-to-one basis, which allowed for clarification and elaboration on points of interest and relevance. Bloomberg (2012) suggests that semi-structured interviews elicit “in-depth context rich personal accounts, perceptions and perspectives” (p. 252). In addition, face-to-face interviews “gives a voice” to those participants who may be influenced by outspoken or assertive individuals and reduces the possibility of the “me-too” that may occur when in focus groups (Guest et al., 2012).
**Figure 3.2.** Diagram showing strategies used to generate questionnaire data. DoE, Department of Education; SERAP, State Educational Research Application Process; HREC, Human Research Ethics Committee; EMSAD, Educational Measurement and School Accountability Directorate; UWS, University of Western Sydney (now Western Sydney University).
The interview questions were designed to guide what was essentially an iterative process. The semi-structured nature of the interviews capitalised on the experiences and views of teachers (Gibson & Brown, 2009). Notably, data collection protocols were consistent. Apart from minor adjustments to reflect each group’s experience, participants were asked the same questions in the same order. However, if a participant addressed a topic earlier during the interview, the conversation continued without interruption from the researcher so that participants were able to develop their thoughts. Probing techniques were used to encourage participants to expand on a thought or response.

The researcher was the only (sole) interviewer and was aware of the importance of consistency. In particular, valid comparisons across answers depended on questions and processes being kept as consistent as possible. As a teacher of the deaf, the researcher has skills in eliciting language and developing conversational skills in students with hearing impairment. These skills were applied during the interview to elicit open and frank responses. Further, when the researcher detected that participants did not understand the intent of a question, she rephrased the question or expanded as required (Guest et al., 2012). For example, one of the participants was uncertain about the term “differentiation”; the interviewer detected this and provided a succinct explanation that the participant understood.

The time allocated to each interview was approximately 30 – 40 minutes. Based on the first interview, this timing was considered appropriate. Overall, the researcher aimed for a balance between formality and informality; however, on listening to a recording of the first interview, the use of personal contributions was reconsidered and reduced to guard against the possibility of influencing participants. Nonetheless, personal comments to acknowledge the participant’s contribution proved useful in eliciting elaborated responses and creating open conversations. Although the interviews were open-ended, at times the interviewer rephrased a question to keep participants on track. This strategy was used only when a participant strayed “too far” from the topic into issues not related to the research. Given the researcher’s familiarity with the topic under investigation, the researcher brought a heightened sense of empathy, understanding and objective awareness to the interview situation (Miles, Huberman, & Saldana, 2013). Miles et al. discuss the markers of a good qualitative researcher-as-instrument and believe that,
a savvy practitioner is often a better research instrument in a qualitative study: sharper, more refined, more attentive, people friendly worldly-wise, and quicker to hone in on core processes and meanings about the case. (p. 42)

Notably, the experienced teachers who were interviewed conveyed a strong sense of having a vested interest in the topic whereas some of the beginning teachers seemed more cautious. Nonetheless, it appeared that all the teachers valued the opportunity to “have their say” about the preparation of pre-service teachers for inclusive teaching. The questions encouraged participants to talk about their experiences working with students with additional needs in inclusive settings, to reflect on what prepared them for inclusive teaching and to consider what may have better prepared them.

Prior to interviewing teachers, principals of each school were contacted via telephone seeking approval to conduct the interviews in their schools. Approval was granted in all cases. In addition, at the time the interviews were conducted, the researcher was on leave from her position as an Assistant Principal (of a team of itinerant teachers of the deaf) with the Department of Education and as such, was authorised to enter NSW public schools. Most of the interviews were conducted in classrooms or offices in the primary schools where the teachers worked (considered natural settings) with some exceptions for participant convenience.

Each interview was recorded using two iPhones (to safeguard against the possibility that one iPhone failed to record the interviews) and transferred to a laptop using iTunes. Interviews with beginning teachers were transcribed by the researcher; however, all interviews were later transcribed by a professional transcription service (Transcriber Online) that specialises in academic, medical, legal and government transcription. This service is widely used by academics and researchers at the university at which the researcher works. Importantly, the transcription service captured nuanced information such as emphasised phrases or words, and hesitations. Tables were created using the emerging themes and modified based on subsequent analyses; with refinements made as each interview was coded.

During October 2013, nominated teachers who were willing to take part in follow-up interview were contacted either by email or by phone (using contact details they supplied on the questionnaires). Seven pre-service teachers who had graduated as teachers the previous year and who responded to both the pre- and post-unit
questionnaire were also contacted. Of these, five were working as primary school teachers and were willing to be interviewed. The researcher arranged to meet the teachers at a time and place that was suitable and convenient for them (e.g., end of school day, during release from teaching times). All of the interviews took place between October 2013 and February 2014. Research shows that conducting interviews in natural settings can facilitate the discovery of nuances in a culture (Bloomberg, 2012). Given that the interviews were conducted at the end and beginning of the school year, a particularly busy time, some of the teachers asked to be interviewed in alternative settings (predominantly private settings), and this was accommodated.

Interviews with the beginning teachers were conducted approximately 11 months after they graduated and within 12 months of commencing teaching. It was particularly important to capture beginning teachers’ responses while they were most likely to recall details about their initial teacher education. In this way, they could consider the influence of their recent initial teacher education program in relation to their current teaching experiences.

**Integrating Data to Address the Research Questions**

The following section explains how quantitative and qualitative data were integrated to answer the overarching research question. As shown in Figure 3.3, results from each phase as well as the integrated findings answer particular research questions. The results are presented in Chapters 4 and 5 and are integrated and discussed in Chapter 6.

In this study, a number of approaches were adopted to ensure that the research questions were addressed and the results integrated. Examples of careful planning include: a) developing a matrix linking the research questions, research approaches and interview questions (see Appendix P) and b) creating an interpretive framework (see Table 3.1).

Numerous scholars express concerns about the failure of mixed methods researchers to adequately integrate the findings of quantitative and qualitative components (Bryman, 2007; Tashakkori & Teddlie, 2008). Bryman argues that the findings from the two methods should be “mutually illuminating” (p. 21) and is critical of mixed methods researchers who allow the two findings to “drift apart” (p. 20), resulting in a failure of the mixed approach to shed light on the topic under investigation. The matrix and interpretive framework ensured these issues would be appropriately addressed in this study.
Other ways to promote effective integration in mixed methods research were also adopted. Guest et al. (2012) point out that mixed methods may be unified by themes, instruments used, theoretical constructs, or research topics and questions. Fetters et al. (2013) identified four approaches to achieve integration at the methods level. These are; connecting, building, merging and embedding. Two of these approaches – connecting and merging – were adopted to achieve integration. Connecting was accomplished by selecting teachers for interview from the population who responded to the questionnaire. This provided meaningful links between the data. Merging occurred following “the statistical analysis of the numerical data and qualitative analysis of the textual data” (Fetters, et al., p. 2140) when the two sets of findings were brought together during the discussion. Figure 3.3 shows how the data sets were merged and integrated.

Considerable thought was given to integrating the different sets of findings (Creswell & Plano Clark, 2011). For this study, quantitative and qualitative data were initially analysed separately; the rationale for presenting the findings separately is that each data set largely answered different contributing questions. During the integration phase the researcher looked for evidence of convergence, divergence or contradiction between the data sets, thus generating a comprehensive and deeper understanding of issues associated with preparing pre-service teachers for inclusive teaching.
This study aims to identify and generate pedagogy and curriculum to prepare pre-service primary school teachers during initial teacher education so that they possess the requisite attitudes, knowledge and skills to plan and manage successful learning for students with disabilities and additional needs in regular classes in NSW.

**Research questions**

Q1. Do the self-reported attitude, knowledge and skills of pre-service teachers change as a result of undertaking a specifically designed mandatory unit in inclusive education in an initial primary teacher education program? After completing the inclusive unit, how similar were pre-service and experienced teachers on these characteristics?

Q2. What content should be covered in initial primary teacher education programs to prepare and equip beginning teachers for inclusive teaching? What mode of delivery optimises the effectiveness of preparing for inclusive teaching?

Q3. How can educational learning experiences during initial teacher education be effectively organised to prepare pre-service primary teachers for inclusive teaching in NSW?

**Data**

- **Quantitative survey data:** Pre-service teachers (pre- and post-unit)
- **Quantitative survey data:** Pre-service and experienced teachers (post-unit)
- **Semi-structured interviews:** Beginning teachers, school counsellors, support teachers, principals and class teachers
- **Semi-structured interviews:** Beginning teachers, school counsellors, support teachers, principals and class teachers
- **Survey results of pre-service and experienced teachers and semi-structured interviews of beginning teachers, school counsellors, support teachers, principals and class teachers**

**Data Integration**

**Legend**

- **Quantitative**
- **Qualitative**
- **Integration**
- **Meta-Infences**

*Figure 3.3. Data integration used for this mixed methods study. Figure adapted from “Acupuncture Treatment in Threatened Miscarriage: A Mixed Methods Study”, (p. 49), by D. Betts, 2013, Doctoral Dissertation, University of Western Sydney. Adapted with permission.*
The following section explains how the data were analysed. While espousing the merits of adopting a mixed methods approach to address this research, it is nonetheless important to provide details about the analyses conducted on each of the separate data sets. Notably, the integrity, validity and reliability of the findings depend on the quality of the contributing analyses.

**Analysing data collected from questionnaires.** The questionnaire produced quantitative data and short open-ended qualitative responses. This section will outline how the quantitative data were analysed. An explanation of the approach to analyse the open-ended responses will be provided later in this chapter.

The Statistical Package for the Social Sciences (IBM SPSS; Version 22; https://www.ibm.com/analytics/us/en/technology/spss/) was used to analyse the quantitative responses of pre-service and experienced teachers. Both parametric and non-parametric statistics were used to analyse the data. Parametric statistics were used where the data met the assumptions of normal distribution (Pallant, 2011). When assumptions are met, parametric statistics are potentially more powerful than non-parametric (Pallant, 2011); in that, they are more likely to detect significant differences between groups (Pallant, 2011). Conversely, the assumptions for non-parametric analyses are less stringent; where the data did not meet the assumptions for parametric analyses, corresponding non-parametric techniques were used, such as Kruskal-Wallis and Mann-Whitney U (Pallant, 2011) in place of ANOVA and independent t-tests. Significance level was set at alpha of .05. However, to reduce the risk of Type 1 error (rejecting the null hypothesis when it is true) alpha levels were adjusted using Bonferroni correction for number of items and number of comparisons where necessary. The statistical techniques used to analyse data to address research questions will be explained and justified in the following sections.

**Comparing pre-service teacher data: pre- and post-unit questionnaire.** Parametric paired-sample t-tests were used to compare pre-service teachers’ responses on commencing and completing the inclusive unit. When using paired-sample t-tests it is assumed that the difference between the two scores obtained should be normally distributed. Violation of this assumption is unlikely to occur, with sample sizes of greater than thirty (Pallant, 2011). Therefore, the sample size of 119 matched cases is more than an adequate sample size. Stevens (as cited in Pallant,
2011) suggests that the power of a test is influenced by sample size and that when the sample size is large (e.g., 100 or more participants), “power is not an issue” (p. 208).

Distributions of scores for paired items (pre- and post-unit questionnaire results for pre-service teachers) were checked for normality (using histograms and statistical tests) and found to be appropriate for parametric analyses. Nonetheless, to ensure rigour, analyses of paired items were also run using non-parametric techniques. Results were found to be similar. For paired items, parametric results will be reported (Pallant, 2011).

**Comparing pre-service and experienced teacher data.** Independent sample t-tests were used to compare responses of pre-service (post-unit questionnaire), and experienced teachers to determine if there were significant differences in the mean scores on items for the two groups. Independent sample t-tests are used when comparing the means of two independent groups (Field, 2009; Pallant, 2013). Assumptions that apply when using independent sample t-tests are: variances in the populations are roughly equal, known as homogeneity of variance; data are measured at least at the interval level; and that group scores are independent of each other (Field, 2009; Green, Key, & Salkind, 2000). The independent t-test is based on the normal distribution. The large sample sizes (n= 326, n= 119) for these groups compensated for possible violations of normality (Pallant, 2013). With sample sizes greater than 30, a violation of the assumption of normal distribution is unlikely to occur (Pallant, 2013). Data distributions were checked and were considered satisfactory for parametric techniques.

The researcher was most interested in comparing pre-service teachers’ self-reported attitudes, knowledge and skills after undertaking the inclusive unit with those of experienced teachers. For this reason only post-unit questionnaire data were compared to experienced teacher data. Further, pre-service teachers results post-unit showed significant improvements compared to their pre-unit responses. As such, it was reasonable to assume that pre-unit questionnaire data would also be significantly different from that of experienced teachers. Limited data analysis confirmed this.

**Determining most important topics to prepare pre-service teachers for inclusive education.** Non-parametric techniques were used to analyse the rank order data as these techniques are ideal for ordinal (ranked) scales (Pallant, 2011).
Participants were asked to rank items, grouped into categories, in order of most important (1) to least important (4 or 5) to indicate the topics they believed most important for coverage during initial teacher education to prepare pre-service teachers for inclusive teaching.

These data were analysed using two approaches. Firstly, data were analysed for level of agreement among raters regarding importance of items. Secondly, data were analysed to identify significant differences in the rankings. The non-parametric Kendall’s W (Kendall’s coefficient of concordance) was used to assess participants’ agreement of ranking of items according to importance within categories (e.g., classroom management, differentiation). The Kendall’s W indicates a strength of relationship index (Green & Salkind, 2014); the overall test of the W statistic indicates whether there is significant agreement within a group of raters; the W ranges from 0 (no trend of agreement) to 1 (complete agreement; Field, 2009). Intermediate values of W indicate a greater or lesser degree of agreement (Siegel & Castellan, 1988).

The Kendall’s W score provides a consensual ordering with the “true” ranking of the N items provided when W is significant (Siegel & Castellan, 1988, p. 271). The score expresses a mean ranking and therefore the lowest score indicates the most important item (Siegel & Castellan, 1988). If the overall W statistic is significant, it is necessary to run additional post hoc comparisons to determine which items within each group are statistically significantly different from one another (Pallant, 2011). Hence, to compare pairs within categories, Wilcoxon Signed Rank Tests, using Bonferroni adjusted alpha values were conducted to determine which differences were significant (Siegel & Castellan, 1988). These data met the required assumptions (i.e., non-normal distribution, measurement on an ordinal scale and more than 30 in each group yields accurate results; Green et al., 2000) and therefore were suitable for this analysis.

For the rank order questions, the pre-service post-unit questionnaire data and the experienced teacher data were analysed. Rather than using only the matched pre-service teacher data, all the post-unit questionnaire data were used for rank order analysis resulting in an additional nine respondents (n=9). This increased the sample size to 128. It should be noted that demographic information was not available for
the unmatched post-unit questionnaire responses, however, this information was not required as these results were not analysed against demographic data. Given that the pre-service teachers completed the questionnaire in the final lecture of the inclusive unit and in the final semester of their Master of Teaching degree, their opinions were regarded as “informed”. Therefore, it seems reasonable to assume that the combination of results for pre-service (post-unit questionnaire) and experienced teachers may usefully identify topics for prioritisation to prepare pre-service teachers for inclusive teaching.

Critical levels of significance were adjusted using a Bonferroni correction for number of items and/or number of comparisons where appropriate. In addition, Monte Carlo tests were conducted to account for the considerably large sample size for the experienced teacher group (n > 300) (Field, 2009, p. 564) and in each case results suggested that significant effects were genuine.

**Influence of demographic characteristics.** Subgroup analyses were conducted to determine the effect of demographic characteristics on results among experienced teachers. Subgroup analyses were conducted on the general questions about attitude, knowledge and skills, and on the factors identified from exploratory factor analysis (see Appendix Q; Tables Q1, Q2, Q3, Q4 and Q5). Because of subgroup sizes and non-normal distribution of some subgroup data, non-parametric tests for independent samples, including Kruskal-Wallis (conducted on three or more subgroups) and Mann-Whitney U (conducted on two subgroups), were used for subgroup comparisons (e.g., class teachers, support teachers). Both the Kruskal-Wallis and Mann-Whitney U tests compare mean ranks. When using Kruskal-Wallis, the p-value becomes more accurate with larger samples (greater than or equal to 30 in the case of Kruskal-Wallis and greater than 42 in the case of Mann-Whitney U; Green et al., 2000, p. 363). Given the large numbers in this study (n > 300) the techniques were deemed appropriate.

Where data showed that a large majority of experienced teachers fell into a single demographic group and thus meaningful comparisons were not possible, subgroup analyses were not conducted. Alternatively, where subgroup numbers were too small to conduct valid analyses, and subgroups were able to be merged into meaningful
categories, merging was performed. For example, data for rural and remote teachers were combined to form a single “non-metropolitan” subgroup.

Subgroup comparisons were not conducted on pre-service teacher data, because their demographic information lacked sufficient variation to warrant this level of analysis (e.g., 92 [78%] were aged 20 – 29, 105 [88%] were female, 113 [95%] held a degree and all were studying to become primary school teachers).

This ends the explanation of the analysis of the quantitative data. The next section explains how the interview data and the open-ended responses in the questionnaires were analysed.

**Analysing data collected from interviews and open-ended responses in questionnaires.** Thematic analysis was conducted on the interview and open-ended questionnaire data. Thematic analysis involves analysing portions of data to identify themes that relate to the research focus (Saldana, 2013). A theme identifies patterns and functions as a way to categorise data; hence a theme brings meaning to the topic or context being investigated. Thematic analysis is particularly suited to interview data (Saldana, 2013). Saldana states that thematic analysis is a strategic choice that considers the theoretical framework, the literature review and the overarching goals of the research and contributing questions. Thematic analysis involves extracting “significant statements” from data (Butler-Kisber, 2010, p. 61), formulating meaning into clusters of themes, and elaborating on the themes through “rich written description” (Saldana, 2013, p. 176). In keeping with Packer’s (2011) recommendation, the themes emerged following the careful interpretation of participants’ extended responses in order to capture complex meaning. This process is outlined in the following section entitled “processes employed to analyse interview data”. Moreover, the emerging discoveries provided the researcher with foundations from which to develop theoretical understandings (Bryman, 2012).

**Processes, transparency and audit trail.** When conducting thematic analysis, Guest et al., (2012) recommend keeping an audit trail showing the approaches used to theme and reduce the data as well as to show the iterations of codes. In this study, interview and open-ended responses were subjected to the same analysis process, however, additional procedures particular to each data set were also required. The
next two sections outline the processes adopted to analyse the interview and open-ended questionnaire data.

*Processes employed to analyse interview data.* The researcher transcribed the beginning teachers’ interviews from voice recordings to written format. Transcribing was conducted on more than three occasions in an attempt to capture all the information. However, not all nuanced information was captured so the recordings of the beginning teachers were later forwarded to a professional transcriber, *Transcriber Online* used by university researchers. Nonetheless, this early transcribing exercise by the researcher resulted in familiarity with and full immersion in the data. The *school counsellors and support teachers* and *principals and class teachers’ data* were forwarded directly to the professional transcription service. This ensured consistency in transcription protocols; this has been shown to enhance validity (Guest et al., 2012).

Coding was done manually by the researcher resulting in greater familiarity with the data (Guest et al., 2012). The use of a computer program to analyse the data was not warranted because the sample (N=15) was relatively small and because analysis was conducted by one researcher (Guest et al., 2012).

The processes of winnowing and memoing were applied to the data (Creswell, 2014, Guest et al., 2012). Winnowing involves highlighting significant information on the transcripts. Recurring patterns, themes and threads were identified and thematic coding was developed. Memoing involves writing notes and descriptors about certain occurrences or sentences that were of interest and which captured new ideas, thoughts, and reflections on transcripts (see Appendix R for a sample of a transcribed segment of an interview showing processes of winnowing and memoing). During this process the researcher identified themes and categories and eliminated descriptors that overlapped.

A second cycle analysis was undertaken. The researcher revisited the recorded interviews and transcripts to ensure that nuanced information was interpreted accurately. For example, emphasis placed on words (e.g., *this* school) or rising intonations may convey subtle messages. While immersed in the data, the researcher simultaneously reflected on themes to ensure that the data were coded accurately.
The data were re-read, listened to on numerous occasions, re-examined and considered with a view to identify latent as well as obvious themes (Saldana, 2013). During this process quotations were subtracted, added and substituted to ensure that the resulting quotes best captured participant sentiments.

Saldana (2013) advises that there is not one definite way to code data and inevitably an overlap of methods will yield a deeper understanding of the phenomenon being investigated. To enhance scrutiny of the data, “versus coding” and “themeing” was used to analyse the transcripts. Saldana suggests that second cycle methods of coding such as versus coding results in deeper analysis; requiring the researcher to apply skills of synthesising, classifying, conceptualising and theory building. Versus coding involves identifying binary conflicts that exist within the data and between groups, and can assist to shed light on emerging issues and tensions. “Themeing the Data” can be applied to most qualitative studies (Saldana, 2013) and involves “analysing portions of data with an extended thematic statement rather than a shorter code” (p. 177). Themeing the data allows categories to emerge during analysis. For this study, however, some categories were predetermined as questions were carefully planned to elicit particular information. Nevertheless, participants brought their own understanding of the constructs this research explored and this enriched the data.

Pertinent and smaller pieces of data were identified and highlighted. Individual coding charts were created (see Appendix S). Quotes were selected based on whether they exemplified and captured an intended concept or provided insight. Quotes were transferred and organised according to previously identified themes. During this process additional verification methods that contributed to accuracy of coding data, were adopted. These are as follows:

- Before transferring quotes to individual data templates, the researcher re-read each quote, reconsidered its placement within a theme, and then read the memo that was previously assigned to the quote, to ensure the allocation of codes to quotes was consistent.

- To assist with the categorisation process, the researcher cross-referred to questionnaire items because these were already classified into categories
(e.g., Collaboration, Differentiation). This proved a useful correlation procedure.

- To maintain consistency, classifying quotes into themes was a continual and ongoing process. For example, the researcher double-checked that the themes allocated to data were consistent by referring to previously completed individual data templates (e.g., the word “continuum” was checked across different transcriptions to ensure that the process of allocating themes was consistent).

Each participant’s transcript and individual data template were colour-coded for easy identification and organisational purposes (e.g., Mel = pink font). The themes did not simply emerge; rather they emanated from a combination of issues arising from the literature review and themes identified in the responses to the interview questions. As the analysis was on-going the approach was interpretive and flexible. As analyses of subsequent transcriptions were completed, new iterations of the template were created. For example, although the category “general life experiences” was initially placed under the theme “experiences” it was finally presented within the larger theme of “teachers’ struggles with inclusive education and preparedness”.

Discussions with an academic colleague and supervisors about the codes assisted to crystallise the themes (Guest et al., 2012). New themes emerged as the analysis progressed and these were incorporated into the code book. As recommended by Guest et al. (2012) codes were defined operationally in most instances (see Appendix T). While analysing and writing the results, the researcher emailed two of the participants to confirm that their statements had been interpreted correctly (e.g., Robyn, personal communication, February 3, 2015). To enhance reliability, cross-checking was ongoing to ensure that the meaning of a quote was preserved during writing.

The coding development chart (see Appendix L) shows the iterative process of “examining commonalities, differences and relationships” (Guest et al., 2012, p. 53) and provides a summary of the refining, revising, adding, eliminating and collapsing of codes and categories that occurred.
Processes employed to analyse open-ended questionnaire data. The following section outlines how the responses to the open-ended questions in the questionnaires were analysed. Responses to open-ended questions, in part informed the development of the qualitative interview questions. In addition, they also served to corroborate, contradict or shed further light on the quantitative and interview findings (Bryman, 2012). In particular, the open-ended responses provided data that was used to cross-check the validity of the interpretations of the interview findings (Bryman, 2012, Hammersley, 2008).

Five open-ended questions, all of which were optional, were included in the questionnaire. Giving participants the option of responding to these questions gave them the opportunity to elaborate if they wished. Participants were provided with four to five lines to respond to each question. Thematic analysis as described earlier in this chapter was conducted on the responses to each of these questions to identify emergent issues and themes. Further, this analysis enabled comparisons to be made between the responses of pre-service teachers, on the pre- and post-unit questionnaires, and experienced teachers.

Pre-service teachers’ responses to open-ended questions for the matched pre- and post-unit data (n=119) were reviewed; patterns emerged and general themes were identified. The process of establishing emerging themes was ongoing and themes were not pre-conceived. An academic in education assisted the researcher to identify emergent themes. Consensus was reached and responses were categorised. This process contributed to consistency. The open-ended questionnaire responses of the 15 participants who were later interviewed were then analysed in greater depth. Responses were accorded themes; statements that encapsulated various viewpoints were placed into tables under the appropriate themes and according to whether the data were collected from pre-service teachers (pre-and post-unit questionnaire data) or from experienced teachers (see Appendix U; Table U1, Table U2 and Table U3). The decision to analyse the open-ended responses of the 15 teachers who were also interviewed provided continuity. In particular, for five of these the researcher was able to compare their pre-service teacher responses on the post-unit questionnaire with their interview responses as beginning teachers. Changes in their perspectives after commencing teaching were detected.
**Mapping findings onto theoretical models** The interview and the open-ended questionnaire data yielded themes that were later identified to map onto *Productive Pedagogies*\(^{21}\) (Hayes, Mills, Christie, & Lingard, 2006). Beginning teachers made suggestions based on their experience of commencing teaching; in addition they recalled learning experiences from the inclusive unit they had undertaken the previous year, while experienced teachers recommended principles and practices based on their varied and extensive experience.

**Summary**

This chapter outlined and provided a rationale for the research approach and design adopted. The first section of this chapter described the methodological framework underpinning the research design. This included an examination of philosophical assumptions that guided the research approach. A justification for the methodological approach used was presented. Rather than adhering to one worldview, this research advances understanding of the preparation of pre-service teachers for inclusive teaching by adopting the notion of a *continuum* of methodological approaches that embrace different theoretical perspectives. The different techniques associated with a mixed methods approach made it possible to gain a deeper and more nuanced understanding of the preparation of pre-service teachers for inclusive teaching that otherwise would not have been attainable. The value and potential contribution of the study were presented and ethical matters were addressed. A detailed description of the research approach followed. Processes for achieving integration of findings were also explained. Lastly, data analysis procedures were described.

The next chapter, Chapter 4, presents the results from the questionnaires. The questionnaires generated two kinds of data; quantitative data and short answer responses to open-ended questions. Chapter 5 presents the results from the interviews.

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\(^{21}\) *Productive Pedagogies* framework identifies four dimensions for quality teaching (intellectual quality, connectedness, supportive classroom environments and working with and valuing difference).
Chapter 4: Questionnaire Results - Pre-service and Experienced Teachers’ Perceptions of Preparedness and Pedagogy

In the previous chapter the research methodology and methods for this study were described in detail. It provided a rationale for a mixed methods approach and outlined the steps taken to collect and analyse the questionnaire and interview data.

This chapter reports the results for phase one of the study; that is, findings from the questionnaires completed by pre-service and experienced teachers. The data were collected and analysed in relation to the overarching aim and contributing questions of this thesis: that is, to identify curriculum and pedagogy that effectively prepare pre-service primary teachers during initial teacher education for inclusive teaching. Phase one involved the dissemination of a questionnaire to pre-service teachers, and experienced teachers who work in primary school settings. The purpose of the questionnaire was threefold. 1. To determine if, after undertaking an inclusive education unit, the self-reported attitudes, knowledge and skills of pre-service teachers changed. 2. To compare the perceptions of pre-service and experienced teachers about their general preparedness and self-reported skills for including students with additional needs in regular classes. 3. To identify content that pre-service and experienced teachers believe should be covered during initial teacher education to prepare pre-service teachers for inclusive teaching. The questionnaires generated two kinds of data; quantitative data and short answer responses to open-ended questions.

The quantitative findings will be presented initially, followed by the findings to the open-ended responses. In reference to the quantitative findings, the first section reports the self-reported changes in pre-service teachers’ attitudes, knowledge and skills to implement inclusive teaching after undertaking the inclusive education unit that is the focus of this study. The second section compares the perceptions of pre-service and experienced teachers about their general preparedness and skills for inclusive teaching. The third section reports the results about content that pre-service and experienced teachers indicate should be covered during initial teacher education to prepare pre-service teachers for inclusive teaching. The fourth section examines
the effect of educator characteristics (demographics) on the self-reported attitudes, knowledge and skills related to inclusive teaching and on the five factors previously identified from exploratory factor analysis. Lastly, the results from the open-ended responses will be presented. This chapter reports the results with limited interpretation of the findings. The findings will be explored further and integrated in the Discussion chapter (Chapter 6).

Changes in Pre-service Teachers’ Self-reported Preparedness for Inclusive Teaching after Undertaking the Inclusive Education Unit

The following section reports changes in pre-service teachers’ self-reported levels of general preparedness, attitudes, knowledge and skills after undertaking a unit in inclusive education. It also presents findings that compare the pre-service teacher (post-unit questionnaire) and experienced teacher data on these measures.

changes in pre-service teachers’ self-reported General Preparedness.

Pre- and post-data were matched for 119 pre-service teachers. Pre-service teachers were asked to indicate their level of agreement using 5-point Likert scales with statements regarding self-reported general preparedness for inclusive teaching in the areas of attitude, knowledge and skills. Paired sample t-tests were used to compare matched data.

On items asking about General Preparedness, pre-service teachers reported positive changes in Attitudes, Knowledge and Skills for inclusive teaching after undertaking the inclusive education unit. As shown in Table 4.1, the results overall indicated significant improvements in self-reported preparedness. In particular, pre-service teachers more strongly agreed that both typically developing students and those with additional needs benefit from being in inclusive classes. They also reported feeling more knowledgeable and more skilled in relation to inclusive teaching. Pre-service teachers held consistently positive views about working with students with additional needs, and their levels of concern about inclusive teaching tended to decrease after undertaking the unit.
Table 4.1 *Pre-service Teachers’ Self-Reporting of General Preparedness for Inclusive Teaching – Comparison of Pre- and Post-Unit Data*

<table>
<thead>
<tr>
<th>General Preparedness statements</th>
<th>Pre</th>
<th>Post</th>
<th>95% CI</th>
<th>r</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Attitudes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I believe inclusion benefits typically developing students</td>
<td>3.86</td>
<td>.89</td>
<td>4.16</td>
<td>.75</td>
<td>14, .47</td>
<td>.38</td>
</tr>
<tr>
<td>I look forward to working with students with additional needs</td>
<td>4.05</td>
<td>.87</td>
<td>4.03</td>
<td>.8</td>
<td>.14, .19</td>
<td>.46</td>
</tr>
<tr>
<td>I believe that students with additional needs benefit from inclusion</td>
<td>4.02</td>
<td>.9</td>
<td>4.32</td>
<td>.63</td>
<td>.14, .48</td>
<td>.3</td>
</tr>
<tr>
<td>I am concerned about working with students with additional needs</td>
<td>3.16</td>
<td>1.16</td>
<td>2.85</td>
<td>1.13</td>
<td>.05, .56</td>
<td>.27</td>
</tr>
<tr>
<td><strong>Knowledge</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am knowledgeable about the needs of students with disabilities</td>
<td>2.99</td>
<td>1.14</td>
<td>4.08</td>
<td>.72</td>
<td>.88, 1.31</td>
<td>.24</td>
</tr>
<tr>
<td><strong>Skills</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have the skills to include students with additional needs</td>
<td>2.77</td>
<td>1.01</td>
<td>3.95</td>
<td>.71</td>
<td>.98, 1.38</td>
<td>.22</td>
</tr>
<tr>
<td>I know how to alter teaching to cater to students with additional needs</td>
<td>3.04</td>
<td>1</td>
<td>4.21</td>
<td>.55</td>
<td>.97, 1.36</td>
<td>.19</td>
</tr>
</tbody>
</table>

*Note.* M = mean; SD = standard deviation, CI = confidence interval for mean difference, r = Pearson’s correlation coefficient, t = t-statistic, df = degrees of freedom. The negative t-value denotes direction of effect with lower mean values after completing the unit.

*1* = strongly disagree to 5 = strongly agree.

*p < .05. ***p < .001.

**Changes in pre-service teachers’ self-reported Skill levels.** This section reports quantitative results addressing the question, *do the self-reported skills of pre-service teachers change as a result of undertaking a unit in inclusive education?* As part of this thesis is concerned with the skills that pre-service teachers need to develop in order to teach inclusively, this section examines self-reported skills in greater detail. Results have been grouped according to the skill areas of Classroom Management, Collaboration, Differentiation and Resources, shown in Tables 4.2, 4.3, 4.4 and 4.5, respectively. Participants used seven point Likert scales (1 = *not at all well*, 7 = *extremely well*) to respond to these items. Data were collected at the first
and last lectures of the inclusive education unit which spanned one semester. Paired t-tests were used to compare pre-service teachers’ pre- and post-unit data regarding how well they reported performing specific skills related to inclusive teaching.

Table 4.2 Pre-service Teachers’ Self-reporting of How Well they Perform Classroom Management Skills – Comparison of Pre- and Post-Unit Data

<table>
<thead>
<tr>
<th>Classroom Management Skills</th>
<th>Pre</th>
<th>Post</th>
<th>95% CI</th>
<th>r</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apply behaviour management theories</td>
<td>5.03 ± 0.91</td>
<td>5.01 ± 0.92</td>
<td>0.38, 0.38</td>
<td>1.9</td>
<td>116</td>
<td></td>
</tr>
<tr>
<td>Manage cooperative learning</td>
<td>5.16 ± 1.12</td>
<td>5.51 ± 1.03</td>
<td>0.07, 6.2</td>
<td>2.53**</td>
<td>115</td>
<td></td>
</tr>
<tr>
<td>Develop skills to manage students with challenging behaviours</td>
<td>4.46 ± 1.33</td>
<td>5.16 ± 1.08</td>
<td>0.29, 0.97</td>
<td>5.06**</td>
<td>115</td>
<td></td>
</tr>
<tr>
<td>Develop strategies to teach social skills to students with</td>
<td>4.22 ± 1.58</td>
<td>5.23 ± 1.08</td>
<td>0.37, 7.07</td>
<td>7.07***</td>
<td>115</td>
<td></td>
</tr>
<tr>
<td>students with additional needs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implement risk assessments for students with challenging</td>
<td>3.60 ± 1.52</td>
<td>4.68 ± 1.44</td>
<td>0.43, 7.33</td>
<td>7.33***</td>
<td>115</td>
<td></td>
</tr>
<tr>
<td>behaviours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. M = mean, SD = standard deviation, CI = confidence interval for mean difference, r = Pearson’s correlation coefficient, t = t-statistic, df = degrees of freedom.
*1 = not at all 7 = extremely well.
**p < .01. *** p < .001.

After completing the inclusive education unit, pre-service teachers reported improvements in their ability to manage their classes. Table 4.2 shows that there was a statistically significant increase from pre- to post-unit questionnaire results on four out of the five items related to Classroom Management. These were: “managing cooperative learning groups”; “managing students with challenging behaviours”; “teaching social skills to students with disabilities and/or additional needs”; and “implementing risk assessments”. There was no statistically significant change on the “applying behaviour management theories” item.
Table 4.3 Pre-service Teachers’ Self-reporting of How Well they Perform Collaboration Skills – Comparison of Pre- and Post-Unit Data

<table>
<thead>
<tr>
<th>Collaboration skills</th>
<th>Pre</th>
<th>Post</th>
<th>95% CI</th>
<th>r</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop skills of collaborating with parents/guardians</td>
<td>4.70</td>
<td>1.24</td>
<td>4.87</td>
<td>1.3</td>
<td>.07, .42, .45</td>
<td>1.4</td>
</tr>
<tr>
<td>Develop individual learning plans collaboratively with colleagues</td>
<td>3.81</td>
<td>1.56</td>
<td>4.73</td>
<td>1.38</td>
<td>.59, 1.25, .27</td>
<td>5.56***</td>
</tr>
<tr>
<td>Develop skills of collaborating with specialist/support teachers</td>
<td>4.41</td>
<td>1.33</td>
<td>5.03</td>
<td>1.23</td>
<td>.37, .89, .4</td>
<td>4.85***</td>
</tr>
<tr>
<td>Develop skills of collaborating with teacher assistants/aides</td>
<td>4.53</td>
<td>1.27</td>
<td>5.11</td>
<td>1.3</td>
<td>.32, .84, .39</td>
<td>4.42***</td>
</tr>
</tbody>
</table>

Note. M = mean, SD = standard deviation, CI = confidence interval for mean difference, r = Pearson’s correlation coefficient, t = t-statistic, df = degrees of freedom.

Table 4.3 shows that there was a statistically significant increase from pre- to post-unit questionnaire results on most items related to Collaboration. Pre-service teachers reported improvements in their ability to collaborate, specifically: “developing individual learning plans”; “collaborating with specialist and support teachers”; and “teacher assistants”. There was no significant difference in their belief about their ability to “collaborate with parents and guardians”.

As seen in Table 4.4, pre-service teachers reported improved skills in all areas of Differentiation. Specifically, their ability to: “adjust and accommodate”; “use a variety of assessment techniques”; “use strategies that are effective with reference to specific disabilities”; “adapt the physical environment to meet the needs of students”; “implement specific skills such as task analysis and scaffolding”; “differentiate the curriculum to cater to the needs of very capable students”; and “adopt teaching strategies that cater to different learning styles”.

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Table 4.4 Pre-service Teachers’ Self-reporting of How Well they Differentiate – Comparison of Pre- and Post-Unit Data

<table>
<thead>
<tr>
<th>Differentiation skills</th>
<th>Pre</th>
<th>Post</th>
<th>95% CI</th>
<th>r</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjust and accommodate to cater to students with additional needs</td>
<td>4.15</td>
<td>5.44</td>
<td>1.0, 1.6</td>
<td>.41</td>
<td>10.04***</td>
<td>116</td>
</tr>
<tr>
<td>Use a variety of assessment techniques to determine the learning needs of students</td>
<td>4.36</td>
<td>5.09</td>
<td>.46, .99</td>
<td>.37</td>
<td>5.47***</td>
<td>116</td>
</tr>
<tr>
<td>Develop research based strategies that are effective for specific disabilities</td>
<td>3.85</td>
<td>5.05</td>
<td>.92, 1.5</td>
<td>.3</td>
<td>8.7***</td>
<td>116</td>
</tr>
<tr>
<td>Adapt the physical environment to meet the needs of students with additional needs</td>
<td>4.3</td>
<td>5.4</td>
<td>.72, 1.4</td>
<td>.13</td>
<td>6.3***</td>
<td>115</td>
</tr>
<tr>
<td>Acquire specific skills e.g., questioning skills, task analysis</td>
<td>4.83</td>
<td>5.5</td>
<td>.39, .91</td>
<td>.09</td>
<td>4.97***</td>
<td>113</td>
</tr>
<tr>
<td>Differentiate the curriculum to cater to the needs of very capable students</td>
<td>4.61</td>
<td>5.24</td>
<td>.37, .89</td>
<td>.29</td>
<td>4.87***</td>
<td>115</td>
</tr>
<tr>
<td>Adopt teaching strategies that cater to different learning styles</td>
<td>4.93</td>
<td>5.47</td>
<td>.29, .78</td>
<td>.29</td>
<td>4.29***</td>
<td>115</td>
</tr>
</tbody>
</table>

Note. M = mean, SD = standard deviation, CI = confidence interval for mean difference, r = Pearson’s correlation coefficient, t = t-statistic, df = degrees of freedom.

As seen in Table 4.5, pre-service teachers reported significant improvements in their ability to use and manage Resources, specifically: “awareness of technology to assist students with a disability”; “matching resources to the learning needs of students”; “awareness of support personnel”; and “evaluating the suitability of resources”.

In summary, this section presented results showing positive changes in pre-service teachers’ self-reported General Preparedness after undertaking the inclusive unit. Further, the results show that, after completing the inclusive education unit, pre-service teachers reported significant improvements in the skills areas of Classroom Management, Collaboration, Differentiation, and Use and Management of Resources related to inclusive teaching.
Table 4.5 Pre-service Teachers’ Self-reporting of How Well they Use and Manage Resources – Comparison of Pre- and Post-Unit Data

<table>
<thead>
<tr>
<th>Resources use skills</th>
<th>Pre</th>
<th>Post</th>
<th>95% CI</th>
<th>r</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop awareness of technology to assist students with additional needs</td>
<td>4.2 1.5</td>
<td>5.15 1.1</td>
<td>1.23 .68</td>
<td>.33</td>
<td>6.8***</td>
<td>116</td>
</tr>
<tr>
<td>Develop understanding that resources need to be matched to students' learning needs</td>
<td>4.96 1.3</td>
<td>5.4 1.07</td>
<td>.72 .16</td>
<td>.15</td>
<td>3.1**</td>
<td>116</td>
</tr>
<tr>
<td>Develop awareness of support personnel</td>
<td>4.35 1.43</td>
<td>5.11 1.13</td>
<td>1.06 .46</td>
<td>.22</td>
<td>5.05***</td>
<td>115</td>
</tr>
<tr>
<td>Evaluate suitability of available resources</td>
<td>4.64 1.4</td>
<td>5.19 1.04</td>
<td>.82 .28</td>
<td>.33</td>
<td>4.06***</td>
<td>114</td>
</tr>
</tbody>
</table>

*Note. M = mean, SD = standard deviation, CI= confidence interval for mean difference, r = Pearson’s correlation coefficient, t = t-statistic, df = degrees of freedom.

These results support the study’s first hypothesis that after undertaking the inclusive unit pre-service teachers will report increased levels of preparedness for including students with disabilities and/or additional needs in regular classes. The following section compares pre-service teachers’ post-unit questionnaire data to experienced teachers’ responses.

Comparison of pre-service (post-unit) and experienced teachers’ self-reported General Preparedness. Pre-service (post-unit questionnaire) and experienced teachers were asked to indicate their level of agreement with general statements, using 5-point Likert scales, regarding self-reported preparedness for inclusive teaching in the areas of attitude, knowledge and skills. Independent sample t-tests were used to compare group data.

Pre-service teachers (see Table 4.6) agreed more strongly than experienced teachers that “typically developing students benefit from having students with disabilities and/or additional needs included in regular classes” and “students with disabilities benefit from being included in regular classes”. In addition, they more strongly agreed with the statement “I am knowledgeable about the educational needs of students with disabilities and/or additional needs”.
Table 4.6 Comparison of Pre-service (Post-unit Questionnaire) and Experienced Teachers Self-reported General Preparedness for Inclusive Teaching

<table>
<thead>
<tr>
<th>General Preparedness statements</th>
<th>Pre-service Teachers</th>
<th>Experienced Teachers</th>
<th>95% CI</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M a</td>
<td>SD</td>
<td>M a</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Attitude</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I believe inclusion benefits typically developing students</td>
<td>4.16</td>
<td>.75</td>
<td>3.8</td>
<td>1.03</td>
<td>.21, .56</td>
</tr>
<tr>
<td>I look forward to working with students with additional needs</td>
<td>4.04</td>
<td>.81</td>
<td>3.9</td>
<td>1.1</td>
<td>.03, .33</td>
</tr>
<tr>
<td>I believe that students with additional needs benefit from inclusion</td>
<td>4.4</td>
<td>.64</td>
<td>3.93</td>
<td>.92</td>
<td>.25, .6</td>
</tr>
<tr>
<td>I am concerned about working with students with additional needs</td>
<td>2.84</td>
<td>1.13</td>
<td>2.71</td>
<td>1.31</td>
<td>.08, .41</td>
</tr>
<tr>
<td><strong>Knowledge</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am knowledgeable about the needs of students with disabilities</td>
<td>4.09</td>
<td>.71</td>
<td>3.78</td>
<td>1.03</td>
<td>.15, .48</td>
</tr>
<tr>
<td><strong>Skills</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have the skills to include students with additional needs</td>
<td>3.97</td>
<td>.70</td>
<td>3.95</td>
<td>.99</td>
<td>.14, .19</td>
</tr>
<tr>
<td>I know how to alter teaching to cater to students with additional needs</td>
<td>4.22</td>
<td>.56</td>
<td>4.18</td>
<td>.79</td>
<td>-.09, .17</td>
</tr>
</tbody>
</table>

*Note. M = mean, SD = standard deviation, CI = confidence interval for mean difference, r = Pearson’s correlation coefficient, t = t-statistic, df = degrees of freedom.

a 1 = strongly disagree to 5 = strongly agree.

***p < .001.

Both groups agreed, but not strongly, that they were “looking forward to working with students with disabilities and/or additional needs”; there was no significant group difference. Both groups indicated a low level of concern about “working with students with disabilities and additional needs”; no significant group difference was found. Pre-service and experienced teachers reported similar levels of agreement with the statements: “I have the skills to include students with disabilities and/or additional needs” and “I know how to reasonably alter teaching and learning to cater to students with disabilities and/or additional needs”.

In summary, pre-service teachers after completing the inclusive education unit, reported more positive attitudes and greater confidence in their knowledge than
experienced teachers. Interestingly, pre-service teachers believed more strongly than experienced teachers in the benefits of inclusive classes for students with disabilities and students without disabilities. Further, their confidence to include students with additional needs on general skill items had improved and notably was similar to that of experienced teachers. Both groups reported a low level of concern about working with students with disabilities and/or additional needs and indicated that they were looking forward to it (but not strongly). Overall, these results suggest that pre-service teachers’ self-confidence and general preparedness improved as a result of undertaking the inclusive unit.

This ends the comparison of pre-service and experienced teachers’ self-reporting of General Preparedness for inclusive teaching. The following section reports the results of comparisons between pre-service and experienced teachers’ self-reported specific skill levels related to inclusive teaching.

Comparison of pre-service (post-unit) and experienced teachers’ self-reported Skill levels. This section compares pre-service (post-unit questionnaire) and experienced teachers’ responses regarding how well they perform specific skills related to inclusive teaching, using independent sample t-tests. Participants used 7-point Likert scales to indicate level of agreement. Results have been grouped in Tables 4.7, 4.8, 4.9 and 4.10, in the skill categories of: Classroom Management; Collaboration, Differentiation; and Use and Management of Resources. Concluding comments about the findings will be presented at the end of this section.

As shown in Table 4.7, results indicate significant differences between pre-service and experienced teachers’ self-reported competency in Classroom Management skills. Although both groups reported feeling competent in classroom management skills, experienced teachers reported greater competency in how well they: “apply behaviour management theories”; “manage students with challenging behaviours”; “teach social skills to students with disabilities and/or additional needs”; and “implement risk assessments”. Both groups reported a similarly high ability to “manage cooperative learning groups”, with no significant group difference.
**Table 4.7 Comparison of Pre-service (Post-unit Questionnaire) and Experienced Teachers’ Self-reported Competencies in Classroom Management Skills**

<table>
<thead>
<tr>
<th>Classroom management skills</th>
<th>Pre-service Teachers</th>
<th>Experienced Teachers</th>
<th>95% CI</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apply behaviour management theories</td>
<td>M = 5.22, SD = .91</td>
<td>M = 5.57, SD = .96</td>
<td>-55, -.15</td>
<td>-.50**</td>
<td>422</td>
</tr>
<tr>
<td>Manage cooperative learning</td>
<td>M = 5.51, SD = 1.02</td>
<td>M = 5.67, SD = .99</td>
<td>-36, .05</td>
<td>-.5</td>
<td>422</td>
</tr>
<tr>
<td>Develop skills to manage students with challenging behaviours</td>
<td>M = 5.16, SD = 1.08</td>
<td>M = 5.69, SD = 1.04</td>
<td>-7.56, -.31</td>
<td>-4.77***</td>
<td>422</td>
</tr>
<tr>
<td>Develop strategies to teach social skills to students with additional needs</td>
<td>M = 5.21, SD = 1.11</td>
<td>M = 5.54, SD = 1.09</td>
<td>-56, -.11</td>
<td>-2.88**</td>
<td>423</td>
</tr>
<tr>
<td>Implement risk assessments for students with challenging behaviours</td>
<td>M = 4.68, SD = 1.42</td>
<td>M = 5.42, SD = 1.29</td>
<td>-1.02, -.46</td>
<td>-5.27***</td>
<td>423</td>
</tr>
</tbody>
</table>

*Note. M = mean, SD = standard deviation, CI = confidence interval for mean difference, r = Pearson’s correlation coefficient, t = t-statistic, df = degrees of freedom. The negative t-values denote direction of effect with higher mean values for experienced teachers compared to pre-service teachers.  
*a 1 = not at all, 7 = extremely well.  
**p < .01. ***p < .001.

Table 4.8 shows significant differences between pre-service and experienced teachers on self-reported collaborative skills. Both groups indicated competence, however experienced teachers indicated higher levels of competence than pre-service teachers on collaborating with: “parents/guardians”; “specialist/support teachers”; and “teacher assistants/aides”. Experienced teachers also reported higher levels of competence to “collaborate with colleagues to develop individual learning plans”.

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Table 4.8 Comparison of Pre-service (Post-unit Questionnaire) and Experienced Teachers Self-reported Competencies in Collaboration Skills

<table>
<thead>
<tr>
<th>Collaboration skills</th>
<th>Pre-service Teachers</th>
<th>Experienced Teachers</th>
<th>95% CI</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>CI</td>
</tr>
<tr>
<td>Develop skills of collaborating with parents/guardians</td>
<td>4.88</td>
<td>1.27</td>
<td>6.09</td>
<td>.88</td>
<td>-1.46, -.97</td>
</tr>
<tr>
<td>Develop individual learning plans collaboratively with colleagues</td>
<td>4.76</td>
<td>1.37</td>
<td>5.69</td>
<td>1.32</td>
<td>-1.19, -.66</td>
</tr>
<tr>
<td>Develop skills of collaborating with specialist/support teachers</td>
<td>5.01</td>
<td>1.21</td>
<td>5.60</td>
<td>.84</td>
<td>-1.28, -.81</td>
</tr>
<tr>
<td>Develop skills of collaborating with teacher assistants/aides</td>
<td>5.11</td>
<td>1.33</td>
<td>6.01</td>
<td>.93</td>
<td>-1.15, -.64</td>
</tr>
</tbody>
</table>

Note. M = mean, SD = standard deviation, CI = confidence interval for mean difference, r = Pearson’s correlation coefficient, t = t-statistic, df = degrees of freedom. The negative t-values denote direction of effect with higher mean values for experienced teachers compared to pre-service teachers.

*1 = not at all, 7 = extremely well.

***p < .001.

Results shown in Table 4.9 indicate significant differences in self-reported ability to differentiate between pre-service and experienced teachers. Both groups consider themselves competent in differentiation skills, however, experienced teachers reported higher levels of competence than pre-service teachers in their ability to: “use assessments to determine the learning needs of students”; “acquire specific skills such as task analysis and scaffolding”; and “differentiate the curriculum to cater to the needs of capable students”. Using conservative Bonferroni corrected alpha levels (α = 0.008) there were no significant group differences in their self-reported ability to: “adjust and accommodate to cater to students with disabilities/ additional needs”; “develop strategies that research findings suggest are effective with reference to specific disabilities”; “implement practices that adapt the physical environment”; and “adopt teaching strategies that cater to different learning styles”.
Table 4.9 *Comparison of Pre-service (Post-unit Questionnaire) and Experienced Teachers Self-reported Competencies with Differentiation*

<table>
<thead>
<tr>
<th>Differentiation skills</th>
<th>Pre-service Teachers</th>
<th>Experienced Teachers</th>
<th>95% CI</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjust and accommodate to cater to students with additional needs</td>
<td>5.43 .99 5.67 1.09</td>
<td>5.67 1.09</td>
<td>-.46, -.02</td>
<td>-2.17€</td>
<td>422</td>
</tr>
<tr>
<td>Use a variety of assessment techniques to determine the learning needs of students</td>
<td>5.10 1.14 5.74 1.12</td>
<td>5.74 1.12</td>
<td>-.88, -.41</td>
<td>-5.37***</td>
<td>422</td>
</tr>
<tr>
<td>Develop research based strategies that are effective for specific disabilities</td>
<td>5.04 1.17 5.18 1.23</td>
<td>5.18 1.23</td>
<td>-.39, .11</td>
<td>-1.08</td>
<td>422</td>
</tr>
<tr>
<td>Adapt the physical environment to meet the needs of students with additional needs</td>
<td>5.32 1.05 5.42 1.21</td>
<td>5.42 1.21</td>
<td>-.34, .14</td>
<td>-.81</td>
<td>422</td>
</tr>
<tr>
<td>Acquire specific skills e.g., questioning skills, task analysis</td>
<td>5.43 1.0 5.83 .92</td>
<td>5.83 .92</td>
<td>-.59, -.19</td>
<td>-3.93***</td>
<td>422</td>
</tr>
<tr>
<td>Differentiate the curriculum to cater to the needs of very capable students</td>
<td>5.25 .90 5.62 1.03</td>
<td>5.62 1.03</td>
<td>-.58, -.16</td>
<td>-3.52***</td>
<td>423</td>
</tr>
<tr>
<td>Adopt teaching strategies that cater to different learning styles</td>
<td>5.47 .92 5.71 1.04</td>
<td>5.71 1.04</td>
<td>-.43, -.01</td>
<td>-2.09€</td>
<td>423</td>
</tr>
</tbody>
</table>

*Note. M = mean, SD = standard deviation, CI = confidence interval for mean difference, r = Pearson’s correlation coefficient, t = t-statistic, df = degrees of freedom. The negative t-values denote direction of effect with higher mean values for experienced teachers compared to pre-service teachers.

*1 = not at all, 7 = extremely well; € Significant at the level of a trend using Bonferroni corrected alpha levels.

***p < .001.

Table 4.10 shows significant differences between pre-service and experienced teachers in self-reported competency in Resource use and management. Both groups reported feeling competent, however, experienced teachers reported higher levels of competency than pre-service teachers on the following items: “match resources to students’ learning needs”; “awareness of support personnel”; and “evaluate suitability of resources”. There was no significant difference between the groups regarding “awareness of technology”. In summary, compared with pre-service teachers, experienced teachers reported higher levels of competence in most skills.
related to Classroom Management, Collaboration, Differentiation, and Use and Management of Resources.

Table 4.10 Comparison of Pre-service (Post-unit Questionnaire) and Experienced Teachers’ Self-reported Competencies in Use and Management of Resources

<table>
<thead>
<tr>
<th>Skill</th>
<th>Pre-service Teachers</th>
<th>Experienced Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M, SD</td>
<td>M, SD</td>
</tr>
<tr>
<td></td>
<td>95% CI</td>
<td>t</td>
</tr>
<tr>
<td>Develop awareness of technology to assist students with addition needs</td>
<td>5.18, 1.08</td>
<td>5.08, 1.29</td>
</tr>
<tr>
<td>Understand that resources need to be matched to students’ learning needs</td>
<td>5.39, 1.05</td>
<td>6.07, 0.89</td>
</tr>
<tr>
<td>Develop awareness of support personnel</td>
<td>5.12, 1.11</td>
<td>6.05, 1.01</td>
</tr>
<tr>
<td>Evaluate suitability of available resources</td>
<td>5.19, 1.01</td>
<td>5.71, 1.09</td>
</tr>
</tbody>
</table>

Note. M = mean, SD = standard deviation, CI = confidence interval for mean difference, r = Pearson’s correlation coefficient, t = t-statistic, df = degrees of freedom. The negative t-values denote direction of effect with higher mean values for pre-service teachers.

Overall, these results support the study’s second hypothesis that after undertaking the inclusive unit pre-service teachers’ self-reported attitudes, knowledge and skills would be more similar to those of experienced teachers.

Views about Effectiveness of Inclusive Units

All participants were asked whether they believed a mandatory inclusion unit should be included in initial teacher education programs. In addition, in the post-unit questionnaire pre-service teachers were asked five further questions related to the impact of the inclusive unit on their beliefs about their dispositions and competencies, while experienced teachers were asked to rate the usefulness of inclusive units they may have undertaken.

All of the pre-service teachers (128/128, 100%) and nearly all of the experienced teachers (312/325, 96%) believed that a mandatory inclusion unit should be part of initial teacher education. Of 181 experienced teachers who undertook an inclusive
education unit in their initial teacher education program, 45% (81/181) reported that they found the unit of limited use in preparing them for inclusive teaching. Given that the aim of mandatory inclusive education units is to prepare pre-service teachers for inclusive teaching, this finding is concerning and indicates that there is still a considerable way to go in designing effective training of pre-service teachers for inclusive teaching. In contrast, the vast majority of pre-service teachers who undertook the inclusive unit that formed the study intervention, indicated they had a better understanding of inclusive education (123/128, 96%), felt more positive about including students with additional needs in regular classes (125/128, 97%), and had developed a repertoire of skills to do so (121/128, 95%). The majority of pre-service teachers reported feeling more confident about having students with additional needs in their classes (113/128, 88%), and indicated that regular classes should include all students (111/128, 87%). The contrasting findings here, suggest that inclusive education units vary in their levels of effectiveness. While it is not possible to compare different units directly from the study data, the results nonetheless suggest that it is possible to design targeted interventions (i.e., inclusive education units) that participants consider effective.

This ends the section that presents the findings for the (a) self-reported changes in attitudes, knowledge and skills of pre-service teachers after undertaking the inclusive education unit, and (b) comparisons of perceptions of pre-service teachers (post-unit questionnaire) with experienced teachers about their dispositions and competencies regarding inclusive teaching.

Overall, these results support the study’s third hypothesis that after undertaking the inclusive unit comprising outcome-focused learning experiences designed to be intellectually engaging, underpinned by learning theory and connected to learning needs, pre-service teachers would report increased levels of preparedness for including students with disabilities and/or additional needs in regular classes.

**Establishing most important topics.** The following section focusses on content that pre-service and experienced teachers believe should be covered to prepare pre-service teachers for inclusive teaching. Firstly, the section looks at changes in pre-service teachers’ views about the extent to which content should be covered from pre- to post-inclusive unit. Results are then presented which compare
the views of pre-service teachers with experienced teachers. Lastly, the section reports the ranking of topics according to importance by pre-service and experienced teachers.

As teachers are practitioners and as such do not generally participate in critical reading of inclusive and disability studies in education literature, it should be noted that the following discussion is limited to topics that arise from the questionnaire. The findings are intended to inform academics of pre-service teachers’ and teachers’ views about what they consider the most important topics.

It is imperative that those responsible for designing courses to prepare pre-service teachers for inclusive teaching ensure that learning experiences are crafted to develop deeper understandings of what constitutes exclusion and inclusion. Perhaps immersion in learning experiences based on disability studies in education literature is required.

Changes in pre-service teachers views about topics to be covered. Pre-service teachers were asked to indicate the extent to which they believed that particular topics should be covered in an inclusive education unit. Paired-sample t-tests were used to compare pre-service teachers’ responses on 7-point Likert scales on the pre- and post-unit questionnaire. Items and results have been grouped according to the areas of Attitudes, Knowledge, and the Skill areas of Classroom Management, Collaboration, Differentiation and the Use and Management of Resources.

For the sake of clarity and because there were few statistically significant findings, Table 4.11 shows only those results that were statistically significant. Detailed tables of results for each section (i.e., Attitudes, Knowledge and Skills such as Collaboration) are presented in Appendix V (Tables V1, V2, V3, V4, V5 and V6).

Overall, on both pre- and post-unit questionnaires, pre-service teachers indicated that all topics should be covered to a moderately high to high extent with few statistically significant changes for most topics (using Bonferroni corrected alpha levels). Interestingly, although there were a number of topics that showed significant decreases these were still rated as requiring a moderately high extent of coverage.
<table>
<thead>
<tr>
<th>Topics</th>
<th>Pre</th>
<th>Post</th>
<th>95% CI</th>
<th>r</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M^a</td>
<td>SD</td>
<td>M^a</td>
<td>SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Attitudes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Understand teachers’ role is to adapt to meet the needs of all students</td>
<td>6.21</td>
<td>.96</td>
<td>5.94</td>
<td>1.01</td>
<td>.05, .49</td>
<td>.25</td>
</tr>
<tr>
<td>Examine views about disability</td>
<td>5.42</td>
<td>1.36</td>
<td>5.32</td>
<td>1.31</td>
<td>.2, .4</td>
<td>.25</td>
</tr>
<tr>
<td><strong>Knowledge</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Understand referral processes to gain assistance</td>
<td>6.04</td>
<td>.99</td>
<td>5.59</td>
<td>1.21</td>
<td>.22, .68</td>
<td>.36</td>
</tr>
<tr>
<td>Apply syllabus information to students with additional needs</td>
<td>6.18</td>
<td>.87</td>
<td>5.84</td>
<td>1.13</td>
<td>.11, .56</td>
<td>.25</td>
</tr>
<tr>
<td><strong>Skills</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use variety of assessment techniques to determine learning needs of students</td>
<td>6.31</td>
<td>.9</td>
<td>6.04</td>
<td>1.2</td>
<td>.04, .5</td>
<td>.32</td>
</tr>
<tr>
<td>Adopt teaching strategies that cater to different learning styles</td>
<td>6.54</td>
<td>.69</td>
<td>6.39</td>
<td>.83</td>
<td>.01, .31</td>
<td>.42</td>
</tr>
<tr>
<td>Develop skills to manage students with challenging behaviours</td>
<td>6.60</td>
<td>.12</td>
<td>6.36</td>
<td>.79</td>
<td>.08, .41</td>
<td>.21</td>
</tr>
<tr>
<td>Implement risk assessments for students with challenging behaviours</td>
<td>6.07</td>
<td>1.04</td>
<td>5.83</td>
<td>1.1</td>
<td>.02, .45</td>
<td>.41</td>
</tr>
</tbody>
</table>

*Note.* M = mean, SD = standard deviation, CI = confidence interval for mean difference, r = Pearson’s correlation coefficient, t = t-statistic, df = degrees of freedom. The negative t-value denotes direction of effect with higher mean values for pre-unit questionnaire results compared to post unit.

^a 1 = no extent to 7 = very high extent; € Significant at the level of a trend using Bonferroni corrected alpha levels.

**p < .01. ***p < .001.

**Comparison of pre-service (post-unit) and experienced teachers’ views about topics to be covered.** The following section compares post-unit questionnaire data for pre-service with experienced teachers’ data and examines the extent to
which topics should be covered to prepare pre-service teachers for inclusive teaching. Results of independent sample t-tests are shown in Tables 4.12, 4.13, 4.15, 4.16 and 4.17, grouped into areas of Attitudes, Knowledge, and Skills related to Classroom Management, Collaboration, Differentiation and Use and Management of Resources.

Table 4.12 Comparison of Pre-service (Post-unit Questionnaire) and Experienced Teachers Ratings of Attitude Topics for Preparing Pre-service Teachers for Inclusive Education

<table>
<thead>
<tr>
<th>Attitude Topics</th>
<th>Pre-service Teachers</th>
<th>Experienced Teachers</th>
<th>95% CI</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understand teachers’ role is to adapt to meet the needs of all students</td>
<td>5.95 .998</td>
<td>6.32 .98</td>
<td>-.58, -.17</td>
<td>-3.64***</td>
<td>441</td>
</tr>
<tr>
<td>Understand benefits of inclusion</td>
<td>6.14 .997</td>
<td>6.23 1.05</td>
<td>-.3, .13</td>
<td>-.79</td>
<td>440</td>
</tr>
<tr>
<td>Develop positive attitudes regarding inclusion</td>
<td>6.32 .997</td>
<td>6.43 .94</td>
<td>-.29, .10</td>
<td>.98</td>
<td>441</td>
</tr>
<tr>
<td>Examine views about disability</td>
<td>5.34 1.29</td>
<td>5.81 1.24</td>
<td>-.72, -.20</td>
<td>-3.51***</td>
<td>441</td>
</tr>
</tbody>
</table>

Note. M = mean, SD = standard deviation, CI = confidence interval of mean difference, r = Pearson’s correlation coefficient, t = t-statistic, df = degrees of freedom. The negative t-values denote direction of effect with higher mean values for experienced teachers compared to pre-service teachers.

As shown in Table 4.12, both pre-service and experienced teachers rated topics about Attitudes as requiring extensive coverage to prepare pre-service teachers for inclusive teaching. Interestingly, compared to pre-service teachers, experienced teachers placed greater significance on the items; examining one’s own views about disability and taking responsibility for meeting the needs of all students’.

Table 4.13 shows that on average experienced teachers rated each of the Knowledge topics as requiring more extensive coverage than did the pre-service teachers; however, both groups rated these topics as requiring significant coverage.
Table 4.13 Comparison of Pre-service (Post-unit Questionnaire) and Experienced Teachers Ratings of Knowledge Topics for Preparing Pre-service Teachers for Inclusive Education

<table>
<thead>
<tr>
<th>Knowledge Topics</th>
<th>Pre-service Teachers</th>
<th>Experienced Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M (^a)  SD</td>
<td>M (^a)  SD</td>
</tr>
<tr>
<td>Apply disability legislation</td>
<td>5.24 1.13</td>
<td>5.51 1.51</td>
</tr>
<tr>
<td>Understand referral processes to gain assistance</td>
<td>5.61 1.21</td>
<td>6.11 1.24</td>
</tr>
<tr>
<td>Know about exam special provisions</td>
<td>5.27 1.20</td>
<td>5.66 1.42</td>
</tr>
<tr>
<td>Apply syllabus information to students with additional needs</td>
<td>5.84 1.14</td>
<td>6.37 .98</td>
</tr>
</tbody>
</table>

Note. M = mean, SD = standard deviation, CI = confidence interval of mean difference, r = Pearson’s correlation coefficient, t = t-statistic, df = degrees of freedom. The negative t-values denote direction of effect with higher mean values for experienced teachers compared to pre-service teachers.

\(^a\) 1 = no extent to 7 = very high extent; \(^e\) Significant at the level of a trend using Bonferroni corrected alpha levels.

As shown in Table 4.14, both groups rated topics related to Classroom Management as requiring a high extent of coverage; however, experienced teachers indicated that these topics should be covered to a significantly higher degree than pre-service teachers. Interestingly, this difference did not reach significance for the topic about teaching social skills.

Table 4.15 shows that on average experienced teachers indicated that all topics related to skills of Collaboration should be covered to a significantly higher extent than pre-service teachers. However, both groups rated these topics as requiring a high extent of coverage.

As shown in Table 4.16, both groups reported that all of the topics about Differentiation should be covered to a high extent. However, compared to pre-service teachers, experienced teachers indicated that greater emphasis should be placed on topics that may be considered fundamental differentiation skills (e.g., assessment).
Table 4.14 Comparison of Pre-service (Post-unit Questionnaire) and Experienced Teachers Ratings of Classroom Management Topics for Preparing Pre-service Teachers for Inclusive Education

<table>
<thead>
<tr>
<th>Classroom management topics</th>
<th>Pre-service Teachers</th>
<th>Experienced Teachers</th>
<th>95% CI</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apply behaviour management theories</td>
<td>6.15 1.09</td>
<td>6.64 .76</td>
<td>-.70, -.29</td>
<td>-4.67***</td>
<td>180</td>
</tr>
<tr>
<td>Manage cooperative learning</td>
<td>6.01 .91</td>
<td>6.3 .88</td>
<td>-.48, -.11</td>
<td>-3.17**</td>
<td>430</td>
</tr>
<tr>
<td>Develop skills to manage students with challenging behaviours</td>
<td>6.36 .78</td>
<td>6.73 .67</td>
<td>-.52, -.21</td>
<td>-4.56***</td>
<td>202</td>
</tr>
<tr>
<td>Develop strategies to teach social skills to students with additional needs</td>
<td>6.22 .82</td>
<td>6.37 .95</td>
<td>-.34, .04</td>
<td>-1.52</td>
<td>430</td>
</tr>
<tr>
<td>Implement risk assessments for students with challenging behaviours</td>
<td>5.84 1.09</td>
<td>6.25 1.02</td>
<td>-.63, -.19</td>
<td>-3.71***</td>
<td>430</td>
</tr>
</tbody>
</table>

Note. M = mean, SD = standard deviation, CI = confidence interval for mean difference, r = Pearson’s correlation coefficient, t = t-statistic, df = degrees of freedom. The negative t-values denote direction of effect with higher mean values for experienced teachers compared to pre-service teachers.

* 1 = no extent to 7 = very high extent.
**p < .01. ***p < .001.

Table 4.15 Comparison of Pre-service (Post-unit Questionnaire) and Experienced Teachers Ratings of Collaboration Topics for Preparing Pre-service Teachers for Inclusive Education

<table>
<thead>
<tr>
<th>Collaboration topics</th>
<th>Pre-service Teachers</th>
<th>Experienced Teachers</th>
<th>95% CI</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop skills of collaborating with parents/guardians</td>
<td>6.03 .90</td>
<td>6.45 .87</td>
<td>-.60, -.24</td>
<td>-4.54***</td>
<td>435</td>
</tr>
<tr>
<td>Develop individual learning plans collaboratively with colleagues</td>
<td>5.81 1.04</td>
<td>6.34 .91</td>
<td>-.75, -.41</td>
<td>-5.51***</td>
<td>432</td>
</tr>
<tr>
<td>Develop skills of collaborating with specialist/support teachers</td>
<td>5.9 .94</td>
<td>6.31 .93</td>
<td>-.59, -.21</td>
<td>-4.10***</td>
<td>430</td>
</tr>
<tr>
<td>Develop skills of collaborating with teacher assistants/aides</td>
<td>5.8 1.03</td>
<td>6.23 .97</td>
<td>-.63, -.22</td>
<td>-4.09***</td>
<td>430</td>
</tr>
</tbody>
</table>

Note. M = mean, SD = standard deviation, CI = confidence interval, r = Pearson’s correlation coefficient, t = t-statistic, df = degrees of freedom. The negative t-values denote direction of
(Note continued) effect with higher mean values for experienced teachers compared to pre-service teachers.

* 1 = no extent to 7 = very high extent.

***p < .001.

Table 4.16 Comparison of Pre-service (Post-unit Questionnaire) and Experienced Teachers Ratings of Differentiation Topics for Preparing Pre-service Teachers for Inclusive Education

<table>
<thead>
<tr>
<th>Differentiation topics</th>
<th>Pre-service Teachers</th>
<th>Experienced Teachers</th>
<th>95% CI</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjust and accommodate to cater to students with additional needs</td>
<td>6.51 .88</td>
<td>6.61 .84</td>
<td>-.28, .07</td>
<td>-1.16</td>
<td>435</td>
</tr>
<tr>
<td>Use a variety of assessment techniques to determine the learning needs of students</td>
<td>6.04 1.17</td>
<td>6.54 .77</td>
<td>-.72, -.28</td>
<td>-4.45***</td>
<td>174</td>
</tr>
<tr>
<td>Develop research based strategies that are effective for specific disabilities</td>
<td>6.02 1.07</td>
<td>6.28 .95</td>
<td>.46, -.06</td>
<td>-2.50€</td>
<td>435</td>
</tr>
<tr>
<td>Adapt the physical environment to meet the needs of students with additional needs</td>
<td>6.12 .89</td>
<td>6.35 .94</td>
<td>-.43, -.04</td>
<td>-2.37€</td>
<td>432</td>
</tr>
<tr>
<td>Acquire specific skills e.g., questioning skills, task analysis</td>
<td>6.1  .94</td>
<td>6.55 .77</td>
<td>-.66, -.29</td>
<td>-3.71***</td>
<td>194</td>
</tr>
<tr>
<td>Differentiate the curriculum to cater to the needs of very capable students</td>
<td>6.31 .83</td>
<td>6.57 .75</td>
<td>-.47, -.14</td>
<td>-3.71***</td>
<td>430</td>
</tr>
<tr>
<td>Implement risk assessments for students with challenging behaviours</td>
<td>6.39  .81</td>
<td>6.47 .97</td>
<td>-.27, .11</td>
<td>.82</td>
<td>430</td>
</tr>
</tbody>
</table>

Note. M = mean, SD = standard deviation, CI = confidence interval, r = Pearson’s correlation coefficient, t = t-statistic, df = degrees of freedom. The negative t-values denote direction of effect with higher mean values for experienced teachers compared to pre-service teachers.

* 1 = no extent to 7 = very high extent; € Significant at the level of a trend using Bonferroni corrected alpha levels.

***p < .001.
Table 4.17 Comparison of Pre-service (Post-unit Questionnaire) and Experienced Teachers Ratings of Resource Topics for Preparing Pre-service Teachers for Inclusive Education

<table>
<thead>
<tr>
<th>Resource topics</th>
<th>Pre-service Teachers</th>
<th>Experienced Teachers</th>
<th>95% CI</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop awareness of technology to assist students with additional needs</td>
<td>M=6.21, SD=.88</td>
<td>M=6.41, SD=.89</td>
<td>-.38, -.01</td>
<td>-2.09*</td>
<td>435</td>
</tr>
<tr>
<td>Understand that resources need to be matched to students' learning needs</td>
<td>M=6.29, SD=.81</td>
<td>M=6.61, SD=.73</td>
<td>-.49, -.16</td>
<td>3.91**</td>
<td>218</td>
</tr>
<tr>
<td>Develop awareness of support personnel</td>
<td>M=6.01, SD=.87</td>
<td>M=6.33, SD=.73</td>
<td>-.50, -.14</td>
<td>-3.48**</td>
<td>432</td>
</tr>
<tr>
<td>Evaluate suitability of available resources</td>
<td>M=5.93, SD=.99</td>
<td>M=6.11, SD=1.05</td>
<td>-.38, .06</td>
<td>1.51</td>
<td>430</td>
</tr>
</tbody>
</table>

*Note. M = mean, SD = standard deviation, CI = confidence interval, r = Pearson’s correlation coefficient, t = t-statistic, df = degrees of freedom. The negative t-values denote direction of effect with higher mean values for experienced teachers compared to pre-service teachers.

a 1 = no extent to 7 = very high extent; * Significant at the level of a trend using Bonferroni corrected alpha levels.

**p < .01. ***p < .001.

Both groups indicated that topics related to Resource use require a high level of coverage (see Table 4.17). Experienced teachers on average assigned significantly higher levels of coverage to all topics; with the exception of skills for evaluating resource suitability.

Overall, with few exceptions there was a tendency for experienced teachers to recommend that topics be covered to a greater extent than pre-service teachers. This ends the section that reports pre-service and experienced teachers views regarding the extent to which particular topics should be covered to prepare pre-service teachers for inclusive teaching.

As reported in Chapter 3 (Construct Validity), the results for two distractor items in this section of the questionnaire support the questionnaire’s construct validity. That is, there was a significant moderate correlation between these two items (r = .609, p=.000), and no significant correlation between them and other items (see Appendix K).
**Topics viewed as most important by pre-service and experienced teachers.**

The following section explores the degree of importance that pre-service and experienced teachers attribute to particular topics. Pre-service and experienced teachers were asked to rank topics within categories (e.g., attitudes, collaboration skills), according to importance for the preparation of pre-service teachers for inclusive teaching. Topics were ranked as most important (1= first) to least important (4 or 5). Within each participant group, a Kendall’s coefficient of concordance (W) was conducted to determine agreement between items ranked by participants. The score expresses a mean ranking, with the lowest score indicating the most important topic (Siegel & Castellan, 1988), and tests for a significant difference amongst rankings within a category. Follow-up pairwise comparisons were then conducted using Wilcoxon (Signed Rank) Test and controlling for the Type I errors at the .05 level using the Bonferroni procedure. These tests identified significant differences in rankings within categories.

Items were grouped within the seven subject categories, as previously addressed. To avoid cognitive overload when completing the questionnaire, items comprising the Differentiation category were split across two sections: *skills to cater to a diversity of learners* and; *general practices for inclusive teaching*. Each of the Differentiation categories contained a distractor item – explained later in this chapter under the heading “construct validity”.

Results for pre-service teachers are presented first and are based on post-unit questionnaire data. Pre-service teachers at the start of the unit were considered to be naïve about inclusive education and therefore not informed enough to make judgements about content to prepare pre-service teachers for inclusive education. This assumption is supported by the changes shown in the earlier results. Thus, it was more meaningful to compare the views of pre-service teachers who had completed the inclusive unit with the views of experienced teachers. Results for the experienced teachers are presented later in this section.

Overall, results showed moderate to strong levels of agreement between the pre-service and experienced teachers in the ranking of five out of seven topics with regard to importance.
**Topics viewed as most important by pre-service teachers.** Although pre-service teachers and experienced teachers agreed on five out of seven items with regard to importance, within each group, the ranking of topics was examined for statistical significance. Tables of mean rankings for topics are reported in Appendix W (Table W1 and Table W2) for pre-service teachers and experienced teachers, respectively.

Significant differences in the ranking results of pre-service teachers regarding the importance of topics for the preparation of pre-service teachers for inclusion was found for the following categories:

- Attitudes ($\chi^2 (3, N = 125) = 159.79, p = .00; \text{Kendall’s W coefficient} = .43$);
- Knowledge ($\chi^2 (3, N = 123) = 112.63, p = .00; \text{Kendall’s W coefficient} = .31$); and
- the Skill areas of:
  - Classroom management ($\chi^2 (4, N = 123) = 81.81, p = .00; \text{Kendall’s W coefficient} = .17$);
  - Differentiation – skills to cater to a diversity of learners ($\chi^2 (3, N = 124) = 165.71, p = .00; \text{Kendall’s W coefficient} = .45$);
  - Differentiation – general practices for inclusive teaching ($\chi^2 (4, N = 124) = 149.38, p = .00, \text{Kendall’s W coefficient} = .3$); and
  - Resource use ($\chi^2 (3, N = 125) = 47.20, p = .00; \text{Kendall’s W coefficient} = .13$).

Within the Collaboration category, pre-service teachers ranked collaboration with parents/caregivers as most important, however, there were no significant differences between the rankings, $\chi^2 (3, N = 125) = 6.01, p = .111; \text{Kendall’s W coefficient} = .02$. Figure 4.1 shows the results of topics within categories ranked most important by both pre-service teachers and experienced teachers.

The following section presents the experienced teachers’ results for how important they believe topics within categories are for the preparation of pre-service teachers for inclusive teaching.

**Topics viewed as most important by experienced teachers.** Significant differences in the results of experienced teachers were found between topics...
regarding their importance for the preparation of pre-service teachers for inclusive education for the following categories:

- Attitudes ($\chi^2 (3, N = 300) = 336.28, p = .00$, Kendall’s W coefficient = .37);
- Knowledge ($\chi^2 (3, N = 300) = 396.76, p = .00$; Kendall’s W coefficient = .44);
- and the Skill areas of;
  - Classroom management ($\chi^2 (4, N = 299) = 292.89, p = .00$; Kendall’s W coefficient = .25);
  - Collaboration ($\chi^2 (3, N = 299) = 134.98, p = .00$; Kendall’s W coefficient = .15);
  - Differentiation – skills to cater to a diversity of learners ($\chi^2 (3, N = 299) = 513.03, p = .00$; Kendall’s W coefficient = .57);
  - Differentiation – general practices for inclusive teaching ($\chi^2 (4, N = 299) = 652.53, p = .00$, Kendall’s W coefficient = .55); and
  - Resource use ($\chi^2 (3, N = 299) = 190.58, p = .00$; Kendall’s W coefficient = .21).

Figure 4.1 shows the results of topics within categories ranked most important by both pre-service teachers and experienced teachers.

**Skill categories viewed as most important by pre-service and experienced teachers.** As this study is concerned particularly with determining the inclusive skills that pre-service teachers should acquire during initial teacher education, pre-service and experienced teachers were asked to rank the four General Skill Categories (Classroom Management, Collaboration, Differentiation and Resource Use) in order of importance. Both groups ranked “differentiation skills” as most important followed by the “development of classroom management skills”. Results show that pre-service teachers ranked “differentiation skills to cater to the different needs of students” ($mean \text{ rank} = 1.49, p = .00$) as significantly more important ($\chi^2 (3, N = 124) = 120.73$, Kendall’s W coefficient = .33) than “development of effective classroom management skills” ($mean \text{ rank} = 2.45, p = .00$), “use of appropriate resources” ($mean \text{ rank} = 3.00, p = .00$), and “collaboration skills” ($mean \text{ rank} = 3.06, p = .00$).
Figure 4.1. Most important topics within category. Percentage of pre-service teachers and experienced teachers that identified these topics within each category as most important for preparing pre-service teachers for inclusive teaching. IEP = individual education/learning plan
Results reveal that experienced teachers ranked “differentiation skills to cater to the different needs of students” (mean rank = 1.60) as most important which was significantly greater than for “development of effective classroom management skills” (mean rank = 1.85, \( p = .00 \)), “collaboration skills” (mean rank = 3.17, \( p = .00 \)), and “use of appropriate resources” (mean rank = 3.38, \( p = .00 \)). The result was significant \( \chi^2 (3, N = 299) = 443.55, p = .00; \) the Kendall’s coefficient of concordance of .49 indicate a moderate trend of agreement. In summary, this section reported the results of topics ranked within categories, according to most important to least important as indicated by pre-service and experienced teachers. Results show that when asked to rank topics, pre-service and experienced teachers agreed on which particular topics are most important for preparing pre-service teachers for inclusive teaching for five out of seven of the categories. In particular, both pre-service and experienced teachers regard “apply syllabus information pertaining to students with disabilities” (Knowledge); “develop skills to manage students with challenging behaviours” (Classroom Management); “adjusting and accommodating to cater to students with disabilities” (Differentiation – skills to cater to a diversity of learners); “use a variety of assessment techniques to determine the learning needs of students”(Differentiation – general practices for inclusive teaching); and “develop understanding that resources need to be matched to student’s learning needs” (Resource Use) as most important for the preparation of pre-service teachers for inclusive teaching. Notably, both groups indicated that “differentiation skills to cater to the different needs of students” is the most important overall category for the preparation of pre-service teachers for inclusive teaching.

Mode of delivery. Pre-service teachers were asked to rank their preferred modes of delivering inclusive content during initial teacher education. There was a moderate level of agreement (Kendall’s coefficient \( W = .60 \)). Tutorials were ranked as significantly more important (\( \chi^2 (3, N = 124) = 222.52, p = .00, \text{mean rank} = 1.29 \)) than lectures (mean rank = 2.34, \( p = .00 \)), assignments (mean rank = 2.67, \( p = .00 \)) and online learning (mean rank = 3.70, \( p = .00 \)).

Effect of Experienced Teacher Characteristics
While there was insufficient variation in the pre-service teacher group to warrant subgroup analysis (92 [78%] were aged 20 – 29, 105 [88%] were female, and 113
[95%] held a degree and all were studying to become a primary school teacher), the demographics of experienced teachers varied considerably. The following section reports the effects of teachers’ characteristics on: (a) self-reported attitudes, knowledge and skills related to inclusive teaching, and (b) the topics identified by factor analysis for coverage in the preparation of pre-service teachers for inclusive teaching. Exploratory factor analysis was described and the results, including the factors identified and used here, were reported in the Construct Validity and Reliability sections of Chapter 3.

As the experienced teacher sample was self-selected and heterogeneous, subgroup analyses were conducted to explore the effect of demographic characteristics – gender, age, relationship to person with a disability, location of school, years of experience, role, socioeconomic status and qualifications – on self-reported attitudes, knowledge and skills. In addition, this section explores the effects of teacher characteristics on conceptual constructs that were identified through exploratory factor analysis as relevant for preparing pre-service teachers for inclusive teaching.

Owing to small subgroup sizes, some categories were combined for analyses purposes. Regional and rural areas were combined into non-metropolitan area and participants with “less than 5 years” and “5 – 9 years” experience were combined into the category of ‘up to nine years’ experience. Because data were not normally distributed, non-parametric techniques were used for these analyses. Mann-Whitney U analyses were used for comparisons between two groups. For comparisons between more than two groups Kruskal-Wallis tests were used; statistically significant results were followed up with pairwise tests using Mann-Whitney U analyses. Monte Carlo method was applied to account for the considerably large sample size of the experienced teacher group (N = 325; Field, 2009, p. 564). Because of the increased risk of Type 1 error associated with the large number of comparisons involved, critical levels of significance were adjusted using a Bonferroni correction for number of items and/or number of comparisons where appropriate.

**Effect of experienced teachers characteristics on self-reported attitudes, knowledge and skills.** There were no significant effects on experienced teachers’ Attitudes, Knowledge and Skills data for the following characteristics:

- Gender (male, female);
- Location of school (metropolitan and non-metropolitan);
- Current teaching stages ['infants’ (K – year 2: early stage 1 and stage 2); ‘primary’ (years 3 – 6: stages 2 and 3)]; and
- Socially disadvantaged school area (yes, no).

However, significant differences were found between groups based on several teacher characteristics: age group, years of experience, role, qualifications, and effect of relationship to a person with disability. The following section reports only the significant results for these analyses. The key findings appear here in summary form. More detailed results are reported in Appendices as noted in the following sections.

**Age.** Overall, teachers aged between 20 – 29 years feel significantly better prepared for inclusive teaching as a result of their initial teacher education and report that they have greater knowledge about the needs of students with disabilities. In particular, experienced teachers aged 20 – 29 and 40 – 49 indicated that their teacher training prepared them to a greater extent for working with students with disabilities, than the group aged over 50. This may not be surprising given that the older age group would generally not have undertaken a mandatory unit in inclusion/special education during initial teacher education. Teachers aged between 20 – 29 years believed that they were more knowledgeable about the needs of students with disabilities and/or additional needs than teachers 40 – 49 and over 50 (see Appendix Q Table Q1).

**Relationship to person with disability.** Subgroup analysis showed no significant effects on attitude, knowledge and skills for teachers based on relationship to a person with a disability. However, results suggested a trend on one attitudinal question. Post hoc comparisons indicated that teachers who themselves have a disability tended to view inclusion as beneficial for students with disabilities. This finding needs to be viewed with caution as the numbers are small (n = 3). Nonetheless, perhaps participants with a disability are more cognisant of the limiting effects of attitudes towards people with disabilities than the others groups (see Appendix Q Table Q 2).

**Years of experience.** Experienced teachers with “up to nine years” experience felt that their initial teacher education prepared them to a significantly greater extent for working with students with disabilities than teachers with “more than 20 years”
experience. Perhaps teachers with “up to nine years” experience feel more prepared as a result of having recently undertaken a mandatory inclusion unit. However, teachers with greater experience reported that they are more knowledgeable and are more skilled at including students with disabilities than teachers with “up to nine years” experience. This finding is not unexpected as it is likely that teachers with more experience would feel more knowledgeable and skilled than less experienced teachers (see Appendix Q Table Q 3).

**Role.** Principals, non-teaching executive teachers, school counsellors and support teachers reported significantly stronger levels of agreement with positive statements about including students with additional needs than did class teachers. This result is of concern given that class teachers are at the “coal face” and ultimately implement inclusive education. It may be that class teachers experience the day to day challenges associated with inclusion while experienced teachers in other roles (mainly non-teaching, consultancy and support roles) view the benefits of inclusion from a different perspective.

Non-teaching executive teachers (e.g., principals) reported feeling less well prepared for inclusive teaching as a result of their initial teacher education program than class teachers, school counsellors and support teachers. Perhaps these teachers are more likely to be of an older age and hence received minimal training about students with additional needs (see Appendix Q Table Q 4).

**Qualifications.** Teachers with postgraduate qualifications in special education or counselling showed significantly stronger beliefs about benefits for typically developing students from having students with additional needs in regular classes, compared with general primary trained teachers with or without inclusion/special education units (see Appendix Q Table Q 5). While it is not surprising that teachers with these qualifications show more positive attitudes about the benefits of inclusion for typically developing students, it is concerning that teachers with an inclusive unit did not differ from those without an inclusive unit.

Overall, teachers with postgraduate qualifications in special education or counselling report a higher level of agreement with positive statements about inclusive education than general primary trained teachers with or without inclusion/special education units. For the statement related to “concerns about including students with
disabilities” the results were consistent; teachers with postgraduate qualifications in special education or counselling had less concerns than teachers with general primary training with and without an inclusion/special education unit. Qualifications in special education and counselling are designed to prepare teachers for working with students with additional needs, so although these results are not surprising they highlight differences in attitudes of class teachers and support teachers.

There were no significant differences between general primary trained teachers with inclusion/special education units and those without, on numerous Attitudes, Knowledge and Skill items. This is concerning, as it is reasonable to expect that after undertaking an inclusion/special education unit, pre-service teachers would report a difference in their level of preparedness for inclusive teaching.

Interestingly, on one General Preparedness question about whether teachers felt that initial teacher education programs prepared them for working with students with additional needs in regular classes, general primary trained teachers with a unit in inclusion/special education indicated that they felt well-prepared. Their results were similar to teachers with postgraduate qualifications in special education. These results appear to contradict the results reported earlier which showed no difference between general primary trained teachers with and those without a unit in inclusion/special education on specific items about Attitudes, Knowledge and Skills. It is difficult to explain these contrasting results; however, it seems that while training in inclusion/special education makes some difference to teachers’ belief about their general preparedness to teach inclusively, it appears to make little difference to their beliefs about their dispositions and competencies to include students with additional needs.

This ends the section that reports the results for the responses by subgroups to general and specific questions about Attitudes, Knowledge and Skills. The following section explores the extent to which teachers indicated that topics identified from factor analysis should be covered to prepare pre-service teachers for inclusive teaching.

**Effect of teacher characteristics on content topic area factors.** As reported in the Construct Validity and Reliability sections in Chapter 3, exploratory factor analysis was applied to teacher data to identify topics that loaded together onto factors. These factors represent constructs most pertinent to the preparation of pre-
service teachers for inclusive teaching as viewed by experienced teachers. As the aim was to explore differences among teachers, the following analyses were conducted using these factors rather than categories presented in the questionnaire.

As noted previously, Appendix J shows the items that loaded onto each factor. The factors identified for the teachers were: 1. Inclusive Classroom Skills; 2. Resource and Supporting Inclusion; 3. Inclusive Strategies for Individual Needs; 4. Embracing Inclusive Principles, and 5. Inclusive Organisational Procedures. The identified factors were used in the following subgroup analyses.

Results showed no significant effects (that is, all p values were greater than adjusted alpha levels using Bonferroni corrections) on content topic area factors for the following demographic characteristics:

- Gender (male, female);
- Current teaching stages (infants [K – year 2] early stage 1 and stage 2); primary (years 3 – 6: stages 2 and 3]); and
- Socially disadvantaged school area (yes, no).

School location. Subgroup analysis based on location of teachers’ school in a metropolitan or non-metropolitan (rural or regional) area showed significant effects on all five factors. Teachers in non-metropolitan areas indicated that ‘Inclusive Classroom Skills’, “Resourcing and Supporting Inclusion”, “Inclusive Strategies for Individual Needs”, “Embracing Inclusive Principles” and “Inclusive Organisational Procedures” should be covered to a higher extent than indicated by teachers in metropolitan areas (see Appendix X Table X1). These results suggest that location of teachers’ school has an impact on the extent to which teachers believe factors should be covered.

Years of experience. Subgroup analysis showed a significant effect of years of experience on only one of the five content topic area factors (p’s = .110, .341, .237, .038, .915, respectively); namely, “Embracing Inclusive Principles” ($\chi^2$ (df = 2, n = 315) = 6.536, $p = .038$). Post hoc comparisons showed that teachers with “up to nine years” experience considered “Embracing Inclusive Principles” as requiring a significantly higher level of coverage than experienced teachers with “more than 20 years” experience. Nonetheless, the subgroups considered that all of the content topic area factors require high to very high coverage (see Appendix X Table X2).
Role. Significant effects of teachers’ role were found on three factors: “Inclusive Classroom Skills”; “Inclusive Strategies for Individual Needs”; and “Embracing Inclusive Principles” (see Appendix X Table X3). Post hoc comparisons showed that both teaching and non-teaching executives and principals indicated that “Inclusive Classroom Skills” (see Appendix X Table X4) and “Inclusive Strategies for Individual Needs” (see Appendix X Table X5) should be covered to a higher extent than did class teachers. It may be that principals and executive teachers have a broader vision of teacher qualities considered important for implementing inclusive education.

Results showed that principals, non-teaching executive, and support teachers considered that (factor 4) “Embracing Inclusive Principles” should be covered to a higher extent than class teachers. Perhaps teachers who are somewhat removed from directly having to implement inclusive education are able to identify attitudinal barriers and therefore feel that all teachers should be more cognisant of principles that underpin inclusive philosophy.

Overall, class teachers indicated that “Inclusive Classroom Skills”, “Inclusive Strategies for Individual Needs” and “Embracing Inclusive Principles” require lesser coverage than indicated by other experienced teacher groups.

Qualifications. Qualifications showed a significant effect on only one of the five teacher factors; that is, (factor 4) “Embracing Inclusive Principles”, \( \chi^2 (df = 4, n = 314) = 10.07, p = .039 \), \( \chi^2 (df = 4, n = 314) = 10.07, p = .039 \). Results showed that teachers with postgraduate qualifications in special education and the group labelled “other” (comprising teachers who had undertaken additional courses about students with additional needs but who held no formal qualifications) considered “Embracing Inclusive Principles” as requiring significantly more coverage than did teachers with general primary training with no inclusion/special education unit. It may be that teachers with postgraduate or additional qualifications in special education have greater awareness about the need for appropriate attitudes, and may therefore regard it as important that pre-service and experienced teachers hold positive attitudes about inclusive education (see Appendix X Table X6).

Relationship with a person with a disability. No statistically significant differences were found between subgroups based on the type of relationship to a
person with a disability on any of the five teacher factors (yourself; immediate family; extended family; not related or other form of relationship which participants could stipulate [e.g., friend]; \( p = .651, .470, .860, .718, .350 \), respectively); all content topic areas were viewed as requiring coverage from a high to very high extent.

This ends the reporting of results of subgroup analyses based on demographic characteristics on the five factors regarding content topic areas for preparing pre-service teachers for inclusive education identified from exploratory factor analysis as previously described. While some demographic characteristics (gender, current teaching status, socially disadvantaged school, relationship to person with a disability) showed no significant effects, results indicate that other demographic characteristics (age, years of experience, role, qualifications, metropolitan location of school) have an effect on experienced teachers’ views about the extent of coverage certain content topic areas should receive for preparing pre-service teachers for inclusion.

**Open-ended Responses to Questionnaire**

This section presents the results of the open-ended responses to the questions in the questionnaire. These results are presented to supplement the statistical analysis of the survey data and thematic analysis of the interview data about the preparation of pre-service teachers for inclusive teaching. The results to the open-ended responses form a minor part of the data collected; they are included mainly for the purposes of corroboration of the overall findings. Open-ended responses were recorded on the majority of questionnaires (100% pre-service teachers on matched pre-unit questionnaire and 96% on matched post-unit questionnaire; 75% of experienced teachers). Sample quotations are presented, according to themes identified. These are presented in Appendix U (Table U1, Table U2 and Table U3).

In the pre-service teachers’ (pre- and post-unit questionnaires) open-ended responses, three themes were identified: “attitudes about inclusive education”; “apprehension about implementing inclusive education”; and “learning experiences that provide practical approaches”. Themes identified in the experienced teachers’ responses were: “attitudes about inclusive education”; “theory into practice”; and “changing paradigm in schools”. There was a direct overlap of two themes across these groups; namely, developing positive attitudes about inclusive education and acquiring practical
inclusive skills. However, the theme of apprehension was unique to the pre-service teachers.

Interestingly, pre-service teachers’ pre- to post-unit data demonstrated a shift in emphasis. At the commencement of the inclusion unit, pre-service teachers expressed concerns about *their capacity* to implement inclusive education whereas at the conclusion of the unit, pre-service teachers were more focused on *barriers* that may hinder the implementation of inclusive practices (e.g., time constraints and negative attitudes). Moreover, pre-service teachers were less focussed on their own apprehensions and showed greater awareness of ethical issues and practical matters associated with implementing inclusive education. These findings support the study’s quantitative results; both show positive changes in pre-service teachers’ beliefs about their readiness to implement inclusive education.

**Attitudes about inclusion.** Overall, pre-service (pre- and post-unit questionnaire) and experienced teachers showed positive attitudes about inclusive education. These attitudes were generally associated with ethical stances of fairness and equity. Nonetheless, some pre-service teachers (pre-unit questionnaire) and experienced teachers expressed concerns and identified barriers to implementing inclusive education. For example, they conveyed some reticence about inclusion by suggesting that some students with additional needs may disrupt the learning of typically developing students. Interestingly, quantitative findings showed that after undertaking the inclusive unit, pre-service teachers had less concerns about potential negative impacts of inclusion on typically developing students.

**Learning experiences that provide practical approaches.** Both pre-service and experienced teachers expressed strong opinions about the need to ensure that pre-service teachers are provided with learning experiences that equip them with practical approaches for implementing inclusive education. In particular, they focused on the importance of providing pre-service teachers with opportunities to develop skills particularly while on professional practice. Pre-service teachers expressed a desire to be immersed in relevant learning experiences that equip them with skills to implement inclusive education. Similarly, experienced teachers emphasised that pre-service teachers require learning experiences that facilitate skill development. These findings support the quantitative findings which showed that pre-service teachers
(pre- and post-unit questionnaires) and experienced teachers believe that practical skill topics should be covered to a moderately high to high extent. Interestingly, experienced teachers tended to recommend that most topics in the areas of attitudes, knowledge and skills should be covered to a greater extent than pre-service teachers.

**Apprehension about inclusive education.** Pre-service teachers conveyed concerns about inclusive education in both pre- and post-unit questionnaires. There was, however, a shift in their focus. In the pre-unit questionnaire responses, they expressed general concerns about what inclusion involved and conveyed fear about their capacity to implement inclusive education while in the post-unit questionnaire they were explicit about what is needed to alleviate their fears. This response was closely aligned to the theme “practical approaches”. They stressed that during initial teacher education, a greater focus should be placed on practical aspects to prepare them to be inclusive teachers. Notably, their responses were in relation to their overall initial teacher education and not limited to the inclusive unit. They suggested an array of learning experiences that would have been beneficial to their practice. These included disability specific information, as well as observational visits and professional practice with a focus on inclusive education.

**Contemporary practice.** A theme that distinguished the experienced teachers’ responses from the pre-service teachers was their implicit understanding of how schools are evolving as a result of the inclusive education movement. Experienced teachers referred to the increasing numbers of students with additional needs enrolled in regular classes. They stressed that they want pre-service teachers to understand that inclusion is the norm. In addition, they emphasised that pre-service teachers require learning experiences that provide them with strong foundations that will ultimately lead to improving inclusive teaching. Topics such as learning how to cater to the diversity of learners in regular classes, as well as understanding legislation and associated policies, emerged as significant.

This ends the reporting of the results of data collected from the questionnaire. This chapter began by reporting quantitative results and ended with an analysis of the open-ended responses. The results show that pre-service teachers felt more prepared in the areas of attitude, knowledge and skills after undertaking the inclusive unit. Although pre-service teachers grew in confidence, they did not regard themselves as
competent as experienced teachers. The findings also provide evidence for selecting and prioritising topics to present to pre-service teachers to prepare them for inclusive education. Results from the analysis of the open-ended responses supported and expanded on the quantitative results. The following chapter reports the findings from analysis of the interview data. These build on the quantitative findings and provide a deeper understanding of how to effectively prepare pre-service teachers for inclusive teaching. The results are integrated and discussed in Chapter 6.
Chapter 5: Interview Findings: Beginning and Experienced Teachers Insights on Inclusive Teaching, Preparation and Pedagogy

The previous chapter presented findings from the questionnaire data which were principally concerned with (a) changes in pre-service teachers’ self-reported preparedness for inclusive teaching after undertaking an inclusive education unit, and (b) identifying content and pedagogy to effectively prepare pre-service teachers for inclusive teaching.

This chapter presents the findings obtained from 15 in-depth interviews with beginning and experienced teachers. These findings build on the quantitative results and provide a more comprehensive understanding of how to effectively prepare pre-service teachers for inclusive teaching. Although some analysis of the findings occurs throughout the chapter, a deeper discussion of the issues arising is presented at the end of this chapter.

The 15 teachers interviewed fell into the following subgroups:

- Beginning teachers who undertook the inclusive education unit, a focus of this study, the previous year (n=5);
- Experienced teachers comprising
  - principals and class teachers (n=6); and
  - school counsellors and support teachers (n=4).

Thematic analysis was conducted on transcripts of interviews to identify emerging themes. At times, some of the themes identified overlapped and complemented each other (Saldana, 2013). To avoid repetition, it was necessary to place some recurring responses under particular themes. At other times, overlapping was unavoidable. For example, some of the data fell into the theme of “struggle” and the subtheme of “managing inclusive classes”.

Beginning teachers’ data is presented first. This is followed by the experienced teacher data; school counsellors and support teachers provided nuanced insights about inclusive education while principals and class teachers provided responses based on
either their comprehensive understanding of implementing inclusive education in schools or their direct experience of including students with additional needs in their classes. Pseudonyms were assigned to participants.

All the beginning teachers in this sample worked in western and south western Sydney schools; one also worked as a casual teacher in a school located in a socially advantaged area. None had permanent teaching positions, but three had secured extended periods of teaching at the same school and on the same class. Two of the beginning teachers were working as casual day-to-day teachers. All of the beginning teachers had graduated from university the previous year and coincidentally four had undertaken their initial teacher education as mature age students. Table 5.1 provides demographic information for this group.

Table 5.1 Beginning Teachers’ Demographic Information

<table>
<thead>
<tr>
<th>Participant</th>
<th>Age Group (years)</th>
<th>Gender</th>
<th>Teaching Position</th>
<th>School/Area Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sam</td>
<td>20-29</td>
<td>Female</td>
<td>Full-time teaching block Year 1 Class Teacher</td>
<td>Western Sydney</td>
</tr>
<tr>
<td>Mel</td>
<td>40-49</td>
<td>Female</td>
<td>Full-time teaching block Year 3 – 4 Class Teacher</td>
<td>South Western Sydney</td>
</tr>
<tr>
<td>Tara</td>
<td>40-49</td>
<td>Female</td>
<td>Full-time teaching block Kindergarten – Year 2 Class Teacher</td>
<td>South Western Sydney</td>
</tr>
<tr>
<td>Stewart</td>
<td>40-49</td>
<td>Male</td>
<td>Casual Teacher: Kindergarten – Year 6, day to day</td>
<td>South Western Sydney</td>
</tr>
<tr>
<td>Debra</td>
<td>50-59</td>
<td>Female</td>
<td>Casual Teacher: Kindergarten – Year 6, day to day</td>
<td>Sutherland Shire and South Western Sydney</td>
</tr>
</tbody>
</table>

The experienced teachers comprised two subgroups: school counsellors and support teachers and principals and class teachers. All four in the subgroup of school counsellors and support teachers worked in schools in the western suburbs of Sydney. Of the two school counsellors, one was in a supervisory role (District Guidance Officer). Of the two support teachers, one was an itinerant support teacher: hearing (IST – H), and one was a learning and support teacher (LAS – teacher). The latter also worked as a tutor in inclusive education at university, and thus provided further insights. All four hold additional qualifications in either counselling or special education that qualify them for their specialist roles. Demographic information for this
subgroup is presented in Table 5.2.

Table 5.2 School Counsellors and Support Teachers' Demographic Information

<table>
<thead>
<tr>
<th>Participant</th>
<th>Age Group (years)</th>
<th>Gender</th>
<th>Position</th>
<th>School/Area Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gemma</td>
<td>30-39</td>
<td>Female</td>
<td>Itinerant Support Teacher: Hearing</td>
<td>Western Sydney</td>
</tr>
<tr>
<td>Reem</td>
<td>40-49</td>
<td>Female</td>
<td>Learning and Support Teacher; University Tutor in Inclusive Education</td>
<td>South Western Sydney</td>
</tr>
<tr>
<td>Greg</td>
<td>50-59</td>
<td>Male</td>
<td>School Counsellor</td>
<td>Western Sydney</td>
</tr>
<tr>
<td>Sue</td>
<td>Over 60</td>
<td>Female</td>
<td>School Counsellor: District Guidance Office (supervisor)</td>
<td>Western Sydney</td>
</tr>
</tbody>
</table>

The school counsellors and support teachers collaborate with class teachers about the learning needs of students with additional needs and work directly with students. By working alongside class teachers in classrooms while supporting students they are at times, like a “fly on the wall”; making their contributions valuable.

The subgroup of principals and class teachers comprised three non-teaching principals, two assistant principals who were also full-time class teachers and one teacher who worked as a casual teacher in a range of capacities including class teacher, librarian, and release from face-to-face teacher. Three of the participants worked in western Sydney; the other three participants worked in different parts of NSW (Mid North Coast, Blue Mountains, Northern Sydney). Table 5.3 provides their demographic information.
Table 5.3 Principals and Class Teachers’ Demographic Information

<table>
<thead>
<tr>
<th>Participant</th>
<th>Age Group (years)</th>
<th>Gender</th>
<th>Position</th>
<th>School/Area Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Siobhan</td>
<td>40-49</td>
<td>Female</td>
<td>Assistant Principal</td>
<td>Northern Sydney</td>
</tr>
<tr>
<td>Leonie</td>
<td>50-59</td>
<td>Female</td>
<td>Principal</td>
<td>Mid North Coast</td>
</tr>
<tr>
<td>Linda</td>
<td>50-59</td>
<td>Female</td>
<td>Assistant Principal</td>
<td>Blue Mountains</td>
</tr>
<tr>
<td>Robyn</td>
<td>50-59</td>
<td>Female</td>
<td>Principal</td>
<td>Western Sydney</td>
</tr>
<tr>
<td>Beth</td>
<td>Over 60</td>
<td>Female</td>
<td>Principal</td>
<td>Western Sydney</td>
</tr>
<tr>
<td>Gillian</td>
<td>Over 60</td>
<td>Female</td>
<td>Casual Teacher – fulfilling various teaching roles</td>
<td>South Western Sydney</td>
</tr>
</tbody>
</table>

Following analysis of the beginning and experienced teachers’ interview data, several themes were identified. These were:

- Teachers’ struggles with inclusive education and preparedness;
- Fostering positive attitudes about inclusive education;
- Knowledge required to implement inclusive education;
- Developing inclusive pedagogical skills;
- Learning experiences to improve preparedness for inclusive teaching; and
- Factors impinging on inclusive education.

The following section presents the analysis of the data gathered during interviews with beginning and experienced teachers. The findings are presented according to the themes identified from thematic analysis of the data. In the main, findings are presented for beginning and experienced teachers separately under each theme. However, to avoid repetition where issues overlapped among subgroups, the findings were integrated and are presented together under the themes.

**Teachers’ Struggles with Inclusive Education and Preparedness**

A major theme to emerge from beginning and experienced teachers’ interview data was the struggle beginning teachers have with inclusive teaching. Both groups identified that beginning teachers face challenges catering to the needs and managing their classes of diverse learners.

*Beginning teachers.* Beginning teachers offered views based on insights about their recent initial teacher education combined with their current teaching experiences. They discussed the challenges they encountered and expressed views about the kinds of teaching and learning experiences that would have better prepared them for including students with additional needs in regular classes. A major theme to emerge
from the beginning teachers’ interview data was the uneasiness they experienced on commencing teaching. They were perturbed by the number of students with additional needs in their classes and described the challenges associated with including students with high support needs. They attributed their struggle to a lack of preparedness as well as the enormity of the task. Some of the beginning teachers responded emotionally about the challenges and frustrations they experienced with inclusive teaching.

Interestingly, the three teachers on long-term teaching blocks talked about their direct experience of feeling overwhelmed, whereas the two teachers who were casual teachers mainly reported on difficulties they observed among other beginning teachers. This may be related to the casual teachers’ role of working on a day-to-day basis on different classes and in different schools; as casual teachers they are less accountable than full-time teachers for the educational outcomes of students. The casual teachers positioned themselves as commentators. The following excerpt highlights these beginning teacher struggles:

*When you're a beginning teacher your stress levels are just entirely off the scale. I was just so stressed out for half the year and the fact that I wasn’t prepared well enough, ..., because there’s so many other things you're preparing for, ...to become a teacher – that I felt like I really didn’t cater for her [student with disability] properly in the first term. I was too busy freaking out.* (Mel, Beginning Teacher)

Mel added, “I fly by the seat of my pants... Inclusion: it plagues me, it haunts me”. Her remarks suggest that she has a consciousness about inclusive education; they also highlight the challenges she has with its implementation. Tara remarked, “I’m just flying blind”. She discussed challenges associated with inclusion and talked eloquently about the mental and physical exhaustion she experienced. She explained how on some occasions she would “go home and cry” and questioned her decision to become a teacher. Tara stated, “I believe that the system is really failing them [students with additional needs]”. Tara stressed that “I cannot allocate the time that they need to achieve their best and it’s a crying shame because with twenty-two students…”

Both Mel and Tara suggested that students with additional needs are not having their needs met. Tara posed rhetorical questions, “When do I get the learning done? When do I get the teaching done?” Tara was concerned about the amount of time she wasted “behaviour managing” rather than teaching her students. These sentiments highlight
the struggles they experienced with their multifaceted role. The comments reveal contrasting responses to inclusive education. While Mel focussed on her lack of preparedness to include students, Tara identified faults with the education system. Tara asserted that inclusion is difficult to realise whereas Mel’s remark, about not catering to a student’s needs in the first term, suggests an improvement in her confidence as the year proceeded. Sam’s statement encapsulates the sentiments of three of the beginning teachers and highlights the complex nature of schools:

So I guess it was such a learning curve to just come in, and your first classroom and on top of trying to teach the Syllabus you’ve also got these issues and especially at this school. We need to manage a lot of the behaviour because the kids aren’t always as beautiful as they should be, so it was a really big jump into it and I found that it was a really, really big learning curve. (Sam, Beginning Teacher)

Sam’s emphasis on behavioural issues that occur at her particular school implies there are other contributing factors that impinge on her ability to implement inclusive education. This is a recurring theme that is expanded on, later in this chapter, under the heading “school context”.

Although the beginning teachers asserted that their life experiences prepared them for inclusive teaching to a greater extent than younger pre-service teachers, they nevertheless, described feeling unprepared for the challenges they encountered. Tara stated,

I’ve got more tools in my bag (scouting leader, AFL coach, mother), than an undergrad… that obviously gives me a whole heap of different resources and skill sets and knowledge than a lot of other people would have…I’m lucky, I’ve got age on my side’. (Tara, Beginning Teacher)

Sam’s experience of having cousins with autism gave her empathy for, and understanding of, people with disabilities. Mel on the other hand indicated that even with her life experience she was not well equipped:

I am a grown-up adult with children… so in a lot of ways I was much more prepared than other people to come into a classroom situation, but I didn’t feel prepared for those high needs. (Mel, Beginning Teacher)

Debra indicated that her background as a nurse provided her with necessary life experience:

I suppose … you’re better off if you’ve got kids… because a lot of these kids [pre-service teachers] … have no life skills… and then they’re thrown to the wolves. (Debra, Beginning Teacher)
Given that Debra, has two (of her own) children with disabilities in regular classes and was positively disposed to inclusive education, her use of the metaphor “thrown to the wolves”, suggests that she believes that pre-service teachers are not adequately prepared for inclusive education.

Interestingly, beginning teachers tended to talk about initial teacher education generally, not always specifically about inclusion of students with additional needs. Many of them felt that their initial teacher preparation should have prepared them to be “classroom ready” (Teacher Education Ministerial Advisory Group, 2014, p. xiii). They conveyed that their initial teacher education program did not fulfil their needs nor did it provide them with requisite skills to manage inclusive classes. Stewart indicated that beginning teachers should commence teaching with a degree of proficiency. He stated, “if you don’t get on top of it [classroom teaching] very quickly” then there are likely consequences such as “giving up teaching”. Sam recounted her experience as a beginning teacher. “I was having a heart attack for weeks trying to figure it out”. In her view, pre-service teachers should be able to “jump into that classroom and know straight away” how to deal with various situations that occur “within the classroom”. She described her first year of teaching as “riding the wave to try and figure it out... We got there in the end”. Sam referred to her current educational contexts and stated, “They [students with additional needs] are in our classrooms and we do have to deal with them every day”. She indicated that if teachers receive “the right training and the right knowledge” about how to best handle situations, students with additional needs are more likely to “feel wanted” in classrooms.

While it may be that these teachers hold idealistic expectations of what can be achieved during initial teacher education, these findings also accord with theoretical models of teaching. These developmental models posit that novice teachers go through predictable stages in the process of mastering skills (Arends, 2014; Conway & Clark, 2003). According to such theory, a novice teacher commences teaching in a “survival stage” and in a gradual and evolving process develops “mastery”. The beginning teachers were united in their opinions about the importance of developing skills during initial teacher education to enable them to experience success on commencing teaching. Beginning teachers suggested that pre-service teachers require learning experiences that prepare them to commence teaching feeling confident and competent.
Although this may not be entirely achievable, it may be that with better preparation, the initial stage for beginning teachers may shift from “survival mode”, which connotes threat and stress, to “classroom ready” as they adopt attitudes, apply knowledge and implement skills learnt as pre-service teachers.

**Experienced teachers.** The experienced teachers corroborated the beginning teachers’ reports of struggling and linked this to a lack of preparedness. *School counsellors and support teachers* provided accounts that illustrated the challenges facing beginning teachers. Gemma, a support teacher, recounted stories of beginning teacher colleagues who struggled with classroom management related to students with very challenging behaviours. She described a situation in which a student from a “behaviour disorder class” transitioned to a beginning teachers’ class. Gemma commented, “I’ve watched her very much struggle with that and almost become a nervous wreck”. Gemma discussed her “best mate’s” experience as a targeted graduate. “It’s her first year out and she’s just going through hell because she just didn’t get the behaviour management plan [during initial teacher education]”. Gemma, a teacher of the deaf, in her early 30’s, referred to her own experiences by disclosing that as a beginning teacher she was “put in a position in my first year out of uni where I had so many additional needs [students] in my room and it seemed they’d all been dumped on me”. She remarked that at the time she thought, “This isn’t the career for me”. She lamented that her initial teacher education did not prepare her for her role as an inclusive class teacher:

*I think our Special Ed course was only one semester out of our entire four years of primary ed, so I don’t think I was prepared in any way to go into a classroom and support the kinds of students I had.* (Gemma, Itinerant Support Teacher – Hearing)

It is worth noting that Gemma referred to the inclusive unit as “special ed”. This is an example of the tendency to merge special education and inclusive education. She expressed concerns about graduates’ preparedness for the difficulties that they are likely to encounter by stating, “We’re throwing them into it right away; it might change your attitude on teaching”. These sentiments illuminate concerns, not only about graduates preparedness for teaching in contemporary classes, but also about retention of beginning teachers especially in more difficult to staff schools.

A view emerged among *principals and class teachers* that beginning as well as
experienced teachers struggle with aspects of inclusive teaching. Leonie, a principal and teacher with over 30 years’ experience stated that,

*inclusion is an area which does create a lot of anxiety for staff members, because they want to know that they’re doing the best they possibly can, and they don’t know if they have enough knowledge.* (Leonie, Principal)

Linda, an assistant principal, revealed that she wished that she “could do it [inclusion] better”. Even with her experience, she expressed reservations about her capacity to cater for the diverse learning needs of students in her class. “Oh, I just hope I can stretch myself far enough to meet the needs of these kids in some way”. Some principals and class teachers suggested that acquiring skills necessary to successfully implement inclusive education is an evolving and ongoing process:

*I’ve seen development of teachers over time as they’ve had particular students who have challenged them, and they’ve learnt from that and become better teachers as a result of that. So I think it’s a big learning curve for all teachers throughout their entire teaching career.* (Leonie, Principal)

The evidence shows that beginning and some experienced teachers struggle with implementing inclusive education and that the changes arising from the inclusive education movement present challenges for many teachers. Further, the accounts suggest that an examination of the preparation of pre-service teachers for inclusive teaching with the aim of better preparing pre-service teachers for their role is warranted.

**Fostering Positive Attitudes about Inclusive Education**

Given the evidence suggesting that inclusive education is likely to be more successful when teachers hold positive attitudes (e.g., Hsien et al., 2009; Loreman et al., 2005; Sharma et al., 2006; Spandagou et al., 2008) beginning and experienced teachers were asked to consider the kinds of learning experiences that may foster positive attitudes among pre-service teachers about inclusive education. The themes identified were

- develop positive attitudes towards students with additional needs; and
- demonstrate commitment to teaching the full range of students with additional needs.

**Beginning teachers.** Some beginning teachers expressed concerns about ingrained negative views that some teachers hold about inclusive education and compared such attitudes to racism:
You've got to convince others, that they [students with additional needs] have a right to be there, because I think some teachers out there don’t think so and so they’re going to be telling those student teachers that these kids shouldn’t even be here. (Debra, Beginning Teacher)

Interestingly, some beginning teachers challenged the value of inclusive education by suggesting that some students should be educated in support classes. Tara asserted,

*I just believe that there’s no placement for them, that it’s mainstream or nothing, or an I.O, I.M.[intellectual moderate; intellectual mild] and they’re only from Year 3 and the places are so few, and the parents have to agree to it, and all of these issues, and the amount of time I spend behaviour-managing just takes away from classroom teaching, and it’s frustrating and it’s just a shame for the students because they’re the ones missing out and how many times – I mean, you can differentiate till the cows come home.* (Tara, Beginning Teacher)

Mel expressed regret about not actively pursuing a support class placement for a student with high support needs (autism and moderate intellectual disability):

*I should have been Hawk-eye…in the hope of being able to move them quickly into a – if they have to move classes – class that would’ve catered to her needs. … this sounds selfish, but her being here is …bad for me, it’s bad for her, it’s bad for everyone in this class.* (Mel, Beginning Teacher)

These excerpts support Debra’s assertion that some teachers believe that certain students neither belong nor are best served by being in inclusive settings. Given that all of the beginning teachers undertook the mandatory inclusion unit the previous year, this view was notable. Tara and Mel’s comments suggest that they have reservations about the efficacy of inclusive education. Their attitudes may also reflect the struggles they experience with implementing inclusive education.

A school counsellor explained that during functional assessments of students, consideration is given to “see if students with additional needs need extra assistance” or whether “they might need another setting” such as a “special unit”. His comments, “they might need another setting” such as a “special unit” together with Mel’s remarks, “if they have to move classes” is evidence of a prevailing view that for some students, enrolment in regular classes is not necessarily automatic practice.

Stewart felt that negative attitudes about inclusive education are not the result of “prejudice” but rather is related to teachers’ workload. Stewart identified “lack of time” as a barrier to successfully implementing inclusive education and suggested that teachers want to implement inclusive education “in an efficient way”. He linked this to
initial teacher education by stating,

*We [pre-service teachers] can learn from some good positive role models that have already done the hard yards and made the mistakes then we can go out and be best-practice right from the start, rather than bumbling around and getting it wrong and then finally working out how to do it.* (Stewart, Beginning Teacher)

Linda’s remarks highlight the challenges that some teachers have implementing inclusive education and reveal the consequences of such challenges:

*Once you meet those kids in the context of a classroom where you’ve got 26 ...kids that you’re trying to ... get your head around, it’s very difficult to then feel positive towards them.* (Linda, Assistant Principal)

Siobhan, an assistant principal, suggested that when teachers say that students “belong in a support unit” it indicates that they are “not coping”. She advised that they should be “listened to” and supported. Her comment encapsulates some teachers’ concerns about their capacity to implement inclusive education successfully. Such sentiments may be related to the preparation pre-service teachers undertake, the challenges associated with the task as well as the lack of support they receive to implement inclusive education.

The way in which language is used in reference to students with additional needs emerged as a significant issue for beginning and experienced teachers. Some experienced teachers described how language adopted can convey negative attitudes and reveal prejudiced views. Beth, a principal, suggested that teachers’ use of language connotes their attitudes. For example, she commented on the way some teachers “talk about children” and “speak to the students”. She added, “You get a very strong sense of conversations with people [teachers] just by hearing them talk”.

*Beginning teachers* used language in a way that suggested either they or others regarded students with additional needs as different. Illustrative comments included, “They’re [students with additional needs] not all crazy monsters”; “They’re still people and they’re still human beings and they still want to be treated just like you or I”; “I mean they’re lovely students, they’re normal people, it’s just they have a learning difficulty, and I think it’s not making it taboo”. While beginning teachers indicated that pre-service teachers and teachers need to be cognisant of negative attitudes towards students with additional needs, their use of such terminology may reveal their own responses to the challenges of including students with high support needs. This is
plausible, given that numerous beginning teachers felt that most students would be better served if students with high support needs were placed in support classes. Their remarks may also indicate an awareness of the limiting effects of negative stereotyping; suggesting the importance of including learning experiences about the appropriateness of language.

Stewart, a beginning teacher, referred to a tutorial activity in which pre-service teachers were required to rephrase statements about students with additional needs. He explained that the exercise of placing “person first and the disability second” had a positive effect on his awareness of the association between use of language and attitude towards students with additional needs. It seems that pre-service teachers require opportunities to reflect on the connection between language use and attitudes towards students with additional needs.

Beginning teachers recommended that pre-service teachers require opportunities during initial teacher education to interact with students with additional needs. Tara suggested that pre-service teachers would more likely acquire requisite skills and develop a deeper understanding of inclusive education by visiting schools with support units (e.g., classes for students with an intellectual disability) and interacting with students with additional needs in regular classes. She remarked, “it’s not until you’ve actually laid eyes on them [students with additional needs] and met them and shaken their hand”, that [pre-service] teachers will begin to understand their needs.

Debra recommended that pre-service teachers participate in community services (e.g., sports day for children with additional needs, guide groups) “before applying for teaching”. She added, “the problem is a lot of people [pre-service teachers] don’t get exposed to anyone with any disability… and so they’re scared of them”. Sam suggested that an effective way to address “some of the bad perceptions” and “stereotypes” that pre-service teachers may have about students with additional needs is to present case studies, so that pre-service teachers learn how to cater to student needs. Overall, beginning teachers felt that interacting with people with additional needs would foster positive attitudes.

Beginning teachers consistently reported that participation in simulations had a positive effect on their attitudes about and understanding of students with additional
needs. Stewart recalled the powerful effect of engaging in a simulation in which pre-service teachers wore a variety of special glasses that simulated different forms of low vision. This activity provided him with insight about “what that lesson would be like from the student’s perspective”. Similarly, Debra recounted a tutorial activity that simulated reading difficulties. In collaborative learning groups, pre-service teachers presented simulations (prepared by the researcher/lecturer) to the tutorial group. Pre-service teachers reported that engaging in the simulations heightened their empathy and contributed to their understanding of the importance of differentiating and adjusting learning tasks to cater for all students.

**Experienced teachers.** Experienced teachers linked inclusive education with social justice and professional responsibility. School counsellors and support teachers felt it critical that pre-service teachers develop open-minded attitudes about students with additional needs. Reem stated, “I think first and foremost they [pre-service teachers] need a positive attitude”. Reem, Gemma and Sue advised that negative mindsets about inclusive education need to be addressed at pre-service level. School counsellors and support teachers stressed that pre-service teachers need to understand that teaching students with additional needs is part of their future job which they should “embrace” and not consider a “burden”. The use of terms such as “embrace”, “burden” and “open-mindedness” suggests that the teachers identify resistance in schools to the notion of inclusive education. These insights highlight the importance of ensuring that pre-service teachers not only understand that are they are responsible for the learning of all students in their class, but that they also recognise disabling attitudes.

Most of the experienced teachers suggested that pre-service teachers should be presented with learning experiences designed to address preconceived views about students with additional needs. Greg suggested presenting learning experiences that ask pre-service teachers to “step back” from their own cultures and to reflect on their practices and attitudes towards students. Reem recommended that pre-service teachers engage in activities designed to heighten empathy. For example, she suggested advancing pre-service teachers understanding of how an additional need may impact a student’s potential and future by presenting them with real case studies so that they are not “detached” from personal stories. She argued that pre-service teachers “need to see
the students as people first and foremost”. Gillian’s views resonate with Reem’s. She emphasised that pre-service teachers “need to know that not all children with additional needs are going to be in the bottom end of the class”. She illustrated this by describing a student with cerebral palsy who has “a positive outlook on life”, “negotiates the classroom really well” and who is “bright as a button”.

Support teachers and counsellors expressed concerns about the effect of acculturation. Reem indicated that experienced teachers with negative mindsets about inclusion are likely to influence beginning teachers:

_To be honest that’s been one of my biggest problems, especially in learning support, working with teachers who do have that mindset. And the scary part is that it’s affecting our younger teachers as well because they’re coming out and they’re going, ‘Yeah right, I can’t work with this child’. (Reem, Learning and Support Teacher)_

While negative attitudes about inclusive education exist, it is imperative that academics ensure that the issue of attitude towards people with additional needs is addressed by providing carefully designed learning experiences during initial teacher education. In addition, school counsellors and support teachers discussed the importance of executive staff adopting an inclusive philosophy to ensure that positive attitudes filter “right down”. Reem remarked “it’s got to come from an executive level” so that staff, “support and embrace having students with additional needs” at their schools.

The school counsellors indicated that pre-service teachers should understand the ethics underpinning inclusive education. They stressed that pre-service teachers need to understand the concept of equity “the idea that there is no-one here more special, more important, more difficult than another … no-one is better than another”. In relation to students with challenging behaviours, Greg suggested that teachers reject the “notion of perceived blame” and develop “acceptance of people” and their differences. He added that pre-service teachers should be made aware that “not all students are going to meet the same standards”. This realisation, after completing a school counselling course, resulted in a “real shift in my attitudes and my beliefs about the world”.

Notably, some school counsellors and support teachers indicated that from their observations beginning teachers are more open to inclusion and “are embracing students with additional needs a little bit more”. “I'm thinking that newly appointed
teachers are much more open to ... accommodating children with disabilities, much more so than teachers who've been around a long time”. Sue added “So something positive must already be happening”. Gemma cautioned, however, that “there needs to be much more preparation”. Sue advised that the notion “that all children have a right to be in the classroom with other children” needs to be reiterated during initial teacher education.

School counsellors and support teachers indicated that pre-service teachers would benefit from interacting with people with disabilities. This finding accords with pre-service teachers’ views. Gemma explained that “exposure to students with different additional needs” was important for her training as a support teacher and suggested that pre-service teachers would benefit from similar experiences. Sue recommended “visits to certain educational facilities where students with additional needs are operating really effectively, with good teaching”. Reem remarked, “hook them up with teachers with positive attitudes about [students with] disability”. She added, “just like for kids, the learning for teachers has to be meaningful as well”. These suggestions support beginning teachers’ proposals that pre-service teachers require opportunities to interact with people with additional needs in order to develop an understanding of diversity of student needs.

The views of principals and class teachers mirror those of the school counsellors and support teachers. They stressed that pre-service teachers need to understand that they have a duty of care and a professional responsibility to include and cater for the needs of students with additional needs. Gillian added that pre-service teachers should understand the importance of lesson preparation and stated that a lack of preparation is “a huge waste of children’s time”. These views were underpinned by themes of social justice and notably the comments were not confined to students with additional needs. Jennifer, for example, referred to the “higher needs” of children who are refugees.

Principals and class teachers queried whether one can teach “empathy”. Beth, a principal about to retire, expressed concerns about teachers with “preconceived ideas”. To illustrate her concerns, she discussed a young teacher on her staff with low
expectations for the learning potential of Aboriginal students. Beth questioned whether “all the lecturing, all the modelling in the world”, would make a difference to this young teacher whom she described as having views “embedded in her psyche almost”. By way of contrast, Beth provided an example of another teacher whom she described as having the “capacity to empathise”. In response to her rhetorical question “How do you describe empathy?” Beth lauded this teacher’s approach, which she described as working beside students at “eye-level”, “reassuring her students” and possessing “an intuition” about the needs of children with additional needs. Beth identified a “direct correlation” between this teacher’s attitude and her success with implementing inclusive education. Her comments highlight the importance of teacher attitudes and indicate that initial teacher education must provide pre-service teachers with learning experiences that promote ethical approaches.

Linda suggested that pre-service teachers participate in learning experiences that lead to rapport building with students with additional needs. She suggested that links be established with schools to,

*meet up with kids and to talk to them, and (possibly sort of) develop a little bit of a relationship, or tracking a child who normally would be considered a problem, whether that’s a behaviour child or whatever.* (Linda, Assistant Principal)

Principals and class teachers stressed that pre-service teachers need to understand that class teachers, and not support teachers or teachers’ aides, are responsible for the learning of students with additional needs. Siobhan stated, “It’s not the aide’s job to do that; you may have a teacher’s aide only for a short period of time but it really is your [the teacher’s] responsibility”. Leonie indicated that it is imperative that pre-service teachers and teachers understand that,

*they are the one responsible for that child in their classroom, and if they don’t feel that that child’s needs are being met, they need to make sure that they bring it to the attention of the learning support team.* (Leonie, Principal)

Leonie observed that some teachers have the view that, “Oh, that’s everyone else’s job, it’s not mine”. Siobhan provided an example of how some teachers relinquish responsibility for students with additional needs. She recalled how a teacher quipped, “‘oh those kids of yours’ like the [support] teacher was the one that gave birth to

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22 Research findings show that Aboriginal and Torres Strait Islander students have lower literacy and numeracy levels (which can present as additional needs) than non-indigenous students (Bradley, Draca, Green, & Leeves, 2006).
them”. These comments shed light on the attitudes and practices of some teachers and are evidence of the need to ensure that pre-service teachers are aware that as future teachers they have an ethical as well as a legal responsibility for the learning of all the students in their class. Notably, Siobhan suggested that if teachers “feel very supported” they find having students with additional needs in their class “quite rewarding”.

Leonie identified “fear” as a factor that produces negative attitudes about inclusive education. She remarked, “Most negative attitudes are built on fear” and suggested that good preparation and appropriate support at the school level would alleviate such reactions. She reasoned that if pre-service teachers feel confident and informed, and have “strategies under their belt to know what to put in place”, they are more likely to maintain positive attitudes. This suggestion that pre-service teachers develop “strategies” became a common thread in the interview data, and supports the findings from the open-ended questionnaire responses presented in the previous chapter.

Although Leonie stressed that pre-service teachers should learn about the impact of disability, she placed greater importance on the need to regard students as individuals first. She commented that students “show themselves, ... their personalities and their abilities and attitudes in so many different ways”. Leonie cautioned that pre-service teachers should be aware that “labelling students (with a particular disability)” can lead to “pigeon-holing children”. She expressed concern about the effect of lowered teacher expectations which create barriers for students:

> You can’t pigeon-hole children, and looking at that whole package of a child is what is the most difficult thing for a beginning teacher, because they’re trying in their minds to find the easiest and simplest way to cope in their new setting as a new teacher. (Leonie, Principal)

A view emerged that pre-service teachers need to be made aware that academic achievement is not the sole focus of education. Teachers across the different groups proposed that pre-service teachers engage in learning aimed at developing an appreciation of this notion. In relation to valuing the attributes of students with additional needs, Gillian suggested that pre-service teachers would benefit from learning about “different intelligences” and “thinking styles”. To illustrate her point, Gillian referred to “The kid who can’t read, but can sing every word in a song in the choir, you know that they’re successes on the stage”.
Knowledge Required to Implement Inclusive Education

Beginning and experienced teachers indicated that pre-service teachers ought to understand

• areas of additional needs/disability that teachers identify as causing them challenges; and
• legislation governing inclusive education and syllabus documents that inform inclusive education.

Beginning teachers. Beginning teachers recommended that pre-service teachers learn about the more prevalent disorders and disabilities (e.g., autism spectrum disorder, attention deficit hyperactivity disorder, challenging behaviours, intellectual disability) to enhance their understanding of student needs and to ensure that they develop appropriate strategies. Sam, for example, recommended learning about strategies that “work for a child with autism”. Mel, who works in a school of social disadvantage, indicated that there is a high number of students with mild intellectual disabilities at her school. “It’s very prolific… here”. She explained that most of the children in her class “don’t learn like they are supposed to… I teach, they don’t get it. I teach it again, they get it a little bit”. She explained that some of the difficulties the students have with retention of learning is related to other impinging factors such as having parents who are illiterate in their first language, being refugees and having experienced trauma. She suggested that while at university she needed to learn skills for teaching students who have difficulty retaining information.

Mel asserted that the topic English as a second language (ESL) received inadequate coverage during initial teacher education. During the interview, Mel asked the researcher, “Is it part of your thing that you’re doing E.S.L?” Based on the researcher’s knowledge of university curricula, it seems unlikely that pre-service teachers were not presented with information about students from culturally diverse backgrounds. Nonetheless, given Australia’s diversity, it is imperative that pre-service teachers develop a firm understanding of the impact of issues associated with disadvantage and marginalisation.

Numerous beginning and experienced teachers discussed the importance of learning how to complete individual education plans and complete referral forms for Aboriginal, refugee, new arrivals (to Australia) and students with ESL while training
to become a teacher. Tara stated emphatically, “I’ve got no idea” and suggested that pre-service teachers engage in “something really practical”, for example, “look at their [student] previous IEPS [individual education [learning] plans]”. Notably, the researcher is aware that the topic of individual learning plans had been covered during the inclusive unit. Tara’s inability to recall learning about this topic may reflect the problem of information overload or non-attendance that may impact any tertiary student’s familiarity with learning material.

**Experienced teachers.** Experienced teachers similarly suggested that pre-service teachers require knowledge about the “more common disabilities and disorders” especially those that may result in behavioural issues such as students with attention deficit hyperactivity disorder. Greg, a school counsellor, stated:

*I think they [pre-service teachers] need to know what a disability is, like even the definition of a disability, whether it’s intellectual, or a behavioural or social one, or even a physical one. I don’t think that people [teachers] know what they are or what the types of conditions that they are likely to encounter are.* (Greg, School Counsellor)

Experienced teachers emphasised that pre-service teachers need to develop an understanding that students with challenging behaviours and “behavioural disorders come under the banner of disability”. Reem, who previously worked as an itinerant support teacher – behaviour, felt that many beginning teachers are not aware that students with emotional and behavioural disorders have a disability:

*Physical disabilities are easier to cater for because it’s a physical thing, you can change the environment, but behavioural disabilities are more to do with how you approach a child, what strategies you use in the classroom, having an understanding that this child has a particular mentality, can go off or whatever, so more around what do I need to do to help support that child when they have their meltdowns or things like that, especially in terms of classroom management.* (Reem, Learning and Support Teacher)

Experienced teachers felt it essential that pre-service teachers acquire knowledge of legislation, and curriculum policies and associated outcomes. They suggested that pre-service teachers engage in learning that promotes knowledge about their legal obligations to cater for all students.

Experienced teachers were concerned by the notion that some teachers regard teaching students with additional needs as “optional”. They emphasised the importance of pre-service teachers developing a clear understanding of their legal obligations to provide
adjustments and accommodations for students with additional needs. Gemma stated emphatically, “That’s part of their role and that they’re expected to do that by law”. Reem remarked, “This is going to sound horrible, but I guess in a way it’s like drilling, they [pre-service teachers] have to do it”. Leonie, a principal stated, “attitudes are based on knowledge… knowledge is key, the key factor I think”. She suggested that imparting knowledge about legislation and its implications would assist in “changing their attitudes”. A number of principals and class teachers indicated resistance among some teachers to changes resulting from the inclusive education movement. In her capacity as a principal, Robyn, stated that pre-service teachers should be “aware that it’s the law; that you have to cater for all students”. She recounted how her staff engaged recently in professional development about disability legislation and found it an “eye-opener”. Robyn recommended presenting pre-service teachers with statistics that make them aware that “it doesn’t matter where you are…you have to cater for them [students with additional needs] and that’s part of your job”. Gillian’s observations supported Robyn views. Based on many years of teaching in south-western Sydney, Gillian indicated that many beginning teachers are not aware “that every class will have one, two, three, a handful of children who are special needs”.

Experienced teachers suggested that pre-service teachers need to learn about indicators of disability and the developmental milestones children are expected to achieve. Leonie felt that pre-service teachers should learn about “stages of learning” so that they are cognisant of students who are “learning below, above or at expectation”. Siobhan expressed unease about beginning teachers who lack knowledge about stages of child development. She illustrated this by referring to “a child sitting in their [a beginning teacher] classroom for two terms and then go ‘oh, I think there’s something not right’”. Greg, a school counsellor, whose role includes assessing students with additional needs, was the only participant to suggest that pre-service teachers would benefit from understanding the types of tests and functional assessments that school counsellors use to assess students learning needs. He explained that teachers develop insight about student’s learning from understanding “what you might expect a kid [with additional needs] to be able to do at this level”. Implicit in these recommendations, is the suggestion that pre-service teachers may not be engaging in learning experiences that consolidate their understanding of developmental milestones in children.
During the interviews with principals and class teachers, other nuanced topics about knowledge arose. Beth described how excellent teachers are able to apply and “tweak” the curriculum and syllabus documents to meet the needs of particular students regardless of language delays or sensory disability. Siobhan, who works in a school located in a high socio-economic area with a large culturally and linguistically diverse student enrolment, raised an issue not identified directly by other participants. She stressed the need for pre-service teachers to develop an understanding of cultural perspectives towards people with disability. She recounted how some parents conceal their child’s disability because they view disability as shameful causing them to reject “any extra help” for their child. She referred to a student, “an only son”, from a Middle Eastern background. His parents did not want him to be “treated any differently to any other student”. Siobhan stressed that pre-service teachers need to “realise that we do not just live in a white Anglo Saxon society, that we live in a multicultural society and children from different cultures do have additional needs…there needs to be this sensitivity towards parents”. Siobhan who recently completed a Master’s degree in “Inclusive Education” recounted teachers remarking, “They [parents] don’t want to help their child, they don’t want us to help their child”, but she argued that parents “don’t want to feel that their child is shamed or different”. She explained:

So there needs to be a lot of communication with the parents. I’ve had to use interpreters a lot because after a while when you’re discussing this (about) [matter with] a parent, they become quite emotional. (Siobhan, Assistant Principal)

Some principals and class teachers discussed developments that have resulted from the inclusive education movement. Siobhan, quipped that pre-service teachers who were school students themselves previously, would have observed the practice of “along came Miss Smith and off they [students with additional needs] went under the tree, outside and did their work and came back again”. Siobhan’s reference to withdrawal of students\(^{23}\) from their classes highlights the custom of changing, and at times questionable, practices that occur in schools. This insight illustrates the importance of ensuring that pre-service teachers are presented with evidence-based practices in order to prevent perpetuating ineffective approaches (e.g., over-use of withdrawal from classes) that are the product of custom and practice.

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\(^{23}\) Withdrawing students with additional needs from their class to work with a support teacher either individually or in a small group.
Experienced teachers indicated that pre-service teachers should have a thorough grounding in curriculum documents. Robyn found it perplexing that beginning teachers are expected to know the curriculum and implement the syllabus yet stated “some of them have never seen it”. Her comment raises concerns about how syllabus documents are “unpacked” in university settings. Alternatively, it may indicate that some pre-service teachers do not engage deeply enough with course content. As one beginning teacher indicated, some pre-service teachers are pre-occupied with passing assignments rather than engaging with content. Robyn implied that since these important documents are now readily available online, there was greater opportunity for academics to ensure that pre-service teachers become familiar with them. In addition, some experienced teachers believed that pre-service teachers should be informed about important official internet sites such as *Every Student, Every School*\(^{24}\) (NSW Department of Education and Communities, 2012).

Linda suggested that pre-service teachers require knowledge about what she referred to as, “simple topics” such as recognising a child with “glue-ear” (i.e., conductive hearing loss) and understanding its impact on learning outcomes. Although this appears quite specific, it correlates with AITSL guidelines. AITSL stipulates that graduate teachers should acquire strategies for teaching Aboriginal and Torres Strait Islander students. There is a high incidence of conductive hearing loss among Aboriginal and Torres Strait Islander students, with deleterious effects on literacy outcomes (Walker & Wigglesworth, 2001). Linda’s suggestion highlights the dilemmas of determining which topics to prioritise in a curriculum for pre-service teachers. Further, it underscores the need to ensure that academics responsible for coordinating the delivery of inclusive content have requisite background, knowledge and current pedagogical experience to provide pre-service teachers with learning experiences that prepare them to teach across a range of settings.

\(^{24}\) Every Student, Every School is a framework which aims to provide better learning and support for the 90,000 students with a disability, learning difficulties or behaviour support needs in NSW public schools.
Developing Inclusive Pedagogical Skills

Beginning and experienced teachers were asked to suggest learning experiences that they felt would advance pre-service teachers’ acquisition of inclusive skills. The following section presents the findings for each skill area: managing inclusive classes; collaborating; differentiating instruction; and managing and using resources.

Managing inclusive classes. While beginning teachers tended to focus on managing the behaviour of students with additional needs, experienced teachers articulated a more comprehensive understanding of managing inclusive classes that included aspects such as student engagement and positive behavioural approaches. The findings suggest that pre-service teachers require learning experiences that

- develop and consolidate fundamental classroom management approaches for effectively managing inclusive classes (e.g., managing group work and catering to the needs of diverse learners); and
- provide approaches to manage challenging situations that occur in classrooms.

Beginning teachers. The theme of classroom management emerged as a significant issue and was found to overlap with the theme of “struggle”. *Beginning teachers* indicated that pre-service teachers require learning experiences that prepare them to manage and conduct authentic classroom scenarios. They emphasised that pre-service teachers ought to engage in learning experiences that prepare them to respond appropriately to classroom circumstances involving students with challenging behaviours – who often have an additional need or disability. The overall message was that a “lot more needs to be done on classroom management” while at university.

Sam discussed students from “disadvantaged backgrounds” who may not have an intellectual disability “but they’re learning how to build relationships”. “Relationship building is a big one … with some of these kids” and “whether they feel safe to… talk to you about any issues”. She explained that in order to effectively manage challenging situations she required higher level behavioural strategies than was offered during initial teacher education. Sam suggested that pre-service teachers ought to be provided with a range of scenarios that show “not only positive ones [scenarios]” but rather show “that there can be bad times [in classrooms]”.

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Notably, beginning teachers referred to a non-conflict approach they had learnt about during their inclusive unit and stressed how this approach was effective:

_The non-conflict approach and non-in-your-face approach, so that process of stepping away ... the steps to conflict resolution or anger management, so having the least intrusive down to the most intrusive._ (Sam, Beginning Teacher)

Beginning teachers described challenging classroom situations that in their view were related to students with difficult to manage behaviours, often being those who also come under the area of additional needs. Tara recommended that the topics of autism spectrum disorder, attention deficit disorder and oppositional defiant disorder be prioritised during inclusive education units. She stated that these areas should be “top of the list because they are such difficult students to deal with”. Mel described how a student in her class with high support needs receives “therapeutic brushing” twice a day from a teachers’ aide (trained in the therapy) for her anxiety. Mel explained that,

_sometimes she goes as stiff as a board, and then the whole class has to stop. We’ve actually got an evacuation plan because she’s – at the beginning of the year before we settled into each other – she’d throw things, the class was in danger. We’d have to file out of the classroom, and we did that twice. I doubt that’ll happen again. Last week I was just sitting, she was sitting in her special spot, someone was sitting in front of her and she just went bang! – across this little girl’s head. I don’t think that’s fair. If it was my daughter being sent off to school to get hit by someone across the head I’d feel really terrible that this little girl had needs that weren’t being met but I wouldn’t want my daughter to be hit, and it’s not fair for anybody, so that’s getting back to the question, the skills that the teacher needs is endless._ (Mel, Beginning Teacher)

Tara explained that her class comprised “a student with an intellectual disability, two students with autism spectrum disorder and at least half a dozen students with learning or behavioural issues”. She described how one student would “throw things in the classroom, … run away regularly [and have] outbursts”.

Beginning teachers recommended an array of learning experiences that they felt would augment pre-service teachers’ classroom management skills. Stewart suggested videoing actual classrooms to capture challenging situations so that pre-service teachers can observe how a situation “might go badly” or “really well”. He recommended follow-up discussions and role-plays to consolidate their learning. He stressed “It’s one thing to hear the information but I think it’s another to actually see an example”.
Beginning teachers indicated a need for pre-service teachers to participate in learning experiences (e.g., assignments, role-plays) that prepare them to engage students who do not participate in lessons in expected ways. Tara referred to “a child with autism sitting in the corner” and posed a rhetorical question “How do you engage them?” Sam suggested that pre-service teachers need to learn how to “build relationships” with students following the occurrence of explosive events. She explained “I’ve got kids who can sometimes just completely go off”. Stewart recommended inviting experienced teachers to lectures or tutorials so that pre-service teachers could seek advice about inclusive teaching. In relation to initial teacher education, Stewart stated:

_We need to be effective in an efficient way at being inclusive, and I don’t think we’ve really got the time to be doing too much trial-and-error._ (Stewart, Beginning Teacher)

**Experienced teachers.** Experienced teachers reported that beginning teachers experience enormous challenges with classroom management and managing behaviours of students with additional needs. Unsurprisingly, experienced teachers provided a more comprehensive understanding of classroom management than did the beginning teachers. Sue stated, “the biggest issue that a lot of new teachers face, the ones that I’ve worked with, is in terms of classroom management”. Greg described concerns that teachers raise with him. “It’s usually about problematic kids that generally have a diagnosed disability”.

Like the beginning teachers, experienced teachers discussed the importance of pre-service teachers learning how to respond appropriately to challenging situations. Gemma stated, “Classroom management is the main issue facing teachers. Behaviour management is my big, big, big one. That is the number one thing”. _School counsellors and support teachers_ reported that some teachers react to challenging circumstances inappropriately, often exacerbating situations. They recommended that pre-service teachers engage in learning experiences that demonstrate subtle approaches to avoid worsening potentially confronting circumstances. Greg elaborated by suggesting that a teacher’s reactions to challenging incidents can “make things explode even more”. School counsellors and support teachers stressed that pre-service teachers need to understand that students with very challenging behaviours may come under the umbrella of disability. They wanted pre-service teachers to understand that challenging family circumstances may negatively impact a student’s life and stressed that pre-
service teachers need to develop empathy and skills “to help kids to move beyond” their challenging circumstances. Greg stated that pre-service teachers require skills in crisis intervention to manage situations in which a student may become “very agitated” and “throw things” as a result of a “change of routine” (e.g., “replacement teachers”). He recommended that pre-service teachers learn how to defuse challenging circumstances by managing their own reactions, to deal with the kinds of “peak behaviours” and “high end kids” that they are going to encounter in schools. He referred to “out of home care”25 students and students with autism spectrum disorders who may have challenging behaviours.

School counsellors and support teachers emphasised how important it is that pre-service teachers acquire an understanding of why students behave in inappropriate ways. They felt that pre-service teachers should learn strategies “to help support (that child) [students] when they have their meltdowns”. Sue referred to students who are at the “gifted end of the scale” and suggested that teachers “have to look at why it is that they’re mucking around”. Her comments highlight the importance of encouraging pre-service teachers to reflect on the reasons students behave in inappropriate ways by looking beyond observable behaviours. Notably, Gemma referred to the learning environment of other students and stressed that teachers need to ensure that “everybody else in the class is in a nice environment”.

These insights highlight the value of providing pre-service teachers with opportunities to hone classroom management skills for the benefit of all students. Gemma, reflected on her own relatively recent initial teacher education by indicating that classroom management is,

\[
a \text{skill that takes a long time to acquire and I think that we should have been really put in some more interesting situations with our pracs. (Gemma, Itinerant Support Teacher – Hearing)}
\]

Some of the participants suggested that during initial teacher education pre-service teachers should be required to critically analyse some approaches. Greg referred to “research-based ones [approaches] rather than historically-based ones” while Gemma suggested critiquing reward systems that have positive and negative consequences. She remarked that teachers sometimes inadvertently reward inappropriate behaviours by,

25 “Out of home care” refers to children and young people who are unable to live with their families because they are in need of care and protection necessary for their safety, welfare and wellbeing.
for example, having students “withdrawn to their favourite DP [deputy principal] in
the office”. Such examples suggest that pre-service teachers engage in critical analysis
of practices that are used in schools to ensure that they adopt practices that are both
effective and evidence-based.

As school counsellors and support teachers often work in classrooms, they are
immersed in a variety of educational contexts which provide them with opportunities
to observe and reflect on practices. They recommended that pre-service teachers would
benefit from engaging in the following practical learning experiences; “case studies of
students with behavioural issues”, critique behaviour management techniques, learn
about Positive Behaviour for Learning approaches\(^{26}\), observe or work in classrooms
with students with challenging behaviours, and examine the catalysts for inappropriate
behaviours. In addition, they suggested that pre-service teachers should learn how to
manage cooperative learning groups, modify the curriculum and use preventative
behavioural strategies. They also suggested that pre-service teachers need to
understand the importance of teacher consistency, recognise the ineffectiveness of
yelling and learn about the positive effect of “catching kids being good”.

The school counsellors and support teachers suggestions are based on their experiences
of observing beginning teachers struggle with classroom management. It may be that
pre-service teachers require further opportunities to consolidate fundamental classroom
management approaches. Rather than construing these results as a call to equip
teachers with approaches that control student behaviour, the results should be used to
inform academics about the kinds of skills and strategies that beginning teachers
require in order to be “classroom ready” for contemporary inclusive teaching.

The principals and class teachers perceived classroom management to be a broad
construct that encompasses notions such as engaging students, catering to learners
needs, managing group work as well as employing positive behavioural approaches.
There was a sense among the principals and class teachers that effective inclusive
teaching is synonymous with sound and effective pedagogy. Rather than advocating
skills specifically for students with additional needs, a theme about the acquisition of

\(^{26}\) Positive Behaviour for Learning is an evidence-based whole-school process to improve learning and
behaviour for all students. It has been implemented in NSW Department of Education Schools.
effective pedagogical approaches emerged:

*I think they [pre-service teachers] need to know that effective teaching and learning only happens in classrooms where there is organisation, routine, an understanding of what the expected behaviours are by all of the students in the classroom, and an understanding of what the consequences are if the students don’t behave within a manner…* (Leonie, Principal)

Linda viewed classroom management as a framework and stated that classroom management is “not an additional extra”. She reasoned that it is about setting classrooms up for success, and added that if teachers establish good classroom management “by engaging and settling ‘95% of the class’” then they are more likely to have the time to “target specifically that 5%” of students who have additional needs.

Some principals and class teachers posited that if pre-service teachers acquire classroom management skills, effective learning by all students will ensue. Numerous experienced teachers associated effective classroom management with equity for all students. Gillian illustrated this by suggesting that if a “student with special needs takes 15 minutes of a 30 minute lesson then that’s a whole lot of minutes that the others aren’t getting of your teaching time”. She remarked “students with special needs can be very challenging” and emphasised “you do need to be really on top of the behaviour”. Leonie argued for “a framework that will allow learning to take place for all children in the classroom, so that nobody is prohibiting other children in the room from learning”.

Principals and class teachers felt that during initial teacher education, pre-service teachers should engage in learning that results in consolidating a range of practices in readiness for inclusive teaching. Linda, for instance, indicated that classroom management is “teachable” and stated, “that is the main thing that I would love to get across to people [pre-service teachers]”. She stressed that pre-service teachers should “invest” time into honing classroom management skills as well as have a vision about “how you [pre-service teachers] want the class to be”. She offered a range of strategies, that she felt would assist pre-service teachers to establish calm classrooms – such as “setting up the rules”, using “lots and lots of praise”, framing expected and desirable behaviours in positive rather than negative terms and involving students in “role-play” in order to have students practise appropriate behaviours. Leonie also
proffered some practical whole-class and student focussed classroom management strategies. She advised that pre-service teachers should “speak to children individually and privately”, “rather than engaging in public reprimands”. She stressed that the overuse of warnings is ineffective and explained that many beginning teachers fail to follow through with consequences. Leonie suggested that pre-service teachers need to realise that sometimes it is more effective to “stop a lesson” if students are disruptive rather than ignoring inappropriate behaviour, which she remarked “leads to ‘disaster”.

Leonie recommended additional strategies that “lead to increased learning time and on-task behaviour” such as providing outlines for the day’s lessons, using visual prompts, providing symbols and cues to remind students about expectations. Leonie explained that she advises beginning teachers, “The less you say, the better the classroom will be”. Leonie indicated that successful inclusive teachers employ these strategies and suggested that pre-service teachers learn how to use them. Notably, these suggestions are conducive to positive classroom climates and do not focus on a traditional notion of managing behaviours of students.

Leonie discussed the importance of pre-service teachers developing “an understanding that a calm place of learning supports children with behaviour problems”. She recounted the events surrounding a mature age beginning teacher on her staff:

*She was screaming a lot, and obviously that was triggering off the boys who were already behaviour problems, it was making them even worse. And it took us three terms to get her to really bring her voice right down to where it needed to be, to be able to be calm with those children, instead of screeching at them.*

(Leonie, Principal)

Robyn, on the other hand, felt that pre-service teachers do “not necessarily [require] strong classroom management skills”; she suggested that they should graduate instead with a set of consolidated strategies that they can apply when they commence teaching. She implied that classroom management skills develop with experience.

Some experienced teachers commended the program, *Positive Behaviour for Learning* (PBL), implemented in their schools. Given the implementation of PBL in NSW Department of Education schools, they felt that pre-service teachers should be made aware of it and some of its strategies.

*Experienced teachers* suggested that the ability to cater to the various levels within a class is a critical aspect of classroom management. Numerous experienced teachers
stressed that pre-service teachers should be “very aware that within their classroom” they are going to have students with a range of “intellectual abilities” from “very bright to IM (mild intellectual disability) and possibly IO (moderate intellectual disability)”. In addition, they emphasised that pre-service teachers need to develop skills “to cater for a range of learners” and that this was necessary to ensure engagement of the “top kids” and “students with learning difficulties”:

You can’t give them [students] all the same work, because you’re going to have the top kids bored and then playing up and then you’re going to have the bottom kids who can’t do it, who are going to play up, so like that’s a classroom management issue. (Robyn, Principal)

Principals and class teachers associated the ability to conduct group work with effectively managing inclusive classes. They emphasised the need for pre-service teachers to learn to manage collaborative learning in order to cater to the diversity of learners in regular classes. Beth suggested that “group teaching” provides students with opportunities for social learning and is “very inclusive”. She advised that pre-service teachers ought to understand that groups do not have to be ability based.

The findings reveal that the teachers interviewed regard the concept of inclusive classroom management as a broad construct involving an array of approaches encompassing organising classrooms, managing group work and dealing with challenging incidents. The accounts suggest that pre-service teachers should be immersed in learning experiences that provide them with strategies to manage inclusive classes effectively.

**Collaborative skills.** Beginning and experienced teachers agreed that in order to implement inclusive education, pre-service teachers require learning experiences that

- augment their ability to collaborate effectively with a “broad range of people”; and
- raise their awareness of support staff and support structures that advance inclusive education in schools.

**Beginning teachers.** Beginning teachers indicated that pre-service teachers require information about the various support roles in schools. They also suggested that learning experiences should be designed in such a way that prepares pre-service teachers to work effectively with stakeholders (e.g., teachers’ assistants,
parents/guardians). Some beginning teachers reported feeling “unclear about how to work with teachers’ aides and support staff”. Mel recounted her sense of confusion about the roles of support staff (e.g., ESL teachers, teachers’ aides) at the beginning of the year:

Oh my goodness here comes another teacher, what will I do with you? ... as a beginning teacher ... someone would come and say ‘Hi I’m here for new arrivals’ and I’m like ‘What the hell’s new arrivals? I didn’t know what a new arrival was, you know. OK and I’ve had someone walk in and go ‘I’m here for the refugees. Who are your refugees?’ How would I know? I’ve got lots and lots of E.S.L. children but I don’t know who’s a refugee here... and then I got ‘OK I’m here for the speech kids’. Who are the speech kids? I don’t know.

(Mel, Beginning Teacher)

To enhance pre-service teachers’ understanding of the various support roles in schools, a number of pre-service and experienced teachers suggested inviting guest speakers, such as teachers’ aides, to present at lectures or tutorials to explain what they do. In stating, “they [support staff] are there to support you [teacher] and the children as well”, Sam implied that pre-service teachers were unclear about the extent of such roles. A learning and support teacher’s remark, “We need to be able to use our support correctly” accord with the beginning teachers’ concerns about the insufficient knowledge and inadequate skills they have to work effectively with support personnel. The support teacher implies that support staff is under-utilised in schools.

Some beginning teachers suggested that pre-service teachers require “advice to deal with parents”. This comment corroborates the findings from the questionnaire which show that pre-service teachers ranked “collaborating with parents and caregivers” as the most important topic within the Collaboration category. It may be that pre-service teachers lack the confidence to liaise effectively with parents/caregivers and consequently recognise that they require further training in this area.

Experienced teachers. School counsellors and support teachers felt it important for pre-service teachers to develop a strong sense that their future role incorporated communicating and collaborating with a range of stakeholders, including parents and support teachers.

Linda advised that as teachers they will be required to work with “people they don’t like”, “very clever people” and people “who know it all”. As such, experienced teachers stressed that pre-service teachers require considered opportunities to develop
communication and negotiation skills. For example, practising and honing a range of communication skills such as how to negotiate, “how to approach people (and) how to read body language …”. Greg stressed that pre-service teachers become aware that “huge sensitivities” are required of them, “It’s a really important thing to be delicate, or subtle I suppose”.

_They need interpersonal skills, that’s the first thing; they need to be able to get on with a wide range of people irrespective of how difficult they might be, so they’ve got to have some sort of adaptability_ (Greg, School Counsellor).

School counsellors and support teachers expressed concerns about teachers’ lack of preparedness to collaborate effectively with stakeholders. Gemma asserted that pre-service teachers are not provided with learning experiences that prepare them to collaborate effectively. She reflected on her experiences as a newly appointed teacher:

_Collaboration is essential; I didn’t know what a teacher’s aide was or an SLSO (School Learning Support Officer) as they’re now known. I didn’t know those roles; I didn’t understand those roles, so how was I supposed to work with those people in my first year? I just kind of found out who they were and that’s something we need to be aware of – what those roles are, these new roles like LAST [Learning and Support teachers]. (Gemma, Itinerant Support Teacher – Hearing)_

These insights suggest that inclusive teaching requires teachers to collaborate with a range of stakeholders. This makes it necessary that pre-service teachers are provided with learning experiences that prepare them to work with the range of people in contemporary schools.

Like the beginning teachers, _principals and class teachers_ suggested inviting guest speakers, such as assistant principals, to explain how learning support teams operate. Leonie stated, “the biggest mistake” she observes beginning teachers make is that they believe they have “do it all alone”; she added, “yes they are ultimately responsible”, but emphasised that they should access support. Gillian wanted pre-service teachers to understand that it is appropriate to seek assistance from support personnel. She recounted how she was “never afraid” to “call(ed) for help” when she had difficulty managing students with challenging behaviours.

A view emerged that the skills of collaboration should be taught to pre-service teachers in explicit ways. Although there was general consensus among experienced teachers about the importance of pre-service teachers acquiring collaborative skills, there was some conjecture about how best to “teach collaboration”. One principal queried
whether “you can teach collaboration” while others offered a range of approaches to enhance pre-service teachers’ ability to collaborate.

Siobhan advised that effective collaboration requires a “strategic plan”. She recommended adopting approaches used by “corporate businesses” to solve problems. Some experienced teachers recommended that pre-service teachers engage in guided collaborative processes – an issue is identified, roles are allocated and timeframes and processes established. In addition, the process has to be “very structured” and “everybody needs to know they’re valued”.

Robyn flagged concerns about the trend for online university courses. She suggested “providing time actually in the university setting” so that students truly collaborate rather than setting off-campus collaborative exercises. She recommended an approach in which pre-service teachers “actually watched each other teach, they actually prepared lessons together, they did a lot of work together…” Leonie described collaborative processes which lead to effective inclusion of students with additional needs; these include setting goals and developing individual learning plans collaboratively, involving parents early in the process, holding review meetings, implementing interventions and applying for “extra support staff”.

Linda was critical of the type of group work that she experienced personally while at university and observed pre-service teachers engaging in during initial teacher education. She suggested that when pre-service teachers are asked to form groups they generally sit and work with friends or acquaintances. She indicated that this type of group work did not adequately prepare pre-service teachers for their future role. Linda’s suggestion supports the findings of Yamane (2006) who found that when friends work together, they often engage in off-task behaviour. Yamane concluded that random assignment of students results in increased attention to the task. Notably, Linda suggested that academics show pre-service teachers how to form and re-arrange random groups. Her remark “the lecturer would have to be really skilled” with group work implies that organising collaborative learning requires a level of skill. Her comment also reveals that she believes that not all academics are necessarily able to demonstrate how to organise students into collaborative groups.

*Experienced teachers* felt that the ability to collaborate effectively ultimately improves
outcomes for students with additional needs. For example, Beth described the attributes of two young teachers on her staff with excellent interpersonal skills. She explained how the teachers’ “relate really closely” to stakeholders because they “listen(s)” and ask questions such as “what do I do with this student?” Leonie felt that pre-service teachers require opportunities to develop an understanding of a “whole team approach”. She suggested that academics could orchestrate meetings in which decisions about students with additional needs is a collaborative process involving a range of stakeholders including “people within their school”, parents/guardians and the student depending on their age and ability. To exemplify the significance of effective partnerships two principals and class teachers recounted how their collaboration with itinerant support teachers (vision and hearing) had resulted in successful outcomes for students.

Experienced teachers commented on the impact of technology on schools. Gillian indicated that social media is altering the dynamic of staffrooms. She reported entering a staffroom recently to find that teachers were interacting “with social media” rather than each other. She wondered, “Where is collaboration going to fit in the grand scheme?” She contrasted such practices with the spontaneous discussions about classroom issues that took place in staffrooms “all those years ago”. Siobhan, however, indicated that many experienced teachers are not effective collaborators “because they’ve never needed it”. She suggested that beginning teachers may encounter resistance from experienced teachers when attempting to collaborate about students.

These anecdotes illuminate the evolution of schools and highlight teacher concerns about pre-service teachers’ preparedness to collaborate with a range of stakeholders. This study found that pre-service teachers require structured learning experiences aimed at improving their collaborative skills. In addition, pre-service teachers require opportunities that raise their awareness of personnel and school systems that support inclusive education. The overall message was that learning to collaborate is left to chance rather than being taught in planned and considered ways.

**Differentiation skills.** Beginning and experienced teachers suggested that pre-service teachers require learning experiences that provide them with skills to

- differentiate instruction;
- design lessons which cater to a range of learners (diversity of learners); and
- teach foundational literacy (e.g., phonics, sight words, prediction skills).

The beginning and experienced teachers indicated that pre-service teachers do not receive a strong grounding in how to differentiate instruction.

**Beginning teachers.** Beginning teachers stressed that pre-service teachers require opportunities to consolidate their ability to differentiate instructions and design lessons that caters to a range of student abilities. They revealed that the concept of differentiation remained elusive. They advised that the pre-service teachers’ likelihood of developing the ability to differentiate instruction would be enhanced if they observed skilled practitioners demonstrating “how to do it”. They also suggested that pre-service teachers would benefit from learning how to design lessons that cater for the range of student needs. Debra conveyed a sceptical view by stating, “You [academics] talk a lot about it”, but asserted that pre-service teachers are not shown how to differentiate. She posited that “the practical side of it is beyond them [beginning teachers] and …they resort to worksheets”. Beginning teachers reported that pre-service teachers ought to be shown approaches to differentiate instruction that are practical. For instance, Tara recommended presenting pre-service teachers with templates that they could use to consolidate their understanding of differentiating literacy and numeracy tasks – “something that I could take home with me”. In reference to teaching procedural text types (part of the English Syllabus; e.g., recipes, instructions), Stewart suggested showing pre-service teachers how to cater for the needs of “the less able students” by, for example, filling in a cloze passage, while “the more able students” could “write a procedure”. Tara indicated that learning experiences needed to be taken to the “next step” by linking theory to practice to a greater extent.

Sam’s comments contrasted with the views of the other beginning teachers. She stated, “I felt really confident to … differentiate”. She remarked, “We talked about [during the inclusive unit] not changing the whole lesson but just changing one aspect of it to include that child because otherwise they’re going to feel like they’re on the outer”. She discussed the use of “visuals” and “concrete material” for Maths lessons and indicated how such modifications “helps all the students within the classroom as well”. Notably, this notion of supporting the learning of all students was a common thread across all groups. Interestingly, Sam’s description of her approach indicates a
fundamental understanding of the concept of *Universal Design for Learning*. Two beginning teachers cautioned that teachers should be judicious in their application of differentiation. To illustrate this, Stewart referred to English literature lessons where he indicated that differentiation may not be required, as the structure of the lesson allows students to produce work at their own levels. He felt that differentiating the lesson unnecessarily may highlight differences in children’s ability. Stewart’s insight supports the proposition that pre-service teachers learn *how* to design lessons that provide students with different entry points and as such, are universal in their design.

Tara and Mel expressed a desire to have learnt more about teaching foundational literacy skills, such as prediction skills and decoding strategies (e.g., initial blends), during their initial teacher education program. Mel referred to a student in her Year 3 class who was reading at level 5 (Early Stage 1 or Kindergarten level) and regretted that she had neither learnt about nor acquired fundamental reading strategies “to be able to help them [students with learning difficulties] with reading strategies”.

Mel spoke about the importance of learning about intervention programs more commonly used in schools such as *Best Start*\(^{27}\) and *Reading Recovery*\(^{28}\). Gillian, an experienced class teacher, corroborated the beginning teachers concerns by suggesting that beginning teachers do not have the necessary skills to teach basic literacy. She recommended that pre-service teachers learn how to teach reading in a “systematic and focused” way so that they are able to teach reading to “younger children” and “children with learning difficulties”; who, she stressed, are in all classes.

*Experienced teachers*. Experienced and beginning teachers indicated that learning experiences for pre-service teachers should include designing lessons that cater to a range of learners, such as “gifted students” and “students with learning difficulties”. *Experienced teachers* suggested initial teacher education should raise pre-service teachers’ awareness “that they’re going to teach people with a range of abilities in every class, for every year”. Robyn felt it important that pre-service teachers “learn to teach to the range” so they “cater to top kids and kids with LD [learning difficulties]”. Greg, a school counsellor, advised that,

\(^{27}\) *The Best Start* initiative is intended to ensure that all students are on track in their literacy and numeracy learning by Year 3.

\(^{28}\) *Reading Recovery* is a literacy program designed to target Year 1 students with reading difficulties.
I think there’s an idea that everyone’s got to meet certain standards, certain grades, certain bands, and NAPLAN scores, in IQ tests, in HSC, there’s not the idea that there is going to be a range for abilities. (Greg, School Counsellor)

Sue, a school counsellor, commented “they're [pre-service teachers] not going into a profession where they [can] assume that all children are going to be run of the mill garden variety students that one curriculum fits everybody”. She added that teaching is not “a one size fits all” approach. Stewart, a beginning teacher, indicated that it was not until he started casual teaching that he realised that he was required “to modify expectations in some cases”.

Experienced teachers felt that having a firm understanding of students’ different learning rates is likely to produce an appreciation that it is not appropriate to “teach to the middle of the class”. Apart from ensuring that students who struggle do not “get left further and further and further behind because they can’t do any of it”, Robyn advised that teachers incorporate differentiation for their “own sanity”.

Many of the experienced teachers discussed differentiation in relation to the curriculum. Gillian suggested that as “the curriculum is differentiated” it was important that pre-service teachers learn how to implement it so that they cater to students’ needs. Sue stressed that teachers “can't be working with every child one-on-one”. She recommended that not only should pre-service teachers learn how to “differentiate the curriculum”, they should also learn to “alter assessment to cater to individual needs”. Gemma advised that pre-service teachers “learn how to look at the curriculum and make appropriate accommodations and adjustments in university”. Referring to her own initial teacher education, she said “I never did that until my Special Education degree”. Perhaps during initial teacher education greater emphasis needs to be directed on pre-service teachers recognising that students learn at different rates and achieve different outcomes. This may deepen pre-service teachers’ understanding that differentiating instruction is necessary with some tasks.

Although the majority of principals and class teachers felt it important that pre-service teachers learn how to break down the curriculum into achievable components, Robyn expressed a pragmatic view – she felt that, at this early career stage, pre-service teachers should not “necessarily” be expected to have honed such competencies. Her view reveals an acknowledgement that beginning teachers are in the process of
developing and consolidating proficiency:

Not necessarily doing it, but being able to say ‘well look, this is the literacy continuum. You’re teaching Year One class. This is where they’re expected to be. You’ve got a couple of children there who have an intellectual disability that you have to cater for. They’re not going to be at the same level as your others’. How can you break down what they have to learn so that they can learn? (Robyn, Principal)

Experienced teachers stressed that pre-service teachers require opportunities to plan lessons that include all students. They recommended that they learn to construct and deliver lessons so that they are “working on the same lesson” with different outcomes for “different children”. Numerous experienced teachers described processes to show pre-service teachers how to design lessons that include all students. Linda suggested commencing with planning one lesson; next “design three activities that go with this lesson to make the lesson suitable for the higher ability kids”, and “more accessible” for a child who is struggling or a “child with vision impairment” for instance. She remarked that while “teaching to a whole class” is “useful at the beginning of a lesson” pre-service teachers should learn how to “break kids into groups”; while Greg suggested that pre-service teachers “have to start thinking in terms of a range of strategies, or a range of divisions of ability within that one class as an automatic piece of thinking”. Reem explained that,

differentiation means making it different. Doing different things in your lessons so that you’re not doing the same thing all the time. ...OK, having small group work is differentiation, doing a think-pair-share is differentiation, having them do a research task on the internet is differentiation. (Reem, Learning and Support Teacher)

Like Tara, a beginning teacher, school counsellors and support teachers recommended that pre-service teachers be provided with templates that require them to plan for the range of learners in their classes (see Figure 6.1). School counsellors and support teachers proposed numerous approaches to improve pre-service teachers’ ability to cater to a diversity of learners. Some indicated that teachers are confused about “what differentiation is”. Reem, for example, asserted that experienced teachers are “confusing the new teachers”. She added that differentiating the curriculum “doesn’t mean that you have 30 different programs for the 30 different kids in your class”.

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These sentiments contrasted with Gillian’s who stated,

*they [pre-service teachers] may need to know that they’ll have to prepare a special program for a single child and if there’s three or four children, that can mean three or four individualised programs for those children, and that’s very intensive work.* (Gillian, Class Teacher)

Gillian appears to suggest that increasingly, beginning teachers are expected to devise and implement individual learning plans in isolation and may explain why two beginning teachers were emphatic about the significance of learning how to prepare individual learning plans. It seems there is a need to provide pre-service teachers with approaches that prepare them to teach a diversity of learners. This may make the task achievable. *Principals and class teachers,* for example, advised that pre-service teachers should be provided with opportunities to plan lessons and adapt units of work that cater to a range of student needs. Although not explicitly stated the concept of *Universal Design for Learning* emerged as a significant theme. Linda suggested that pre-service teachers engage in activities in which they “look at a plan” to see how they can modify it without having to develop “a whole new program”. She wanted pre-service teachers to understand that such an approach “does not require an enormous amount of preparation” and that catering to all levels can develop into an automatic process. Siobhan remarked that she readily adjusts her teaching, however, she acknowledged that some teachers find it difficult. Linda impressed that “differentiation is not about writing five lesson plans for the same lesson” and advised that if pre-service teachers approach teaching in this way, they will “go under, you just can’t do that”. Robyn suggested presenting tutorials to pre-service teachers that require them to plan activities for students at different levels based on “one particular area of the curriculum”. She posed questions for pre-service teachers to consider:

*How can I extend them? What can I do to help them and then you’ve got kids who aren’t ready to learn that skill? What do they need so that they can learn that skill so that you can bring them up?* (Robyn, Principal)

Siobhan suggested that when programming, teachers need to think in terms of the major concepts that they want students to grasp. She indicated that the application of Bloom’s taxonomy29 during programming would assist teachers’ to cater to the range

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29 Bloom’s Taxonomy was created by educational psychologist, Dr Benjamin Bloom, in order to promote higher order thinking, such as analysing and evaluating concepts and principles, rather than lower order thinking such as recalling information.
of learners in a class. Robyn suggested that pre-service teachers require opportunities to hone their questioning skills so that they are able to engage a range of learners by asking lower to higher order questions during the same lesson. She described how a maths game, for example, could be adapted by directing questions limited to the numbers “one to five” to a student [with learning difficulties] while higher order questions, “one to 30”, could be directed to the rest of the class. The experienced teachers explained that these strategies “benefit every other child in the classroom”.

Some experienced teachers emphasised that pre-service teachers should have a firm understanding of the Learning Cycle in readiness for teaching students with additional needs. Siobhan stressed that pre-service teachers should be aware that planning and programming follows on from assessment. She stated, “before they [beginning teachers] go in guns blazing” with “really great units of work”, teachers should conduct assessments to determine what the students “know” and what they “need to know”. Siobhan reiterated, “there’s no point programming, planning, developing a unit of work for children if you don’t know what they can and can’t do…”.

Principals and class teachers did not delineate between regular class teaching and teaching students with additional needs. Rather they regarded teaching students with additional needs, as an integral part of contemporary teaching and associated this with effective pedagogy:

I’ve impressed upon young teachers that the things that are good for children who are included with disability are also good for the rest of the class. So that structured organised classroom which is good for an (autistic) child [with autism], is also good for every other child in the classroom. (Leonie, Principal)

Notably, this echoes the words of one beginning teacher who discussed differentiation in conjunction with the construct of Universal Design for Learning. Mel recalled learning about Universal Design for Learning and adjustments and accommodations during the inclusive unit and remarked on the importance of these strategies to her teaching. “I’m mindful of making them [adjustments and accommodations] for the entire class so they benefit the children who need it”.

Principals and class teachers contended that pre-service teachers must learn certain

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30Assessing, planning, programming, implementing and evaluating form the basis of the teaching and learning cycle that supports students to achieve syllabus outcomes.
basic strategies in order to effectively include students with additional needs. They advised that pre-service teachers learn how to: establish routines for the benefit of students with autism spectrum disorder; use visual stimulus (e.g., visual timetables, visual aids); and use Social Stories\textsuperscript{31}. Robyn explained how the use of visual timetables supports the whole class; they support the learning of students with additional needs, keep the “teacher on track” and provide routine which “definitely makes a huge difference for classroom management”. Displaying a visual timetable for a student who has anxiety or autism spectrum disorder in order to see what is “expected today” is “really, really helpful for all children, regardless of whether they’re identified with a disability or not”. Leonie explained how the use of Social Stories for a student who is behaving in socially inappropriate ways, may benefit “five other children in the class”. In reference to students with challenging behaviours and intellectual disability, Reem, a support teacher, recommended setting up scenarios in which pre-service teachers are required to devise teaching strategies based on research. She added, “actually get them to practise that with each other” as a follow-up activity, “look at how you can scaffold those activities, how you can break them down, how you can work more closely with students, maybe setting them up with buddies”.

Experienced teachers and one beginning teacher stressed that pre-service teachers require opportunities to learn how to plan lessons using the curriculum together with the literacy and numeracy continuum (K – 10 Planning Literacy and Numeracy [PLAN] software\textsuperscript{32}). They commended the concept of the learning continuum and affirmed that its implementation is beneficial for students with additional needs because teachers are able to “see their [students’] growth”. Mel, a beginning teacher considered it “vital” that pre-service teachers learn to plan and differentiate lessons in relation to the learning continuum. “To do those lesson plans in line with differentiating (within), on that continuum”. Robyn indicated that these initiatives provide clear guidelines about “the next step” that students should be working towards. She argued that pre-service teachers should be conversant with the learning continuum in readiness to cater to the full range of student abilities. While acknowledging that the

\textsuperscript{31} A Social Story is a written or visual story that provides students with disabilities with a set of instructions on ways to interact in social contexts – devised by Carol Gray originally for students with autism spectrum disorder.

\textsuperscript{32} PLAN software is based on the Literacy and Numeracy continuum K – 10. It provides Literacy and Numeracy profiles for students and enables teachers to plan the next stages of learning.
learning continuum and K-10 PLAN are NSW Department of Education initiatives, the experienced teachers stressed their importance given the implementation of new Australian Curriculum. Siobhan reiterated,

*I think they were probably the best things that have come out in the department which started with the Best Start, with the learning continuum which has now K to 6 and I think it’s going K – 10.* (Siobhan, Assistant Principal)

These teachers’ insights suggest a disconnection between the learning that occurs at university and what happens in schools. The “take-home” message here is the underlying belief that pre-service teachers need to engage in learning experiences that are relevant to their future carers.

**Managing and using resources.** The findings suggest that pre-service teachers require opportunities to

- develop a level of proficiency with technology which teachers associated with social justice; and
- learn how to select, adapt and utilise resources to cater to a range of diverse learners.

**Beginning teachers.** There was a sense among all of the beginning teachers that their initial teacher education did not provide them with a strong foundation in selecting, accessing or utilising resources. Some beginning teachers indicated that they needed to learn how to use interactive whiteboards. Debra lamented, “I don’t know how to use those whiteboards and I don’t use them and I think that is sad…no-one in the whole two years ever taught us”. Beginning teachers asserted that pre-service teachers require learning experiences that extend their knowledge and understanding of resources available. Tara, for example, suggested that pre-service teachers learn how to select and use suitable visual aids. Some beginning teachers reported that pre-service teachers were purchasing expensive teaching aids because they did not know how to select appropriate resources. Debra indicated, “A lot of kids [beginning teachers] are buying things that are expensive but equally you can just use things that are at home”. They articulated a desire to have learned how to “substitute or make their own resources”.

**Experienced teachers.** Experienced teachers agreed with beginning teachers about the need for pre-service teachers to develop competency with technology, and in
particular with interactive whiteboards, in order that students with additional needs have access to learning. Reem, who also works as a university tutor recommended that pre-service teachers undertake a unit dedicated to technology:

_A course where we’re training them how to access the technology, how to use the smart software, how to use the interactive whiteboards to be able to create engaging tasks for kids._ (Reem, Learning and Support Teacher)

Experienced teachers expressed concerns about graduate teachers’ lack of proficiency with technology (e.g., interactive whiteboard) which they regarded as a social justice issue. Given that most of the experienced teachers were over the age of 50 this finding is notable. It may reflect their roles as leaders and support teachers who are ultimately responsible for successfully implementing inclusion in schools. They explained how technology provides access to information which previously was unavailable to some students. Greg, for example, described how interactive whiteboard provides “kids with vision difficulties” immediate access to enlarged print. Linda remarked that interactive whiteboards are “actually quite tricky” and recommended that pre-service teachers undergo a “general introduction …, how you turn them on, what you would use them for, how to use them beyond the whiteboard”. Linda’s comment “how to use them beyond the whiteboard” suggests that she believes that interactive whiteboards have the potential to be used in more innovative ways. School counsellors and support teachers suggested that pre-service teachers learn to use programs and applications that prepare them for contemporary inclusive teaching, so that they are not “behind the eight ball”, when they go into schools:

_When they come out of a university degree … they should … know how to use an interactive whiteboard and iPad… and whatever other technologies are introduced between now and then._ (Gemma, Itinerant Support Teacher – Hearing)

Comments such as, “behind the eight ball” and “whatever other technologies are introduced between now and then” imply that initial teacher education is not providing pre-service teachers with cutting edge learning experiences that prepare them to be innovative with the use of technology. It seems that experts in Information and Communication Technologies in education and in particular adaptive and assistive technology should be asked to deliver content to pre-service teachers. Further, a view emerged that some graduates of initial teacher education programs have not acquired the requisite competencies to work in contemporary class settings. It seems that pre-service teachers require planned opportunities to explore programs and applications
that augment their competencies for including students with additional needs. In contrast, Gillian, a class teacher, felt that many younger teachers are competent with technology and as such provide “a very rich learning experience” for students but lamented that from her observations many were not “good at using people in the classroom”. This view supports earlier suggestions about the need for pre-service teachers to develop collaborative skills to enable them to work with support personnel to improve outcomes for students with additional needs.

*Experienced teachers* suggested that pre-service teachers become familiar with important sites and documents such as the Board of Studies site and curriculum links for programming purposes. Reem was concerned that “some teachers don’t even know how to use the Board of Studies website”. In commending the NSW Department of Education website, Linda implied that pre-service teachers should be aware of the array of resources that are available to enhance inclusive teaching. She remarked, “The DEC [Department of Education and Communities] website is amazing. I mean there’s just so much on there”.

Some *principals and class teachers* felt it important that pre-service teachers show initiative and develop the attributes of flexibility and resilience. They indicated that beginning teachers with these attributes are more likely to seek solutions to matters relating to sourcing resources and teaching in general. Leonie suggested that pre-service teachers engage in experiential learning by “poking your [their] nose in resource rooms” – and joked, “they still exist!” She spoke about the importance of pre-service teachers discovering “what’s available online” and proffered “it’s about asking lots of questions, it’s about networking, it’s about finding out from other teachers, other trainee teachers what resources they’ve found”. She suggested, “there’s probably a lot more potential to share than there was [previously] because of the internet and computers today”. Leonie acknowledged the challenges for pre-service teachers, given that they are not based in schools, however, she emphasised that “they need to know the scope of resources” available.

**Learning Experiences to Improve Preparedness for Inclusive Teaching**

Beginning and experienced teachers felt that stronger connections should exist between
• universities and schools; and
• professional practice and university learning.

**Beginning teachers.** Sharing their shock of realising the high prevalence of students with additional needs in their classes, led beginning teachers to offer unsolicited suggestions about how to make professional practice more relevant to their needs. Tara and Mel complained that their professional practice did not equip them for the challenges that they currently face in their endeavours to include students with additional needs. Beginning teachers recommended that learning at university should be integrated to a greater extent with school visits to enhance pre-service teachers’ preparedness to implement inclusion. Mel commented “as you learn about something you do it”; she recalled “at the time I remember thinking, I wish I could just do this now”. Sam recommended that professional practice should be undertaken in more difficult to staff schools and commented that some universities adopt this approach. A number of beginning teachers recommended extending professional practice, because in their opinion it was “a bit on the light side”. They asserted that more time in schools during their initial teacher education program would have been beneficial to their development as teachers.

Numerous beginning teachers suggested that pre-service teachers would benefit from observing skilled role models implement inclusive practices. Stewart stated “it would be very helpful … to observe a range of different classrooms where there was a range of [students with] different special needs” enabling pre-service teachers to observe inclusion “working well”. He stated, “so you know that it’s not effective to try to talk over half-a-dozen kids … and you can see that if you get everybody quiet then you can talk quietly and everyone’s listening and it’s just calmer”.

Similar suggestions were made by some experienced teachers. Sue suggested that pre-service teachers should “observe professional skilled teachers operating” and added “if you [the academic] were to model a reading lesson or model a numeracy lesson”, so that pre-service teachers see what “explicit teaching looks like”. This suggestion was reinforced by Reem’s comment, “They [pre-service teachers] need to be shown how to do it”. These recommendations assume that academics are able to model such competencies and lead to a number of questions. Is modelling of such competencies lacking in initial teacher education? Is it the role of teacher educators to model such
skills? Do academics possess the necessary competencies to model skills? If not, how do initial teacher education programs bridge this gap? What are the requisite skills?

Tara felt that pre-service teachers should undertake mandatory professional practice on a support class or a school for specific purposes (special school for students with disabilities and high support needs). She asserted that this would provide pre-service teachers with opportunities to develop requisite skills for inclusive teaching. She added:

> It [enrolment of students with disabilities and/or additional needs] is so prevalent in mainstream now... not everyone would have that experience. I didn’t really have that exposure ...[during professional practice]. (Tara, Beginning Teacher)

It is possible, however, that undertaking professional practice on special education classes will continue the normalisation and promotion of segregated education for students with disability and additional needs.

Both beginning and experienced teachers recommended that pre-service teachers would benefit from observing scenarios that emulate typical situations that arise in classrooms: “Actual real life situations”, “the sorts of things you are likely to encounter”. Stewart suggested presenting pre-service teachers with “what if” scenarios. He advised that if pre-service teachers analyse such scenarios “when it really happens it’s not completely new”. Reem (learning and support teacher, university tutor) suggested that pre-service teachers engage in research-based projects related to inclusive education and students with disability. She recommended learning experiences that involve collecting data about a practice or case, implementing an intervention and analysing the effectiveness of that practice. She, like many of the beginning teachers, suggested linking such learning experiences to professional practice.

Like the beginning teachers, principals and class teachers suggested that pre-service teachers visit schools with students with additional needs to enable them to experience “our reality”. Linda commented, “Every school has got kids with some disability, it’s not like you would have to pick a special school”. These teachers indicated concerns about a lack of connectedness between schools and initial teacher education. Robyn suggested that pre-service teachers,

> come out to schools and see what’s happening in classrooms and talk(ing) to
the teachers about what learning needs kids have and realise that a mainstream classroom has kids with disabilities. (Robyn, Principal)

Aspects of these claims warrant examination. Implicit in Robyn’s statement, is a view that pre-service teachers are neither aware of students with additional needs nor have they undertaken professional practice in schools with high enrolments of students with additional needs. It may be that stronger emphasis needs to be placed on enhancing pre-service teachers’ awareness of the prevalence of students with additional needs by presenting statistical information about enrolment figures and by connecting professional practice to assessment. Reem’s suggestion that pre-service teachers engage in research-based projects related to inclusive education and students with disability while on professional practice may heighten their awareness of students with additional needs in regular classes.

A number of school counsellors and support teachers indicated that it was their special education and counselling training and not their initial teacher education that impacted positively on their approach to including students with additional needs. Reem posed a rhetorical question about her postgraduate special education training: “Why did I not do this course while I was doing my pre-service [training]?” Certainly, studying subjects in greater depth is the realm of postgraduate courses. However, general graduates of initial teacher education commence work as class teachers in inclusive classrooms – for which they need to be well-prepared. It is critical, therefore, that pre-service teachers are immersed in learning experiences that promote positive attitudes about including students with additional needs and advance skill acquisition to enable them to commence teaching feeling competent and confident. In addition, perhaps the role of school counsellors and support teachers could be broadened so that it encompasses providing support to beginning teachers with inclusive education.

Some beginning and experienced teachers suggested the establishment of support networks instigated by universities for graduates. Reem proposed that, “universities should be responsible for their students for at least a term or six months after or a year”. There may be beneficial outcomes in establishing connections with graduates. For example, there appears to be a space for establishing internet sites that support inclusive education. Notwithstanding, beginning teachers may wish to participate in Alumni and engage in social media networking which are offered by some universities and education departments.
Experienced teachers. The beginning teachers’ views were supported by the experienced teachers. The experienced teachers, however, placed greater emphasis on the importance of consolidating fundamental teaching skills. The key message was that inclusive teaching is synonymous with excellent pedagogy. To illustrate this, Reem, a learning and support teacher who works directly in regular classes supporting teachers, and students with additional needs, described some of the difficulties beginning teachers have with basic classroom practices. She explained that they have difficulty setting up “classroom systems”, and “creating [classroom] plans”. She regarded these as pre-requisites to managing contemporary inclusive classes effectively.

The experienced teachers recommended a range of learning experiences that they felt would enhance pre-service teachers’ preparedness for inclusive teaching. These included deconstructing “referral forms”, examining student profiles in relation to their learning needs and engaging in situational role-plays such as learning support team meetings. Notably, pre-service teachers participated in the latter two suggestions in the inclusive unit of this study.

Although a number of experienced teachers recognised advantages of online learning they nonetheless expressed concerns about its use. Sue regarded online learning as an efficient form of delivery, however, she cautioned that the learning experiences need to be engaging and relevant. Gemma offered insights about online inclusion courses introduced to NSW Department of Education teachers as professional development from Britain (Clench & Smyth King, 2014). She described these as “reasonably good”, but suggested they need “Australianising”; implying that the courses lack Australian content. These teachers’ concerns highlight the need to ensure that inclusive content is both relevant and connected to the contexts in which they are likely to work.

Issues about Preparing Pre-service Teachers for Inclusive Teaching and Factors Impinging on Inclusive Education

Beginning and experienced teachers identified other factors that impact teacher preparedness and impinge on the implementation of inclusive education.

Alternative approaches to a one semester inclusive unit. Some beginning and experienced teachers proposed alternative approaches to preparing pre-service teachers for inclusive teaching other than a one semester inclusive unit. Their
proposals were unsolicited. Some recommended that the inclusive unit should be presented over two semesters; many felt that one semester was insufficient to cover the content. Tara asserted that,

*to cover the depth that you need, cause it’s such a huge area in mainstream now, it’s not a ‘Oh maybe you might come across someone that you need to include and differentiate for’, it’s definitely you will... there’s usually someone undiagnosed ...so you’ve got to go through the process of saying ‘You know what, I think we need to refer your child, What’s the process?’ – and that takes more than what you can teach us in eight weeks... it certainly didn’t equip me for the skill set that I needed.* (Tara, Beginning Teacher)

Debra argued that to cover inclusion “in six months, well you only have, … ten weeks – is ludicrous”. She recalled that the unit covered the topics: students with special needs; behaviour modification; empathy, and added that it is “about everyone”. Mel felt that a one semester mandatory inclusive unit was necessary to cover topics such as legislation but suggested that inclusive content should be incorporated into other units; “it is nearly like you [the researcher/lecturer] need to go and teach a bit of inclusion in every other subject, like, in the KLAs [Key Learning Area]33 … the everyday practicalities of inclusion in every subject”.

Their views demonstrate the importance these beginning teachers place on the inclusive unit they had undertaken. Firstly, Debra’s comments, “well you only have, … ten weeks” and it is “about everyone” shows that she feels that the inclusive unit she had undertaken was a subject that encompassed all students. Mel’s suggestion that the researcher “go and teach a bit of inclusion in every other subject”, implies that she feels that curriculum units should incorporate inclusive pedagogical approaches.

Leonie, a regional school principal, agreed with the beginning teachers about the lack of time available for pre-service teachers to learn about disability and inclusive education:

*One semester is not going to even give a tip of the iceberg of what special needs are; and because we are getting more and more and more children diagnosed with special needs, learning difficulties, etcetera, we’re in a position where it is more important than ever for teachers to come into the teaching practice knowing as much as they can about that.* (Leonie, Principal)

Leonie suggested that the subject of inclusive education requires more than a one semester unit to adequately prepare pre-service teachers for their role:

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33 The term Key Learning Area has been replaced with the term Curriculum Area (e.g., Mathematics).
I would say at least a minimum of a year, possibly even longer, is needed for special education learning disabilities and coping with the whole gamut of students from those with gifted and talented abilities, right through to children with serious special needs with regard to intellectual disability, or the high levels of physical disability, and behaviour problems. (Leonie, Principal)

**Increased numbers of students with additional needs in regular classes.**

Principals and class teachers discussed the impact of increasing enrolments over the last 15 years of students with additional needs, “particularly on the spectrum [autism spectrum]; the other big one was language disabilities”. They also discussed the increasing numbers of diagnosed and undiagnosed students with additional needs in regular classes.

Gillian outlined some of the issues facing staff and students at her previous school:

*The schools that I was in with high NESB[non-English speaking background], 82 to 90 percent NESB, there are a lot of high level needs there, particularly the ones that came from refugee backgrounds.* (Gillian, Class Teacher)

Gillian noted that some schools “seem to be getting more of these children [students with additional needs]” and posited a correlation between the high prevalence of students with additional needs and “affordable housing”. Gillian explained that some of the children have “illiterate parents”:

*They weren’t even literate in another language, and even if they were, one of the languages there was Assyrian. There are no books in Assyrian. So there’s huge deficits in what they come to school with.* (Gillian, Class Teacher)

Gillian stated,

*I think that they [pre-service teachers] need to know that with children on the spectrum particularly, there will be a lot [of students] … undiagnosed or there will be some very challenging children in the classroom, and you’ve got to deal with it. …the inclusivity of it all, it will just get bigger and bigger as there are fewer support units.* (Gillian, Class Teacher)

Gillian’s prediction that inclusive education will “get bigger and bigger” support findings that show an increase in enrolments of students with additional needs in regular classes (Graham & Sweller, 2011). Taken together, this evidence underscores the importance of building the capacity of pre-service teachers for succeeding in their roles as inclusive teachers.

**Relevant experience and connectedness of academics.** A number of principals and class teachers raised concerns about the relevant experience of academics who teach inclusive education at university. Linda was critical of the
mandatory inclusive unit that she undertook during her initial teacher education program because in her view it prepared teachers “for classrooms of ten [students], rather than the classroom of 30”. Linda explained, “it was all about tracking what every child, or what the children were doing in ten minute lots, and so it was impossible to do”. This is a concerning depiction and reveals that the learning that Linda undertook had a special education rather than an inclusive focus.

Some experienced teachers expressed concerns about academics’ connectedness with schools. Gillian enquired, “And do you [unit coordinator and researcher] go out and visit the prac students?” She asserted, “The course people in your position need to get in schools and see what’s happening” and added, “may be you [academics] need to get into schools and send out people who are fit to teach”. Gillian’s asserts that academics are out of touch with what is happening in schools and are failing to adequately prepare pre-service teachers for their future roles. Her sentiment appears to support comments made earlier by beginning and experienced teachers about a lack of connectedness between initial teacher education and schools. Perhaps academics are not fully cognisant of the implications of inclusive education on schools. Although the role of an academic is diverse and not necessarily understood by teachers, these criticisms whether real or perceived need to be heeded. One school principal revealed that she had discussed initiatives in her school with personnel from universities and expressed disappointment that the dialogue did not continue. This anecdote appears to support other findings of this study that indicate a need to enhance relationships between school systems and universities.

**Concerns about pre-service teachers’ commitment.** Some beginning and experienced teachers expressed concerns about the selection process of candidates entering teaching degrees. In particular, they were concerned about the attitudes of some pre-service and experienced teachers towards students with additional needs. Beth, a principal recommended more rigorous screening “for the appropriate people in front of these children [with additional needs]”; candidates who are “self-motivated and active learners”. She argued, “We should be like Finland – the best teachers – intellect … and applied professional standards”. In reference to teaching students with additional needs, Debra suggested that candidates entering teaching courses should be “hand-picked”. Not only do these statements underscore concerns about the suitability
of some candidates entering initial teacher education, they also highlight the importance of designing learning experiences that address negative attitudes about inclusive education.

Beginning teachers expressed concerns about pre-service teachers’ level of engagement with their initial teacher education program. Debra complained about the “fast-tracking” that some pre-service teachers undertake and reported that they neither develop the knowledge required to understand inclusive education nor acquire the skills required to implement inclusive practices. “They [pre-service teachers] are simply swapping information…to pass the things [assessments] but really you’re [pre-service teachers] not going to know anything”. Similarly, Tara reported, “they [pre-service teachers] don’t go to lectures, they don’t go to tutorials, they barely skim through assignments, they copy assignments, if they’re in group work they don’t do the group work, everybody pulls them along”. These accounts suggest that the impact of such practices on the preparedness of pre-service teachers to fulfil their roles necessitate investigation. Based on these reports, it seems that higher standards are required regarding matters such as attendance at tutorials and lectures or perhaps these issues are related to the suitability of candidates entering initial teacher education programs. Nevertheless, these beginning teachers concerns about some pre-service teachers’ commitment suggest they are guided by moral compasses, necessary for implementing inclusive education.

School context and inclusive education. Beginning and experienced teachers discussed the preparedness of pre-service teachers for inclusive education in relation to their school’s context. In particular, the socio-economic status of the school emerged as a recurrent theme. Beginning and experienced teachers explained how the demographic make-up of their schools added to the complexity of implementing inclusive approaches.

The three full-time beginning teachers worked in schools of social disadvantage. They identified a correlation between a school’s social disadvantage and high prevalence of students with additional needs. Mel stated, “in this school every single class has at least one student with very high needs”. Tara and Sam referred to difficulties associated with working in schools that are “disadvantaged”. Tara stated, “not all classes are like this, [they are] not as extreme as here”. Sam commented that she would
have benefitted from receiving advice about teaching in schools with students from “disadvantaged backgrounds”. She stated, “I’ve got no idea how to actually put that [teaching in disadvantaged contexts] into practice at a school such as this”. Sam felt that while at university she learnt about the “perfect way to deal” with difficult situations but indicated that these approaches were not realistic. She explained that,

\textit{this school has a lot of behavioural issues, it has children that come from really displaced families so they not only bring their baggage with them, they bring their family’s baggage as well so trying to deal with that and ... trying to deal with the parents. When you’ve got ... kids come into school and talking about their parents being in gaol ... you don’t know how to deal with that, and so I think for me it would have been really good just to get some advice on how to talk to parents and schools from really disadvantaged backgrounds.} (Sam, Beginning Teacher)

The principals and class teachers described the demographic nature of their schools:

\textit{There’s now 17 percent of enrolment of Aboriginal or Torres Strait Islander children; and nearly 50 percent, 49.8 percent of students from backgrounds other than English. Now they’re not disabilities, but they carry with them a tweaking of curriculum that goes beyond what you supposedly just read in the excellent documents for the Syllabuses that we get} (Beth, Principal).

Gillian described a class with,

\textit{three or four children that need physical lifting and the other little one [with autism spectrum disorder] who rolls on the floor and is ignored half of the day because they can’t let her interfere with the learning of the other 19 children in the class.} (Gillian, Class Teacher)

Tara, a beginning teacher explained that in her class,

\textit{there’s – one girl with autism, she will just happily sit in the corner and play all day. If the aide didn’t come in that was allocated to her luckily to assist her with that hour a day, if that, she would do nothing and I just cannot, no matter how much encouragement I provide, appropriate differentiated resources, she just chooses not to do it and I cannot physically sit down with her during the class day and do the work with her.} (Tara, Beginning Teacher)

These anecdotes highlight the layers of complexity associated with teacher preparedness for inclusive teaching and show the compounding effects of social disadvantage. In addition, insights such as “the little one who rolls on the floor and is ignored half of the day” should raise concerns about how inclusive education is implemented.

Gillian explained that although the teachers at her school were “dedicated”, the
students performed poorly in basic skills and NAPLAN\textsuperscript{34} tests. She described how many students do not have an identified disability yet they have additional needs related to circumstances. These teachers’ accounts suggest that pre-service teachers would benefit from understanding the correlation between the high prevalence of students with additional needs attending schools in locations of social disadvantage. Further, pre-service teachers require exposure to approaches that will prepare them for the complexities of their future roles.

Siobhan described the multicultural nature of her school and indicated that its location in a high socio-economic status area resulted in fewer concerns about discipline. She explained that the majority of parents view education as “so valid and so important”:

\begin{quotation}
We have almost 700 students, we have an OC class, we have a very multicultural school – 98% of the children are non-English speaking. The parents, that is their ultimate goal is to get their child in the OC class.\textsuperscript{(Siobhan, Assistant Principal)}
\end{quotation}

She expanded,

\begin{quotation}
so it’s quite interesting that the children that have the additional needs in our school are mainly our Anglo Saxon population... And our small Polynesian population are the children with additional needs. And so that sort of tells you that it’s definitely culture has a lot to do with how we... affect the way which teachers here teach. \textsuperscript{(Siobhan, Assistant Principal)}
\end{quotation}

Robyn described the demographics of her school:

\begin{quotation}
Well at the school where I am presently, every class would have at least three to five students who would be on the autism spectrum. They would have children with intellectual disability, children who have glasses or hearing issues, so every class would have at least half of the students with some form of disability. Not always affecting their learning, but they do have to cater for those students within their classrooms. \textsuperscript{(Robyn, Principal)}
\end{quotation}

These insights highlight the complex nature of schools and provide glimpses of teachers’ experiences. Leonie explained how the location of her school, in a regional area is impacted by inclusive education:

\begin{quotation}
So I guess, yes, in country schools you do tend to get more children with more severe needs in schools, which creates more angst and anxiety on staff, and other students as well, because it has impacted on other students in the school who were terrified that something would go wrong with a particular child. Yeah, so it does, it definitely does have a major impact on schools. \textsuperscript{(Leonie, Principal)}
\end{quotation}

\textsuperscript{34}The National Assessment Program – Literacy and Numeracy (NAPLAN) is an annual national assessment for all students in Years 3, 5, 7 and 9.
Leonie explained that “pre-service teachers come in with limited knowledge because the disabilities area is so broad, there are so many types of disabilities, so many cross matches of disabilities, so many... it’s so complex”. Leonie recalled how “30 years ago”, she first heard inclusion mooted by the Department of Education. She recalled her reaction:

\[\text{My goodness, how am I ever going to cope if these children are in a mainstream classroom with me, with 30 children, how could I possibly cope when I could see in the setting they needed such intensive support on their own in that special setting.} \]\ (Leonie, Principal)

Her recollection captures the evolution of inclusive education and amplifies the importance of building pre-service teachers’ capacity to implement inclusive approaches. The findings suggest that a school’s context has implications for the implementation of inclusive education and underscores the importance of providing pre-service teachers with programs that prepare them to work in a variety of school contexts.

**Concerns about funding inclusion.** Some principals and class teachers raised concerns about a lack of government funding to support inclusive education. Although this issue is not directly related to the preparation of pre-service teachers, it may impinge on beginning teachers’ capacity to implement inclusive education effectively:

\[\text{There are very limited resources available, and schools desperately need, public schools desperately need more funding to support the number of students. We are carrying the bulk of the load in New South Wales, vastly more than in private schools, and yet we are still fighting for funds to be able to adequately support those children.} \]\ (Leonie, Principal)

Leonie reported that some non-government schools are not complying with legislation. She recounted conversations with parents, who were informed by non-government school principals that, “we do not have the resources to enrol the child”. Leonie described feeling “furious, absolutely furious” when the parents of a child with a disability, who were teachers in a local non-government school were advised to seek enrolment in the public system.

Although funding is not directly related to preparing pre-service teachers for inclusive teaching, exploring such topics during initial teacher education is likely to provide pre-service teachers with a broader perspective of issues associated with inclusive education. Leonie’s account highlights a range of issues including availability of resources, moral and legal obligations and social justice all of which are germane to
preparing pre-service teachers to teach in contemporary educational settings. In addition, providing appropriate funding to support beginning teachers is likely to affect teacher resilience as well as teacher retention rates. Addressing topical issues while at university provides a platform for debate, discussion and reflection which ultimately requires pre-service teachers to engage with content at a deeper and more analytical level.

The issues raised connote the evolving nature of schools and suggest that multiple factors impact the success of inclusive education (e.g., funding issues, social disadvantage). It is the responsibility of initial teacher education providers to ensure that pre-service teachers are provided with strong foundations in inclusive pedagogy, such as those identified and discussed in this chapter to ensure that pre-service teachers are prepared for their roles as inclusive teachers.

**Applying productive pedagogies to prepare pre-service teachers for inclusion.** During analysis of the interview data, it became apparent that many of the suggested learning experiences mapped onto the dimensions and elements associated with *Productive Pedagogies* (Hayes et al, 2006). In their research, Hayes and colleagues identified four dimensions (intellectual quality, connectedness, supportive classroom environments and working with and valuing difference); each comprising a number of elements. This framework was useful as *Productive Pedagogies* and inclusive education share fundamental values of fairness and equity (Allan, 2003; Lingard et al., 2003).

The pedagogy delivered in the inclusive unit together with the findings from the interviews are presented in Appendix Y. Rather than discussing all of the suggested learning experiences, this overview shows the dimensions and the elements that correlate with the learning experiences. These will be considered further in the Discussion chapter.

**Overview of Findings**

The majority of beginning and experienced teachers discussed challenges associated with including students with additional needs. Their views, encapsulated by one comment “the fact that I wasn’t prepared well enough”, suggest that the beginning and experienced teachers interviewed, felt that pre-service teachers are not adequately
prepared for their role as contemporary inclusive teachers.

**Fostering positive attitudes.** The findings from the interviews suggest that learning experiences designed to personalise the stories of individuals with additional needs are likely to have a positive impact on pre-service teachers’ attitudes about inclusive education. Beginning and experienced teachers suggested that pre-service teachers engage in learning experiences designed to raise their awareness of the disabling practice of defining students by their disabilities.

During the interviews it became apparent that “words matter”. Beginning and experienced teachers discussed the association between the language used by teachers in reference to students with additional needs and attitudes. Some teachers expressed concerns about the undermining impact of what Foucault (1977) describes as a mode of discourse that reflects a way of thinking (Fforde, Bamblett, Lovett, Gorringe, & Fogarty, 2013). Some of the teachers indicated that pre-service teachers require opportunities to develop consciousness of their own preconceptions. They felt it important that pre-service teachers consider the negative impact of deficit discourse (using language in a way that reflects a negative way of thinking about a group of people) which can impede the right of people with disabilities to acquire agency and independence. In the course of considering how to foster positive views about inclusive education, experienced teachers suggested that pre-service teachers require learning experiences that raise awareness of the impact of factors such as self-fulfilling prophecies, teacher expectations and labelling.

The findings suggest that attitudinal change towards inclusive education may occur if pre-service teachers engage in learning that requires them to consider the rationale for introducing disability legislation. It seems important that during initial teacher education pre-service teachers develop an understanding of the implications of Australian legislation as well as the ethics underpinning inclusive education. Issues emerged related to the rights of the child versus some teachers’ views of their role. Given that legislation exists to support inclusive education, it is particularly important that pre-service teachers develop a firm understanding that a class teacher is responsible for the learning of all the students in their class.

It is of interest that a number of beginning and experienced teachers recommended that
special placements be sought for some students. Importantly, this practice runs counter to inclusive education philosophy. The teachers’ comments suggest reservations about including all students with additional needs in regular settings and imply an acceptance of the practice of placing some students into segregated settings. The teachers may simply believe that support classes are preferable educational settings for some students. Alternatively, their views may stem from the challenges they experience when including students with high support needs. Clearly, there is a need to provide beginning teachers with greater support to implement inclusive education. There may also be a need to scrutinise and revise school policy.

Teachers provided insights about the culturally diverse nature of their schools. Some experienced teachers spoke about the importance of pre-service teachers adopting sensitive approaches. Some responses were a reminder that Australia has a culturally diverse population and that disability produces different responses from individuals and from some demographic groups. Teachers raised concerns that highlighted the interconnectedness of inclusion and diversity. There may be a need for academics to work collaboratively in order to develop a shared vision of inclusive education.

**Building required knowledge.** Beginning and experienced teachers suggested that pre-service teachers would benefit from learning about how specific areas of disability may impact some students’ learning. For example, pre-service teachers are likely to benefit from understanding that the implications for students with profound pre-lingual hearing impairment are very different from the implications of autism spectrum disorder. Notwithstanding this, the findings also highlight the importance of ensuring that pre-service teachers are aware of the detrimental effects of labelling and stereotyping.

In order to monitor the progress of all students, teachers suggested that greater emphasis be devoted to examining syllabus and policy documents and the learning continuum during initial teacher training.

**Acquiring inclusive skills.** The need for pre-service teachers to acquire a range of skills was voiced by both beginning and experienced teachers. Together with the recognition that inclusive education has prompted changes to school structures (Florian & Linklater; 2010; Florian, Young, & Rouse, 2010; Graham & Jahnukainen, 2011),
these findings suggest that the delivery of inclusive content and pedagogy in initial teacher education needs review. Perhaps an examination of which skills require prioritising and how best to impart such skills is required.

A recurring theme was the importance that beginning teachers placed on practical aspects of teaching, “the actual take-home, how do I manage it, how do I actually do it in the classroom?” Given the increasing enrolments of students with challenging behaviours in regular classes, it may be necessary to increase the effort to bridge the gap between theory and practice during initial teacher education. In particular, by presenting learning experiences that equip pre-service teachers with skills and practical approaches, as demanded by the evolving nature of schools.

Although the five beginning teachers described the influence of the practical components of the inclusive unit they undertook the previous year, they expressed disappointment with aspects of their overall initial teacher education. Other studies (e.g., Forlin & Chambers, 2011; Kurth & Foley, 2014; Parliament of NSW, 2010; Teacher Education Ministerial Advisory Group, 2014; Sharma & Sockal, 2015) have also found that teachers are critical of their initial teacher preparation. Notably, the quantitative findings of this study show that pre-service teachers reported feeling well-prepared for their role as inclusive teachers after undertaking the inclusive unit. It is possible that the beginning teachers’ negative responses were related to the unexpected challenges they encountered on entering the teaching profession. The findings, nonetheless, demonstrate the importance of investigating approaches that teachers feel would be beneficial to their practice. It seems reasonable to suggest that the cluster of practices developed for this inclusive unit had a positive effect on the preparedness of the pre-service teachers who undertook it. It may be that the cluster of practices extrapolated from analysing the qualitative data could be used to inform policy about the delivery of content for preparing pre-service teachers for inclusive teaching.

The qualitative findings added the valuable insights of teachers who currently work in schools. Thematic analysis of beginning and experienced teacher interview data identified and described learning experiences to prepare pre-service teachers for inclusive education in the areas of attitude, knowledge and skills. In particular, the findings suggest that pre-service teachers require learning experiences that provide them with a repertoire of skills to commence teaching in contemporary classes.
At interview, teachers recommended learning experiences that are conducive to creating positive classroom climates and which do not focus on traditional approaches to managing behaviours of students. The findings also show that pre-service teachers require learning experiences that prepare them to manage a range of probable and challenging scenarios that occur in schools. Teachers indicated that some students with additional needs affect the class dynamic, making it imperative that pre-service teachers develop a level of proficiency to enable them to manage inclusive classes effectively.

In addition, the findings demonstrate the importance of pre-service teachers acquiring knowledge about various support roles and developing skills to work effectively with a range of people. These findings align with the notion that the success of inclusive education is associated with effective collaboration between stakeholders (Loreman, 2007; McKenzie, 2009).

Beginning and experienced teachers reported that pre-service teachers would benefit from engaging in learning experiences that improve their ability to differentiate instruction, so that they are able to cater to a range of learners. Further, they proposed various approaches to show pre-service teachers how to design lessons that are inclusive of all students.

Given that beginning teachers are at the interface between traditional approaches and contemporary practices that incorporate Information and Communication Technologies, it is crucial that pre-service teachers engage in learning experiences that prepare them to use technology competently to ensure the provision of equity in contemporary classes. Notably, the experienced teachers discussed inclusion of students with additional needs through the lens of contemporary practice rather than that of special education; most did not discuss using specialised resources for students with additional needs. The key message was that inclusive teaching is synonymous with excellent pedagogy.

The findings revealed that beginning teachers are increasingly expected to devise and implement individual learning plans in isolation – a task that should be conducted collaboratively and led by experienced teachers. Such expectations may cause beginning teachers to feel daunted by inclusive education. There appears to be a need
to devise approaches that makes implementing inclusive education more achievable for teachers.

Most of the beginning and experienced teachers reflected on how to improve professional practice – these insights were unsolicited. Some felt that pre-service teachers would benefit from undertaking professional practice on special education classes. However, this is likely to advance a segregated approach to education. Adopting approaches such as linking outcomes and assessment tasks to professional practice is more likely to result in a deeper understanding of inclusive education.

Overall, the findings indicate the importance of ensuring that inclusive content is engaging, relevant and connected to school contexts. Beginning and experienced teachers proposed an eclectic “cluster of practices” for preparing pre-service teachers for inclusive education.

**Summary**

Beginning teachers shared their perspectives on their learning during initial teacher education, in the light of having recently commenced their teaching career. School counsellors and support teachers often provide support to class teachers through consultation and by working in classes alongside class teachers; they shared insights based on their expertise, experience and observations. Teachers comprising principals, assistant principals and class teachers shared their perspectives of directly implementing inclusive education. Further, principals provided comprehensive understandings on how to improve the delivery of content and pedagogy to prepare pre-service teachers for inclusive education.

The analysis of the interview data provided a rich picture of issues associated with inclusive education. While reflecting on their experiences, beginning and experienced teachers shed light on how to effectively prepare pre-service teachers for inclusive teaching. Thematic analysis of the data yielded details about relevant and engaging learning experiences that beginning and experienced teachers felt would enhance the preparation of pre-service teachers for contemporary inclusive teaching.

The next chapter integrates and discusses the findings from the questionnaires (quantitative results and open-ended responses) and interviews to address the overarching research question and contributing questions posed in this study. The
implications of the research findings will also be discussed.
Chapter 6: Discussion – Integrating Perceptions and Advancing Pedagogy

The aim of this mixed methods study was to investigate approaches that effectively prepare pre-service teachers during initial teacher education for inclusive teaching in primary schools (Kindergarten to Year 6). Surveys (quantitative and open-ended responses) and face-to-face interviews were conducted with pre-service, beginning and experienced teachers to identify curriculum and pedagogy that effectively prepare pre-service teachers so that on graduation they possess the requisite attitudes, knowledge and skills to plan and manage successful learning for students with additional needs in regular classes. Data collection, analysis and approaches to integrate the results were outlined in Chapter 3 while Chapters 4 and 5 presented the results of each phase of this mixed methods study. This chapter integrates and discusses the findings in light of other research, as well as placing the findings within the broader context of practice and future research.

The findings from the questionnaires and interviews will be integrated to address the over-arching research question and contributing questions posed in this study. The contributing questions are:

1a. Do the self-reported attitudes, knowledge and skills of pre-service teachers change as a result of undertaking a specifically designed mandatory unit in inclusive education in an initial primary teacher education program?

1b. After completing the inclusive unit, how similar are pre-service teachers on these characteristics compared to experienced teachers?

2a. What content needs to be covered in initial primary teacher education programs to prepare and equip beginning teachers for inclusive teaching?

2b. What mode of delivery optimises the effectiveness of preparing pre-service teachers for inclusive teaching?

3. How can educational learning experiences during initial teacher education be effectively organised to prepare pre-service primary teachers for inclusive teaching in NSW?
The chapter begins by discussing findings that show changes in pre-service teachers’ self-reported preparedness for inclusive teaching after undertaking the inclusive unit that is a focus of this study. These findings are then compared to experienced teachers’ responses to gain further insight into pre-service teachers’ preparedness after undertaking the inclusive unit. The effects of teacher characteristics on self-reported attitudes, knowledge and skills and conceptual constructs (identified using exploratory factor analysis) are discussed as a means of exploring attributes that influence teachers’ views about inclusive education.

This is followed by discussing the findings that identified topics for curriculum prioritisation. This section explicates learning experiences that optimise the preparation of pre-service teachers for inclusive teaching. It also discusses the findings for modes of delivering inclusive content. Models developed to support the implementation of inclusive education during initial teacher education are then presented. Finally, implications for policy and practice and strengths and limitations of the study are discussed and directions for future research are suggested.

The three conceptual categories (as outlined in Chapter 3 in Table 3.1) that are discussed are:

- preparedness of pre-service teachers for inclusive teaching after undertaking the inclusive unit that formed the study intervention;
- content for curriculum prioritisation – attitudes, knowledge and skills, and modes of delivery; and
- learning experiences that optimise pre-service teachers’ preparedness for inclusive teaching.

### Preparedness of Pre-service Teachers for Inclusive Teaching after Undertaking the Inclusive Unit that Formed the Study Intervention

The findings show that a one semester unit designed to address attitudes, convey knowledge and impart skills about inclusive education resulted in positive changes in pre-service teachers’ self-reported preparedness for inclusive teaching and support the three hypotheses formulated for the quantitative component of this study. The findings show that:
1. As a result of undertaking the inclusive unit that formed the study intervention, pre-service teachers reported increased levels of preparedness for including students with disabilities and/or additional needs in regular classes.

2. After undertaking the inclusive unit, pre-service teachers’ self-reported attitudes, knowledge and skills were more similar to those of experienced teachers.

3. After engaging in outcome-focused learning experiences that were designed to be intellectually engaging, underpinned by learning theory and connected to learning needs, pre-service teachers reported increased levels of preparedness for including students with disabilities and/or additional needs in regular classes.

Importantly, pre-service teachers’ self-efficacy for implementing inclusive education improved considerably after engaging in the learning experiences provided in the inclusive unit. These learning experiences will be referred to here as a “cluster of practices”.

In this study, pre-service teachers participated in a cluster of practices that resulted in positive shifts in attitudes about the benefits of inclusive education for all students. Notably, pre-service teachers agreed more strongly that both typically developing students and those with additional needs benefit from inclusive classes. A more positive attitude about students with additional needs may be associated with a greater willingness to develop the necessary skills to implement inclusive education.

In particular, pre-service teachers were found to have a higher sense of efficacy with regard to their abilities to include and cater for the educational needs of students with additional needs. More specifically, they reported improvements in their ability to effectively manage inclusive classes, collaborate with a range of stakeholders, differentiate instruction and manage and use resources. For example, pre-service teachers reported improvements in their ability to adjust and accommodate to cater for students with additional needs, use a variety of assessment techniques to determine the learning needs of students, match resources to student’s learning needs, manage students with challenging behaviours and collaborate with specialist/support teachers. These results are consistent with those of a number of studies showing positive effects of participating in inclusive units (Sharma et al., 2006; Spandagou et al., 2008). In this study “preparedness” may be operating as a proxy of self-efficacy. It is possible that
the pre-service teachers felt prepared to cater for the range of student needs in inclusive classes. Evidence suggests that self-efficacy is one factor that contributes to successful performance in teaching. Tschannen-Moran and Hoy (2007) describe four major influences on teachers’ self-efficacy. These are

- mastery experiences which come from a teacher’s self-perception of their ability to teach students successfully;
- vicarious experiences are those that influence an individual’s behaviour as a result of observing and modelling;
- positive psychological responses that lead to a sense of capability; and
- verbal persuasion that follows verbal reinforcement received from significant others.

It is posited that the cluster of practices in which the pre-service teachers engaged, impacted on at least three of these four areas of self-efficacy. Specifically, the learning experiences were designed to provide pre-service teachers with opportunities to consider the social benefits of inclusive education (psychological and emotional arousal), ameliorate self-concepts about their ability to teach inclusively (mastery experiences), as well as to model teaching strategies (vicarious). These changes are important because research indicates that teachers with enhanced self-efficacy are more likely to persevere with students who have difficulty learning (Schunk, 2012; Tschannen-Moran & Hoy, 2007). After completing the unit, pre-service teachers’ concerns shifted from showing apprehension about their ability to include students with additional needs to recognising barriers that impede the implementation of inclusive education. This change in perspective suggests that pre-service teachers were more positive about inclusive education and developed an awareness of the ethics underpinning inclusive education. Notably, both of the questionnaire findings (i.e., thematic analysis of open-ended responses and the statistical analysis of the numerical data) support this suggestion.

**Positive changes in self-reported skills.** For the most part, studies about the preparation of pre-service teachers for inclusive teaching have focussed on attitudes about inclusion (e.g., Hsien et al., 2009; Loreman et al., 2005; Sharma et al., 2006; Spandagou et al., 2008). A number of studies conclude that pre-service teachers need to develop inclusive pedagogical skills (Florian & Linklater, 2010; Kurth & Foley,
2014). Importantly, the findings of this study show that pre-service teachers felt more skilled after engaging in the cluster of practices used in this unit. Such practices will be expounded, in a later section.

Enhanced self-efficacy beliefs may produce graduate teachers who are better equipped to implement inclusive education. If teachers experience success with inclusive teaching earlier in their careers, such success may have implications for teacher retention rates (Tschannen-Moran & Hoy, 2007). Ewing and Smith (2003) reported that between 25% – 40% of beginning teachers in western societies either resign or burn out within three to five years of commencing teaching. Given that inclusive education, supported by legislation, is contemporary and ethical practice, it is particularly important that pre-service teachers receive high quality initial teacher education to prepare them for including students with additional needs. It seems that by engaging in learning experiences which were designed to provide pre-service teachers with opportunities to develop skills through an array of strategies such as modelling, collaborative learning, examining case studies and engaging in carefully planned simulations, pre-service teachers’ self-efficacy improved. This study offers approaches that address concerns about the quality of teacher preparation for inclusive education (Desutter, 2015; Forlin & Chambers, 2011; Kurth & Foley, 2014; Parliament of NSW, 2010; Shaddock et al., 2007; Sharma & Sokal, 2015; Teacher Education Ministerial Advisory Group, 2014; Vinson et al., 2002) by detailing how to effectively prepare pre-service teachers for inclusive teachers.

Effectively managing inclusive classes. Pre-service teachers reported feeling more prepared to manage inclusive classes following the inclusive unit. Learning experiences were designed to be connected to the future careers of pre-service teachers and involved modelling constructivist learning principles such as active learning and cooperative learning that occur in classrooms (e.g., viewing and discussing scenarios followed with role-playing teacher reactions that escalate and defuse challenging situations). Interestingly, results showed no statistically significant change for the topic “applying behaviour theories”. It may be that pre-service teachers either prefer practical solutions to their needs or did not identify the linkages between learning theory and instructional practices.
Collaborating with a range of stakeholders. Pre-service teachers reported significant improvements in their ability to collaborate with specialist and support teachers and teachers’ assistants, and with professionals to develop individual learning plans. Given that teachers are required to collaborate with a range of stakeholders in order to successfully include students with additional needs, it is likely that this reported change will positively influence teachers’ practice (Savolainen et al., 2012). This improved confidence may be attributable to pre-service teachers’ engagement in connected learning experiences designed to develop their understanding of school learning support teams and support roles in schools. For example, as a scenario in a tutorial, pre-service teachers assumed the roles of support team members (learning and support teacher, parent or guardian, class teacher) to plan the transition of a student from a support class to the regular class.

Differentiating instruction and using resources. Pre-service teachers reported improvements in all skills related to differentiating instruction and using and managing resources. Participation in the cluster of practices may have demystified the concept of differentiation leading to an enhanced understanding of how to cater to a diversity of learners. For example, as an assessment based on their professional practice, pre-service teachers were required to demonstrate how they would include students with diverse learning needs. These changes suggest that the inclusive unit had a positive effect on pre-service teachers’ belief in their ability to effectively differentiate instruction for students with additional needs.

Informing Preparation of Pre-service Teachers

Interestingly, when asked about “general preparedness” pre-service teachers reported higher levels of confidence on some items than experienced teachers (attitudes and knowledge). This was not the case, however, when rating their ability to implement specific skills in managing inclusive classes, collaborating, differentiating instruction and using and managing resources. Importantly, after undertaking the inclusive unit, these self-reported ratings were more similar to those of experienced teachers. These results suggest that while pre-service teachers developed an increased sense of preparedness for inclusive teaching, they did not overestimate their abilities. The learning experiences presented to pre-service teachers had the desired effect of changing attitudes and increasing knowledge but did not lead to over-confidence.
Developmental models of teaching posit that beginning teachers go through predictable stages in the process of mastering skills required to be an accomplished teacher (Arends, 2014; Conway & Clark, 2003). According to such models, beginning teachers commence teaching in the survival stage and in a gradual and evolving process develop mastery skills. Others argue that the chronological approach accepted in stage theory restricts a comprehensive understanding of the complex nature of teacher development (Watzke, 2007). Although the findings of this study indicate that pre-service and experienced teachers’ views resemble indicators identified in “teacher developmental stage” theory (e.g., matching strategies and resources to meet student needs) they also highlight how well-designed curriculum lead to desired outcomes. This finding corroborates the ideas of Watzke (2007) who concluded that pre-service and beginning teachers require programs that support them to make linkages between learning theory and instructional practices.

To expedite this developmental process, it is posited here that academics need to provide pre-service teachers with carefully considered learning experiences that boost self-efficacy and facilitate skill development in preparation for inclusive teaching. In view of the Teacher Education Ministerial Advisory Group’s (2014) conclusions that teacher education programs are not consistently preparing and equipping pre-service teachers with evidence-based strategies and skills that enable them to cater for the needs of students with additional needs, it seems critical that pre-service teachers engage in learning experiences that enhance their preparedness for inclusive teaching.

Teachers’ views about inclusive units – lessons on preparing pre-service teachers for inclusive teaching. Both pre-service and experienced teachers had opinions about the effectiveness of the inclusive units they had undertaken. While experienced teachers provided nuanced insights about the preparation of pre-service teachers for inclusive teaching, beginning teachers offered opinions about the relevance of their initial teacher education to their current roles.

A large proportion of the experienced teachers (45%, 81/181), reported that the inclusive unit they completed during their initial teacher education made little impact on their ability to include students with additional needs. Given that inclusive education units have been mandatory in initial teacher education programs in NSW since 1994, it is concerning that such a high percentage of experienced teachers rated
the effectiveness of their inclusive units so poorly. These results corroborate those of other researchers and indicate a need to improve the preparation of pre-service teachers for inclusive teaching (Florian & Linklater, 2010; Forlin & Chambers, 2011; Hodkinson, 2009; Gehrke & Cocchiarella, 2013; Teacher Education Ministerial Advisory Group, 2014; Van Laarhoven, Munk, Bosma, & Rouse, 2007). They also support Kurth and Foley’s (2014) conclusion that teacher preparation for inclusive education is lagging. Teachers holding negative views about the effectiveness of their pre-service courses’ inclusive units itself has detrimental implications for schools, teachers and all students. Moreover, if these views are correct, inadequate training is likely to manifest in poor attitudes and practices. Such views accord with the findings of Gehrke and Cocchiarella (2013) who concluded that pre-service teachers struggled with transferring theory into practice. In particular, they identified a disconnection between the knowledge acquired of inclusive education during initial teacher education coursework classes and pre-service teachers’ observations of inclusive education while on professional experience fieldwork.

In contrast, pre-service teachers who undertook the inclusive unit in this study reported high levels of satisfaction with their preparation, and felt prepared and equipped for their role. This suggests that it is possible to design curriculum that effectively prepare pre-service teachers for inclusive teaching in one semester. In particular, the success of this unit suggests that pre-service teachers require learning experiences that are strongly underpinned by learning theories. Equally they need to engage in learning that provides them with practical transferable skills. Freire (1970) advises that educators “must not negate practice for the sake of theory” nor “negate theory for the sake of practice” (p. 18). It seems that in order to effectively prepare pre-service teachers for inclusive teaching, learning experiences should be relevant, connected and authentic.

“Reality bites” – teachers’ struggles and expectations of teacher preparation. Although pre-service teachers reported feeling equipped and prepared for inclusive education after completing the inclusive unit that formed part of this study, approximately 12 months later, three out of five beginning teachers discussed major challenges they associated with contemporary inclusive teaching. Notably, this finding accords with the notion of experiencing “reality shock” on commencing teaching (Tschannen-Moran & Hoy, 2007, p. 946). Both beginning and experienced
teachers described the challenges that beginning teachers experience. These were often but not always related to including students with additional needs. Some beginning teachers reported that their initial teacher education did not prepare them adequately for their role as teachers of contemporary classes. For example, beginning teachers indicated that they did not acquire requisite skills to cater for students from culturally and linguistically diverse backgrounds or students with autism spectrum disorder. Pre-service teachers may benefit from being introduced to case studies of school students with disabilities and additional needs that are prevalent in school age children. Further, it may be that the learning that occurs in inclusive units needs to be better integrated with professional practice so that pre-service teachers have opportunities to practise and consolidate requisite skills.

It is possible that the expectations of participants were in some instances beyond the scope of what can be achieved in a one semester unit in initial teacher education programs. For example, some beginning and experienced teachers suggested that pre-service teachers needed to be presented with practical exercises, such as how to complete funding applications; however, such administration tasks are system-specific and are best acquired within the context of future workplaces.

The pre-service teachers’ self-reported changes seen in this study are evidence that it is possible to effectively prepare pre-service teachers for inclusive teaching. While the reality is that some beginning teachers struggle when commencing teaching, and logistically teacher education may not completely avert this, this study shows that it is possible to enhance pre-service teachers’ preparedness for inclusive education. The study explicates a cluster of practices that brought about this reality.

Notably, beginning teachers recalled the powerful effect that some of the inclusive unit’s learning experiences had on them, while experienced teachers recommended a cluster of practices that, in the main, were included in the unit. These findings indicate that the unit design stands up to scrutiny by those well-placed to critique it. Such appraisals help to explain why after undertaking the inclusive unit, pre-service teachers reported significant improvements (from pre- to post-unit questionnaire) in their overall ability to include students with additional needs. The cluster of practices described may be adopted by those seeking to enhance pre-service teachers’ preparedness for inclusive teaching.
Interestingly, teachers’ views were influenced by several factors. When drawing on teachers’ views to inform pre-service teacher preparation for inclusive education, it is important to note that they do not always speak with “one voice”.

**Effect of teacher characteristics on views about inclusive education.**

Evidence shows that holding positive attitudes towards inclusive education contributes to teachers’ ability to effectively include students with additional needs (Sosu et al., 2010). Further, studies show that teacher characteristics can influence teachers’ attitudes and performance with regard to inclusive education (Forlin et al., 2008; Hsien et al., 2009). In the current study, demographic characteristics were examined to determine their influence on teachers’ perspectives about teacher preparation for inclusive education and inclusive education more generally. Younger teachers (aged 20 – 29) felt better prepared for inclusive teaching than older teachers. This result is similar to the findings of Forlin et al. (2008) who found that younger teachers were more positively disposed to inclusive education. As a result of having undertaken preparation for inclusive education more recently, perhaps younger teachers have embraced inclusive education as a philosophical and ethical approach.

Teachers with less experience felt that their initial teacher education prepared them to a greater extent for inclusive education than teachers with more than 20 years experience. This result supports the findings of de Boer et al. (2011). In their review of the literature they found that teachers with fewer years experience were more positive about inclusive education than teachers with greater experience. Teachers with less experience are likely to have completed the mandatory inclusive unit introduced in 1994 in NSW initial teacher education programs; therefore they are more likely to have covered topics such as legislation, the inclusive movement and changing paradigms that drive inclusive education. Teachers with more than 20 years experience are less likely to have undertaken the mandatory inclusive unit and may be coming to terms with the impact of inclusive education. Not surprisingly, however, teachers with greater experience felt more knowledgeable about and more skilled at implementing inclusive education.

Experienced teachers in non-teaching roles (i.e., principals, non-teaching executive teachers, support teachers and school counsellors) held more positive views about inclusive education than class teachers. This finding is concerning because it suggests
that teachers who are directly responsible for including students with additional needs are less positive about it. However, it is also consistent with those of Hsieh and Hsieh (2012) who found that early childhood teachers in positions with greater authority were more positive about inclusion than regular early childhood teachers. Academics and education authorities need to be aware that those responsible directly for implementing inclusive education perhaps encounter challenges that impact on their attitudes towards students with additional needs. For example, providing in class support and planning time and creating opportunities to engage in professional development are likely to advance inclusive education.

Further, being removed from having to directly implement inclusive education may result in holding more positive attitudes. Unsurprisingly, experienced teachers with special education or counselling qualifications held more positive views about inclusive education than those without such qualifications. This finding suggests that there is much to be achieved to ensure that class teachers understand the benefits of inclusive education and are cognisant that children have a fundamental right to regular schooling. Perhaps immersion in disability studies in education combined with a focus on skill acquisition during initial teacher education may change this concerning finding. Hsien et al. (2009) similarly reported that teachers with postgraduate qualifications in special education were more positively disposed to inclusive education. The current study also found that general primary teachers, whether they had or had not undertaken an inclusive education unit, had more concerns about including students with additional needs than support teachers or school counsellors. Given that class teachers are at the chalkface and rely mainly on inclusive units to prepare them for inclusive teaching, it is concerning that the inclusive units showed no significant effect. This result supports concerns about the effectiveness of initial teacher education to prepare pre-service teachers for inclusive teaching (Florian & Linklater, 2010; Forlin & Chambers, 2011; Hodkinson, 2009; Gehrke & Cocchiarella, 2013).

During interviews, a number of support teachers and school counsellors explained that their special education and school counselling training and not their initial teacher education impacted positively on their attitudes about inclusive education. Although not unexpected, this finding together with the earlier finding of this study showing that
a large proportion of experienced teachers were disappointed with their inclusive unit, suggest that those who are required to implement inclusion directly feel unprepared for the task. Further, it is unlikely that school counsellors and teachers with special education qualifications remain regular class teachers, amplifying concerns about the preparation of pre-service teachers for inclusive teaching. It seems that the teachers most removed from implementing inclusive education are the ones most positively disposed to it.

Overall, these findings show that teacher perspectives about inclusive education are influenced by demographic characteristics based on age, years of experience, role and qualifications. In addition, these results highlight concerns about the effectiveness of initial teacher education programs to prepare pre-service teachers for inclusive teaching.

**Effect of demographics on pre-service and experienced teachers’ conceptualisation of topics for inclusive education.** The conceptual constructs that were identified (using exploratory factor analysis) as relevant for preparing pre-service teachers for inclusive teaching were similar across pre-service and experienced teacher groups. This indicates that both groups agree about the importance of these constructs in relation to preparing pre-service teachers. The five constructs that were linked to teacher characteristics were

- inclusive classroom skills;
- resourcing and supporting inclusion;
- inclusive strategies for individual needs;
- embracing inclusive principles; and
- inclusive organisational procedures.

Teachers in non-metropolitan areas indicated, to a significantly higher extent than teachers in metropolitan areas, that these five factors should be covered. This may reflect differences between schools in metropolitan and non-metropolitan areas and may be related to educational disadvantage associated with non-metropolitan geographical location of schools and concomitant clusters of students whose parents have low educational levels (Goss & Sonnemann, 2016). Notably, teacher characteristics significantly affected results for “embracing inclusive principles”. This factor primarily characterises dispositions towards inclusive education and may reflect
the challenges faced by teachers who work in non-metropolitan areas, related to geographical isolation (e.g., lack of access to support and professional development).

In summary, being positively disposed to inclusive education appears to be more important to teachers in non-teaching roles, those with less experience and those who have pursued further specialist training than more experienced classroom teachers. It seems that class teachers with more than nine years experience require professional development so they understand the philosophy underpinning inclusive education.

Establishing Curriculum Priorities
The following section discusses curriculum topics identified as important to prioritise to prepare pre-service teachers for inclusive teaching. It begins by discussing the findings of general categories. This is followed by discussing the findings for specific categories under the themes of attitude, knowledge and skills. These results are then integrated with other quantitative findings (from the post-unit questionnaire) and interview responses.

General topics regarded as most important. Pre-service and experienced teachers ranked “differentiation skills to cater to different needs of students” as the most important overall category and ranked “development of effective classroom management skills” second most important. Interestingly, findings indicate that both groups regarded “acquisition of differentiation skills” as more important than “development of classroom management skills”. This finding is interesting given that other researchers have found that teachers are predominantly concerned with classroom management skills (Meister & Jenks, 2000; Meister & Melnick, 2003; Vinson et al., 2002). Perhaps both groups in this study view the ability to differentiate instruction as integral to creating positive classroom climates.

Given that typically there is more inclusive content that can reasonably be covered during initial education (Hodkinson, 2009), unit coordinators are required to make decisions about curriculum priorities. When asked to rank topics within categories according to importance, pre-service and experienced teachers nominated the same five topics out of seven categories as most important. This consistency suggests that these results could be used to inform the selection and prioritisation of topics for preparing pre-service teachers for inclusive education.
The five most important topics within their respective categories were

- Knowledge. Apply syllabus information pertaining to students with disabilities and/or additional needs;
- Manage inclusive classes. Develop skills to manage students with challenging behaviours;
- Differentiation (A). Adjusting and accommodating to cater to students with disabilities/additional needs;
- Differentiation (B). Use a variety of assessment techniques to determine the learning needs of students; and
- Resources use. Develop understanding that resources need to be matched to student’s learning needs e.g., reading material.

The following discusses the five categories where there was consensus about the most important topics, as well as the topics on which the groups differed.

**Developing knowledge about inclusive education.** Pre-service and experienced teachers ranked “apply syllabus knowledge pertaining to students with disabilities/additional needs” as most important among knowledge topics. This demonstrates the importance pre-service and experienced teachers place on syllabus knowledge. The interview data indicated that pre-service teachers require knowledge about legislation, curriculum documents and how disability may impact students’ learning. Although experienced teachers emphasised the importance of pre-service teachers acquiring knowledge of the implications of legislation, beginning teachers indicated that “knowledge of legislation” was covered thoroughly in their inclusive unit.

Experienced teachers argued that pre-service teachers should develop knowledge of the curriculum. However, this theme did not feature in the interviews with beginning teachers. This discrepancy may be because beginning teachers were more concerned with immediate challenges such as engaging students, managing their class and preparing appropriate resources. As expected, beginning teachers tended to focus on their current and immediate needs while experienced teachers provided comprehensive perspectives. This finding aligns with research on teacher development (Arends, 2014; Conway & Clark, 2003).
Pre-service teachers ranked “develop strategies that research findings suggest are effective with reference to specific disabilities” significantly less important than other knowledge topics. Interestingly, this conflicts with their views as beginning teachers, when they indicated that pre-service teachers require additional knowledge about specific types of disability that in their experience presented particular challenges (e.g., intellectual disability, opposition defiant disorder and autism spectrum disorder). This shift in priorities indicates that on commencing teaching, pre-service teachers faced unanticipated challenges related to including students with particular disabilities and underscore the importance of providing pre-service teachers with strong foundations in classroom management. These findings support those of Jordan et al., (2009) and Loreman (2010b) who found that pre-service teachers require learning experiences that, among other skills, improve their ability to effectively manage and organise classes of children.

Managing inclusive classes. All groups stressed that pre-service teachers need to engage in learning experiences that prepare them for managing contemporary inclusive classes. In the category of Classroom Management, pre-service and experienced teachers ranked “developing skills to manage students with challenging behaviours” as the most important topic to cover in inclusive units. This topic was ranked higher than “apply behaviour management theories”, “manage cooperative learning”, “develop strategies to teach social skills to students with disabilities/additional needs” and “implement risk assessments for students with challenging behaviours”. These findings corroborated other results of this study rating the required coverage of “developing skills to manage students with challenging behaviours” as high to very high. While both groups indicated that this topic should be covered extensively, experienced teachers considered that it required greater coverage. It may be that the experienced teachers have insights to which the pre-service teachers were not privy. These findings concur with those of Mayer et al. (2013) who found that principals rated classroom management, followed by pedagogy and catering for diverse learners, as the leading challenges facing beginning teachers.

In addition, Thomson, De Bortoli, and Underwood (2017) found that Australia scored significantly lower than the Organisation for Economic Co-operation and Development (OECD) average on the index related to classroom discipline indicating that many
Australian schools experience more challenges with classroom discipline than across the OECD. Further, 33% of Australian students indicated that disorder and noise hindered learning compared to the OECD average of 24%. This was particularly an issue for students in disadvantaged schools. This finding is concerning for all students, however, in reference to this study it highlights concerns for students with additional needs particularly those in disadvantaged areas. For example, a student with a hearing impairment would find it particularly challenging to learn in a noisy classroom. Taken together, it seems that providers of initial teacher education may need to consider enhancing their delivery of approaches to prepare pre-service teachers to manage contemporary classes.

Notably, findings here show that on completing the inclusive unit there was a significant decrease in the extent to which pre-service teachers believed the topic “develop skills to manage students with challenging behaviours”, should be covered. This finding was unexpected and may suggest that pre-service teachers believed that this topic had received comprehensive coverage. This seems plausible, given that pre-service teachers reported that their skills to manage students with challenging behaviours had improved significantly.

Beginning and experienced teachers felt that pre-service teachers do not receive adequate grounding in classroom management while at university. This sentiment was associated with their concern about beginning teachers’ inability to effectively manage inclusive classes. Given that this study as well as others (Evertson & Weinstein, 2011; Goss, Sonnemann, & Griffiths, 2017; Lindsay, Proulx, Thomson, & Scott; 2013) show that classroom management presents challenges for many beginning teachers, it seems that providers of initial teacher education need to make concerted efforts to ensure that pre-service teachers are presented with learning experiences based on evidence that prepare them to manage inclusive classes effectively. In interviews, experienced teachers emphasised that learning experiences should augment pre-service teachers’ ability to implement a range of fundamental classroom management skills. This theme was accorded precedence over learning how to manage the behaviour of individual students. This contrasts with questionnaire results reported earlier, which showed that both groups nominated “developing skills to manage students with challenging behaviours” as requiring priority. It seems that the questionnaire may have captured
issues that were limited by survey design (e.g., limited number of items) while the interviews captured extended and nuanced responses. Further, developing fundamental approaches to manage inclusive classes and acquiring skills to manage students with challenging behaviours may be complementary.

Both groups described the difficulties that beginning teachers have with classroom management – at times but not always, related to students with additional needs. Rising numbers of students with autism spectrum disorder and mental ill health (NSW Department of Education and Communities, 2012) necessitate that pre-service teachers develop a range of skills that prepare them to manage classes of students with diverse learning needs for the betterment of all students. Beginning and experienced teachers reported that the context in which they worked had a significant impact on beginning teachers’ ability to effectively manage their classes. Notably most of the teachers interviewed worked in schools of social disadvantage. This finding supports those of Goss et al. (2017) who, after reviewing the literature, concluded that disengagement and disruption are “much worse in schools with many low socio-economic students (p. 10)”.

The findings indicating that some schools experience significantly more pressure related to their school demographics highlight the interplay of social disadvantage (e.g., refugees, disability) and school failure. Pre-service teachers require opportunities to interrogate these relationships through engagement with disability studies in education. In particular, opportunities to analyse the effect of school policies are needed. These include, but are not limited to: interrogating the usefulness of individual education plans; considering the effect of suspension policies, withdrawal programs and assessment protocols such as NAPLAN; evaluating the effectiveness of approaches adopted by teacher assistants; appraising the cultures of schools and the attitudes of leadership and staff; as well as evaluating the appropriateness of curriculum and pedagogy. Moore and Slee (2012) maintain that failure to consider institutional causes of exclusion during initial teacher education leads to inadequate preparation of pre-service teachers for inclusive education. It seems that in order for inclusive education to be realised a paradigm shift concerned with human rights is required (Liasidou, 2015).

Most of the classroom management skills referred to during interviews were general
skills. The majority of teachers referred to actions that teachers take and strategies they use to ensure that the classroom environment supports and facilitates both academic learning and social–emotional growth of students (Evertson & Weinstein, 2011). A general view emerged among experienced teachers that strategies considered useful for students with additional needs (e.g., Social Stories, schedules) are useful for the entire class. These findings highlight the need for pre-service teachers to engage in learning experiences that facilitate the development of a repertoire of skills to manage and organise classes effectively. This finding is in keeping with those of Goss et al. (2017) who recommend system level changes; in particular, that initial teacher education programs only receive accreditation if their graduates are able to demonstrate that they can apply evidence-based approaches for engaging and managing students. Further, given that many graduates work as casual teachers, it seems critical that pre-service teachers are provided with well-designed learning experiences that equip them to manage their classes so that they achieve early success. In addition, there is a need to build pre-service teachers capacity to recognise and challenge cultures and structures within schools that propagate exclusion (Goodley, 2017; Moore & Slee, 2012; Slee, 2005).

A correlation between equity and the ability to effectively manage inclusive classes was identified in the interviews. Experienced teachers stressed that pre-service teachers need to learn how to develop harmony in the classroom and indicated that calm and organised classrooms are conducive to supporting and facilitating the learning of all students. While beginning teachers were concerned with the immediacy of managing students with challenging behaviours associated with their additional need, experienced teachers’ responses tended to be more comprehensive. Experienced teachers discussed numerous issues associated with classroom management such as practices that inadvertently reinforce inappropriate behaviour or escalate challenging circumstances. For example, one support teacher described how some beginning teachers, send students to executive teachers as a form of discipline, inadvertently reinforcing inappropriate behaviours by providing students with opportunities to leave the classroom and avoid work.

In interviews beginning teachers tended to focus on categories of disability that presented them with significant challenges associated with classroom management. In
addition, both beginning and experienced teachers argued that pre-service teachers require learning experiences that consolidate their ability to manage contemporary inclusive classes. Experienced teachers in particular, asserted that having the capacity to create a quality learning environment would enable beginning teachers to have the time and flexibility to address challenges related to individual students with particular disabilities. Nonetheless, they also felt that pre-service teachers required information about specific disabilities. Overall, a view emerged suggesting that many beginning teachers do not acquire elementary classroom management skills while at university. In acknowledging that inclusive education adds a layer of complexity to teaching, it seems critical that beginning teachers commence their teaching careers with a strong foundation in managing and organising contemporary inclusive classes. Such a foundation would afford beginning teachers time to hone approaches to cater to students with specific support needs.

**Differentiating instruction.** In the two Differentiation categories (designated for study purposes as A and B) pre-service and experienced teachers ranked the same topics, “adjusting and accommodating to cater to students with disabilities/additional needs” and “using a variety of assessment techniques to determine the learning needs of students” as most important within their respective categories. This consensus of opinion suggests that these topics should be prioritised during the preparation of pre-service teachers for inclusive teaching. These results were confirmed by other findings of this study that showed that both groups believe “adjust and accommodate to cater to students who have disabilities/additional needs” should be covered to a high to very high extent.

Most of the beginning teachers indicated that they were unclear about how to differentiate instruction, suggesting that the practice remained elusive. They asserted that the concept of differentiation was used by academics in a very broad manner. As a consequence, pre-service teachers reported that they did not fully grasp the concept nor did they know how to “do it”. The experienced teachers corroborated the beginning teachers’ views. The findings of the quantitative phase combined with the themes emanating from the interviews, suggest that pre-service teachers require learning experiences that show them how to differentiate instruction in order to implement inclusive education effectively. The interviews suggest that pre-service teachers would
benefit from explicit instruction about the practice of differentiation. In addition, experienced teachers nominated particular skills which they felt pre-service teachers should master while training to become a primary teacher. These included learning to use visual aids and scaffolds, modifying instructions, and applying task analysis to support student learning.

Beginning and experienced teachers argued that pre-service teachers require opportunities to develop skills in designing lessons that are inclusive of all students. Experienced teachers in particular asserted that pre-service teachers need to practise designing lessons using a universal approach. By adopting such an approach, pre-service teachers may be better prepared to cater for the needs of a range of students. This finding appears to accord with those of Thomson, et al. (2017) whose analysis of The Programme for International Student Assessment (PISA) data revealed that the percentage of students whose principals (of Australian schools) reported concerns about “teachers not meeting individual students’ needs” was 38% and significantly higher than the OECD average of 23%. It may be that initial teacher education could adopt a shared vision across units, to reduce the possible expectation that inclusive units are responsible for teaching pre-service teachers how to differentiate instruction to cater to students with additional needs. Further, inclusive education may be regarded as more achievable if pre-service teachers learn how to plan lessons that cater for the diverse needs of students.

It seems that stronger connections between the learning that occurs at university (whether on campus or online) and professional practice are required. The professional practice component of initial teacher education must be firmly underpinned by an inclusive philosophy – ensuring that pre-service teachers practise and consolidate skills such as universal lesson design and differentiated instruction. This finding accords with those of Kurth and Foley (2014) who contend that the professional practice component of initial teacher education must convey a conviction to supporting inclusive education. This requires initial teacher education programs to ensure that pre-service teachers are provided with targeted opportunities to understand inclusion and acquire inclusive skills while on professional experience. This aligns with Goss et al.’s (2017) recommendation that “government should only accredit initial teacher
Beginning and experienced teachers expressed concerns about graduates’ lack of requisite knowledge and skills to teach fundamental literacy. Perhaps not surprisingly, it appears important that pre-service teachers learn how to teach fundamental literacy. This echoes the recommendation of the Teacher Education Ministerial Advisory Group’s (2014) that “education providers equip all primary and secondary pre-service teachers with a thorough understanding of the fundamentals of teaching literacy and numeracy (p. xv)”. Fundamental literacy skills (e.g., introducing single sounds/letters and sight words) are generally introduced to children in Kindergarten through to Year 3 (Torgesen, 2002). Given that students with additional needs are in K – 6 primary classes, findings suggest that all pre-service teachers require an understanding of how to teach fundamental reading.

**Managing and using resources.** Pre-service teachers need to develop awareness of support personnel and proficiency with technology. Further, it is important that they understand that resources should be matched to a student’s learning needs.

Both pre-service and experienced teachers ranked “develop understanding that resources need to be matched to students’ learning needs (e.g., reading material)” as the most important topic within the “Resource” category. However, on Likert scale responses, experienced teachers indicated that this topic should be covered to a greater extent than did pre-service teachers. It may be that their experience provides them with a deeper understanding of the link between student progress and matching learning materials to students’ abilities. Likewise, experienced teachers considered that “develop awareness of support personnel (e.g., itinerant teacher)” should be covered to a greater extent than did pre-service teachers. This finding may reflect a view about the relative importance that experienced teachers place on accessing the expertise of other professionals. It may be that at this initial stage of their careers, pre-service teachers are more likely to focus on what they consider to be more immediate matters; in particular, classroom management and organisational matters. During interviews, beginning and experienced teachers indicated that pre-service teachers would benefit from learning about various support roles to assist them with inclusive education. The
themes that emerged from interviews are consistent with the experienced teachers’ questionnaire findings which showed that pre-service teachers need to “develop awareness of support personnel”.

Notably, questionnaire findings indicate that experienced teachers ranked “awareness of support personnel” as more important than did pre-service teachers. This finding may reflect the large number of support teachers (106, 33%) who responded to the questionnaire. Given their pivotal roles, it is expected that they consider it important that pre-service teachers develop an understanding of the role and expertise of support teachers (e.g., learning and support teacher).

Findings revealed that rather than focusing on specialised resources for students with additional needs, beginning and experienced teachers indicated that pre-service teachers should develop proficiency with general resources. A view emerged that pre-service teachers should learn about the scope of resources available and learn to select and match resources to cater to students with a range of learning needs. Beginning and experienced teachers spoke about the importance of pre-service teachers developing proficiency with technology. In particular, they stressed that while at university pre-service teachers should develop competence with interactive whiteboards. This was linked to socially just practices of ensuring that students with additional needs have access to the learning that occurs in classrooms. For example, a school counsellor explained that teachers need to be able to enlarge font on interactive whiteboards so that students with low vision have access to content.

There were two categories, “Attitudes” and “Collaboration”, where pre-service and experienced teachers differed on the ordering of topics, including which topic they saw as “most important”. The section that follows discusses the findings that pre-service and experienced teachers differed in their views about the importance of topics within the categories of Attitudes and Collaboration.

**Developing positive attitudes about inclusive education.** Within the “Attitude” category, pre-service teachers ranked “develop positive attitudes regarding inclusion and diversity” as most important, whereas experienced teachers ranked “understanding that it is the role of teachers to meet the needs of all students” as most important, with “develop positive attitudes” the next highest. Both groups agreed about the importance
of ensuring that during initial teacher education, pre-service teachers are provided with learning experiences that require them to reflect on attitudes towards people with disabilities, which can often result in exclusionary practices. Pre-service teachers may recognise that they or their peers require learning experiences designed to inform them about the benefits of inclusive education. It is possible they are coming to terms with the concept and, hence, reality of inclusive education and are perhaps in a process of recognising that their vision of a teacher’s role is broader than they originally conceived.

Although experienced teachers indicated that learning about specific types of disability was important, they tended to place greater importance on learning to cater to students’ individual needs. Experienced teachers discussed the notion of teaching to need rather than difference. Learning experiences should advance a pre-service teacher’s understanding that catering to the individual needs of students takes precedence over acquiring knowledge about disabilities. Notably, as seen elsewhere, this result contrasts with beginning teachers’ focus on a desire to learn about specific disabilities.

The key message from this finding is that while pre-service teachers may benefit from learning about specific disabilities they require learning experiences that augment their understanding that teachers should view students with additional needs as individuals first. Learning experiences should be designed so that pre-service teachers focus on a student’s areas of need and attainments rather than on the additional need or disability – albeit understanding areas of disability may provide important insights. For example, pre-service teachers could reflect on a student’s need for social skills development rather than focus on the label of autism spectrum disorder.

Experienced teachers stressed how important it was that pre-service teachers develop the understanding that all teachers are responsible for the education of students with additional needs. This finding amplifies concerns about the “mine” versus “yours” (Weiner & Murawski, 2005, p. 284) phenomenon that occurs when students are physically included in classes but support staff are expected to take responsibility for their learning (McKenzie, 2009). Pre-service teachers should graduate from initial teacher education with a firm understanding that it is a class teacher’s responsibility to cater for the learning needs of all their students (e.g., students with intellectual disability, students who are gifted) by monitoring and ensuring each student’s
progression. They need to understand that responsibility for the learning of students with additional needs cannot be delegated to different services or personnel. Initial teacher education should advance the notion that teachers are required to cater to all of their students’ learning needs regardless of ability. Furthermore, learning experiences need to be designed to ensure that pre-service teachers understand that students with additional needs have a rightful place in regular classes.

Most pre-service, beginning and experienced teachers embraced an inclusive philosophy, however, some teachers qualified their comments by offering examples of the struggles they experienced with its implementation and with including particular students. For those who embraced inclusion, their views were largely underpinned by ethical perspectives. Most of the teachers indicated that students with additional needs have a right to have their educational needs met in an inclusive environment. However, during interviews it emerged that some beginning and experienced teachers believed that segregated settings may be more suitable environments for some students. This view was usually related to students with challenging behaviours or with high support needs. Experienced teachers discussed the evolving nature of inclusive education and its concomitant effects on schools while beginning teachers conveyed a sense of shock on learning of the number of students with additional needs in their classes. Some beginning teachers expressed disquiet and felt challenged by this revelation. Further, some indicated that the effect of the degree of disability on students’ learning had negative implications for the entire class. This finding accords with Avramidis and Norwich’s finding (2002) that, overall, teachers have positive attitudes towards inclusive education, however, this positivity reduced in relation to the severity of disability and the degree of behavioural issues. Some beginning and experienced teachers indicated that if a student does not participate and engage in learning in expected ways, alternative educational placements should be sought. This may be related to the challenges that teachers face, or it may reflect an acceptance of the custom and practice of placing students with disabilities into segregated settings based on the medical view of disability (Mertens et al., 2011); if students do not fit in, then alternative environments are sought. While enrolling certain students into segregated settings is accepted practice, inclusive philosophy is likely to be challenged.

Influenced by shifting values towards diversity throughout the western world, debates
about the efficacy of inclusive education have reduced (Loreman, 2007). Although this study identifies other factors that impinge on inclusive education, a primary problem facing the success of inclusive education appears to be beginning teachers’ preparedness. Perhaps when teachers encounter difficulties with including students with high support needs, they revert to the “medical model of disability” philosophy – that the student is required to adapt to the environment rather than expecting schools and teachers to modify their teaching to include students with additional needs. The medical model of disability may have a lingering influence on practices that lead to a focus on differences between students and deficits in students’ abilities (Loreman et al., 2011; Mertens et al., 2011).

On the other hand, perhaps teachers, in particular beginning teachers, require more support to implement inclusive education or it may be that they have a legitimate reason for seeking alternative placements for some students. One beginning teacher, for example, was alarmed that in her view there were not enough support classes for students with disabilities. The fact that support classes are not available for students with a mild intellectual disability in NSW public schools until the age 8 years and over may lend weight to her argument (NSW Parents’ Council, 2015).

Beginning and experienced teachers believed that pre-service teachers should engage in learning experiences that raise awareness of the connection between language and attitudes toward people with additional needs. Pre-service teachers require opportunities to reflect on and evaluate their use of language in relation to students with additional needs. In addition, diagnosing students raised concerns about labelling. It seems that obtaining diagnoses can act as a double-edged sword; providing useful information and possibly government funding to support inclusive education while inadvertently leading to labelling and pigeon-holing of students.

**Collaborating with stakeholders.** The findings suggest that the ability to collaborate with a range of stakeholders is integral to the success of inclusive education. Within the category of Collaboration, pre-service teachers ranked “collaborating with parents and guardians” as the most important topic whereas experienced teachers ranked “develop individual education plans collaboratively with colleagues” as the most important topic. The findings for the pre-service teachers were corroborated by the results to questions about the extent to which an inclusive unit
should cover “collaborating with parents and guardians”. Both groups rated it as requiring the highest coverage. This finding supports the Teacher Education Ministerial Advisory Group’s (2014) recommendation that “higher education providers equip pre-service teachers with skills to effectively engage with parents about the progress of their children (p. xv)”. Notably, unlike results that showed a significant improvement on all other collaboration items, pre-service teachers reported no significant change in their ability to collaborate with parents, although rating their ability to perform this skill *moderately well*. Further, even though pre-service teachers ranked “collaborating with parents and guardians” as most important the result was not significantly different from the ranking of other collaboration items. Perhaps, because skills of collaboration were practised within the context of tutorials rather than in school settings, pre-service teachers were not able to easily discern items.

Overall, experienced teachers placed greater emphasis on the importance of collaboration than did pre-service teachers. As pre-service teachers have not worked as qualified teachers, it may be that they have not developed an appreciation of the benefits of collaborating for including students with additional needs. This supports McKenzie’s (2009) conclusion that pre-service teachers require targeted opportunities to develop skills to collaborate with parents and caregivers in authentic endeavours.

Importantly, pre-service teachers require opportunities to develop and practise collaborative competencies in authentic settings. Such learning experiences would enable them to develop skills to effectively collaborate with a range of stakeholders considered necessary for the success of inclusive education (McKenzie, 2009). Further, this study found that the topic of collaborating with parents and guardians should be prioritised, so that beginning teachers develop confidence in their ability to collaborate with parents/caregivers.

**Learning Experiences to Prepare Pre-service Teachers for Inclusive Education**

The analysis of the different data sets generated a cluster of practices that will be discussed here. Firstly, the evidence from this study suggests that the design and delivery of the inclusive unit’s curriculum resulted in pre-service teachers’ self-reported positive changes in dispositions and competencies. Examining why the inclusive unit was so effective in improving pre-service teachers’ self-efficacy
contributes, in part, to addressing the research question about how curriculum can be
designed and delivered to ensure that pre-service teachers are effectively prepared for
inclusive teaching in NSW and Australia more broadly. Secondly, beginning and
experienced teachers offered and described an array of learning experiences that they
believed would enhance pre-service teachers’ preparedness for inclusive teaching. The
findings suggest that there are lessons to be learned about designing curriculum and
delivering pedagogy for preparing pre-service teachers for inclusive teaching. The
following section explicates learning experiences found to shift attitudes, convey
knowledge and impart skills to enhance pre-service teachers’ preparedness for
inclusive teaching. For expediency purposes, details of the learning experiences are
shown in Table 3.2 and Appendix Y; these show the alignment of learning theories,
unit learning experiences and curriculum areas (attitudes, knowledge and skills) and
the mapping of the cluster of practices onto the Productive Pedagogies framework that
emanated from both the interviews and the inclusive unit’s learning experiences. The
discussion also proffers models that may be used by academics and other educators to
enhance the preparation of pre-service teachers for inclusive teaching.

Learning experiences that challenge pre-conceived dispositions. This study
details learning experiences that are effective in challenging pre-conceived views and
broadening perspectives about educating students with additional needs. By engaging
in learning experiences that involve rigorous and critical thinking, it could be expected
that pre-service teachers are more likely to identify and address disabling practices in
schools (Ballard, 2012). Ballard argues that teachers should regard themselves as
“agents of change” (p. 79) in order to advance fair and just societies. Learning
experiences designed to develop pre-service teachers’ understanding of models of
disability and disability theory may lead pre-service teachers to reflect on
philosophical approaches that have influenced past and current practices (Mertens et
al., 2011). Further, academics need to ensure that pre-service teachers understand that
inclusive education is not special education. This supports Slee’s (2011) call that
“Inclusive education needs to be decoupled from special education” (p.155).

It is important that pre-service teachers understand theoretical constructs, historical
influences and associated issues that have shaped inclusive education. During
interviews, beginning teachers referred to learning experiences from the inclusive unit
that challenged their pre-conceived perceptions about people with additional needs. Examples of these included considering historical influences on special and inclusive education by juxtaposing primary source photographs of special education classes with inclusive classes, and as a flipped classroom activity researching famous people with a disability then sharing this knowledge in collaborative learning groups.

Apart from undertaking professional practice on inclusive classes, the findings of this study suggest that attending community-based organisations such as scouting groups and swimming clubs, where students with additional needs are included, may foster pre-service teachers’ understanding of inclusion more generally. This finding is consistent with those of Chambers and Forlin (2010) who concluded that an effective way to address negative attitudes is to provide pre-service teachers with suitable experiences to meet and interact with people with disabilities, parents and caregivers and advocacy groups.

In addition, findings suggest that pre-service teachers would benefit from listening to presentations delivered by people with additional needs. This finding accords with Loreman’s (2010) recommendation that invitations should be extended to people with disabilities to present at lectures. In the final lecture of the inclusive unit, the focus of this study, a “Question and Answer” session is routinely planned. Guests with expertise in inclusion (e.g., relative of a person with a disability, school learning support officer [teachers’ aide], support teacher, class teacher and principal) are invited to form a panel. Each guest presents a brief talk about their role and/or experiences with follow-up questions directed to the panel. By listening to personal stories, it seems that pre-service teachers are more likely to develop a deeper understanding of issues related to inclusion or, indeed, exclusion. Notably, at times pre-service teachers have discussed their own disability in tutorials or disclosed to the researcher/lecturer that they have a hidden disability or learning difficulty. It has proved opportune and inclusive to enquire among the pre-service teacher cohort whether individuals are comfortable sharing their lived experience. Further, many pre-service teachers work as School Learning Support Officers (teachers’ aides) and have offered insights about supporting students with additional needs. In addition, academics could liaise with advisors from university student support services to invite guest speakers to present their personal stories and experiences.
This study found that experienced teachers who themselves have a disability tend to regard inclusive education as beneficial for students with disabilities. Although this finding needs to be viewed with caution as numbers are small (3), it nevertheless, suggests that teachers with a disability are more cognisant of the limiting effects of attitudes towards people with disabilities and concomitant practices than other groups. Hearing the perspectives of people with additional needs is likely to have a positive influence on pre-service teachers’ attitudes and, hopefully, practices.

The use of carefully selected and planned simulations had a powerful impact on pre-service teachers about the importance of catering for diverse learning needs. In particular, their empathy was aroused and their awareness of issues related to access and equity was heightened. By engaging in carefully selected and well-planned simulations, participants developed awareness of the need to adjust and accommodate for students with additional needs. Simulations engendered empathy rather than sympathy – an important distinction in view of the possibility that teachers, support staff and family members sometimes fail to foster independence for people with additional needs. Flower, Burns and Bottsford-Miller (2007) conducted a literature review about the effectiveness of disability simulations to raise awareness about the needs of people with disability. Their findings were inconclusive and differ from the findings of this study. Numerous beginning teachers spoke positively about the effects of participating in the simulations. Overall, they became aware of the learning needs of students with additional needs. This may be because the simulations were planned with care and sensitivity.

Although developed by the researcher, each activity was presented by small collaborative groups resulting in active engagement. Pre-service teachers were offered opportunities to debrief by sharing their feelings and reactions, and to consider implications for practice. Questions presented to the group included: How did you feel? What was the purpose of the simulation? What should you consider if you have a student with low vision/dyspraxia in your class? What accommodations/adjustments could you as the teacher adopt? How could you design a lesson that ensures universal access? It is important to emphasise that presenters require expertise in their field to ensure that simulations are conducted respectfully and to avoid trivialising the implications of disability. To this unit, the researcher brings her post-graduate
qualifications in deaf education and experience of teaching students with disabilities.

In reference to the power of language, it seems “words matter”. One beginning teacher recalled an activity that involved rephrasing sentences that were captured from the media or from conversations about people with disabilities (e.g., *suffered, wheelchair bound*). This activity, as evidenced by his account, had a positive and memorable impact on his views about the importance of using appropriate language. In addition, short biographies sourced from quality current affairs programs were presented whereby individuals discussed their story and educational experiences (e.g., Paralympian, artist, mathematician, and scientist). This led pre-service teachers to reflect on personal attitudes, the practice of stereotyping and barriers to inclusion. Personalising the stories of individuals appears to have a positive impact on pre-service teachers’ attitudes about inclusive education.

**Learning experiences for knowledge acquisition.** The study found that pre-service teachers should be involved in well-designed learning experiences that focus on developing knowledge of curriculum documents, support available in schools, implications of disability legislation, and on specific areas of disability. Findings suggest that this acquisition of knowledge is best achieved by providing pre-service teachers with meaningful learning experiences that are connected to schools and classrooms. These findings validate the learning experiences provided during the inclusive unit. These included

- listening to authentic Australian school-based case studies that resulted in litigation (acquired from ABC radio\(^{35}\)), followed by discussions in collaborative learning groups;
- applying legislation to case studies – presented in multi-media;
- devising inclusive approaches; and
- using online curriculum documents to consider alternative outcomes for students.

**Learning experiences that enhance pre-service teachers’ inclusive skills.**

Beginning and experienced teachers expressed concerns about beginning teachers’ ability to implement inclusive education. This finding supports the recommendation in

\(^{35}\) Australian Broadcasting Corporation (ABC) is non-commercial radio network which programs news and current affairs, the arts, social issues, science, drama and comedy.
the *Action Now: Classroom Ready Teachers* report (Teacher Education Ministerial Advisory Group, 2014, p. xiv) which proposes that pre-service teachers develop “evidence-based pedagogical approaches for contemporary classrooms”. A significant message from this study’s findings is that pre-service teachers require evidence-based learning experiences that provide them with pedagogical competencies; for example, developing the ability to ask lower and higher order questions during discussions to engage a range of learners.

Although a number of beginning and experienced teachers suggested that pre-service teachers learn about traditional special education practices (e.g., writing Social Stories for students who require social skills), this suggestion was of secondary importance compared to the view that pre-service teachers should develop and consolidate sound pedagogy. During interviews experienced teachers discussed how special education approaches are effective for the majority of students (e.g., visual schedules that provide students with a pictorial representation of the day’s activities) and therefore suggested that such approaches should be introduced to pre-service teachers as inclusive approaches. This finding aligns with Florian and Linklater’s (2010) suggestion that pre-service teachers should be encouraged to regard themselves as “inclusive practitioners” (p. 384).

This study identified a cluster of practices that provide pre-service teachers with skills to implement inclusive education. The following section integrates and discusses the findings for augmenting pre-service teachers’ skills in

- managing inclusive classes;
- collaborating with stakeholders;
- differentiating instruction; and
- selecting and using resources.

**Enhancing pre-service teachers’ ability to manage inclusive classes.**

Experienced teachers indicated that greater emphasis should be placed on augmenting pre-service teachers’ competencies to effectively manage inclusive classes. Notably, many of the experienced teachers’ suggestions overlapped with learning experiences that beginning teachers recalled from their inclusive unit. They recommended that pre-service teachers should learn how to

- modify the curriculum so that they can cater to and engage a range of learners
Both groups stressed that pre-service teachers should be presented with realistic scenarios and case studies. They also felt that pre-service teachers should be offered opportunities to observe skilled inclusive teachers. For example, beginning teachers recalled viewing video clips of challenging classroom scenarios and analysing teacher responses during the inclusive unit. They indicated that such learning experiences contributed to their ability to manage classes calmly and in ways that were non-confrontational. Both beginning and experienced teachers indicated how important it was that pre-service teachers learn how to manage inclusive classrooms during professional practice by honing approaches that result in calmer classrooms (e.g., classroom organisation, non-confrontational approaches, speaking privately to students). It seems that pre-service teachers would benefit from presentations by practitioners with expertise in supporting the learning of students with challenging behaviours (e.g., teachers with advanced skills, behavioural psychologists).

Experienced teachers offered insights that highlighted their expertise. They associated effective classroom management with equity for all students. They indicated that managing inclusive classes went beyond behaviour management by suggesting that pre-service teachers learn how to: conduct collaborative learning groups; cater for the learning needs of diverse learners; and critically analyse approaches used in schools. They tended to regard effective inclusive teaching as synonymous with sound and effective pedagogy. Nonetheless, both groups felt that pre-service teachers require learning experiences that provide them with skills to respond appropriately to challenging situations.

Enhancing pre-service teachers’ collaborative skills. Findings highlight the importance of pre-service teachers engaging in meaningful and relevant learning experiences that enhance their ability to collaborate with a range of stakeholders to improve outcomes for students with additional needs. Over the last few decades parents and guardians have taken a more active role in their children’s education. Further, participation by parents in children’s education is recognised as having benefits for student learning (Department of Education, Employment and Workplace
Relations, 2008). Not surprisingly, beginning and experienced teachers suggested that pre-service teachers engage in learning experiences designed to enhance their ability to collaborate with stakeholders especially parents and caregivers.

Beginning teachers discussed the usefulness of support staff, however, they revealed that they lacked the knowledge and skills to utilise the expertise of such staff in order to benefit their students. These results accord with those of McKenzie (2009) who found that the topic of collaboration is covered in an ad hoc manner in many initial teacher education programs.

There was consensus among beginning and experienced teachers that pre-service teachers should engage in role plays to consolidate their understanding of various support roles (e.g., learning and support teacher, school counsellor) and structures, such as learning support teams to advance the implementation of inclusive education. These findings support those of Forlin et al. (2008) who found that strategies that teachers reported as effective for implementing inclusive education included: collaborating with colleagues and seeking professional support for students; focussing on problem-based scenarios and implementing action plans; and setting realistic expectations and working towards priorities. During the inclusive unit, pre-service teachers participated in (mock) learning support team meetings to discuss the learning needs of various students. The positive changes in pre-services teachers’ reported ability to collaborate effectively after completing the inclusive unit may be attributable to such learning experiences. Nonetheless, it is difficult to explain why as beginning teachers they reported lacking the knowledge and skills to collaborate with a range of stakeholders. Perhaps while undertaking professional practice, pre-service teachers should be offered opportunities to observe and practise these skills. Further, it seems that a shared vision and joint approach may be required to prepare pre-service teachers for collaborating with stakeholders in contemporary schools.

Experienced teachers stressed that pre-service teachers need to engage in systematic learning aimed at developing collaborative and interpersonal skills. They suggested that pre-service teachers practise liaising with a range of stakeholders and engage in learning that requires them to understand the perspective of others. It seems important to provide pre-service teachers with learning experiences that improve their ability to; actively listen, acknowledge the viewpoints of others, and work collaboratively using
Enhancing pre-service teachers’ differentiation skills. Findings show that pre-service teachers require learning experiences that provide them with a deeper understanding of how to differentiate instruction to cater for students with additional needs. Beginning and experienced teachers impressed that pre-service teachers should engage in learning experiences that augment their understanding of and ability to

- apply knowledge about the learning continuum;
- conduct assessment;
- deconstruct the curriculum to support students with additional needs.

Beginning and experienced teachers recommended that pre-service teachers be provided with examples of differentiated lessons as well as templates that require them to plan differentiated instruction. This thesis offers one such template (see Figure 6.1). Many of the experienced teachers emphasised the need for pre-service teachers to learn about assessment in relation to the learning cycle, the learning continuum and the curriculum. It seems that pre-service teachers require opportunities while on professional practice to match learning materials based on assessment to the needs of students.

It became evident that pre-service teachers’ ability to differentiate instruction would be enhanced if learning experiences required them to plan lessons and units of work that cater for the needs of all students in classes. Inclusive education may be more attainable and achievable if pre-service teachers are provided with models of how to implement inclusive education. The majority of experienced teachers explained that a comprehensive planning approach to inclusive education is required. This thesis proposes one such model (see Figure 6.3); an explanation is presented later in this chapter. Interestingly, the experienced teachers interviewed were not aware of the Universal Design for Learning framework. One beginning teacher recalled learning about the concept of Universal Design for Learning while many experienced teachers alluded to the concept. Accomplishing the task of designing and implementing universal lessons may result in pre-service teachers feeling more equipped to teach inclusively.

In addition, teachers suggested that learning experiences should provide pre-service
teachers with a range of practical strategies (e.g., preparing Social Stories and visual timetables). Importantly, beginning and experienced teachers felt that pre-service teachers require opportunities to observe the skill of differentiation being modelled by either academics or teachers.

**Improving pre-service teachers’ ability to select and use resources.** This study found it important that pre-service teachers are provided with learning experiences that augment their ability to select and use resources to cater to a diversity of learners. This supports an earlier finding of this study that pre-service teachers need to develop cognisance of the importance of matching resources to student needs. For example, as a way to enhance pre-service teachers’ understanding of the importance of matching resources to student needs, pre-service teachers commenced a tutorial under test conditions. They were asked to attempt Higher School Certificate examinations (e.g., English, Mathematics) labelled as NAPLAN Year 3 tests. This exercise was stopped after approximately five minutes. A debriefing session followed in which pre-service teachers discussed their reactions and the appropriateness of the exams to current learning outcomes. This empathy task induced pre-service teachers to evaluate the importance of matching resources to students’ learning needs. The aim was to consolidate their understanding that outcomes and resources need to be matched to student levels in order for students to progress, and to heighten their awareness of the anxiety that tests such as NAPLAN can produce in all students, particularly students with additional needs.

Both beginning and experienced teachers emphasised the importance of pre-service teachers developing competency with technology. They felt that pre-service teachers should be provided with hands-on opportunities to experiment with technology in order to acquire such competencies (e.g., interactive whiteboards). As part of a cluster of practices pre-service teachers experimented with a variety of adaptive and assistive technologies as a flipped classroom activity, and presented and discussed the benefits of their Information and Communication Technologies to collaborative learning group during tutorials.

**Mode of delivery.** Pre-service teachers (post-unit questionnaire) ranked tutorials as the most important component of their preparation for inclusive teaching, followed by lectures, assignments, and online learning. This finding shows that pre-
service teachers’ preferred mode of learning for the inclusive unit was face-to-face tutorials. In light of other results of this study which show that pre-service teachers felt prepared and equipped for inclusive teaching after undertaking the inclusive unit, this finding suggests that they recognise the benefits of participating in the practical aspects of the tutorials. This supports Bligh’s (2000) findings that show that although university students enjoy well-presented lectures they prefer well-conducted group learning.

Beginning teachers recalled influential learning experiences from the inclusive unit that positively influenced their practice. As examples, they cited learning how to implement universal approaches and observing authentic case studies that contributed to their understanding of the implications of legislation. Such recollections are evidence of the effectiveness of the mode of delivery as well as the cluster of practices.

Although beginning and experienced teachers were not asked directly during interviews about preferred modes of delivery, they nonetheless spontaneously recommended learning experiences for tutorials, lectures, assessments and online delivery. Regardless of whether inclusive content is delivered face-to-face, blended or online, or delivered as a stand-alone unit or as an integrated model, learning experiences offered to pre-service teachers should be designed to address attitudes about inclusive education, convey knowledge and impart skills that prepare them to cater to a diversity of learners in inclusive settings.

Lessons Learned: Implications for Policy and Practice

The findings from this study build on the knowledge-base about preparing pre-service teachers for inclusive education. Firstly, a number of implications for policy decisions were identified. Secondly, the findings generated a cluster of practices, in particular learning experiences that support an eclectic approach to pre-service teacher preparation. These informed the development of a template and two models as tools for academics in teacher education to use in the delivery of inclusive pedagogy and curriculum during initial teacher education.
Implications for policies regarding the preparation of pre-service teachers for inclusive teaching.

Selection of candidates for entry to teaching. Concerns were raised by beginning and experienced teachers about the selection of candidates entering teacher education programs. A view emerged that in order to be an effective inclusive teacher, consideration should be given to personal attributes. This finding is consistent with the recommendation in the Action Now: Classroom Ready Teachers report (Teacher Education Ministerial Advisory Group, 2014) which recommends that initial teacher education programs develop rigorous selection processes (e.g., personal attributes and aptitudes). Presenting learning experiences based on disability studies in education may elevate the curriculum by providing opportunities for pre-service teachers to engage in critical thinking about school structures, cultures and practices (Moore & Slee, 2012).

In addition, beginning teachers questioned the efficacy of acceleration pathways to expedite course completion. They suggested that some pre-service teachers adopted inappropriate practices in order to pass course requirements resulting in a failure to comprehend subject material.

Integrating university learning with school experiences. Beginning teachers identified a fundamental disconnection between the learning that occurs at university and what happens in schools. This finding mirrors that of the Action Now: Classroom Ready Teachers (Teacher Education Ministerial Advisory Group, 2014) which recommends that theory and professional practices must be “mutually reinforced” (p. X111). Beginning teachers, support teachers and counsellors suggested that, while on professional practice, pre-service teachers should be placed with effective inclusive class teachers. This finding supports Loreman’s (2010) proposal, “that a deliberate effort to place them [pre-service teachers] in positive, inclusive environments is important” (p. 63).

While recognising that logistical barriers sometimes prevent best practice (e.g., placing pre-service teachers while on professional practice with teachers who implement inclusive teaching well) attempts should be made to provide pre-service teachers with professional practice that contributes positively to their development as an inclusive
teacher. In addition, beginning and experienced teachers suggested that pre-service teachers would benefit from working with students with additional needs by visiting support classes. This practice, however, may have counterproductive outcomes by reinforcing a view that students are better served when those with additional needs are enrolled into segregated classes (Loreman, 2010a).

Beginning teachers also questioned the relevance of some aspects of their initial teacher education, particularly professional practice, that were undertaken outside schools (e.g., in non-educational institutions and unrelated to students with additional needs). Perhaps a concerted effort is required to ensure that non-school professional practice placements are relevant to pre-service teachers’ needs. This aligns with a previous finding of this study suggesting that pre-service teachers require opportunities to attend community-based organisations where students with additional needs are included.

This study found that pre-service teachers should be immersed in learning experiences designed to provide them with transferable skills; allowing them to achieve early success that impacts positively across their teaching careers (Arends, 2014; Conway & Clark, 2003). Beginning and experienced teachers suggested an array of learning experiences for professional practice, such as observing effective teachers demonstrating inclusive approaches (e.g., scaffolding tasks for students with learning difficulties) and shadowing support teachers. It may be beneficial to establish school partnerships in which teachers who have been identified as having expertise could demonstrate lessons live or tele-conferenced highlighting effective inclusive practices. This accords with Kurth and Foley’s (2014) suggestion that invitations should be extended to effective mentor teachers to create partnerships to support inclusive education.

It is important that professional practice is structured in such a way that ensures that pre-service teachers are provided with targeted opportunities to consolidate evidence-based skills and strategies for contemporary inclusive teaching. Stronger connections with schools may lead to a deeper awareness of the implications of the rising number of students with additional needs in regular classes as well as an understanding of the educational needs of the diverse learners (Kurth & Foley, 2014).
**Stronger connections with schools.** The findings of this study suggest that universities need policies that strengthen connections with schools. This supports Watson’s finding (2005) that stronger relationships between initial teacher education providers and schools would have beneficial outcomes for pre-service teachers. One way to foster such a link is to ensure that inclusive education forms an integral part of the “professional practice” component of initial teacher education. This suggestion supports Kurth and Foley’s (2014) proposal that course work “must convey an unwavering support for inclusive education” (p. 298). It is imperative that prior to undertaking professional practice pre-service teachers understand that they are responsible for the learning of all their students. In addition, beginning teachers indicated that more time in schools during their initial teacher education course would have been beneficial to their practice. Watson (2005) drew a similar conclusion, showing that pre-service teachers require more time undertaking professional practice. Further, the current findings suggest that links with universities should be established to provide ongoing support for beginning teachers after they complete their initial teacher education.

**Academics’ connectedness with schools.** Some experienced teachers expressed concerns about academics’ apparent lack of connectedness with schools. They felt that some academics were unaware of the changing nature of schools with regard to inclusive education and emphasised a need for academics to have relevant experience, background and skills to enable them to prepare pre-service teachers for inclusive teaching. This finding accords with the Teacher Education Ministerial Advisory Groups’ (2014) recommendation that a proportion of staff should have contemporary school experience (see also Urbis, 2015). Whether through such contemporary experience or through academics’ strong(er) connections with schools, sufficient understanding of the complexities of schools would seem fundamental to preparing pre-service teachers for contemporary inclusive teaching.

Further, enhanced connections between schools and universities may create opportunities to work collaboratively to construct highly relevant and connected learning experiences – for example, collaborating with accomplished teachers to plan online or face-to-face tutorials resulting in stronger linkages between theory and practice.
Implications for academic staff. A view emerged that the learning experiences provided during initial education are often not relevant to pre-service teachers’ future needs. Given the trend towards educating students with additional needs in regular settings, it is imperative that pre-service teachers feel prepared for their inclusive role. The findings of the current study support those of Kurth and Foley (2014) who suggested that teacher preparation for inclusive education has not kept pace with changes in schools. Hodkinson (2009) argues that initial teacher education providers must present coordinated learning programs that equip pre-service teachers to include students who have traditionally been excluded. It is incumbent on initial teacher education providers to ensure that pre-service teachers receive quality and relevant learning experiences to prepare them for contemporary inclusive teaching. It may be that academics require opportunities to develop an appreciation of the implications of the trend towards inclusive education. This might promote the notion that catering to the continuum of learners needs to be applied across all units. This aligns with Kemmis’ (2010) contention that academics in the field of education face challenges associated with increased diversity of students, changed historical education contexts, and different community and government expectations.

While acknowledging that many initial teacher education programs are adversely impacted by time constraints (Hodkinson, 2009), it is important that academics ensure that pre-service teachers learn how to cater to a range of learners in all curriculum areas. This recommendation concurs with those of other researchers (Harvey et al., 2010; Loreman, 2010a; Slee, 2001) who assert that initial teacher education providers adopt a philosophy and practice of shared vision. These scholars regard the preparation of pre-service teachers for inclusive teaching as a shared responsibility; not the sole responsibility of an inclusive unit coordinator. Although part of this study focuses on the effect of an inclusive unit on one cohort of pre-service teachers, many of the pedagogical approaches described are applicable to other units of study. The findings suggest the importance of presenting pre-service teachers with an eclectic selection of learning experiences that are connected to schools, relevant to their needs and authentic.

Notwithstanding this, Loreman (2010) suggested that the choice of an inclusion unit coordinator is a critical factor in the successful design and delivery of inclusive
content. Academics responsible for coordinating inclusive education content need to design learning experiences that advance a deeper understanding of the benefits of inclusive education as well as impart knowledge and skills. This may require drawing on the professional currency of teachers currently working in schools who are positively disposed to inclusive education. In reference to the current study, it may be that the unit coordinator’s combined background as an experienced teacher and academic with a thorough understanding of issues associated with inclusive education has contributed to the positive changes that pre-service teachers reported after undertaking the inclusive unit.

**Implications for practices regarding the preparation of pre-service teachers for inclusive teaching.**

*Viewing “inclusive teaching” as synonymous with “teaching” in contemporary Australian classes.* A key finding was that inclusive content and material should be presented as mainstream rather than marginal subject matter. A view or practice that relegates inclusive units or inclusive content as dealing with the “other” or special students, fails to advance inclusive education. In the last decade, across Australian universities there has been a change in nomenclature from “special education” to “inclusive education”. However, the findings of this study suggest that the role of inclusive units has not changed. One experienced class teacher explained how the content of the inclusive unit that she undertook during initial teacher education had a special education focus and therefore was not relevant to her needs as a beginning regular-class teacher. Other experienced teachers indicated that their inclusive unit did not contribute to their understanding of how to teach inclusively. These findings accord with research conducted by Kurth and Foley (2014) who found that when inclusive education is viewed as a special education issue, it is often treated as an add-on subject.

School of education academic staff and inclusive unit or content coordinators need to reframe the concept of inclusive education by promoting inclusive curriculum as pedagogy that prepares pre-service teachers for contemporary teaching. Because beginning teachers can act as change agents, it is particularly important that pre-service teachers are provided with learning experiences that shift attitudes and showcase effective inclusive pedagogy. For example, it is important that while on professional
practice, pre-service teachers focus on how to successfully implement inclusive education rather than asking why adopt the approach (Loreman, 2007).

It seems that academics in the field of education should have the requisite skills to model and demonstrate aspects of teaching such as applying approaches such as universal design. Teacher education providers are responsible for ensuring that university teaching does not promote “the empty vessel” model that Freire cautions against (Freire, 1970). In such a model, approaches to delivering lectures result in passive engagement (Biggs & Tang, 2011) and perpetuate teaching styles whereby knowledge is bestowed on others; rather than creating learning environments that result in processes of inquiry (Freire).

Based on the researcher’s experience during this study and pre-service teacher feedback, a practice emerged that will be referred to as “pedagogical highlighting”. When employing a teaching strategy it is important to identify the strategy and explain its purpose to pre-service teachers. This clearly links the modelled experience with relevant pedagogy. For example, when using a teaching aid or scaffold to explain a concept, the lecturer links its use to Vygotsky’s theory of the Zone of Proximal Development. This process takes the learning experience beyond modelling.

**Designing inclusive content that bridges competing paradigms.** The findings of the current study indicate that a teacher’s focus should be on students’ needs rather than on their differences. Inclusive education units within initial teacher education are intended to support inclusive education policy and practice. While academics are required to design and deliver inclusive content, they are faced with the reality that large school institutions predominantly use the medical model to inform practices. Diagnosing and classifying students based on disability occurs in order to obtain funding and to enrol students into segregated educational settings. The NSW Department of Education, for example, uses classification of disability to enrol some students into segregated settings (NSW Department of Education and Communities, 2012). The findings of this study reveal a prevailing acceptance of ableism within the education system – the practice of justifying discriminatory policies. For example, a number of teachers discussed seeking segregated settings for some students.

While a finding of this research shows that pre-service teachers and teachers see a need
for disability specific information, it also found that a focus on individual needs of students should take precedence. Perhaps by presenting carefully selected case studies, issues pertaining to difference can be addressed in a respectful manner. The adoption of a balanced approach that recognises difference within the framework of inclusive education may assist to resolve issues about responding to disability and difference (Norwich, 2010). It seems important that pre-service teachers are made aware that highlighting student differences can lead to marginalisation while failing to recognise student differences can result in inadequate responses to individual needs.

**Recognising contextual issues that impinge on inclusive education.** The preparation of pre-service teachers is one of many issues that impacts on inclusive education in schools; others include availability of resources, access to professional development, and socio-economic factors. The intensity of beginning teachers’ stories about the challenges they experienced suggests other factors such as these were at play.

Unsurprisingly, school context appeared to be a factor that contributed to challenges associated with the implementation of inclusive education. Interview findings revealed that beginning teachers in areas of social disadvantage faced additional challenges in relation to inclusive teaching. This finding supports those of other researchers who have revealed the compounding effects of social disadvantage on children (Erebus International, 2005; Gonski et al., 2011). In particular, the current study found that factors such as having more students with challenging behaviours, less experienced teachers, greater proportions of students with learning difficulties and students from non-English speaking backgrounds (e.g., refugees) interact and impact on a teacher’s capacity to implement inclusive education. While education policies continue to segregate students, and school structures and cultures foster exclusion, the realisation of inclusive education can be very much diminished.

In addition, the findings of this study suggest that pre-service teachers require insight about cultural perspectives regarding disability. In a multi-cultural society, cultural sensibilities towards disability should be understood to ensure students are not disadvantaged. This is consistent with Clark’s (2005) recommendations that the development of cultural competence among school stakeholders must be a priority. Given the diverse nature of schools it seems necessary that some learning time during
initial teacher education is devoted to developing cultural competence in relation to disability. To illustrate this, one experienced teacher interviewed for the current study, explained how a father from a migrant background, did not want his son to receive additional educational support because he was concerned about perceived shame associated with disability. Lalvani (2015) found that parents were more concerned than teachers about stigma and marginalisation associated with their child’s disability while other scholars (Obeid et al., 2015; Saetermoe, Scattone, & Kim, 2001) found significant differences in the attitudes of people of various ethnic groups towards people with disabilities.

More nuanced approaches to supporting the learning needs of students are required. For example, approaches that purport to be inclusive may in fact corroborate a special education approach (Liasidou, 2015). For example, the practice of withdrawing students from classes. It seems important that pre-service teachers engage in learning that heightens their awareness of disabling and exclusionary practices. In addition, it is possible that the ongoing focus on improving test scores on public tests such as NAPLAN has diverted attention from matters such as improving curriculum and pedagogy and implementing inclusive education (Slee, 2014).

The interview data uncovered challenges and frustrations that many teachers experience with implementing inclusive teaching. These findings highlight the importance of delivering pedagogy and curriculum to pre-service teachers designed to shift attitudes, improve knowledge and advance skills to face the challenges and demands of teaching in a range of school contexts.

Consider alternative models for preparing pre-service teachers for inclusive teaching. All of the pre-service teachers (128/128, 100%) and almost all of the experienced teachers in this study (312/325, 96%) believe that a mandatory inclusion unit should be part of initial teacher education. On the questionnaire, nearly half (81/181, 45%) of experienced teachers were critical of the mandatory inclusive unit that they undertook during their studies; many at interview described their inclusive unit as inadequate. These findings, while demonstrating the importance that teachers attribute to studying inclusive education during initial teacher education, highlight concerns they have about the preparation of pre-service teachers for inclusive teaching. This study’s findings are consistent with other studies and government
reports which articulate concerns about teacher preparation for inclusive education (Forlin & Chambers, 2011; Kurth & Foley, 2014; Parliament of NSW, 2010; Shaddock et al., 2007; Teacher Education Ministerial Advisory Group, 2014; Vinson et al., 2002).

During interviews, many participants volunteered alternative approaches to preparing pre-service teachers for inclusive education other than a one semester inclusive unit. Beginning and experienced teachers suggested that inclusive education requires more extensive coverage (e.g., two semesters). A beginning teacher proposed retaining a one semester mandatory inclusive unit and supplementing it by integrating inclusive pedagogy into other units. Similar proposals have been posited by several researchers (Avramidis et al., 2000; Loreman, 2010a; Slee, 2001). Loreman and Slee assert that an integrated approach is preferable to presenting inclusive content as a separate unit; they argue that the latter model inadvertently reinforces a view that supports a segregated approach to teaching students with additional needs. However, such an approach may lead to an ad hoc or inadequate coverage of inclusive content (Avramidis et al., 2000). Integrating inclusive content across units would require academics to have a thorough understanding of the movement towards inclusive education and the philosophy underpinning it; some may need to be convinced of the benefits of a shared vision and may need to become accustomed to delivering content that requires differentiated instruction.

At interview, the five beginning teachers who undertook the inclusive unit as part of this study, while critical of some aspects of their initial teacher education, expressed satisfaction with their preparation for inclusive teaching. In particular, beginning teachers recalled specific learning experiences from the unit and commented on the practical relevance to their teaching. Questionnaire results showed positive changes in the self-reported attitudes, knowledge and skills of the pre-service teachers who completed the unit; a further demonstration of pre-service teachers’ satisfaction with their preparation. Notably, Sharma, Forlin and Loreman (2008) suggested that the quality of content and pedagogy delivered to pre-service teachers is the most salient predictor of pre-service teachers’ attitudes, regardless of the type of model employed to present inclusive content.

The findings of this study show that a well-designed, one semester inclusive unit had
beneficial outcomes for pre-service teachers suggesting that they entered the workforce feeling prepared and equipped for teaching inclusive classes. As such, rather than extending inclusive education during initial teacher education, it is imperative that inclusive curriculum and pedagogy are of relevance and connected to the future needs of beginning teachers and firmly grounded in research.

**Ongoing review of pre-service curriculum.** Given the evolving nature of inclusive education, together with the complexity of contemporary schools, it seems likely that demands on class teachers will continue to increase. This suggests that the process of designing curriculum to prepare pre-service teachers for inclusive education requires ongoing review and refinement. Further, the content and delivery of inclusive subject matter should be revised and updated to reflect current research and philosophies, and changing circumstances in schools. Continued research about how to effectively prepare pre-service teachers for inclusive teaching should inform and enhance the delivery of teacher preparation as well as provide guidance for professional development of teachers.

**Individual learning plans – emerging practices that impact on inclusive education.** An unanticipated finding of this study was that beginning teachers are increasingly expected to prepare and write individual learning plans for students with additional needs and to do so in isolation. Some beginning teachers complained that they were not taught how to develop these plans while at university, yet reported that they were required to prepare these documents in schools. This finding is concerning as individual learning plans are intended to be prepared collaboratively with other professionals. The development of individual learning plans in isolation by beginning teachers who are inexperienced is not in the best interests of students and may be exceeding class teachers’ responsibilities. Apart from evidence to suggest that placing students on individual learning plans can lead to marginalisation (Tennant, 2007), the preparation of individual learning plans should be carried out collaboratively. It is posited that beginning teachers do not have the requisite expertise to perform this role. For example, a beginning teacher does not have the requisite knowledge about links between language development and reading difficulties to prepare an individual learning plan for a student with an expressive and receptive language delay. This emerging practice may be the consequence of a top-down approach – one that aims to
satisfy bureaucratic requirements at the expense of allocating time for effective collaboration and planning. Notably, the practice of preparing individual learning plans for students with additional needs requires careful consideration and should be a collaborative process.

**Providing adequate support for beginning teachers.** The evidence from this study shows that many beginning teachers struggle with aspects of inclusive teaching (e.g., differentiating instruction, managing inclusive classes). An important message to take from this study is that beginning teachers require assistance and ongoing professional development to support them in their endeavours to implement inclusive education. Beginning and experienced teachers’ suggested that there are many children with undiagnosed disabilities/additional needs in regular classes. In addition, their accounts support findings that show a rapid increase in the number of students with a disability in regular classes in NSW (Graham & Sweller, 2011). Taken together, it seems reasonable to suggest that education systems have a responsibility to provide beginning teachers whether casual, part-time or permanent with induction programs (e.g., professional development) that support them to implement inclusive education. This conclusion accords with those of Avramadis and Norwich (2002) who maintain that if inclusive education is to be successful, teachers should be well-supported in their endeavours.

This thesis focuses on how to prepare pre-service teachers for inclusive teaching. To this end, the findings have informed the development of a cluster of practices and tools for improving the preparation of pre-service teachers for inclusive teaching. These are detailed in the following discussion.

**Pedagogical Approaches to Prepare Pre-service Teachers for Inclusive Education**

The findings of this study highlight the need for targeted and well-informed approaches to advance the preparation of pre-service teachers for inclusive education. Interestingly, links emerged between the cluster of practices emanating from the study’s findings and the *Productive Pedagogies* framework.

Importantly, the need for structured approaches informed the design of instructional schema – a template and models that are presented in this section. It is proposed that
these approaches would enhance the preparation of pre-service teachers for inclusive teaching. In offering pedagogical models for preparing pre-service teachers for inclusive teaching, consideration has been given to learning theories, elements identified in research reports such as Newmann and Associates (1996) and the Productive Pedagogies model, and evidence-based approaches for teaching and learning at university (i.e., Constructive Alignment by Biggs & Tang, 2011). As described in the study methods (Chapter 3), the learning experiences provided in this inclusive unit were linked to learning theories and to the themes of attitudes, knowledge and skills (see Table 3.2).

**Productive pedagogies.** On analysing beginning and experienced teachers’ responses it became apparent that their suggestions mapped onto the Productive Pedagogies dimensions of intellectual quality, connectedness, supportive classroom environments and working with and valuing difference identified in the Productive Pedagogies framework (Lingard, Hayes, & Mills, 2003). Given the vast and varied experience of the 15 teachers interviewed, who continually design and deliver learning experiences for students, this finding is not surprising. It was surprising, however, how closely responses mapped onto this theoretical model. Further, the researcher’s practice as an academic is informed by her extensive experience as a teacher. Therefore, it was interesting to ascertain that the learning experiences that pre-service teachers described from the inclusive unit also mapped onto the Productive Pedagogies model. Perhaps there is a correlation between the positive effects of the inclusive unit on pre-service teachers’ self-reported levels of preparedness and the findings showing that the learning experiences mapped onto the Productive Pedagogies framework. It seems that the Productive Pedagogies framework could be used to inform the design of learning experiences for pre-service teachers about inclusive pedagogy. Further, this may be the first time that learning experiences of a university education unit have been mapped onto the influential Productive Pedagogies framework. This is of importance because this framework is used by academics to inform pre-service teachers about effective teaching practices in schools (Gore, Griffiths, & Ladwig, 2004). Further, this framework has been adopted by the NSW Departments of Education to guide programming in schools (Gore, et al., 2004).

Although Productive Pedagogies is based on school contexts, its four dimensions are
useful for considering learning experiences identified in the study’s findings. The Productive Pedagogies model is underpinned by a philosophy of social inclusion (Allan, 2003; Lingard et al., 2003). A core principle is to enhance the social and academic outcomes for all students, especially those who underachieve as a result of social disadvantage (Lingard et al., 2003). This philosophical, ethical and pedagogical approach harmonises with the philosophy of inclusive education.

The evidence from this study suggests that an eclectic approach should be adopted to prepare pre-service teachers for inclusive teaching – one that showcases, models and demonstrates a variety of inclusive pedagogical approaches (e.g., explicit instruction, pedagogical highlighting, well-considered simulations, empathy tasks, use of assistive and adaptive technology and managing inclusive classes). This study’s findings suggest that in order to effectively prepare pre-service teachers for inclusive teaching, learning experiences should be engaging, relevant and linked to educational theory.

**Templates and Models for Enhancing the Preparation of Pre-service Teachers for Inclusive Education**

The study findings confirmed the need for structured approaches to prepare pre-service teachers for inclusive teaching. This led to the development of schemas to be used in initial teacher education; specifically, a template and two models are proposed. Firstly, based on the study findings a planning template for the application of the Universal Design for Learning framework was developed to assist with planning and implementing inclusive education. Secondly, a model of inclusion, the Pyramid of Inclusive Pedagogy was devised to promote pre-service teachers’ and teachers’ understanding of inclusive education. Thirdly, a model of curriculum and pedagogy was designed to guide academics when developing and reviewing inclusive content and pedagogy for preparing pre-service teachers for inclusive teaching. Notably, the model could be applied to other units within initial teacher education.

**Universal lesson planning template.** A universal planning template was designed to provide pre-service teachers and teachers with practical approaches to prepare inclusive lessons that cater to a range of learners (see Figure 6.1). The findings of the current study, concepts emanating from the Universal Design for Learning framework and the learning continuum were combined to create the template. The template can be used by pre-service teachers and teachers to plan for the learning
needs of all students (from students with high support needs to students who are
gifted). It prompts pre-service teachers and teachers to adopt approaches that cater to
the diversity of learners by differentiating instruction and adjusting their teaching to
learners needs. It requires pre-service teachers and teachers to consider structuring
lessons with regard to:

- multiple means of engagement – which involves engaging students by tapping
into their interests and increasing their motivation. For example, in tutorials
Braille books were sourced to consolidate pre-service teachers’ understanding of
the need to adjust and accommodate;

- multiple means of representation (enquiry) – which involves providing students
with various ways to acquire information. For example, students may use the
text-to-voice feature on a computer to access written formats; and

- multiple means of expression (action) – which involves providing alternative
methods for students to demonstrate their understanding. For example, a student
with intellectual disability may submit a slide show rather than a written report.

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<tr>
<th>Curriculum Area:</th>
<th>Syllabus Document:</th>
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<tr>
<td>High Support Needs</td>
<td>Learning Continuum</td>
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| UDL Elements | Support Needs | Universal: All Students | Extension |
|--------------|---------------|----------------------------|
| Varied pedagogy |               |                            |
| Differentiation |               |                            |
| Adjustments |               |                            |
| Accommodations |               |                            |
| Engagement |               |                            |
| Representation |               |                            |
| (Enquiry) |               |                            |
| Expression |               |                            |
| (Action) |               |                            |

Resources/materials:

Figure 6.1. Planning template for application of Universal Design for Learning (TAUDL).
The following section demonstrates the application of the template to a learning experience in a tutorial (Figure 6.2). The aim of this tutorial segment was to demystify *Universal Design for Learning* while modelling a variety of pedagogical approaches (e.g., differentiating instruction, collaborative learning, explicit instruction, and Information and Communication Technology). Further, the tutorial was designed to replicate a classroom situation in which teachers are required to cater to a diversity of learners.

Pre-service teachers engaged in a simulation of hearing loss designed to engender understanding of the impact of a hearing impairment. The outcomes of the tutorial segment were to

- consolidate pre-service teachers’ understanding of the concept of *Universal Design for Learning*;
- reinforce pre-service teachers’ understanding of the need to adjust and accommodate to cater to student learning needs;
- expand pre-service teachers’ repertoire of inclusive instructional strategies; and
- enhance pre-service teachers’ understanding of the implications of hearing loss.

The learning experiences are based on the four dimensions identified in *Productive Pedagogies*. *Connectedness* is achieved through observing a video of university students discussing their lived experiences of having a hearing impairment. Frequency modulation systems (FM) and hearing aids, used as stimulus highlighted connectedness to classrooms by demonstrating that as future teachers, pre-service teachers may be required to use FM systems in their classes. The academic (the researcher) explained the biology of the ear and causes of hearing loss thus achieving *intellectual quality* (deep knowledge, deep understanding). Pre-service teachers were provided with learning materials appropriate to their learning needs thus creating a *supportive classroom environment*. For example, to enhance their understanding of the newly introduced concepts of adjustments and accommodations, groups were given a scaffold with suggested strategies. Lastly, an overall aim was to foster the attitude of *valuing difference*. 
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<th>Curriculum Area:</th>
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<td>High Support Needs</td>
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<td><strong>Learning Continuum</strong></td>
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<tr>
<td><strong>UDL Elements</strong></td>
<td><strong>Support Needs</strong></td>
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<tr>
<td>Varied pedagogy</td>
<td>Captions, frequency modulation (FM) system</td>
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<tr>
<td>Differentiation</td>
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<td>Adjustments</td>
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<td>Accommodations</td>
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<td><strong>Engagement</strong></td>
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<td><strong>Representation</strong></td>
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<tr>
<td><strong>(Enquiry)</strong></td>
<td>Participate in simulation; collaborative learning groups – devise teaching strategies. Frequency modulation systems and hearing aids provided as stimuli</td>
</tr>
<tr>
<td><strong>Expression</strong></td>
<td></td>
</tr>
<tr>
<td><strong>(Action)</strong></td>
<td>Tutor demonstrates how to direct and phrase lower order questions. Tutor moves around groups to ensure all students engaged and clear about tasks. Students learning supported with (scaffold) outline of researched strategies</td>
</tr>
</tbody>
</table>

Resources: video with captions, hearing aids and FM systems, iPad, laminated list of strategies

*Figure 6.2. Sample tutorial showing application of Universal Design for Learning (TAUDL).*

**Pyramid of Inclusive Pedagogy.** The Pyramid of Inclusive Pedagogy encapsulates the findings of this study (see Figure 6.3). The pyramid is designed to inform pre-service and experienced teachers of teacher dispositions and competencies required of effective inclusive teachers. The model is predicated on the importance of
pre-service teachers developing perceptions and consciousness about the ethics underpinning inclusive education. In order to inform future practice, it stipulates that pre-service teachers require an understanding of *disability studies in education*. This would provide pre-service teachers with the necessary background to identify exclusionary practices while raising their social conscience about inclusive approaches. The middle tier is concerned with developing pedagogical approaches that include all students. Notably, the findings of this study build on *Universal Design for Learning* principles. The peak of the pyramid prompts pre-service teachers to consider and plan for the individual needs of students. The term “practice” in this tier comprises the skills of adjusting, accommodating and differentiating to cater for the needs of diverse learners. Each level of the pyramid focuses on factors that are vital for the success of inclusive education. The sections overlap and complement each other. For example, a class teacher will need to collaborate with a specialist itinerant teacher – vision, to ensure resources such as Braille or large print books are available for a student with low vision.
Designing curriculum for preparing pre-service teachers for inclusive teaching. There is a paucity of information about curriculum development for preparing pre-service teachers for inclusive teaching. Given that an overall goal of initial teacher education is to advance the learning of its graduates, through delivery of courses, units and sets of learning experiences, scrutiny of its curriculum should be essential and ongoing. The findings of this study provide details and nuanced information that were used to develop a curriculum to prepare pre-service teachers for inclusive teaching. The findings identify “disciplinary content” and “disciplinary skills” (Barnett & Coate, 2005, p. 56) that were incorporated into the model to prepare pre-service teachers for inclusive teaching.
Understanding the concept of curriculum theory can be elusive. A curriculum needs to be flexible so that context is taken into account; therefore it should not be formulaic. Nonetheless, too often personal ideas or preferences guide the choice of content and delivery of material in university courses (Barnett & Coate, 2005). For example, the choice of a prescribed text is likely to influence underlying philosophies and approaches.

It is posited that the preparation of pre-service teachers for inclusive teaching would be improved if greater emphasis was placed on curriculum development. In order to provide guidance for those responsible for designing and delivering inclusive content this thesis presents such a model. In framing curriculum, numerous influences were considered, namely: the evolving world and its impact on schools; the diversity of learners in schools and universities; and legislation that drives the progression of inclusive education. In addition, curriculum components were considered. These include; organising the scope and sequence of learning experiences, developing relevant and connected learning experiences, aligning outcomes, learning experiences and assessments, designing learning experiences that engage learners, and ensuring that information is current and evidence based.

A tenet of this thesis is that pre-service teachers need to develop dispositions and acquire a repertoire of competencies to enable them to experience initial success on commencing teaching. With success, positive attitudes towards inclusive education are likely to be strengthened. As is often shown “success produces success”. This accords with Tschannen-Moran and Hoy’s (2007) suggestion that it is expected that academics equip pre-service teachers with fundamentals that lead to the development of strong resilient teachers.

**An ideal curriculum model.** The inclusive unit, which is the focus of this study, prepared pre-service teachers through a range of approaches (e.g., constructivist learning principles, pedagogical highlighting and simulations). Figure 6.4 presents a proposed “ideal curriculum model” informed by this research. Pre-service teachers are placed at the centre of the curriculum model because this highlights that the intended outcome is to prepare pre-service teachers for inclusive teaching.

External influences are placed at the top of the model in Box A. These include
government documents that provide some direction in terms of outcomes that graduates of initial teacher education are required to attain. Federal laws that protect people with disabilities against discrimination govern practices and therefore have significant implications for academics as well as pre-service teachers. The culture and structures of schooling is included in this section as these have a major influence on the viability of inclusive education. As a result of changing attitudes and legislation, the custom of automatically placing students with disabilities/ additional needs into segregated settings has changed and is shown in this box. An academics’ background and experiences are placed in Box A, as these factors influence the philosophical approaches adopted and learning experiences presented to pre-service teacher cohorts.

Box B shows the alignment of prescribed outcomes from government documents with course and unit outcomes, learning experiences, assessments and professional practice. Box B also includes professional practice in schools as well as community settings. Designing learning experiences and establishing curriculum priorities are presented in Box C, as well as an overview of approaches used to design learning experiences. These include the application of learning theories and pedagogical frameworks (Productive Pedagogies, Universal Design for Learning and the Learning Continuum).

Box D shows the refinement process that should be ongoing to ensure that all elements of the curriculum are relevant, authentic and current (e.g., evidence-based). Scope and sequence of learning experiences is included in Box D, as it is critical that curriculum developers consider how to organise and structure content (Print, 1993). Linking elements within curriculum is important to facilitate learners’ understanding of content material. It is also important to adjust curriculum to reflect developing theory, in particular, disability studies in education.

It is posited that units of study that prepare pre-service teachers for inclusive education should be reconceptualised; rather than being regarded as units about students with additional needs they should be presented as pedagogy for all students. Although this curriculum model has been devised for preparing pre-service teachers for inclusive teaching, it is anticipated that the model could also be used, with due consideration to context and subject matter, to design curriculum for other units of study especially in the field of education.
A: External Influences
Educational authorities (*AITSL, # BOSTES, @ACARA)
Culture and structures of schooling
Legislation (Disability Discrimination Act 1992; Disability Standards for Education 2005)
Societal changes (changing attitudes)
Academics’ background and experience

B: Alignment
Prescribed outcomes
Interface of unit with initial teacher education program
Unit outcomes
Learning experiences
Assessment
Professional practice with inclusion as a focus: in
1. schools 2. community organisations

C: Designing Learning Experiences and Establishing Curriculum Priorities
Establishing curriculum priorities;
Applying learning theories (see Table 3.2); Productive Pedagogies framework (see Appendix Y); Universal Design for Learning (see Figure 6.1) and the Learning Continuum to designing learning experiences.

D: Refinement
Scope and sequence, Engagement, Relevance, Authenticity, Current and evidence-based research, Developments in theory (e.g., disability studies in education)

Figure 6.4. Model of curriculum and pedagogy to prepare pre-service teachers for inclusive education (CaPPTIE). *AITSL = Australian Institute for Teaching and School Leadership; #NESA = The NSW Education Standards Authority; #BOSTES = Board of Studies, Teaching and Educational Standards; @ACARA = Australian Curriculum, Assessment and Reporting Authority.
Strengths and Limitations

One of the major strengths of this study lies in its mixed methods approach. The researcher is unaware of any other studies that combine questionnaire findings of pre-service teachers (before and after an intervention to establish effect) and experienced teachers (in a variety of roles) with follow-up interview findings. By combining the views of those who work in the field with those who undertook the inclusive unit, the findings propose and detail approaches to prepare pre-service teachers for inclusive teaching. The quantitative results identified and quantified various facets related to preparing pre-service teachers for inclusive teaching while the qualitative responses helped to explain and expand on the quantitative findings and provided detailed and nuanced information based on the teachers’ experiences.

An additional strength of this study was the evaluation of a carefully-designed intervention, in particular using a mixed methods approach. There is a scarcity of research that uses a mixed methods approach to examine the effectiveness of inclusive units. Some studies (e.g., Lancaster & Bain, 2010; Spandagou et al, 2008) used a quantitative approach to examine their effectiveness; however, the qualitative findings of this study produced nuanced insights which helped to explain the self-reported positive changes in pre-service teachers found in the quantitative data. In addition, the design of the questionnaire generated data allowing comparisons between pre-service teachers and experienced teachers regarding inclusive units and inclusive education.

The online questionnaire generated responses from a widespread area of NSW, yielding a large sample of experienced teachers (n=326). Study resources determined that interviews were conducted predominantly with teachers working in Sydney and outer Sydney. However, the researcher secured interviews with teachers who worked in different roles – providing a broad snapshot of views about the preparation of pre-service teachers for inclusive teaching in NSW.

All five beginning teachers who took part in the interviews worked largely in disadvantaged areas in the western and south western suburbs of Sydney. Given the findings in this study showing effects of school location on experienced teachers’ views about inclusive education together with other studies that reveal the compounding effects of social disadvantage on children (Erebus International, 2005; Gonski et al., 2011), school location may have influenced these beginning teachers’
responses. However, as this type of placement is a general pattern for graduates of this initial teacher education program in NSW, their responses remain highly relevant.

**Questionnaire design and dissemination.** Because current measures did not serve the specific purposes of this study, a new measure was developed. This process adhered to all the rigours of tool development necessary for producing a valid, reliable measure. Data had to meet the assumptions of the selected statistical techniques, and appropriate statistical adjustments were made for large sample sizes and number of responses. The results suggest that the questionnaire served as a valid and reliable measure. For example, experienced teachers reported higher skill levels than did pre-service teachers, thus, validating the tool’s capacity to accurately discriminate between groups.

To ascertain that respondents interpreted questions correctly, two distractor items were included in the questionnaire. Results showed that participants interpreted the questions as intended, further validating the questionnaire’s design and the data it yielded. Likert scale results revealed that the majority of participants rated all items as *important to very important* with the exception of the two distractor items. This restricted range of responses appears to accurately reflect the participants’ views about the importance of most of the topics – results for the two distractor items support this interpretation. Importantly, Likert-scale results were corroborated by the ranked topic findings. The changes seen in the pre-service teacher data across the two data collection points, as well as group differences captured by the tool, speak to the questionnaire’s reliability. It was surprising that matched data was obtained for less than half (45 %) of the original sample. This is because some pre-service teachers had discontinued their studies. It may also be due to the timing of data collection which was undertaken in the last teaching week of semester, a time when student attendance sometimes wanes. Nevertheless, data collected at completion of the inclusive unit still resulted in a matched sample size of 119 pre-service teachers – a number more than sufficient to test for statistically significant changes.

The questionnaire was designed as an online tool, which allowed state-wide distribution. To increase the response rate it was disseminated to pre-service teachers in hardcopy (84% of pre-unit questionnaires and 95% of post-unit questionnaires [after cleaning]). Perhaps because it was designed as an online tool, when it was piloted in
hardcopy a potential problem was identified with interpreting the instructions for the ranking items. This was addressed at the time of data collection, by presenting a brief PowerPoint to ensure that pre-service teachers interpreted the questions correctly (see Appendix N).

There were a number of initial challenges when distributing the online questionnaire to teachers. Despite an earlier trial, an unexpected firewall prevented it being freely accessible. This necessitated using alternative distribution avenues. The online questionnaire was posted to teacher community websites (e.g., Alumni and Moodle), disability education consultants and the researcher’s networks. Ethics applications were submitted to three Catholic education dioceses; however, only one granted permission to conduct this research and response rates were low. Consequently, data used in this study were collected predominantly from public schools within the NSW Department of Education. While this places some limit to the generalisability of the findings, it is important to note that this process resulted in an impressively large sample size (n=326). This was sufficiently large to allow for robust statistical analyses and integrity of the results. Perhaps, future research could be extended to include a better representation of Catholic and Independent Schools.

**Addressing potential bias in the qualitative component.** The researcher has a strong background in teaching in schools and university settings. The project was motivated by my background as an educator and by my experience of having a sister with a disability. My experience as a general primary teacher, support teacher in executive positions, educational consultant and academic provides me with insights about challenges associated with the implementation of inclusive education. While I am cognisant that I bring an inclusive philosophy to the research I am well aware of the challenges that class teachers face. The research stems from my belief that if pre-service teachers are provided with high quality initial teacher education in inclusive pedagogy, they are more likely to cope with future challenges.

As such, I was aware of the potential for bias in the qualitative phase of this study and attempted to reduce its effects. Interview questions were developed and adjustments were made to the wording based on advice from a supervisor and an academic colleague. Responses were analysed in accordance with the techniques and rigors of thematic analysis.
The beginning teachers were recruited from the cohort that had undertaken the inclusive unit that I coordinated and taught. Being aware of the potential influence of this, I commenced interviews with beginning teachers by stating (and gesturing), “I am taking my lecturer’s hat off”. I explained that I was interested in their views about how to effectively prepare pre-service teachers for inclusive teaching; generally participants responded by offering solutions based on their experiences. Most participants appeared relaxed and spoke frankly during interviews.

The potential for researcher bias is further addressed by adopting a mixed methods study. This approach allowed for corroboration, convergence and divergence of results which confirmed integrity of the key findings. In particular, the quantitative method ensured objectivity while the qualitative findings supported those results; adding more nuanced and detailed information.

**Directions for Future Research**

The following section suggests approaches for conducting future research which could address the limitations of the current study and extend on the findings.

1. This study proposes two models to advance the preparation of pre-service teachers for inclusive teaching and a template to assist with planning of inclusive lessons. Future research could explore the impact of these tools on teachers’ ability to implement inclusive education. In addition, it is recommended that longitudinal studies be conducted to investigate the impact of inclusive units on teachers’ dispositions and competencies to implement inclusive education. Such investigations would enhance understanding of how to better prepare pre-service teachers for inclusive teaching. The questionnaire in this study may be useful for such future research.

2. The findings demonstrate that the design of the inclusive unit yielded positive changes in pre-service teachers’ self-reported preparedness for inclusive teaching. Unit effectiveness could be further investigated with a randomised control trial. Perhaps, pre-service teachers could be placed into different tutorial groups with different tutors (not the researcher). Some tutorial groups would participate in the inclusive unit described in this thesis while the other tutorial groups would cover inclusive content in alternative ways. Appropriate statistical techniques would control for possible confounding effects.
3. Given the increasing percentage of school age children in NSW attending non-government schools, garnering the views of teachers about inclusive education in those sectors (e.g., Catholic and Independent Schools) would extend this study’s findings and add to the body of knowledge about preparing pre-service teachers for inclusive education as well as inclusive education more generally.

4. With the trend towards online and blended delivery of modules and units at universities and in schools, further research should be conducted to investigate and improve the effectiveness of these forms of delivery. For example, conducting further and more rigorous research on the effectiveness of the Inclusion Online training model developed in the United Kingdom and adopted by NSW Department of Education (Clench & Smyth King, 2014).

5. Investigating the views of parents/caregivers and young people with additional needs and their experiences of inclusive education would shed light on issues and provide lessons for academics about preparing pre-service teachers and inclusive education more generally.

6. This approach, known as transformative methodology, would involve respectfully investigating the lived-experiences of people with disabilities and their parents and caregivers (Mertens et al., 2011). For example, evidence suggests that many parents and caregivers of children with autism spectrum disorder are opting to home-school their children because they feel that education systems are failing them (Parliament of Australia, 2016). Understanding the causes underlying this trend is likely to lead to improved practice.

7. This study was partly concerned with ascertaining how to enhance pre-service teachers’ skills in preparation for inclusive teaching. Conducting in-situ research (Silverman, 2013) about the practices of academics who successfully deliver inclusive content may shed further light on approaches that effectively prepare pre-service teachers for inclusive teaching. A starting point could be to contact academics about Student Feedback on Teacher or Unit.

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36 The Student Feedback on Units/Teacher gives students the opportunity to provide confidential feedback about teachers and units of study. The process is conducted by departments within universities.
8. This research highlighted the effect a school’s context (e.g., social disadvantage, greater numbers of students with additional needs and challenging behaviours) has on teachers’ ability to implement inclusive education underscoring the structural inequalities that exist within schools. Future researchers may investigate approaches to effectively implement inclusive education in more challenging contexts. Such research could be used to inform the preparation of pre-service teachers in readiness for inclusive teaching in a variety of school settings.

9. Conducting research to address challenges that teachers face in relation to curriculum areas in primary and secondary settings may inform practice. For instance, investigating practices that facilitate the inclusion of students with physical disabilities in Health and Physical Education and Creative Arts classes.

As schools and prevailing philosophies evolve, approaches to prepare pre-service teachers for inclusive education require review if they are to remain relevant. As such, research about how to better prepare pre-service teachers for their important roles should be ongoing.

Summary
This chapter integrates the quantitative and qualitative data gathered in order to investigate how to effectively prepare pre-service teachers for inclusive teaching. Findings from the study’s data sources (questionnaire responses and interviews with a range of teachers) provide evidence about content and pedagogy that explicate effective preparation of pre-service teachers for inclusive education. The study showed that after completing the inclusive unit, pre-service teachers felt more prepared for inclusive teaching. In addition, certain topic areas were highlighted as priorities for inclusive units. Notably, the study identified and detailed learning experiences that teachers feel would contribute to improving preparedness of pre-service teachers for inclusive teaching.

Further, the study generated learning experiences that could be incorporated into initial teacher education programs to better prepare and equip pre-service teachers for inclusive teaching. Three models were presented: a template to support teachers with planning and implementing inclusive teaching; a conceptual framework which encapsulates philosophy and approaches to support the implementation of inclusive
education; and a curriculum and pedagogical model which can be used to design curriculum in other units of study especially in the field of education.
Chapter 7: Conclusion

This thesis reported the results of a study of pre-service, beginning and experienced teachers using a mixed methods approach. The study aimed to identify and generate curriculum and pedagogy that effectively prepare pre-service primary teachers during initial teacher education for including students with diverse learning needs. The findings provide a comprehensive overview for effectively preparing pre-service teachers for contemporary inclusive teaching during initial teacher education.

Given the diversity of learners that attend most Australian schools, it is critical that during initial teacher education, pre-service teachers are provided with courses, units and learning experiences that prepare them for teaching in contemporary inclusive schools. Yet, evidence suggests that teachers feel ill-prepared and ill-equipped to include students with additional needs in regular classes. Studies show that many teachers feel their initial teacher education did not prepare them to cater for the diversity of learners in contemporary classes. Despite this, there is a paucity of empirical evidence detailing how to shift negative attitudes, convey knowledge and, in particular, impart skills during initial teacher education to prepare pre-service teachers for inclusive teaching. As schools have progressively become more inclusive, investigating the preparation of pre-service teachers for inclusive teaching with the aim of enhancing pre-service teachers’ preparedness is warranted. This is vital for the educational outcomes for all children as well as teacher retention.

This study utilised a mixed methods approach, adopting an “explanatory sequential” design with an intervention. A mandatory one semester inclusive unit in an initial primary teacher education program in a NSW university formed the intervention. Pre-service, beginning and experienced teachers provided questionnaire and interview data collected in multiple stages. Their views and responses were analysed and the results integrated to identify content and pedagogy that effectively prepares pre-service teachers to plan and manage learning for students with additional needs in regular primary school classes. In particular, the findings identified content to prioritise for curriculum to prepare pre-service teachers for inclusive teaching, proposed a cluster of practices and devised pedagogical tools which can be used to enhance the preparation of pre-service teachers for inclusive teaching. Importantly, these tools may be used to advance teachers’ capacity to implement inclusive education.
Key Findings and Conclusions Drawn

To meet the aim of this study, a number of research questions were posed. These informed the approach adopted to conduct this study; both the design of the questionnaire and the development of the interview questions. In addressing each of these questions, the research fulfilled its purpose. The key findings of the study, as set out below, answer those questions and highlight the study’s contribution.

**Achieving positive changes in pre-service teachers’ self-reported preparedness.** The findings showing that pre-service teachers felt significantly more prepared for contemporary inclusive teaching after participating in the inclusive unit suggest that this change is attributable to the design and delivery of the inclusive unit. These results show that it is possible to design a one semester inclusive unit that enhances pre-service teachers’ preparedness in the areas of attitudes, knowledge and skills. A cluster of practices was detailed that were endorsed by experienced teachers. A concerning finding is the large proportion of the experienced teachers (45%, 81/181), who reported that the inclusive unit they completed during their initial teacher education did not adequately prepare them for inclusive teaching. This result suggests that the preparation of pre-service teachers for inclusive teaching may be illusory. The detailing of a cluster of practices provides academics responsible for designing inclusive curriculum with evidence of approaches that make a difference. To date this level of description and detail is not provided in the literature.

**Priorities for curriculum, and learning experiences for effective preparation.** This study provides evidence to support selection and prioritisation of specific content to prepare pre-service teachers for inclusive teaching in the areas of attitudes, knowledge and skills. This finding has important implications for academics responsible for preparing inclusive content because currently scant detail is available. Consequently, selection and delivery of content is determined by the coordinator, often with no evidence base.

Pre-service teachers require learning experiences that develop their capacity to identify exclusionary practices that occur in schools. This requires more than simply selecting appropriate readings with the expectation that pre-service teachers will engage in the literature. Rather, it necessitates designing learning experiences based on disability studies in education that require pre-service teachers to critically analyse the culture
and structures of schools. For example pre-service teachers could appraise the cultures of schools and the attitudes of leadership and staff to inclusive education.

There is a need for universities to identify and forge partnerships with schools that implement inclusive education successfully. Showcasing such models across initial teacher education and presenting pre-service teachers with opportunities to examine structures, policies and processes will likely increase understanding of the attributes of successful contemporary inclusive schools.

The study details learning experiences designed to advance pre-service teachers’ cognisance of their legal and moral responsibilities and augment their skill proficiency to enable them to successfully implement inclusive education. Importantly, this study details how to equip pre-service teachers with skills that enable them to instruct in ways that support the learning of a diversity of learners. The findings revealed that pre-service teachers would benefit from learning to teach in ways that provide universal access. It is important that pre-service teachers learn about the learning continuum in relation to Universal Design for Learning to assist with planning to cater for all students in their class. In addition, the study found that introducing pre-service teachers to what may be regarded as special education approaches (e.g., visual timetables, Social Stories, assistive technology) would lead to improvements in their overall practice. Such approaches were found to have universal benefits for all members of the class.

This study found that pre-service teachers are not receiving adequate grounding in skill acquisition, deemed necessary to teach in contemporary inclusive settings. They require learning experiences designed to improve their: ability to manage contemporary classes; understanding of the need to match resources to students’ levels; competence with technology; and ability to collaborate effectively with a range of stakeholders.

The mandatory one semester inclusive unit offered to pre-service teachers in NSW universities is positioned within initial teacher education programs to champion pedagogical approaches that include the diverse range of students who attend regular classes, regardless of the subject (e.g., Health and Physical Education, English, Mathematics). This study’s findings suggest, however, that all curriculum units should include content that equip pre-service teachers with approaches to include a range of
learners. A shared responsibility means that academics require an appreciation of the philosophies, historical practices and movements that have given rise to inclusive education. Many teachers recommended increasing the amount of time to cover inclusive content during initial teacher education. However, pre-service teachers indicated that the one semester unit in which they participated as part of this study prepared them well. It appears that the quality of the learning experiences has more influence on outcomes than the time allocated to studying inclusive content.

**Preferred mode of delivery.** Pre-service teachers surveyed preferred face-to-face learning to the online components of the inclusive unit. In particular, pre-service and beginning teachers referred to the practical benefits of tutorials. As universities and educational institutions embrace online delivery, this finding is a cautionary reminder that it is necessary to investigate the effectiveness of online approaches, with the aim of improving outcomes for pre-service teachers and their students, prior to implementing online methods.

**Providing a cluster of practices and pedagogical tools for preparing pre-service teachers for inclusive teaching.** This study provides instructive lessons for those involved in preparing pre-service teachers for inclusive teaching. The cluster of practices mapped onto the influential *Productive Pedagogies* framework. They are also underpinned by learning theories.

It is imperative that the learning offered, whether part of an inclusive unit or integrated across curriculum areas, or delivered face-to-face or online, improves pre-service teachers’ self-efficacy to implement inclusive teaching. This thesis proposes an eclectic cluster of practices and three tools for advancing the preparation of pre-service teachers for inclusive teaching. They are based on approaches such as experiential learning using carefully selected resources, collaborative learning using inspiring stimulus, carefully considered simulations, modelling and pedagogical highlighting, use of authentic case studies and application of Information and Communication Technologies. Given the time constraints during initial teacher education for preparing pre-service teachers for their inclusive roles it is proposed that the cluster of practices should have a powerful effect on them. Unexamined assumptions about the effectiveness of established practices comprising teacher centred question and answer sessions, passive use of videos as stimulus, collaborative discussions using paper-
based case studies, high expectations that university students will complete their readings and PowerPoint delivery in tutorials are not sufficient to effectively prepare pre-service teachers for contemporary inclusive teaching.

**University learning and school experiences.** Pre-service teachers require purposeful opportunities to observe effective practitioners of inclusive approaches in school and university settings (e.g., managing personal reactions to challenging events, applying differentiated instruction) to ensure they develop a clear understanding of what inclusive education entails. The study revealed a need to improve integration of university learning with school experiences; in particular linking professional practice with the advancement of inclusive education. A view emerged that too much of the learning that occurs during initial teacher education lacks connectedness to school settings. It is important that pre-service teachers develop and acquire eclectic teaching approaches to meet the needs of diverse learners. It is essential, therefore, that during initial teacher education they are exposed to an array of evidence-based approaches to prepare them for contemporary inclusive teaching (as shown in Table 3.2 and Appendix Y).

An important finding of this study is that academics in initial teacher education need to forge stronger connections with schools. Although contemporary Australian schools are predominantly inclusive settings, the study findings suggest that academics are either not fully aware of the challenges associated with inclusive education or have not adjusted their programs to reflect the changes. Consequently, it seems that many graduate teachers are not provided with learning experiences that adequately prepare them to effectively manage contemporary inclusive classes. This lack of awareness and preparedness impacts all students. Some teachers believed that academics lacked understanding of schools. Although academics are responsible for designing courses to prepare pre-service teachers they do not necessarily have an extensive teaching background. This raises questions about their effectiveness to pass on the nuances of teaching in schools and teaching skills in particular.

**Reconceptualising schools.** Inclusive education notionally embraces all students. This study found that schools in areas of social disadvantage have disproportional numbers of students who have difficulty with learning. An implication is that students in areas of social disadvantage depend more heavily on the public
education system. Therefore, vigilance is required of those working in the field of education (e.g., school leaders, teachers) to guard against a propensity to impute lower attainment on marginal groups such as students with disability or refugee children. It is also necessary to examine particular school contexts and their systems in order to identify inclusionary and exclusionary approaches. Allied to this proposal is the necessity to present learning experiences that enable beginning teachers to identify barriers to learning and teach in ways that respond positively to all students. The ultimate aim is to increase the capacity of schools and teachers to respond to diversity.

**Revisiting my personal position.** My personal experiences and insights on issues related to inclusive education inspired this research. Other issues associated with the topic, however, became apparent to me during the course of this study. The following discussion draws these threads together.

As discussed in previous chapters a number of issues make inclusive education problematic. Examples of these include; instituting practices in schools that are not inclusive, presenting pre-service teachers with courses that have a special education focus and failing to place pre-service teachers with effective inclusive teachers while undertaking professional practice. While acknowledging that the dual system (i.e., inclusive education and special education) is the reality in NSW and Australian schools, this thesis investigated the preparation of pre-service teachers for contemporary inclusive teaching. By advancing one aspect of the inclusive education landscape, namely initial teacher education, it is anticipated that my findings will progress endeavours toward achieving inclusive education. It is my hope that if teachers are provided with a curriculum that prepares them well for inclusive teaching, they are more likely to execute it successfully – notwithstanding the challenges that lay ahead.

It became more apparent to me during this research that pre-service teachers enter a school system that perpetuates exclusion. While education systems continue to have structures that offer segregated settings for students, beginning teachers will enter a system where exclusion is the norm. Beginning teachers observe a continuum of individual responses to inclusive education: ranging from those who associate difference with difficulty; those who opine that segregation is advantageous for students for an array of reasons (e.g., provides options for parents, more nurturing
environment); to those who embrace inclusive education.

The practice of schools accepting only students who “fit in” and therefore do not require additional commitment means that exclusion prevails. In order to change the status-quo pre-service teachers need to be immersed in learning experiences that evoke questioning normative practices. This thesis contributes specific approaches to raise pre-service teachers’ consciousness about the fundamental rights of children to an inclusive education, as well as detailing curriculum and pedagogy that enhance pre-service teachers’ preparedness.

Further, I realised how important it is that academics in the area of inclusive education have greater access to the international leaders in the field. Given changes to the ways academics are employed in Australian universities (viz. contracts and casualisation), many teacher educators do not have the time or resources nor are they encouraged to attend conferences. Therefore, it is necessary to build networks and forge partnerships across universities to ensure that those responsible for teaching inclusive content are kept abreast of developments in the field. This may require conference organisers and university leaders to be proactive in ensuring that teacher educators are invited directly to events and to intellectual exchanges. This goes beyond the current findings that show the need to promote interconnectedness between schools and academics in education.

Although this thesis focusses on initial teacher education as an important component of advancing the successful implementation of inclusive education, it also puts forward processes for targeting professional development. In conducting this study, I became aware that school leaders and staff require opportunities to consider their practices and to learn about current theories and research findings that provide a rationale for innovations in schools.

Overall, as a result of this research my commitment to inclusive education has been reinforced. My knowledge and understanding of the issues and their many nuances have been enhanced strengthening my belief that endeavours to improve pre-service teachers’ preparedness for contemporary inclusive teaching should be ongoing. While curriculum alone does not guarantee the successful implementation of inclusive education my findings indicate that the quality of learning experiences can enhance pre-service teachers’ self-efficacy for including all students. In turn this may reduce
the tendency to view exclusion as a viable solution to challenges encountered. Over time these potential school leaders may come to champion inclusive education as the norm; thus bringing about cultural changes from within the school system.

**Contribution to the Field**

This research makes an original contribution to the literature by developing detailed, theory-driven and empirically-supported approaches to enhance the preparation of pre-service teachers for inclusive teaching. Previous research has identified concerns about the preparation of pre-service teachers for inclusive teaching but has not provided detail about how to shift negative attitudes, convey knowledge and impart skills. Although much of the literature discusses the need to address negative attitudes towards students with additional needs, there is little that suggests how to achieve such a shift. While possessing positive attitudes about inclusive education is necessary, it is not sufficient to produce successful outcomes. By devising and detailing a cluster of practices, particularly in relation to learning experiences that shift attitudes and augment skill development, this thesis addresses a gap in the knowledge about preparing pre-service for inclusive teaching by offering approaches that link theory and practice.

While acknowledging that the focus of inclusive subject material and inclusive units is to prepare pre-service teachers to include students with additional needs, it is nonetheless, necessary to challenge approaches that reinforce prevailing notions of inclusive education as a unit about “special students”. This requires a shift in thinking; one that moves away from regarding inclusive education as a marginalised subject to recognising that it is concerned with advancing pedagogy that caters to the full range of student abilities.

Based on the findings, tools were developed which can be used to advance inclusive education in initial teacher education and schools. Firstly, a lesson planning template was developed to promote pre-service teachers’ and teachers’ awareness of the requirement to plan for inclusive instruction. It focuses pre-service teachers’ and teachers’ attention on the requirement to cater for the continuum of learners. Secondly, an inclusive pedagogical model was developed which provides an overview of the attributes required to be effective as an inclusive teacher. This was developed in response to the emerging practice identified in this study of beginning and experienced
teachers increasingly preparing individual learning plans for students. It is intended to inform pre-service and experienced teachers of theoretical understandings (e.g., disability studies in education), dispositions and competencies required of effective inclusive teachers. Thirdly, a curriculum and pedagogical model was designed to guide academics when developing and reviewing inclusive content and pedagogy for preparing pre-service teachers for inclusive teaching. Consideration was given to curriculum features such as external influences, alignment of outcomes with learning experiences, developments in theory and determining which content to prioritise.

The findings of this study are particularly important because they address the paucity of research focusing on learning experiences that contribute to fostering positive attitudes, imparting knowledge and enhancing skills to include students with additional needs in regular classes. The study linked learning experiences to learning theories and shows how the learning experiences identified in this study mapped onto the Productive Pedagogies framework. Evidence from this study shows that the inclusive unit had the effect of improving pre-service teachers’ self-efficacy; as such, it is proffered that academics could consider using Productive Pedagogies to inform the design of learning experiences they provide to pre-service teachers.

This research provides a comprehensive picture of how to effectively prepare primary pre-service teachers for inclusive teaching in contemporary Australian classes. It proposes a cluster of practices that are relevant, engaging and transformative so that beginning teachers feel prepared and equipped to include students with additional needs in regular classes. The thesis proposes a template and two models to advance the preparation of pre-service teachers for inclusive classes. In accord with the study aim, the findings offer a nexus between theory and practice. The ultimate goal is to improve learning environments and outcomes for all students.

In order to advance the preparation of pre-service teachers for inclusive teaching and contemporary inclusive education more generally, the challenge for future researchers, academics and teachers may be in discovering the approaches and practices of those practitioners who are successful at what they do. This notion is captured in the words of Clifford Geertz (1973), “If you want to understand what a science is, you should look in the first instance not at its theories or its findings, and certainly not at what its apologists say about it; you should look at what the practitioners of it do” (p. 5).
References


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Appendices

Appendix A: Glossary

**Beginning teacher**: teachers who graduated the previous year and were, at the time they were interviewed, in their first year of teaching. The term will also be used more generally to refer to teachers in their first year of teaching.

**Class teacher**: mainstream or regular class teacher responsible for the learning of students in classes K – 6.

**Diversity** refers mainly to students with disabilities and/or additional needs and students who are gifted. However, this term also reflects the wide variation in needs of students in contemporary inclusive classes and the “need to be aware of factors related to their ethnic, cultural and social backgrounds” (Foreman & Arthur Kelly, 2014, p. 558).

**Experienced teacher**: refers to class teachers, support teachers, executive staff including assistant principals and principals, and school counsellors. This comprehensive term includes personnel who are trained teachers who are in non-teaching roles (i.e., principals and school counsellors).

**Initial teacher education**: an accredited program delivered by higher education institutions that qualify graduates of these programs to work as teachers. They cover the domains of professional knowledge, professional practice and professional commitment.

**Learning continuum**: identifies key markers of achievement regarded as critical for success in literacy and numeracy through the years of schooling. It is used in conjunction with the NSW syllabuses to assist teachers to integrate literacy into all curriculum areas.

**Learning support team**: stakeholders who meet to discuss and plan for the needs of students with disabilities/additional needs.

**Pre-service teachers**: university students who are enrolled in an approved initial teacher education program that meets the requirements of a nationally accredited program provided by higher education institutions.
**Professional Practice:** the practical component of an initial teacher education program. Pre-service teachers undertake supervised experience in different school settings and are required to engage in all aspects of the teaching process. This includes teaching a range of learners.

**School counsellors:** experienced teachers who have a degree in psychology and have undertaken additional study to gain postgraduate qualifications in school counselling. Their role includes assessing students and offering support and counselling to students and their families. They often work with students with disabilities and additional needs.

**Self-efficacy:** “A motivational construct based on self-perception rather than actual level of competence” (Tschannen-Moran & Woolfolk Hoy, 2007 p. 946) that has powerful effects on self-beliefs about capabilities and proficiencies.

**Support teacher:** teachers who work with students with disabilities and/or additional needs. They may support class teachers with inclusive education (e.g., Learning and Support Teachers) or they may teach students who are enrolled in support classes (i.e., students with identified disabilities in segregated settings). Support teachers also include specialist teachers such as itinerant support teachers-hearing or vision, who provide consultancy to class teachers at a variety of educational settings (e.g., early childhood and secondary settings) and direct support to students with hearing loss or low vision.

**Universal design for learning:** an educational framework based on research developed to assist teachers to implement inclusionary practices. It is a planning approach to education that enables all students to gain access to and participate in learning.
Appendix B1: UWS Human Research Ethics Approval

UWS HUMAN RESEARCH ETHICS COMMITTEE

6 July 2012

Associate Professor Christine Johnston,
School of Education

Dear Christine,

I wish to formally advise you that the Human Research Ethics Committee has
approved your research proposal H9445 “Pre-service Teacher Education for
Inclusive Classrooms”, until 31 December 2014 with the provision of a progress
report annually and a final report on completion.

Please quote the project number and title as indicated above on all correspondence
related to this project.

This protocol covers the following researchers:
Christine Johnston, Katrina Barker, Nolene Walker.

Yours sincerely

Dr Anne Abraham
Chair, UWS Human Research Ethics Committee

c.johnston@uws.edu.au
82305303@student.uws.edu.au
Appendix B2: NSW Department of Education; State Education Research Approval

Ms Nolene Walker
17 Leslie Rd
GLENBROOK NSW 2773

Dear Ms Walker

I refer to your application to conduct a research project in New South Wales government schools entitled Pre-service Teacher Education for Inclusive Classes. I am pleased to inform you that your application has been approved. You may now contact the Principals of the nominated schools to seek their participation. You should include a copy of this letter with the documents you send to schools.

This approval will remain valid until 09/09/2013.

No researchers or research assistants have been screened to interact with or observe children for the purposes of this research.

I draw your attention to the following requirements for all researchers in New South Wales government schools:

- School Principals have the right to withdraw the school from the study at any time. The approval of the Principal for the specific method of gathering information for the school must also be sought.
- The privacy of the school and the students is to be protected.
- The participation of teachers and students must be voluntary and must be at the school’s convenience.
- Any proposal to publish the outcomes of the study should be discussed with the Research Approvals Officer before publication proceeds.

When your study is completed please forward your report marked to Manager, Schooling Research, Department of Education and Training, Locked Bag 53, Darlinghurst, NSW 2010.

You may also be asked to present on the findings of your research.

Yours sincerely

Bill Tomlin
Acting Senior Manager
Student Engagement and Program Evaluation

August 2012
Appendix B3: Catholic Education Diocese of Parramatta Ethics Approval

Dear Noelene,

Thank you for your Application to Conduct Research in Parramatta Diocese which we received on 30/07/2012. We have now reviewed your ethics approval. I am happy for you to approach Primary Schools in the Diocese of Parramatta in order to carry out research on 'Pre-service Teacher Education for Inclusive Classes'.

We always stress the following points in relation to research requests:

- It is the school principal, who gives final permission for research to be carried out in his/her school.
- Confidentiality needs to be observed in reporting and must comply with the requirements of the Commonwealth Privacy Amendment (Private Sector) Act 2000.
- There should be some feedback to schools and a copy of the findings of the research forwarded to this office.
- This letter of approval should accompany any approach to schools.

I look forward to the results of this study and wish you the best over the coming months. If you would like to discuss any aspect of this research in our diocese, please do not hesitate to contact me on 02 9407 7079 or john.decourcy@parra.catholic.edu.au.

Yours sincerely,

[Signature]

Dr John Decourcy

Director Strategic Accountabilities Services
Catholic Education Office
Diocese of Parramatta

12 Victoria Rd, Parramatta
(02) 9840 5600
fax (02)9840 5678
Locked Bag 4, North
Parramatta NSW 1750
www.parra.catholic.edu.au
Appendix C1: UWS Human Research Ethics Approval to Use Social Media

28 June 2013

Associate Professor Christine Johnston
School of Education

Ms Noelene Walker
School of Education

Dear Christine and Noelene

RE: Amendment Request to H9445

I acknowledge receipt of your email dated 17 June 2013 concerning a request to amend your approved research protocol H9445 “Pre-service Teacher Education for Inclusive Classrooms”.

The Office of Research Services has reviewed your amendment request and I am pleased to advise that it has been approved as follows:

1. Approval to use UWS Social Media sites to recruit

Please do not hesitate to contact me at humanethics@uws.edu.au if you require any further information.

Regards

Jillian Shute
Human Ethics Officer
Office of Research Services
Appendix C2: NSW Department of Education; State Education Research
Approvals to Use Social Media and Newsletter

Dear Nolene

The New Year has started well for me and I had a nice break.

Thank you for the update on the progress with your research. I am sorry to hear about the technical hitch in relation to the PPA, and the poor response rate in Side by Side. I have no concerns about using Yammer or Maang.

Whichever way, I wish you every success.

All best wishes

Rob

Dr Robert Stevens
Manager, Schooling Research
Student Engagement and Program Evaluation Bureau

Level 3, 1 Oxford Street Darlinghurst NSW 2010
Locked Bag 53 Darlinghurst NSW 1300
T (02) 9244 5619
F (02) 9244 5646
E robert.stevens@det.nsw.edu.au

From: Stevens, Robert [mailto:Robert.Stevens@det.nsw.edu.au]
Sent: Friday, 16 November 2012 11:46 AM
To: Nolene Walker
Subject: RE: side by side

Dear Nolene

I hope all is well with you.

I have no concerns about you forwarding the link to Wendy R... in Side By Side.

Have you also discussed the distribution of the survey with the PPA?

Many thanks and all best

Rob

Dr Robert Stevens
Manager, Schooling Research
Student Engagement and Program Evaluation Bureau
Appendix D1: Participant Information Sheet

Participant Information Sheet (General)

An information sheet which is tailored in format and language appropriate for the category of participant - adult, child, young adult, should be developed.

Note: If not all of the text in the row is visible please click your cursor anywhere on the page to expand the row. To view guidance on what is required in each section 'hover your cursor' over the bold text. Further instructions are on the last page of this form.

Project Title: Pre-service Teacher Education for Inclusive Classes

Who is carrying out the study?
Nolene Walker is the principal researcher. This research for PhD purposes. The supervisors of this project are Associate Professor Christine Johnston and Dr Karina Barker.

You are invited to participate in a study conducted by Nolene Walker lecturer in the School of Education at University of Western Sydney. The research being undertaken will form the basis for the degree of PhD at the University of Western Sydney under the supervision of Associate Professor Christine Johnston and Dr Karina Barker.

What is the study about?
The purpose of this study is to identify curricula and pedagogy that prepare pre-service teachers for inclusive classrooms during their initial training. It will also examine the impact of the mandatory unit in inclusion that students at University of Western Sydney undertake as part of their pre-service primary teacher preparation.

What does the study involve?
The first phase (quantitative phase) involves surveying participants to determine their views about what should be in teacher preparation courses to prepare teachers for inclusion of students with disabilities and additional needs. The second phase (qualitative phase) will involve interviewing participants to harness their views about teacher education and preparation for inclusive primary classrooms. The interviews will be audio recorded. Participants may choose to complete the survey but not take part in the interviews. A supervisor (of this study) will provide a written explanation describing the nature and purpose of the research and will explain protocols. Final results for Inclusive Teaching for Effective Learning will be submitted prior to interviews.

How much time will the study take?
The survey will take each participant approximately 20 minutes. There will be a pre and post survey. The second phase (only 5 participants required) will involve an interview which will take approximately 30 minutes.

Will the study benefit me?
It is expected that the outcomes of this research will benefit pre-service teachers to prepare them for the role of including students with disabilities and additional needs in their classrooms.
Appendix D2: Participant Consent Form

Participant Consent Form

This is a project specific consent form. It restricts the use of the data collected to the named project by the named investigators.

Note: If not all of the text in the row is visible please click your cursor anywhere on the page to expand the row. To view guidance on what is required in each section hover your cursor over the bold text.

Project Title:
Pre-service Teacher Education for Inclusive Classes

I, ............................................., consent to participate in the research project titled Pre-service Teacher Education for Inclusive Classes.

I acknowledge that:

I have read the participant information sheet [or where appropriate, 'have had read to me'] and have been given the opportunity to discuss the information and my involvement in the project with the researchers.

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

I consent to responding to a survey and if requested consent to participating in an interview which will be audio taped.

I understand that my involvement is confidential and that the information gained during the study may be published but no information about me will be used in any way that reveals my identity.

I understand that I can withdraw from the study at any time, without affecting my relationship with the researchers now or in the future.

Signed: ____________________________

Name: ____________________________

Date: ____________________________

Return Address: to be collected at the time of interview

This study has been approved by the University of Western Sydney Human Research Ethics Committee.
The Approval number is: H9445
Appendix E: Script Read to Pre-Service Teachers by Senior Academic

Nolene is doing her doctorate and is researching the preparation of pre-service teacher education for the inclusion of students with disabilities and additional needs in regular classes. Her supervisors are Associate Professor Christine Johnston and Dr Katrina Barker. They are unable to be here today so I will explain this project to you. The aims of the research are to:

- Identify content and pedagogy that prepare pre-service primary teachers for inclusive classrooms during teacher training
- Examine the impact of the mandatory primary inclusive unit at UWS

The findings will have implications for selection of curricula and pedagogy to prepare teachers for inclusion. Nolene is gathering data from a range of sources including: UWS students, primary teachers, support teachers, and school counsellors to explore how best to prepare pre-service teachers for their role of including students with disabilities and additional needs in regular/mainstream classes. She has developed a questionnaire as part of the initial phase and is requesting that you complete this survey. Your participation in this study is voluntary and you can withdraw from the study at any time. Not participating in the study will have no bearing on your involvement in this unit or course.

This project has ethics approval from the Human Research Ethics Committee at UWS (NEAF approval). This research involves completing a survey at the beginning of this unit and at the end of this unit. At the front of the survey you will see that there is a participant information sheet which requests your student number. This number will be used only for matching data to see if your views have changed after completing the unit. For privacy and ethical reasons this number will not be used for identification so please respond to this questionnaire candidly as frank responses provide the most significant information. Nolene will not have access to the post survey until results for this unit are finalised. Furthermore, after data is collected all identifiers will be eliminated and will be replaced with a code. Surveys will be kept in a locked filing cabinet.

In appreciation, regardless of whether you complete the survey there is a small lucky dip, so please take an item as you leave.
Appendix F: Sample Characteristics

Table F 1
Sample Characteristics of Matched UWS Pre-service Teachers

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Frequency (% rounded to closest number)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>14 (12%)</td>
</tr>
<tr>
<td>Female</td>
<td>105 (88%)</td>
</tr>
<tr>
<td><strong>Age (years)</strong></td>
<td></td>
</tr>
<tr>
<td>20-29</td>
<td>92 (78%)</td>
</tr>
<tr>
<td>30-39</td>
<td>16 (14%)</td>
</tr>
<tr>
<td>40-49</td>
<td>7 (6%)</td>
</tr>
<tr>
<td>50 plus</td>
<td>2 (2%)</td>
</tr>
<tr>
<td><strong>Highest qualification</strong></td>
<td></td>
</tr>
<tr>
<td>Degree</td>
<td>113 (95%)</td>
</tr>
<tr>
<td><strong>Know a person with a disability</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>79 (67%)</td>
</tr>
<tr>
<td>No</td>
<td>36 (30%)</td>
</tr>
<tr>
<td>missing</td>
<td>4 (3%)</td>
</tr>
</tbody>
</table>

*Note. N=119*

Table F 2
Sample Characteristics of Experienced Teachers

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Frequency (% rounded to closest number)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>49 (15%)</td>
</tr>
<tr>
<td>Female</td>
<td>277 (85%)</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
</tr>
<tr>
<td>20-29</td>
<td>34 (10%)</td>
</tr>
<tr>
<td>30-39</td>
<td>47 (14%)</td>
</tr>
<tr>
<td>40-49</td>
<td>81 (25%)</td>
</tr>
<tr>
<td>50 plus</td>
<td>164 (51%)</td>
</tr>
<tr>
<td><strong>Know someone with a disability</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>305 (94%)</td>
</tr>
<tr>
<td>No</td>
<td>21 (6%)</td>
</tr>
<tr>
<td><strong>Location of school</strong></td>
<td></td>
</tr>
<tr>
<td>metropolitan</td>
<td>245 (76%)</td>
</tr>
<tr>
<td>*Regional</td>
<td>63 (19%)</td>
</tr>
<tr>
<td>*Rural/remote</td>
<td>17 (5%)</td>
</tr>
</tbody>
</table>

(continued)
(continued)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Frequency (% rounded to closest number)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Years of teaching experience</strong></td>
<td></td>
</tr>
<tr>
<td>Up to 9 years</td>
<td>85 (26%)</td>
</tr>
<tr>
<td>10-19 years</td>
<td>74 (23%)</td>
</tr>
<tr>
<td>More than 20</td>
<td>167 (51%)</td>
</tr>
<tr>
<td><strong>Educator role</strong></td>
<td></td>
</tr>
<tr>
<td>Class teacher</td>
<td>109 (33%)</td>
</tr>
<tr>
<td>Teaching-executive class teacher or Principal</td>
<td>48 (15%)</td>
</tr>
<tr>
<td>Non-teaching-executive class teacher or Principal</td>
<td>44 (13%)</td>
</tr>
<tr>
<td>Support teacher/special education teacher (including executive positions)</td>
<td>106 (33%)</td>
</tr>
<tr>
<td>School counsellor</td>
<td>19 (6%)</td>
</tr>
<tr>
<td><strong>Socially disadvantaged school area</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>130 (40%)</td>
</tr>
<tr>
<td>No</td>
<td>169 (52%)</td>
</tr>
<tr>
<td>Unsure</td>
<td>27 (8%)</td>
</tr>
<tr>
<td><strong>Educator Highest Qualification</strong></td>
<td></td>
</tr>
<tr>
<td>General Primary No Special Education/Inclusive unit</td>
<td>73 (22%)</td>
</tr>
<tr>
<td>General Primary including Special /Inclusive unit</td>
<td>83 (26%)</td>
</tr>
<tr>
<td>Postgraduate in Special Education or Counselling</td>
<td>89 (27%)</td>
</tr>
<tr>
<td>Postgraduate no Special Education or Counselling</td>
<td>61 (19%)</td>
</tr>
<tr>
<td>Other</td>
<td>19 (6%)</td>
</tr>
<tr>
<td><strong>Should there be a mandatory inclusive unit?</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>312 (96%)</td>
</tr>
<tr>
<td>No</td>
<td>7 (2%)</td>
</tr>
<tr>
<td>Unsure</td>
<td>6 (2%)</td>
</tr>
</tbody>
</table>

*Note. *Regional and rural were combined into non-metropolitan area; *Participants with less than 5 years and 5 – 9 years experience were combined into the category of up to nine years experience.
Appendix G1: Questionnaire for Pre-service Teachers - Pre-unit Questionnaire

Pre-service Teacher Education for Inclusive Classes: UWS Pre-survey
This survey is designed to elicit responses from UWS students about the preparation of pre-service teachers for their role of including students with disabilities and/or additional needs into mainstream/regular classes. It will take approximately 15 minutes to complete.

Student Number: Please note that this number is used for matching data only. For privacy and ethical reasons this number will not be used for identification.

Mark your student id into the grid like this
If your student number was 123456780
It would appear like this

Section 1
1. What is your gender?  
   ☐ Male ☐ Female

2. What is your age?  
   ☐ 20-29 ☐ 30-39 ☐ 40-49 ☐ 50 Plus

3. Do you know a person with a disability or an additional need?  
   ☐ go to question 3a  ☐ go to question 4
   Yes ☐ No

3a. If yes, what is your relationship with that person? (select the ONE most significant to you)
   ☐ spouse ☐ parent ☐ sibling ☐ friend ☐ acquaintance ☐ relative o.g. cousin, niece ☐ Other:

4. What educational qualifications have you completed at this stage (NOT including the Master of Teaching degree at UWS that you are currently completing)?
   ☐ degree ☐ degree with post graduate qualification. Please state the area of study ☐ Other

5. Do you think a mandatory inclusion/special education unit should be included in primary teacher training programs?  
   ☐ Yes ☐ No ☐ Unsure

6. Why did you think this?

   __________________________________________________________
   __________________________________________________________

Code: 1007

291
### Section 2  To what extent do the following statements apply to you?

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<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>7. I am knowledgeable about the educational needs of students with disabilities and/or additional needs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

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</thead>
<tbody>
<tr>
<td>8. I believe that typically developing students benefit from having students with disabilities and/or additional needs in regular/mainstream classes.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

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</thead>
<tbody>
<tr>
<td>9. Why did you think this?</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</thead>
<tbody>
<tr>
<td>10. I have the skills to include students with disabilities and/or additional needs into regular/mainstream classes.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

<p>| | | | | |</p>
<table>
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<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>11. I am looking forward to working with students with disabilities and/or additional needs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

<p>| | | | | |</p>
<table>
<thead>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>12. I believe that students with disabilities and/or additional needs benefit from being included in the regular/mainstream class.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

<p>| | | | | |</p>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>13. Why did you think this?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<p>| | | | | |</p>
<table>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>14. I know how to reasonably alter teaching and learning to cater to students with disabilities and/or additional needs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>15. I am concerned about working with students with disabilities and/or additional needs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>
Section 3

The section below explores your views about the extent to which you think teacher training courses should cover these topics to prepare pre-service teachers for inclusion of students with disabilities and/or additional needs into mainstream/regular classes.

To what extent do you think this unit “Inclusive Teaching for Effective Learning” should cover each topic? Using the response scale from 1 (no extent) to 7 (very high extent), choose your answer to each statement by scribbling INSIDE the bubble.

### 16. Knowledge and Values

<table>
<thead>
<tr>
<th>no extent</th>
<th>neutral</th>
<th>very high extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td><strong>A.</strong> apply disability legislation with reference to school settings</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>B.</strong> develop understandings that it is the role of educators to adapt to meet the needs of all students</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>C.</strong> understand benefits of inclusion</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>D.</strong> understand referral processes to gain assistance for students with disabilities/additional needs</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>E.</strong> know about exam special provisions for students with disabilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>F.</strong> develop positive attitudes regarding inclusion and diversity</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>G.</strong> apply syllabus information pertaining to students with disabilities/additional needs</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>H.</strong> examine views about disability</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 17. Teacher Skills

Pre-service teachers should learn how to:

<table>
<thead>
<tr>
<th>no extent</th>
<th>neutral</th>
<th>very high extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td><strong>A.</strong> apply behaviour management theories</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>B.</strong> develop skills of collaborating with parents/guardians</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>C.</strong> develop awareness of technology available to assist students with a disability/additional need</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>D.</strong> adjust and accommodate to cater to students who have disabilities/additional needs</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>E.</strong> develop understanding that resources need to be matched to students’ learning needs e.g. reading materials</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>F.</strong> use a variety of assessment techniques to determine the learning needs of students</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>G.</strong> develop strategies that research findings suggest are effective with reference to specific disabilities</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

...continued

Code: 1007
17. Teacher Skills - continued

Pre-service teachers should learn how to:

<table>
<thead>
<tr>
<th>H. adopt strategies that ignore the individual differences of students</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. develop individual education plans collaboratively with colleagues</td>
</tr>
<tr>
<td>J. develop awareness of support personnel e.g. itinerant support teachers, school counselors</td>
</tr>
<tr>
<td>K. implement practices that adapt the physical environment to meet the needs of students with disabilities/additional needs e.g. participation in PE lessons</td>
</tr>
<tr>
<td>L. manage co-operative learning e.g. group work, peer tutoring</td>
</tr>
<tr>
<td>M. develop skills to manage students with challenging behaviours</td>
</tr>
<tr>
<td>N. acquire specific skills e.g. questioning skills, task analysis, scaffolding, explicit instruction</td>
</tr>
<tr>
<td>O. differentiate the curriculum to cater to the needs of very capable students</td>
</tr>
<tr>
<td>P. develop skills of collaborating with specialist/support teachers</td>
</tr>
<tr>
<td>Q. develop strategies to teach social skills to students with disabilities/additional needs e.g. social stories, role play</td>
</tr>
<tr>
<td>R. adopt teaching strategies that cater to different learning styles</td>
</tr>
<tr>
<td>S. implement risk assessments for students with challenging behaviours</td>
</tr>
<tr>
<td>T. assess all students using the same methods</td>
</tr>
<tr>
<td>U. develop skills of collaborating with teacher assistants/aides</td>
</tr>
<tr>
<td>V. evaluate suitability of available resources</td>
</tr>
</tbody>
</table>

Code: 1007

294
18. In the context of inclusive education, what do you view as most important to prepare pre-service teachers for the inclusion of students with disabilities and/or additional needs into mainstream/regular classes?

Within each group, each item receives a DIFFERENT number, from 1 to 4.

A. Knowledge

**Rank 1 - 4**

- apply disability legislation with reference to school settings
- apply syllabus information pertaining to students with disabilities/additional needs
- understand referral process to gain additional support for students with disabilities/additional needs
- know about exam provisions for students with disabilities

B. Values

**Rank 1 - 4**

- 1 2 3 4 develop understandings that it is the role of educators to adapt to meet the needs of all students
- 1 2 3 4 understand benefits of inclusion
- 1 2 3 4 develop positive attitudes regarding inclusion and diversity
- 1 2 3 4 examine views about disability

C. Skills in collaboration

**Rank 1 - 4**

- develop skills of collaborating with parents/guardian
- develop individual education plans collaboratively with colleagues
- develop skills of collaborating with teacher assistants/aides
- develop skills of collaborating with specialist/support teachers

D. Develop awareness of resources

**Rank 1 - 4**

- 1 2 3 4 develop awareness of technology available to assist students with a disability/additional need
- 1 2 3 4 develop understanding that resources need to be matched to students' learning needs e.g. reading material
- 1 2 3 4 develop awareness of support personnel e.g. itinerant support teacher, school counsellors
- 1 2 3 4 evaluate suitability of available resources
18. continued. What do you view as most important
   Within each group, each item receives a DIFFERENT number, from 1 to 4/5.

E. Differentiation  
   
   adjust and accommodate to cater to students who have disabilities/additional needs 1 2 3 4
   differentiate the curriculum to cater to the needs of very capable students 1 2 3 4
   adopt strategies that ignore individual differences of students 1 2 3 4
   adopt teaching strategies that cater to different learning styles 1 2 3 4

F. Classroom management  
   
   1 2 3 4 5 apply behaviour management theories
   1 2 3 4 5 manage co-operative learning e.g. group work, peer tutoring
   1 2 3 4 5 develop skills to manage students with challenging behaviours
   1 2 3 4 5 develop strategies to teach social skills to students with disabilities/additional needs e.g. social stories, role play
   1 2 3 4 5 implement risk assessments for students with challenging behaviours

G. Differentiation  
   
   use a variety of assessment techniques to determine the learning needs of students 1 2 3 4 5
   develop strategies that research findings suggest are effective with reference to specific disabilities 1 2 3 4 5
   assess all students using the same methods 1 2 3 4 5
   acquire specific skills e.g. questioning skills, task analysis, scaffolding, explicit instruction 1 2 3 4 5
   implement practices that adapt the physical environment to meet the needs of students with disabilities/additional needs 1 2 3 4 5

19. In reference to pre-service teacher training and inclusive education which of the following topics do you view as most important for pre-service teachers to learn about at university?
   Colour the bubbles according to importance with 1 being the most important.
   Give each item a DIFFERENT ranking 1 to 4.

   Rank 1 - 4
   1 2 3 4 differentiation skills to cater to the different needs of students
   1 2 3 4 use of appropriate resources
   1 2 3 4 collaboration skills
   1 2 3 4 development of effective classroom management skills

Code: 1007
20. How well can you do the following?

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>not at all</td>
<td>not very well</td>
<td>slightly well</td>
<td>neutral</td>
<td>moderately well</td>
<td>very well</td>
</tr>
<tr>
<td>A. apply behaviour management theories</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. develop skills of collaborating with parents/guardians</td>
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<td></td>
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</tr>
<tr>
<td>C. develop awareness of technology available to assist students with a disability/additional need</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. adjust and accommodate to cater to students who have disabilities/additional needs</td>
<td></td>
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</tr>
<tr>
<td>E. develop understanding that resources need to be matched to students' learning needs e.g. reading materials</td>
<td></td>
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</tr>
<tr>
<td>F. use a variety of assessment techniques to determine the learning needs of students</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>G. develop strategies that research findings suggest are effective with reference to specific disabilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H. develop individual education plans collaboratively with colleagues</td>
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<td></td>
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<td>I. develop awareness of support personnel e.g. itinerant support teachers, school counsellors</td>
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</tr>
<tr>
<td>J. implement practices that adapt the physical environment to meet the needs of students with disabilities/additional needs e.g. participation in PE lessons</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>K. manage co-operative learning e.g. group work, peer tutoring</td>
<td></td>
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</tr>
<tr>
<td>L. develop skills to manage students with challenging behaviours</td>
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</tr>
<tr>
<td>M. acquire specific skills e.g. questioning skills, task analysis, scaffolding, explicit instruction</td>
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</tr>
<tr>
<td>N. differentiate the curriculum to cater to the needs of very capable students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O. develop skills of collaborating with specialist/support teachers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P. develop strategies to teach social skills to students with disabilities/additional needs e.g. social stories, role play</td>
<td></td>
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<td>Q. adopt teaching strategies that cater to different learning styles</td>
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<td></td>
</tr>
<tr>
<td>T. evaluate suitability of available resources</td>
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Code: 1007
Section 4

21. What components of your pre-service training for inclusive teaching do you see as most important? Please rank the items according to importance with 1 being the most important.

Each item receives a DIFFERENT number, from 1 to 4.

Rank 1 - 4

1. lectures
2. practical tutorials
3. assignments
4. on-line learning

22. What teaching and learning experiences do you see as most important to prepare pre-service teachers for inclusion of students with disabilities and/or additional needs?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

23. What concerns or comments do you have about the preparation of primary school teachers’ pre-service training for inclusive classes?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

24. I would be willing to take part in a half hour follow up interview about teacher training and inclusion, if requested. The interview will be at a time and place convenient to me. I understand that I may opt out of this study at any time.

☐ Yes  ☐ No

25. I am willing to take part in a follow up interview and my email details are as follows:

Name: ____________________________________________
Email: ___________________________________________
Contact phone (optional): ___________________________

Thank You for taking part in this survey😊

Code: 1007

Page 8
Appendix G2: Questionnaire for Pre-service Teachers - Post-unit Questionnaire

Pre-service Teacher Education for Inclusive Classes: UWS Pre-survey
This survey is designed to elicit responses from UWS students about the preparation of pre-service teachers for their role of including students with disabilities and/or additional needs into mainstream/regular classes. It will take approximately 15 minutes to complete.

Mark your student i.d. into the grid.
If your i.d. was 16932680 it would appear like this

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Write Student Number here: __________________________
and complete grid below

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</table>

Please note that this number is used for matching data only. For privacy and ethical reasons this number will not be used for identification.

Section 1

1. Do you think a mandatory inclusion/special education unit should be included in primary teacher training programs? ☐ Yes ☐ No ☐ Unsure

2. Why did you think this?

________________________________________________________________________

3. As a result of this unit, I feel more positive about including students with disabilities/additional needs into regular/mainstream.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐ Neither agree nor disagree

4. As a result of this unit, I have developed a repertoire of skills to include students with disabilities/additional needs into regular/mainstream classes.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐ Neither agree nor disagree

5. As a result of this unit, I have a better understanding of inclusion.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐ Neither agree nor disagree

6. As a result of this unit, I feel more confident about having students with disabilities/additional needs in my class.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐ Neither agree nor disagree

7. As a result of this unit, I feel that students with disabilities/additional needs should be included in mainstream/regular classes.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐ Neither agree nor disagree
### Section 2  
To what extent do the following statements apply to you?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Neither agree nor disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. I am knowledgeable about the educational needs of students with disabilities and/or additional needs.</td>
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<tr>
<td>8. I believe that typically developing students benefit from having students with disabilities and/or additional needs in regular/mainstream classes.</td>
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<tr>
<td>9. Why did you think this?</td>
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<tr>
<td>10. I have the skills to include students with disabilities and/or additional needs into regular/mainstream classes.</td>
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<tr>
<td>11. I am looking forward to working with students with disabilities and/or additional needs.</td>
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<tr>
<td>12. I believe that students with disabilities and/or additional needs benefit from being included in the regular/mainstream class.</td>
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<tr>
<td>13. Why did you think this?</td>
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<tr>
<td>14. I know how to reasonably alter teaching and learning to cater to students with disabilities and/or additional needs.</td>
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<tr>
<td>15. I am concerned about working with students with disabilities and/or additional needs.</td>
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</table>

Code: 2001
Section 3

The section below explores your views about the extent to which you think teacher training courses should cover these topics to prepare pre-service teachers for inclusion of students with disabilities and/or additional needs into mainstream/regular classes.

To what extent do you think this unit "Inclusive Teaching for Effective Learning" should cover each topic? Using the response scale from 1 (no extent) to 7 (very high extent), choose your answer to each statement by scribbling INSIDE the bubble.

16. Knowledge and Values

<table>
<thead>
<tr>
<th>Topic</th>
<th>No Extent</th>
<th>Neutral</th>
<th>Very High Extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Apply disability legislation with reference to school settings</td>
<td></td>
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<tr>
<td>B. Develop understandings that it is the role of educators to adapt</td>
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<tr>
<td>C. Understand benefits of inclusion</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>D. Understand referral processes to gain assistance for students with disabilities</td>
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<td></td>
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<tr>
<td>E. Know about exam special provisions for students with disabilities</td>
<td></td>
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<td></td>
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<tr>
<td>F. Develop positive attitudes regarding inclusion and diversity</td>
<td></td>
<td></td>
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<tr>
<td>G. Apply syllabus information pertaining to students with disabilities</td>
<td></td>
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<td></td>
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<tr>
<td>H. Examine views about disability</td>
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</table>

17. Teacher Skills

Pre-service teachers should learn how to:

<table>
<thead>
<tr>
<th>Topic</th>
<th>No Extent</th>
<th>Neutral</th>
<th>Very High Extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Apply behaviour management theories</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Develop skills of collaborating with parents/guardians</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Develop awareness of technology available to assist students with a disability/additional need</td>
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<td></td>
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<tr>
<td>D. Adjust and accommodate to cater to students who have disabilities/additional needs</td>
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<tr>
<td>E. Develop understanding that resources need to be matched to students' learning needs e.g. reading materials</td>
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<tr>
<td>F. Use a variety of assessment techniques to determine the learning needs of students</td>
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<tr>
<td>G. Develop strategies that research findings suggest are effective with reference to specific disabilities</td>
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</table>

.../continued

Code: 2001
17. Teacher Skills - continued
Pre-service teachers should learn how to:

<table>
<thead>
<tr>
<th></th>
<th>no extent</th>
<th>neutral</th>
<th>very high extent</th>
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</thead>
<tbody>
<tr>
<td>H.</td>
<td>adopt strategies that ignore the individual differences of students</td>
<td>1 2 3 4 5 6 7</td>
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</tr>
<tr>
<td>I.</td>
<td>develop individual education plans collaboratively with colleagues</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>J.</td>
<td>develop awareness of support personnel e.g. itinerant support teachers, school counsellors</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
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<tr>
<td>K.</td>
<td>implement practices that adapt the physical environment to meet the needs of students with disabilities/additional needs e.g. participation in PE lessons</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>L.</td>
<td>manage co-operative learning e.g. group work, peer tutoring</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>M.</td>
<td>develop skills to manage students with challenging behaviours</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>N.</td>
<td>acquire specific skills e.g. questioning skills, task analysis, scaffolding, explicit instruction</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>O.</td>
<td>differentiate the curriculum to cater to the needs of very capable students</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>P.</td>
<td>develop skills of collaborating with specialists/support teachers</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Q.</td>
<td>develop strategies to teach social skills to students with disabilities/additional needs e.g. social stories, role play</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>R.</td>
<td>adopt teaching strategies that cater to different learning styles</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>S.</td>
<td>implement risk assessments for students with challenging behaviours</td>
<td>1 2 3 4 5 6 7</td>
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<tr>
<td>T.</td>
<td>assess all students using the same methods</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>U.</td>
<td>develop skills of collaborating with teacher assistant/aides</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>V.</td>
<td>evaluate suitability of available resources</td>
<td>1 2 3 4 5 6 7</td>
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</table>
18. In the context of inclusive education, what do you view as most important to prepare pre-service teachers for the inclusion of students with disabilities and/or additional needs into mainstream/regular classes?

Within each group, each item receives a DIFFERENT number, from 1 to 4.

A. Knowledge  

Rank 1 - 4

- apply disability legislation with reference to school settings
- apply syllabus information pertaining to students with disabilities/additional needs
- understand referral process to gain additional support for students with disabilities/additional needs
- know about exam provisions for students with disabilities

B. Values  

Rank 1 - 4

- develop understandings that it is the role of educators to adapt to meet the needs of all students
- understand benefits of inclusion
- develop positive attitudes regarding inclusion and diversity
- examine views about disability

C. Skills in collaboration  

Rank 1 - 4

- develop skills of collaborating with parents/guardian
- develop individual education plans collaboratively with colleagues
- develop skills of collaborating with teacher assistants/ aides
- develop skills of collaborating with specialist/support teachers

D. Develop awareness of resources  

Rank 1 - 4

- develop awareness of technology available to assist students with a disability/additional need
- develop understanding that resources need to be matched to students' learning needs e.g. reading material
- develop awareness of support personnel e.g. itinerant support teacher, school counsellors
- evaluate suitability of available resources

Code: 2001  

303
18. continued. What do you view as most important
Within each group, each item receives a DIFFERENT number, from 1 to 4/5.

E. Differentiation Rank 1 - 4
adjust and accommodate to cater to students who have disabilities/additional needs 1 2 3 4
differentiate the curriculum to cater to the needs of very capable students 1 2 3 4
adopt strategies that ignore individual differences of students 1 2 3 4
adopt teaching strategies that cater to different learning styles 1 2 3 4

F. Classroom management Rank 1 - 5
1 2 3 4 5 apply behaviour management theories
1 2 3 4 5 manage co-operative learning e.g. group work, peer tutoring
1 2 3 4 5 develop skills to manage students with challenging behaviours
1 2 3 4 5 develop strategies to teach social skills to students with disabilities/additional needs e.g. social stories, role play
1 2 3 4 5 Implement risk assessments for students with challenging behaviours

G. Differentiation Rank 1 - 5
use a variety of assessment techniques to determine the learning needs of students 1 2 3 4 5
develop strategies that research findings suggest are effective with reference to specific disabilities 1 2 3 4 5
assess all students using the same methods 1 2 3 4 5
acquire specific skills e.g. questioning skills, task analysis, scaffolding, explicit instruction 1 2 3 4 5
implement practices that adapt the physical environment to meet the needs of students with disabilities/additional needs 1 2 3 4 5

19. In reference to pre-service teacher training and inclusive education which of the following topics do you view as most important for pre-service teachers to learn about at university?
Colour the bubbles according to importance with 1 being the most important. Give each item a DIFFERENT ranking 1 to 4.

Rank 1 - 4
differentiation skills to cater to the different needs of students 1 2 3 4
use of appropriate resources 1 2 3 4
cooperation skills 1 2 3 4
development of effective classroom management skills 1 2 3 4

Code: 2001
19A. What components of your pre-service training for inclusive teaching do you see as most important? Please rank the items according to importance with 1 being the most important.

Each item receives a DIFFERENT number, from 1 to 4.

<table>
<thead>
<tr>
<th>Rank 1 - 4</th>
<th>lectures</th>
<th>practical tutorials</th>
<th>assignments</th>
<th>on-line learning</th>
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20. How well can you do the following?

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<tr>
<th></th>
<th>not at all</th>
<th>not very well</th>
<th>slightly well</th>
<th>neutral</th>
<th>moderately well</th>
<th>very well</th>
<th>extremely well</th>
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<tbody>
<tr>
<td>A.</td>
<td>apply behaviour management theories</td>
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<td>B.</td>
<td>develop skills of collaborating with parents/guardians</td>
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<td>C.</td>
<td>develop awareness of technology available to assist students with a disability/additional need</td>
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<td>D.</td>
<td>adjust and accommodate to cater to students who have disabilities/additional needs</td>
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<tr>
<td>E.</td>
<td>develop understanding that resources need to be matched to students’ learning needs e.g. reading materials</td>
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<tr>
<td>F.</td>
<td>use a variety of assessment techniques to determine the learning needs of students</td>
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<td>G.</td>
<td>develop strategies that research findings suggest are effective with reference to specific disabilities</td>
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<td>H.</td>
<td>develop individual education plans collaboratively with colleagues</td>
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<tr>
<td>J.</td>
<td>implement practices that adapt the physical environment to meet the needs of students with disabilities/additional needs e.g. participation in PE lessons</td>
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<tr>
<td>K.</td>
<td>manage co-operative learning e.g. group work, peer tutoring</td>
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<td>L.</td>
<td>develop skills to manage students with challenging behaviours</td>
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<tr>
<td>M.</td>
<td>acquire specific skills e.g. questioning skills, task analysis, scaffolding, explicit instruction</td>
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</table>

Code: 2001
20. Continued. How well can you do the following?

N. differentiate the curriculum to cater to the needs of very capable students

O. develop skills of collaborating with specialist/support teachers

P. develop strategies to teach social skills to students with disabilities/additional needs e.g. social stories, role play

Q. adopt teaching strategies that cater to different learning styles

R. implement risk assessments for students with challenging behaviours

S. develop skills of collaborating with teacher assistants/aides

T. evaluate suitability of available resources

Section 4

22. What teaching and learning experiences do you see as most important to prepare pre-service teachers for inclusion of students with disabilities and/or additional needs?

______________________________________________________________________________________________________________________________________________________________

23. What concerns or comments do you have about the preparation of primary school teachers' pre-service training for inclusive classes?

______________________________________________________________________________________________________________________________________________________________

______________________________________________________________________________________________________________________________________________________________

25. I am willing to take part in a follow up interview and my email details are as follows:

Name: __________________________________________________________

Email: __________________________________________________________

Contact phone (optional): ________________________________________

Thank You for taking part in this survey 😊

Code: 2001
Appendix G3: Online Questionnaire for Experienced Teachers

Preparation of Pre-Service Teachers for Inclusive Teaching

Thank you for doing this survey. It is designed to elicit responses from primary school staff (executive staff, class teachers, support teachers, itinerant teachers and school counsellors) about the preparation of pre-service teachers for their role of including students with disabilities and/or additional needs into mainstream/regular classes. I am very grateful for your participation and hope that the findings will have implications for pre-service teacher training. This questionnaire is also being given to current teacher education students and, as a result, parallel wording has been used for all of the questions. The survey should take approximately 20 minutes to complete. Completion of the survey is taken as consent to participate in the study and your responses are anonymous.

Section 1

Q1. What is your gender?
   ☐ Male
   ☐ Female

Q2. What is your age?
   ☐ 20-29 years
   ☐ 30-39 years
   ☐ 40-49 years
   ☐ 50 plus

Q3. Do you know a person with a disability or an additional need?
   ☐ Yes (1)
   ☐ No (2)
   If No Is Selected, Then Skip To In what system do you mostly work?

Q3a. If yes, what is your relationship with that person? (Select the ONE most significant to you)
   ☐ yourself (1)
   ☐ spouse (2)
   ☐ parent of (3)
   ☐ child of (4)
   ☐ sibling (5)
   ☐ friend (6)
   ☐ acquaintance (7)
   ☐ relative e.g., cousin, niece (8)
   ☐ other (9) ____________________

Q4. In what system do you mostly work?
   ☐ NSW Department of Education and Communities school (1)
   ☐ Catholic systemic school (2)
   ☐ other (3) ____________________
Q5. In what area is your school?
- Sydney/ metropolitan area (population greater than 100,000 e.g., Sydney, Queanbeyan, Newcastle, Blue Mountains) (1)
- a regional area (e.g., Lismore, Armidale, Batemans Bay) (2)
- a rural/ remote area (e.g., Cobar, Broken Hill) (3)

Q6. How many years have you been working in the field of education?
- less than 5 years (1)
- 5-9 years (2)
- 10-19 years (3)
- more than 20 years (4)

Q7. What is your current role?
- class teacher (1)
- class teacher and executive teacher in regular/mainstream teaching role (2)
- executive teacher in non-teaching role in regular/mainstream setting (3)
- principal (teaching role) (4)
- principal (non-teaching) (5)
- support teacher or special education teacher (including executive positions) (6)
- school counsellor or a counselling role (7)

If class teacher is selected, then skip to (Q 7. continued) As a class teacher I... If class teacher and executive... Is selected, then skip to (Q 7. continued) As a class teacher I... If support teacher or special... Is selected, then skip to (Q7. continued) As a support teacher... If executive teacher in non te... Is selected, then skip to Q8. Do you currently have or hav... If school counsellor or a coun... Is selected, then skip to Q8. Do you currently have or hav... If principal (teaching role) is selected, then skip to (Q 7. continued) As a class teacher I... If principal (non teaching) is selected, then skip to Q8. Do you currently have or hav...

(Q 7. continued) As a class teacher I currently teach:
- Infants (K-2) (1)
- Primary (3-6) (2)

If Infants (K-2) is selected, then skip to Q8. Do you currently have or hav... If Primary (3-6) is selected, then skip to Q8. Do you currently have or hav...

(Q7. continued) As a support teacher I am currently:
- a teacher of a special education/support class. Please indicate category (e.g., IM, IO, autism) (1) _______________
- an itinerant support teacher (e.g., hearing impairment, vision impairment). Please state your role. (2) _______________________
- a teacher who supports students with additional needs who are in mainstream/regular classes (e.g., learning and support teacher, reading recovery). Please state your role. (3) _______________________

Q8. Do you currently have or have you in the past had a student with a disability or an additional need in your class or on your caseload?
- Yes (1)
- No (2)
- Unsure (3)
Q9. Does your school (or schools in which you work) receive Priority Schools Funding or funding for being in a socio-economically disadvantaged area?

- Yes (1)
- No (2)
- Unsure (3)

Q10. Please indicate which of the following you have completed as part of your teacher training (you may indicate more than one).

- general primary with no unit in inclusion/ special education (1)
- general primary with a unit in inclusion/ special education (2)
- additional postgraduate special education or counselling qualifications (3)
- additional postgraduate qualifications (not special education or counselling) (4)
- other (5) ________________

Q11. Where did you do your initial training to become a teacher?

- Australian Catholic University (1)
- Charles Sturt University (2)
- Macquarie University (3)
- Sydney University (4)
- Newcastle University (5)
- University of New England (6)
- University of New South Wales (7)
- University of Technology Sydney (8)
- University of Western Sydney (9)
- other e.g., other university, college of advanced education, educational institute, teachers' college. Please state which institution. (10) ________________

Q12. If you undertook an inclusion/special education unit in your teacher training, how useful was it to your teaching?

- Not useful (1)
- Somewhat useful (2)
- Useful (3)
- Very useful (4)
- Neutral (5)
- Did not undertake unit (6)

Q13. (optional) What was in your teacher training that prepared you to include students with additional needs?

Q14. (optional) How could your teacher training have been improved so that you are better equipped to successfully include students with additional needs?

Q15. Have you attended training and development courses about including students with disabilities and/or additional needs since working as a teacher?

- Yes (1)
- No (2)

If No Is Selected, Then Skip To Q16. Do you think a mandatory inclusion...
Q15a. How useful were these training and development courses?
- Not useful (1)
- Somewhat useful (2)
- Useful (3)
- Very useful (4)
- Neutral (5)

Q15b. (optional) If training and development courses were useful, what did you find useful?

Q16. Do you think a mandatory inclusion/special education unit should be included in primary teacher training programs?
- Yes (1)
- No (2)
- Unsure (3)

Q17. (optional) Why do you think this?

Section 2 To what extent do the following statements apply to you?

Q18. I am knowledgeable about the needs of students with disabilities and additional needs.
- Strongly disagree (1)
- Disagree (2)
- Agree (3)
- Strongly agree (4)
- Neither agree nor disagree (5)

Q19. I believe that typically developing students benefit from having students with disabilities and/or additional needs in regular/mainstream classes.
- Strongly disagree (1)
- Disagree (2)
- Agree (3)
- Strongly agree (4)
- Neither agree nor disagree (5)

Q20. (optional) Why do you think this?

Q21. I have the skills to include students with disabilities and/or additional needs into regular/mainstream classes.
- Strongly disagree (1)
- Disagree (2)
- Agree (3)
- Strongly agree (4)
- Neither agree nor disagree (5)

Q22. I look forward to working with students with disabilities and/or additional needs.
- Strongly disagree (1)
- Disagree (2)
- Agree (3)
- Strongly agree (4)
- Neither Agree nor Disagree (5)
Q23. I believe that students with disabilities and/or additional needs benefit from being included in the regular/mainstream class.
- Strongly disagree (1)
- Disagree (2)
- Agree (3)
- Strongly agree (4)
- Neither disagree or agree (5)

Q24. (optional) Why do you think this?

Q25. I know how to reasonably alter teaching and learning to cater to students with disabilities and/or additional needs.
- Strongly disagree (1)
- Disagree (2)
- Agree (3)
- Strongly agree (4)
- Neither agree nor disagree (5)

Q26. I am concerned about working with students with disabilities and/or additional needs.
- Strongly disagree (1)
- Disagree (2)
- Agree (3)
- Strongly agree (4)
- Neither agree nor disagree (5)

Q27. My teacher preparation course prepared me well for working with students with disabilities and/or additional needs in regular/mainstream classes.
- Strongly disagree (1)
- Disagree (2)
- Agree (3)
- Strongly agree (4)
- Neither agree nor disagree (5)

Q28. I implement inclusive practices when working with students with disabilities and/or additional needs in the regular/mainstream class.
- Strongly disagree (1)
- Disagree (2)
- Agree (3)
- Strongly agree (4)
- Neither agree or disagree (5)
Section 3
Q29. Knowledge and Values
The section below explores your views about the extent to which you think teacher training courses should cover these topics to prepare pre-service teachers for inclusion of students with disabilities and/or additional needs into mainstream/regular classes. In the context of inclusive education to what extent do you think teacher training should cover each topic?

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<td>b. develop understandings that it is the role of educators to adapt to meet the needs of all students</td>
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<td>c. understand benefits of inclusion</td>
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<td>d. understand referral processes to gain assistance for students with disabilities/additional needs</td>
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<td>e. know about exam special provisions for students with disabilities (5)</td>
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<td>f. develop positive attitudes regarding inclusion and diversity</td>
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<td>g. apply syllabus information pertaining to students with disabilities /additional needs</td>
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<td>h. examine views about disability</td>
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</table>
Q30. Teacher Skills: The section below explores your views about the extent to which you think teacher training courses should cover these topics to prepare pre-service teachers for inclusion of students with disabilities and/or additional needs into mainstream/regular classes. In the context of inclusive education to what extent do you think teacher training should prepare pre-service teachers to do the following? Pre-service teachers should learn how to:

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<th>No extent (1)</th>
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<tr>
<td>a. apply behaviour management theories</td>
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<td>b. develop skills of collaborating with parents/guardians</td>
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<td>c. develop awareness of technology available to assist students with a disability/additional need.</td>
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<td>d. adjust and accommodate to cater to students who have disabilities/additional needs</td>
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<td>e. develop understanding that resources need to be matched to students' learning needs e.g., reading materials</td>
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<td>f. use a variety of assessment techniques to determine the learning needs of students (6)</td>
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<td>g. develop strategies that research findings suggest are effective with reference to specific disabilities</td>
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<td>h. adopt strategies that ignore the individual differences of students</td>
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<td>i. develop individual education plans collaboratively with colleagues</td>
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<td>j. develop awareness of support personnel e.g., itinerant support teachers, school counsellors</td>
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<td>k. implement practices that adapt the physical environment to meet the needs of students with disabilities/additional needs e.g., participation in PE lessons</td>
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Q30 continued: In the context of inclusive education to what extent do you think teacher training should prepare pre-service teachers to do the following? Pre-service teachers should learn how to:

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<th>No extent (1)</th>
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<td>l. manage co-operative learning e.g., group work, peer tutoring</td>
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<td>n. acquire specific skills e.g., questioning skills, task analysis, scaffolding, explicit instruction</td>
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<td>q. develop strategies to teach social skills to students with disabilities/additional needs e.g., social stories, role-play</td>
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<td>r. adopt teaching strategies that cater to different learning styles</td>
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<td>s. implement risk assessments for students with challenging behaviours</td>
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<td>t. assess all students using the same methods</td>
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<td>v. evaluate suitability of available resources</td>
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In the context of inclusive education, what do you view as most important to prepare pre-service teachers for the inclusion of students with disabilities and/or additional needs into mainstream/regular classes? Please rank the following items from most preferred at the top to least preferred at the bottom by dragging the full bar and dropping it in your selected place.

Q31. Knowledge  (**drag and drop with most preferred at the top to least preferred at the bottom 1-4**)

- apply disability legislation with reference to school settings (1)
- apply syllabus information pertaining to students with disabilities/additional needs (2)
- understand referral process to gain additional support for students with disabilities/additional needs (3)
- know about exam provisions for students with disabilities (4)
Q32. Values  (drag and drop with most preferred at the top to least preferred at the bottom 1-4)
   ______ develop understandings that it is the role of educators to adapt to meet the needs of all students (1)
   ______ understand benefits of inclusion (2)
   ______ develop positive attitudes regarding inclusion and diversity (3)
   ______ examine views about disability (4)

Q33. Skills in collaboration (drag and drop with most preferred at the top to least preferred at the bottom 1-4)
   ______ develop skills of collaborating with parents/guardian (1)
   ______ develop individual education plans collaboratively with colleagues (2)
   ______ develop skills of collaborating with teacher assistants/aides (3)
   ______ develop skills of collaborating with specialist/support teachers (4)

Q34. Develop awareness of resources (drag and drop with most preferred at the top to least preferred at the bottom 1-4)
   ______ develop awareness of technology available to assist students with a disability/additional need (1)
   ______ develop understanding that resources need to be matched to students’ learning needs e.g., reading material (2)
   ______ develop awareness of support personnel e.g., itinerant support teacher, school counsellors (3)
   ______ evaluate suitability of available resources (4)

Q35. Differentiation (drag and drop with most preferred at the top to least preferred at the bottom 1-4)
   ______ adjust and accommodate to cater to students who have disabilities/additional needs (1)
   ______ differentiate the curriculum to cater to the needs of very capable students (2)
   ______ adopt strategies that ignore individual differences of students (3)
   ______ adopt teaching strategies that cater to different learning styles (4)

Q36. Classroom management (drag and drop with most preferred at the top to least preferred at the bottom 1-5)
   ______ apply behaviour management theories (1)
   ______ manage co-operative learning e.g., group work, peer tutoring (2)
   ______ develop strategies to manage students with challenging behaviours (3)
   ______ develop strategies to teach social skills to students with disabilities/additional needs e.g., social stories, role-play (4)
   ______ implement risk assessments for students with challenging behaviours (5)

Q37. Differentiation (drag and drop with most preferred at the top to least preferred at the bottom 1-5)
   ______ use a variety of assessment techniques to determine the learning needs of students (1)
   ______ develop strategies that research findings suggest are effective with reference to specific disabilities (2)
   ______ assess all students using the same methods (3)
   ______ acquire specific skills e.g., questioning skills, task analysis, scaffolding, explicit instruction (4)
   ______ implement practices that adapt the physical environment to meet the needs of students with disabilities/additional needs (5)
Q38. In reference to pre-service teacher training and inclusive education which of the following topics do you view as most important for pre-service teachers to learn about at university? (drag and drop with most preferred at the top to least preferred at the bottom 1-4)

- differentiation skills to cater to the different needs of students (1)
- use of appropriate resources (2)
- collaboration skills (3)
- development of effective classroom management skills (4)

Q39. How well can you do the following?

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<tr>
<th>Task Description</th>
<th>Not at all</th>
<th>Not very well</th>
<th>Slightly well</th>
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Section 4
Q40. (optional) What teaching and learning experiences do you see as most important to prepare pre-service teachers for inclusion of students with disabilities and/or additional needs?

Q41. (optional) What concerns or comments do you have about the preparation of primary school teachers' pre-service training for inclusive classes?

Q42. I would be willing to take part in a half hour follow up interview about teacher training and inclusion, if requested. The interview will be at a time and place convenient to me. I understand that I may opt out of this study at any time.
○ Yes (1)
○ No (2)

Q42a. I am willing to take part in a follow up interview and my email details are as follows:
   Name (1)
   Email (2)
   Contact phone (optional) (3)
Appendix H: Qualitative Questions

1. Tell me about your experiences regarding inclusion of students with disabilities or additional needs.

2. May I ask you to think about what would have assisted you in your initial teacher training to prepare you for inclusive classes?

2. (Alternative questions for experienced teachers) May I ask you to suggest what would assist pre-service teachers during teacher training for inclusive classes?

3. Attitudes of teachers towards students with a disability or an additional need is considered very important for effective inclusion to occur. Do you have any views or thoughts about how to develop positive attitudes towards individuals with disabilities in pre-service teachers?

4. What prior knowledge do you think pre-service teachers should have about inclusion of students with disabilities before commencing work as a teacher?

5. Based on your experiences tell me about what you think pre-service teachers need with regard to classroom management and students with additional needs.

6. What kinds of experiences/knowledge do pre-service teachers require to prepare them for:
   - Differentiation
   - Classroom management
   - Collaboration (support staff, teachers’ assistants or aides or school learning support officer, parents and others)
   - Resources

7. Overall, what skills do you think pre-service teachers should engage in during their teacher training to equip them for inclusive classes?

8. Have you had effective professional learning either at university or during your teaching career regarding inclusion of students with disabilities or additional needs; how was it beneficial?
## Appendix I: Correlation of Items in Questionnaire with Research Questions

<table>
<thead>
<tr>
<th>Focus</th>
<th>Questions per item</th>
<th>Pre-service teacher questionnaire (pre-unit)</th>
<th>Pre-service teacher questionnaire (post-unit) same as pre with additional questions</th>
<th>Experienced teacher questionnaire:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td>Questions per item</td>
<td>Pre-service teacher questionnaire (pre-unit)</td>
<td>Pre-service teacher questionnaire (post-unit) same as pre with additional questions</td>
<td>Experienced teacher questionnaire:</td>
</tr>
<tr>
<td>Question 16, 17, 29, 30. What do you believe should be in initial teacher education to prepare pre-service teachers for inclusive teaching?</td>
<td>Knowledge</td>
<td>1 general section 4 in Q 16</td>
<td>Q 7, Q 16 (pre-questionnaire) a, d, e, g, Q 7 (has there been a change after the intervention?)</td>
<td>Q 18, Q 29 a, d, e, g</td>
</tr>
<tr>
<td>Values</td>
<td>4 general section 4 in Q 16</td>
<td>Q 8, 11, 12, 15, Q 16 (pre-questionnaire) b, c, f, h</td>
<td>Q 8, 11, 12, 15, Q 16 (pre-questionnaire) b, c, f, h, Q 25, 28, 29</td>
<td>Q 19, 22, 23, 26, Q 29 b, c, f, h</td>
</tr>
<tr>
<td>Skills in general section</td>
<td></td>
<td>Q 10, 14</td>
<td>Q 10, 14</td>
<td>Q 21, 25</td>
</tr>
<tr>
<td>Skills in collaboration</td>
<td>4</td>
<td>Q 17 b, i, p, u</td>
<td>Q 17 b, i, p, u</td>
<td>Q 30 b, i, p, u</td>
</tr>
<tr>
<td>Develop awareness of resources</td>
<td>4</td>
<td>Q 17 c, e, j, v</td>
<td>Q 17 c, e, j, v</td>
<td>Q 30 c, e, j, v</td>
</tr>
<tr>
<td>Differentiation</td>
<td>7</td>
<td>Q 17 d, f, g, k, n, o, r</td>
<td>Q 17 d, f, g, k, n, o, r</td>
<td>Q 30 d, f, g, k, n, o, r</td>
</tr>
<tr>
<td>Classroom management</td>
<td>5</td>
<td>Q 17 a, l, m, q, s</td>
<td>Q 17 a, l, m, q, s</td>
<td>Q 30 a, l, m, q, s</td>
</tr>
<tr>
<td>How well can you? (overall)</td>
<td></td>
<td>Q 20</td>
<td>Q 20</td>
<td>Q 39</td>
</tr>
<tr>
<td>Skills in collaboration</td>
<td></td>
<td>Q 20 b, h, o, s</td>
<td>Q 20 b, h, o, s</td>
<td>Q 39 b, h, o, s</td>
</tr>
<tr>
<td>(Skill) Develop awareness of resources</td>
<td></td>
<td>Q 20 c, e, i, t</td>
<td>Q 20 c, e, i, t</td>
<td>Q 39 c, e, i, t</td>
</tr>
<tr>
<td>(Skill) differentiation</td>
<td></td>
<td>Q 20 d, f, g, j, m, n, q</td>
<td>Q 20 d, f, g, j, m, n, q</td>
<td>Q 39 d, f, g, j, m, n, q</td>
</tr>
<tr>
<td>Skill (classroom management)</td>
<td></td>
<td>Q 20 a, k, l, p, r</td>
<td>Q 20 a, k, l, p, r</td>
<td>Q 39 a, k, l, p, r</td>
</tr>
</tbody>
</table>
Appendix J: Factor Loadings of Preparation of Pre-service Teachers’ Questionnaire using Principal Component Analysis with Varimax Rotation

Table J1. *Five Factors for Pre-service Teachers on Post-unit Questionnaire Data*

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor loading</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Collaborate with assistants/aides</td>
<td>.827</td>
</tr>
<tr>
<td>Awareness of support personnel</td>
<td>.773</td>
</tr>
<tr>
<td>Collaborate with support teachers</td>
<td>.773</td>
</tr>
<tr>
<td>Develop individual education plans collaboratively</td>
<td>.714</td>
</tr>
<tr>
<td>Strategies to teach social skills</td>
<td>.495</td>
</tr>
<tr>
<td>Evaluate resources</td>
<td>.469</td>
</tr>
<tr>
<td>Positive attitudes regarding inclusion</td>
<td>.077</td>
</tr>
<tr>
<td>Adapt to meet the needs of all students</td>
<td>.131</td>
</tr>
<tr>
<td>Understand benefits of inclusion</td>
<td>.072</td>
</tr>
<tr>
<td>Apply disability legislation</td>
<td>.194</td>
</tr>
<tr>
<td>Apply syllabus information</td>
<td>.115</td>
</tr>
<tr>
<td>Examine views about disability</td>
<td>.227</td>
</tr>
<tr>
<td>Adjust and accommodate for students with additional needs</td>
<td>.146</td>
</tr>
<tr>
<td>Technology to assist students</td>
<td>.138</td>
</tr>
<tr>
<td>Match resources to students' needs</td>
<td>.309</td>
</tr>
<tr>
<td>Assessment to determine learning needs</td>
<td>.129</td>
</tr>
<tr>
<td>Strategies for specific disabilities</td>
<td>.310</td>
</tr>
<tr>
<td>Adapt the physical environment</td>
<td>.419</td>
</tr>
</tbody>
</table>

(continued)
Table J2. *Five Factors for Experienced Teachers on Questionnaire Data*

<table>
<thead>
<tr>
<th>Item</th>
<th>Inclusive Teaching approaches</th>
<th>Resourcing and Supporting Inclusion</th>
<th>Inclusive Strategies for Individual needs</th>
<th>Embracing Inclusive Principles</th>
<th>Inclusive Organisational Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skills to manage students with challenging</td>
<td>.748</td>
<td>.149</td>
<td>.334</td>
<td>.073</td>
<td>.108</td>
</tr>
<tr>
<td>Acquire specific skills</td>
<td>.742</td>
<td>.348</td>
<td>.162</td>
<td>.207</td>
<td>.083</td>
</tr>
<tr>
<td>Apply behaviour management theories</td>
<td>.718</td>
<td>.053</td>
<td>.280</td>
<td>.071</td>
<td>.297</td>
</tr>
<tr>
<td>Manage co-operative learning</td>
<td>.670</td>
<td>.457</td>
<td>-.029</td>
<td>.223</td>
<td>.004</td>
</tr>
<tr>
<td>Differentiate for very capable students</td>
<td>.634</td>
<td>.361</td>
<td>.343</td>
<td>.110</td>
<td>.082</td>
</tr>
<tr>
<td>Assessment to determine learning needs</td>
<td>.586</td>
<td>.195</td>
<td>.458</td>
<td>.183</td>
<td>.299</td>
</tr>
<tr>
<td>Collaborate with parents/guardians</td>
<td>.570</td>
<td>.219</td>
<td>.302</td>
<td>.253</td>
<td>.257</td>
</tr>
<tr>
<td>Match resources to students' needs</td>
<td>.482</td>
<td>.287</td>
<td>.464</td>
<td>.227</td>
<td>.221</td>
</tr>
</tbody>
</table>

Note. Major loadings for each item are in bold font.
Note. Major loadings for each item are in bold font.
Appendix K: Distractor Items in Questionnaire

Level of Agreement about the Extent to which Distractor Items should be Covered

<table>
<thead>
<tr>
<th></th>
<th>Pre-service Teachers</th>
<th>Experienced Teachers</th>
<th>95% CI</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adopt strategies that ignore</td>
<td>3.43 2.23</td>
<td>3.2 2.31</td>
<td>.25, .71</td>
<td>.83</td>
<td>431</td>
</tr>
<tr>
<td>individual differences of students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assess all students using the</td>
<td>3.77 2.14</td>
<td>3.26 2.11</td>
<td>.06, .95</td>
<td>.86</td>
<td>430</td>
</tr>
<tr>
<td>same assessment methods</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. M = mean, SD = standard deviation, CI = confidence interval, t = t-statistic, df = degrees of freedom.

a 1 = no extent to 7 = very high extent.
**Appendix L: Coding Development Chart**

<table>
<thead>
<tr>
<th>Developmental phases of analytic framework</th>
<th>Explanation and description of resulting changes to coding scheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coding scheme version 1 (November 2013). Based on analysis of three beginning teacher interviews, a coding system was devised.</td>
<td>The coding emanated from themes identified in the data, the literature and discussions with a supervisor and colleagues (2013, 2014). The codes were influenced by the research questions which were influenced by the literature review. Commenced analysis on beginning teacher data.</td>
</tr>
<tr>
<td>Coding scheme version 2 (November 2014).</td>
<td>After re-listening to the recordings, the codes were refined; some categories were collapsed (e.g., life experience), some codes were moved to the bottom of the grid (e.g., surprising and challenging) as they did not align with the topics. Also one column was removed (category) as it was deemed cumbersome.</td>
</tr>
<tr>
<td>Coding scheme version 3: following discussion with supervisors at November 14 meeting – co-supervisor approved coding with revisions and suggestions i.e., to incorporate a range of answers (not necessarily numbers)</td>
<td>Adopted model with codes and themes after further reading (e.g., Saldana and Miles and Huberman. Themes added (e.g., impinging factors).</td>
</tr>
</tbody>
</table>
Appendix M: Coding Chart

<table>
<thead>
<tr>
<th>Themes</th>
<th>Categories</th>
<th>Quotes (refer to research questions, hypotheses and literature)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiences (emerging from interviews)</td>
<td>General life experience e.g., work, family, maturity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tutorial experiences</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Experience with people with disabilities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Professional practice</td>
<td></td>
</tr>
<tr>
<td>Skills (topics established from literature and used to develop interview questions)</td>
<td>Classroom management</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Collaboration</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Differentiation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Resource use</td>
<td></td>
</tr>
<tr>
<td>Attitudes (emerging from interviews)</td>
<td>Time factor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Language</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Societal attitudes</td>
<td></td>
</tr>
<tr>
<td>Knowledge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Context</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Theme of struggling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surprising/challenging view/impinging</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:
Appendix N: Instructions Demonstrating how to Rank Items on Hardcopy of Questionnaire

How to complete Question 18

38. In the context of inclusive education, what do you view as most important to prepare pre-service teachers for the inclusion of students with disabilities and/or additional needs into mainstream/regular classes?

Within each group, each item receives a DIFFERENT number, from 1 to 4.

The item you like the most is coloured 1 and the item you like the least is coloured 4.

A. Knowledge

<table>
<thead>
<tr>
<th>Rank</th>
<th>Item Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Apply disability legislation with reference to school settings</td>
</tr>
<tr>
<td>2</td>
<td>Apply syllabus information pertaining to students with disabilities/additional needs</td>
</tr>
<tr>
<td>1</td>
<td>Understand referral process to gain additional support for students with disabilities/additional needs</td>
</tr>
<tr>
<td>2</td>
<td>Know about exam provisions for students with disabilities</td>
</tr>
</tbody>
</table>

B. Values

<table>
<thead>
<tr>
<th>Rank</th>
<th>Item Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Develop understandings that it is the role of educators to adapt to meet the needs of all</td>
</tr>
</tbody>
</table>

How to complete Question 18

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A. Knowledge

<table>
<thead>
<tr>
<th>Rank</th>
<th>Item Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Apply disability legislation with reference to school settings</td>
</tr>
<tr>
<td>2</td>
<td>Apply syllabus information pertaining to students with disabilities/additional needs</td>
</tr>
<tr>
<td>1</td>
<td>Understand referral process to gain additional support for students with disabilities/additional needs</td>
</tr>
<tr>
<td>2</td>
<td>Know about exam provisions for students with disabilities</td>
</tr>
</tbody>
</table>

B. Values

<table>
<thead>
<tr>
<th>Rank</th>
<th>Item Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Develop understandings that it is the role of educators to adapt to meet the needs of all</td>
</tr>
</tbody>
</table>
Appendix O: Correspondence to Principals of Catholic Schools

Appendix O1: Introductory Letter Explaining the Nature of the Research

Name
Address
17 May, 2013

Dear ,

I am a lecturer and unit coordinator in the area of inclusive education at the University of Western Sydney. The units that I coordinate prepare teachers for the inclusion of students with a disability and/or an additional need into regular/mainstream classes.

For my PhD, I am seeking responses from Primary School Executive and Teachers, School Counsellors, Itinerant and Support Teachers (and Support Class Teachers if your school has a satellite class) about inclusion and teacher training.

I have developed an online survey which I will forward to you in one to two weeks. I am requesting that you forward this survey to your staff. It takes about 20 minutes to complete and is completely anonymous. Schools are not identified. My aim is use the data to improve teacher training to prepare primary school teachers for inclusive teaching.

As you are aware, there are increasing numbers of students with disabilities who are enrolled in regular/mainstream classes. The responses will have implications for selection of pedagogical approaches to prepare teachers for modern classes as well as contribute to the knowledge about inclusion and teacher training. This research has approval from the Catholic Education Diocese of Parramatta and UWS research ethics approval (see attachments).

Yours sincerely,

Nolene Walker
Lecturer and Unit Co-ordinator (Inclusive Education)
School of Education
University of Western Sydney
Kingswood Campus Building J.1.20
Locked Bag 1797 Penrith Sth DC, NSW 1797
Email Address: nolene.walker@uws.edu.au
17 May, 2013

Dear Principal,

I am a lecturer and unit coordinator in the field of inclusive education at the University of Western Sydney. The units that I coordinate prepare teachers for the inclusion of students with a disability and/or an additional need into regular/mainstream classes.

For my PhD, I am seeking responses from Primary School Executive and Teachers, School Counsellors, Itinerant and Support Teachers (and Support Class Teachers if your school has a satellite class) about inclusion and teacher training. My research has approval from the Catholic Education Diocese of Parramatta and UWS research ethics approval (see attachments).

I have developed an online survey. I am hoping that you forward this survey to your staff. It takes about 20 minutes to complete and is completely anonymous. Schools are not identified. My aim is use the data to improve teacher training to prepare primary school teachers for inclusive classes.

Press control and click the link below!
http://uwseducations.us.qualtrics.com/SE/?SID=SV_8csV697pOtKnviB

As you are aware, there are increasing numbers of students with disabilities who are enrolled into regular/mainstream classes. The responses will have implications for selection of pedagogical approaches to prepare teachers for modern classes as well as contribute to the knowledge about inclusion and teacher training.

Yours sincerely,

Nolene Walker
Lecturer and Unit Co-ordinator (Inclusive Education)
School of Education
University of Western Sydney
Kingswood Campus Building J.1.20
Locked Bag 1797 Penrith Sth DC, NSW 1797
Email Address: nolene.walker@uws.edu.au
**Appendix P: Matrix Linking Research Questions, Research Approaches and Interview Questions**

<table>
<thead>
<tr>
<th>Research questions</th>
<th>Research method</th>
<th>Approach and/or interview questions (IQ)</th>
<th>Themes</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1. Do the self-reported attitudes, knowledge and skills of pre-service teachers change as a result of undertaking a mandatory unit in inclusive education (quantitative and qualitative)?</td>
<td>quantitative</td>
<td>Examine in relation to the survey and the 5 early career teachers who undertook the course – discuss in relation to reality of implementation and context. Quantitative-questionnaire</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q1. After completing the inclusive unit, how similar were pre-service and experienced teachers on these characteristics?</td>
<td>quantitative predominantly with some qualitative</td>
<td>Analyse different themes emerging from different groups.</td>
<td>Context (pre-service training and theory and practice)</td>
<td>Disadvantaged school, &quot;SES Struggle&quot;</td>
</tr>
<tr>
<td>Q2. What content (attitude, knowledge and skills) should be covered in initial primary teacher education programs to prepare and equip beginning teachers for inclusive teaching?</td>
<td>quantitative and qualitative</td>
<td>Theories e.g., social model and medical model of disability (equity social justice), social learning theory</td>
<td>From literature review – as discussed with supervisor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>IQ 2. May I get you to think about what would have assisted you in your initial teacher education to prepare you for inclusive classes?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>IQ 4. What knowledge do you think pre-service teachers should have about inclusion of students with disabilities before commencing work as a teacher?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Experiences</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Triangulate: incorporated short answers from post-unit questionnaire responses. Knowledge</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>University experiences (e.g., professional practice, people with disabilities)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Life experiences</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Disability specific, &quot;UDL, adjustments and accommodations Legislation, Referrals, individual learning plans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research questions</td>
<td>Research method</td>
<td>Approach and/or interview questions (IQ)</td>
<td>Themes</td>
<td>Categories</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>IQ 5. Based on your experiences tell me about what you think pre-service teachers need with regard to classroom management and students with additional needs? IQ 6. What kinds of experiences/knowledge do pre-service teachers require to prepare them for: – Classroom management – Differentiation – Collaboration (support staff, teachers’ assistants or aides or school learning support officer, parents and others) – Resources?</td>
<td></td>
<td>Skill areas (topics that guided the design of the questionnaire – from the literature)</td>
<td>Classroom management Collaboration Differentiation Resource use and awareness of personnel</td>
<td></td>
</tr>
<tr>
<td>Q2. What mode of delivery optimises the effectiveness of preparing pre-service teachers for inclusive teaching?</td>
<td>Quantitative with some insights gathered from qualitative data</td>
<td>Questionnaire items asking pre-service teachers to prioritise modes of delivery. Thematic analysis to determine nuanced insights from interviews</td>
<td>Questionnaire and interview responses</td>
<td></td>
</tr>
<tr>
<td>Q3. How can educational learning experiences during initial teacher education be effectively organised to prepare pre-service primary teachers for inclusive teaching in NSW?</td>
<td>Quantitative and qualitative</td>
<td>IQ1. Tell me about your experiences regarding inclusion of students with disabilities or additional needs. IQ3. Do you have any views or thoughts about how to develop positive attitudes towards individuals with disabilities in pre-service teachers?</td>
<td>Attitudes</td>
<td>Time factor Language Societal attitudes</td>
</tr>
<tr>
<td>Research questions</td>
<td>Research method</td>
<td>Approach and/or interview questions (IQ)</td>
<td>Themes</td>
<td>Categories</td>
</tr>
<tr>
<td>--------------------</td>
<td>----------------</td>
<td>----------------------------------------</td>
<td>--------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>IQ 7. Overall, what learning experiences do you think pre-service teachers should engage in during initial teacher education to equip them for inclusive teaching? IQ 8 Have you had effective professional learning either at university or during your teaching career regarding inclusion of students with disabilities or additional needs? How was it beneficial?</td>
<td></td>
<td>Skills</td>
<td>Learning experiences that prepare pre-service teachers in the areas of: Classroom management Collaboration Differentiation Resource use and awareness of personnel</td>
<td></td>
</tr>
</tbody>
</table>

*Note. *UDL = *Universal Design for Learning*; *SES = socioeconomic status.*
### Appendix Q: Effect of Experienced Teacher Characteristics on General Attitudes, Knowledge and Skills regarding the Preparation of Pre-service Teachers for Inclusive Teaching

#### Table Q 1

**Effect of Experienced Teacher Age on Attitudes, Knowledge and Skills regarding the Preparation of Pre-service Teachers for Inclusive Teaching**

<table>
<thead>
<tr>
<th>Item description</th>
<th>n</th>
<th>$X^2$</th>
<th>df</th>
<th>Post hoc comparisons of subgroups $^a$</th>
<th>Higher level of agreement</th>
<th>Lower level of agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude: Teacher training prepared me well for inclusive teaching</td>
<td>318</td>
<td>23.09***</td>
<td>3</td>
<td>20-29 (n = 34, $Md = 2$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>($p=.000$)</td>
<td></td>
<td>40-49 (n = 80, $Md = 2$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Over 50 (n = 158, $Md = 2$)***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge: I am knowledgeable about the needs of students with disabilities</td>
<td>324</td>
<td>16.72**</td>
<td>3</td>
<td>20-29 (n = 34, $Md = 4$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>($p=.001$)</td>
<td></td>
<td>40 and 49 (n = 81, $Md = 4$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Over 50 years (n = 163, $Md = 5$)***</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* df = degrees of freedom; $Md =$ median. $^a$ = Significance levels set using Bonferroni corrected alpha. *$p < .05$. **$p < .01$. ***$p < .001$.

#### Table Q 2

**Effect of Experienced Teacher Relationship to Person with Disability on Attitudes, Knowledge and Skills regarding the Preparation of Pre-service Teachers for Inclusive Teaching**

<table>
<thead>
<tr>
<th>Item description</th>
<th>n</th>
<th>$X^2$</th>
<th>df</th>
<th>Post hoc comparisons of subgroups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude: I believe that students with additional needs benefit from inclusion</td>
<td>301</td>
<td>11.85* ($p=.018$)</td>
<td>4</td>
<td>Experienced teachers with a disability (n = 3, $Md = 5$)</td>
</tr>
<tr>
<td></td>
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</tr>
</tbody>
</table>

*Note.* df = degrees of freedom; $Md =$ median. P-values for group comparisons were not significant but results indicate a trend showing that experienced teachers with a disability report a stronger level of agreement. *$p < .05$. 

333
Table Q 3

Effect of Experienced Teacher Years of Experience on Attitudes, Knowledge and Skills regarding the Preparation of Pre-service Teachers for Inclusive Teaching

<table>
<thead>
<tr>
<th>Item description</th>
<th>n</th>
<th>X²</th>
<th>df</th>
<th>Post hoc comparisons of subgroups b</th>
<th>Higher level of agreement</th>
<th>Lower level of agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude: Teacher training prepared me well for inclusive teaching</td>
<td>318</td>
<td>16.95***</td>
<td>2</td>
<td></td>
<td>Up to 9 years (n=83, Md=2)</td>
<td>More than 20 years (n=162, Md=2)***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(p=.000)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge: I am knowledgeable about the needs of students with disabilities</td>
<td>324</td>
<td>12.70***</td>
<td>2</td>
<td></td>
<td>More than 20 years (n=166, Md=5)</td>
<td>Up to 9 years (n=85, Md=4)***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(p=.000)</td>
<td></td>
<td></td>
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<tr>
<td>Skills: I have the skills to include students with additional needs</td>
<td>324</td>
<td>7.658*</td>
<td>2</td>
<td>10-19 years (n=73, Md=4)</td>
<td>Up to 9 years (n=85, Md=4)</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>(p=.02)</td>
<td></td>
<td>More than 20 years</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>(n=166, Md=4, p=.01)</td>
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<td></td>
</tr>
<tr>
<td>Skills: I know how to alter teaching to cater to students with additional needs</td>
<td>318</td>
<td>9.65**</td>
<td>2</td>
<td></td>
<td>Up to 9 years (n = 83, Md = 4)</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>(p=.008 b)</td>
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</tr>
<tr>
<td>Skills: I implement inclusive practices in regular classes</td>
<td>318</td>
<td>12.70**</td>
<td>2</td>
<td>10-19 years (n = 73, Md = 4)</td>
<td>Up to 9 years experience (n = 83, Md = 4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(p=.002)</td>
<td></td>
<td>More than 20 years of experience</td>
<td></td>
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</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td>(n = 162, Md = 4)</td>
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</tr>
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</table>

Note. df = degrees of freedom; Md = median; b = Significance levels set using Bonferroni corrected alpha. *p < .05. **p < .01. ***p < .001.
Table Q.4

*Effect of Experienced Teacher Role on Attitudes, Knowledge and Skills regarding the Preparation of Pre-service Teachers for Inclusive Teaching*

<table>
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<th>Item description</th>
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<th>Lower level of agreement</th>
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<tbody>
<tr>
<td><strong>Attitude:</strong> I believe inclusion benefits typically developing students</td>
<td>324</td>
<td>27.29***</td>
<td>4</td>
<td>Principals and non-teaching executive (n = 43, Md = 4)**</td>
<td>Class teachers (n=109, Md = 4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(p=.000)</td>
<td></td>
<td>Support teachers (n = 106, Md = 4)***</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>School counsellors (n = 19, Md = 4)***</td>
<td></td>
</tr>
<tr>
<td><strong>Attitude:</strong> I look forward to working with students with additional needs</td>
<td>324</td>
<td>79.16***</td>
<td>4</td>
<td>Principals and teaching executive (n = 47, Md = 4)**</td>
<td>Class teachers (n = 109, Md = 4)</td>
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<tr>
<td></td>
<td></td>
<td>(p=.000)</td>
<td></td>
<td>Support teachers (n = 106, Md = 5)***</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>School counsellors (n = 19, Md = 4)***</td>
<td></td>
</tr>
<tr>
<td><strong>Attitude:</strong> I believe that students with additional needs benefit from inclusion</td>
<td>324</td>
<td>18.10***</td>
<td>4</td>
<td>Support teachers (n = 106, Md = 5)***</td>
<td>Class teachers (n = 109, Md = 4)</td>
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<td></td>
<td></td>
<td>(p=.000)</td>
<td></td>
<td>School counsellors (n = 19, Md = 4)**</td>
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</tr>
<tr>
<td><strong>Attitude:</strong> I am concerned about working with students with additional needs</td>
<td>318</td>
<td>35.47***</td>
<td>4</td>
<td>Class teachers (n = 108, Md = 3.5)***</td>
<td>Support teachers (n = 104, Md = 2)</td>
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<tr>
<td></td>
<td></td>
<td>(p=.000)</td>
<td></td>
<td>Principals and teaching executive (n = 46, Md = 3)**</td>
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</tr>
<tr>
<td><strong>Attitude:</strong> Teacher training prepared me well for inclusive teaching</td>
<td>318</td>
<td>15.09**</td>
<td>4</td>
<td>Class teachers (n = 108, Md = 2)***</td>
<td>Principals and non-teaching executive (n = 43, Md = 2)</td>
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<td>(p = .004*)</td>
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<td>School counsellors (n = 17, Md = 2)**</td>
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<td>Support teachers (n = 104, Md = 2)***</td>
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<tr>
<td><strong>Knowledge:</strong> I am knowledgeable about the needs of students with disabilities</td>
<td>324</td>
<td>76.35***</td>
<td>4</td>
<td>Principals and non-teaching executive (n = 43, Md = 4)***</td>
<td>Class teachers (n = 109, Md = 4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(p=.000)</td>
<td></td>
<td>Support teachers (n = 106, Md = 4)***</td>
<td></td>
</tr>
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<td></td>
<td>School counsellors (n = 19, Md = 4)***</td>
<td></td>
</tr>
<tr>
<td><strong>Skills:</strong> I have the skills to include students with additional needs</td>
<td>324</td>
<td>50.13***</td>
<td>4</td>
<td>Principals and non-teaching executive (n = 43, Md = 4)***</td>
<td>Class teachers (n = 109, Md = 4)</td>
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<tr>
<td></td>
<td></td>
<td>(p=.000)</td>
<td></td>
<td>Support teachers (n = 106, Md = 4)**</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>School counsellors (n = 19, Md = 4)***</td>
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(continued)
Skills: I know how to alter teaching to cater to students with additional needs

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Chi Sq</th>
<th>df</th>
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<th>Lower Level of Agreement</th>
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<tr>
<td></td>
<td>318</td>
<td>61.05***</td>
<td>4</td>
<td>Principals and teaching executive (n = 46, Md = 4)**</td>
<td>Class teachers (n = 108, Md = 4)</td>
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<tr>
<td></td>
<td></td>
<td>(p=.000)</td>
<td></td>
<td>Principals and non-teaching executive (n = 43, Md = 4)**</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Support teachers (n = 104, Md = 5)***</td>
<td></td>
</tr>
</tbody>
</table>

Skills: I implement inclusive practices in regular classes

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Chi Sq</th>
<th>df</th>
<th>Higher Level of Agreement</th>
<th>Lower Level of Agreement</th>
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</tr>
<tr>
<td></td>
<td>318</td>
<td>30.82***</td>
<td>4</td>
<td>Principals and teaching executive (n = 46, Md = 4)***</td>
<td>Class teachers (n = 108, Md = 4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(p=.000)</td>
<td></td>
<td>Support teachers (n = 104, Md = 5)***</td>
<td></td>
</tr>
</tbody>
</table>

Note. df = degrees of freedom; Md = median. * = Significance levels set using Bonferroni corrected alpha. *p < .05. **p < .01. ***p < .001.

Table Q 5

*Effect of Experienced Teacher Qualifications on Attitudes, Knowledge and Skills regarding the Preparation of Pre-service Teachers for Inclusive Teaching*

<table>
<thead>
<tr>
<th>Item description</th>
<th>N</th>
<th>Chi Sq</th>
<th>df</th>
<th>Higher Level of Agreement</th>
<th>Lower Level of Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude: I believe inclusion benefits typically developing students</td>
<td>323</td>
<td>17.88**</td>
<td>4</td>
<td>Teachers with postgraduate qualifications in special education or school counselling (n = 89, Md = 4)</td>
<td>General primary teachers with (n = 82, Md = 4)*** and without a unit in inclusion/special education (n = 73, Md = 4)**</td>
</tr>
<tr>
<td>Attitude: I look forward to working with students with additional needs</td>
<td>323</td>
<td>61.17***</td>
<td>4</td>
<td>Teachers with postgraduate qualifications in special education or school counselling (n = 89, Md = 4)</td>
<td>General primary teachers with (n = 82, Md = 4)*** and without a unit in inclusion/special education (n = 73, Md = 4)**</td>
</tr>
<tr>
<td>Attitude: I believe that students with disabilities and/or additional needs benefit from being included in the regular/mainstream class</td>
<td>323</td>
<td>19.98***</td>
<td>4</td>
<td>Teachers with postgraduate qualifications in special education or school counselling (n = 89, Md = 4)</td>
<td>General primary teachers with (n = 82, Md = 4)*** and without a unit in inclusion/special education (n = 73, Md = 4)**</td>
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</tbody>
</table>

(continued)
### Attitude: I am concerned about working with students with additional needs

<table>
<thead>
<tr>
<th>Item description</th>
<th>n</th>
<th>X²</th>
<th>df</th>
<th>Higher level of agreement</th>
<th>Lower level of agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>General primary teachers without a unit in inclusion/special education (n = 72, Md = 3.5)*** and teachers with postgraduate qualifications without special education (n = 59, Md = 3)***</td>
<td>317</td>
<td>25.94***</td>
<td>4</td>
<td>General primary teachers without a unit in inclusion/special education or school counselling (n = 85, Md = 2)</td>
<td>Teachers with postgraduate qualifications in special education or school counselling (n = 85, Md = 2)</td>
</tr>
</tbody>
</table>

### Attitude: Teacher training prepared me well for inclusive teaching

<table>
<thead>
<tr>
<th>Item description</th>
<th>n</th>
<th>X²</th>
<th>df</th>
<th>Higher level of agreement</th>
<th>Lower level of agreement</th>
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</thead>
<tbody>
<tr>
<td>General primary teachers with a unit in inclusion/special education (n = 82, Md = 2) and teachers with postgraduate qualifications in special education (n = 85, Md = 2)</td>
<td>317</td>
<td>21.17***</td>
<td>4</td>
<td>General primary teachers without a unit in inclusion/special education (n = 72, Md = 2)*** and teachers with postgraduate qualifications but not in special education (n = 59, Md = 2)***</td>
<td>General primary teachers without a unit in inclusion/special education (n = 72, Md = 2)*** and teachers with postgraduate qualifications but not in special education (n = 59, Md = 2)***</td>
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### Knowledge: I am knowledgeable about the needs of students with disabilities

<table>
<thead>
<tr>
<th>Item description</th>
<th>n</th>
<th>X²</th>
<th>df</th>
<th>Higher level of agreement</th>
<th>Lower level of agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers with postgraduate qualifications in special education (n = 89, Md = 5) or not in special education (n = 60, Md = 4.5)</td>
<td>323</td>
<td>54.82***</td>
<td>4</td>
<td>General primary teachers with (n = 82, Md = 4)*** and without a unit in inclusion/special education (n = 73, Md = 4)***</td>
<td>General primary teachers with (n = 82, Md = 4)*** and without a unit in inclusion/special education (n = 73, Md = 4)***</td>
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</table>

### Skills: I have the skills to include students with additional needs

<table>
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<tr>
<th>Item description</th>
<th>n</th>
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<th>df</th>
<th>Higher level of agreement</th>
<th>Lower level of agreement</th>
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<td>Teachers with postgraduate qualifications in special education (n = 89, Md = 5)</td>
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<td>45.04***</td>
<td>4</td>
<td>General primary teachers with (n = 82, Md = 4)*** or without a unit in inclusion/special education (n = 73, Md = 4)***</td>
<td>General primary teachers with (n = 82, Md = 4)*** or without a unit in inclusion/special education (n = 73, Md = 4)***</td>
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Item description | n | X² | df | Post hoc comparisons of subgroups a | Higher level of agreement | Lower level of agreement |
<table>
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<tbody>
<tr>
<td>Skills: I know how to alter teaching to cater to students with additional needs</td>
<td>317</td>
<td>33.78***</td>
<td>4</td>
<td>Teachers with postgraduate qualifications in special education or school counselling (n = 85, Md = 5)</td>
<td>General primary teachers without a unit in inclusion/special education (n = 72, Md = 4)*** and teachers with postgraduate qualifications but not in special education (n = 59, Md = 4)**</td>
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</tr>
<tr>
<td>Skills: I implement inclusive practices in regular classes</td>
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<td>17.57**</td>
<td>4</td>
<td>Teachers with postgraduate qualifications in special education (n = 85, Md = 5)</td>
<td>General primary teachers with (n = 82, Md = 4)*** and without (n = 72, Md = 4)*** a unit in inclusion/special education</td>
<td></td>
</tr>
</tbody>
</table>

Note. df = degrees of freedom; Md = median; Other = teachers who did not have special education qualifications but who worked in the field or had completed short courses related to students with additional needs; a = Significance levels set using Bonferroni corrected alpha. **p < .01. ***p < .001.
Appendix R: Sample of a Transcribed Segment of an Interview showing Processes of Winnowing and Memoing

Respondent: And then I moved from, for a transfer to Mandy Village of a school of, so it was this size of about 600 plus students. And I kept hearing this word all the time “differentiating”. You need to differentiate. And they were sending me to courses and I’m thinking “I do this; I’ve been doing this for years”. That’s when I realised that other people hadn’t been doing it because they did not have the experience that I had of having to deal in a small school environment with so many children with additional needs (LIFE OR TEACHING EXPERIENCE *). So then I realised then that because I had the experience I started getting in a larger school, when I moved to a larger school for children with the additional needs because I was the only person that really had experience. Now working where I am now here at school, we have almost 700 students, we have an OC class, we have a very multicultural school – 98% of the children are non-English speaking. The parents, that is their ultimate goal is to get their child in the OC class, (SCHOOL CONTEXT *) even from Kindergarten as a Kindergarten teacher when I do orientation the questions parents want to know “How many children get into the OC class?” and this is what they strive for. So here teachers are used to catering for, they cater very well for our gifted and talented students. Cater very well for students who we know have 21 hours a week Kumon or tutoring (CONTEXT *), But we also have a small percentage of children with additional needs. And the teachers here are not used to that, they’re not used to making those adjustments for the children at the lower end. I think the model that they’ve been used to is if you do have a child like that an aide comes in and the aide works with that child, helping them do what’s already happening in the classroom. (TEACHER’S AIDE /COLLABORATION HOW TO WORK BEST WITH AIDE FOR STUDENT’S BENEFIT *) But now with the introduction of the “Every School, Every student” we now have a learning and support teacher. And there has been a lot more, I suppose training and knowledge of accountability that it is your job to work with the learning and support teacher to make adjustments for these children. So here that’s where I’ve seen, that’s starting to happen here, it’s a very slow process because it is something that teachers are not, have not really had to I suppose either because being in the area (CONTEXT *), as I say before we’ve got these children where and discipline and everything is not an issue because their parents culturally, you know
it’s… an education is so valid and so important. So but even then I’ve found that some children who they think may be struggling in a school in another area would be your average student. Because they’re not at that extended level, yeah and I think a lot of teachers have been here for quite some time can’t make the comparison. They’re comparing within their classroom.

Interviewer: Sure.

Respondent: So it’s quite interesting that the children that have the additional needs in our school are mainly our Anglo Saxon population…

Interviewer: Isn’t that interesting?

Respondent: And our small Polynesian population are the children with additional needs. And so that sort of tells you that it’s definitely culture has a lot to do with how we… affect the way which teachers here teach. *(CULTURE AND CONTEXT)*

Interviewer: So if you were to think in terms of pre service training for teachers what do you think, what skills do you think pre service teachers require in order to be effective at this concept of inclusion? So what should they be taught in pre service training to prepare them for an inclusive classroom? So those kids with disabilities and additional needs?

Respondent: I think number one cultural, they need to have an understanding of cultural differences and understand that if a child from a different culture has additional needs the parent may not be forthcoming with that. *(CULTURAL AWARENESS)*

Interviewer: OK.

Respondent: Because it can then, for them it’s sort of, it’s almost shame if they have a child that has a disability or an additional learning need. They could cover it up, they could… and not actually also be willing to have them have any extra help or additional support *(SHAME)*. So there needs to be a lot of communication *(COLLABORATION AND COMMUNICATION SKILLS)* with the parents. I’ve had to use interpreters a lot because after a while when you’re discussing this about a parent, they become quite emotional. And in their native tongue they’re finding it difficult to translate in English. So I’ve had an experience where it’s really good to have someone that’s there as an interpreter. A lot of the time at the beginning they said “No I don’t need an
interpreter” and they find as they start getting emotional and as they start discussing that they find it difficult to express themselves, they go into their Mother tongue. And then they have an interpreter there to try to explain to you how it is that they are feeling. And I’ve had an incident recently with a little boy who has quite severe language delay and he’s only started speaking really in the last 12 months or so. The Mother didn’t want him to be treated any differently to anyone else. And I found that it was a lot stronger than any other situation that I had been in and I really felt that it was a Middle Eastern background, (CULTURE AND GENDER ) that it was more too that she did not want her child to… culturally he was the only son, to be at all treated any differently to any other student.

Interviewer: OK.

Respondent: So I think for your teachers that are coming out to realise that we do not just live in a white Anglo Saxon society, that we live in a multicultural society and children from different cultures do have additional needs. And that there needs to be this sensitivity towards parents and trying to sort of say “Well no they”…I hear comments from people that sort of say “They don’t want to help their child, they don’t want us to help their child” and it’s not the case of that, they don’t want to feel that their child is shamed or different in any case. So the way in which you would go about adjusting for them is you have to just keep them informed along the line every step (COLLABORATION ). You would not be withdrawing (WITHDRAWAL LESSONS ) a child from the classroom like that without permission from the parent because the learning and support teacher would have to have written permission to take them out of the room for any extra assessment or anything like that. Because, and I think too now with the regulations and the new “Every school Every Student” there must be written permission (COLLABORATION WITH PARENTS ) before you can even take the child out of the classroom environment to do individual one on one testing or anything like that as well too. And I think for the new in service teachers they need to understand this new model because they would have gone to school with a model where you had a child that had a disability, along came Miss Smith and off they went under the tree outside and did their work and came back again (ISSUES OF WITHDRAWAL - OLDER MODEL ).
Appendix S: Sample Segment of an Individual Coding Chart

**Interview:** Siobhan  **Date:** December, 2013  **Time:** 1.15  **Venue:** (northern suburbs of Sydney in school office)

Brief description: Assistant Principal (Kindergarten teacher)

<table>
<thead>
<tr>
<th>Themes</th>
<th>Categories</th>
<th>Quotes (in view of research questions, hypotheses, literature and illuminating insights)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiences (emerging from interviews)</td>
<td>General life experience e.g. work, family, maturity</td>
<td>So I have seen the socio as well too economical situation where I’ve come from a poorer background going to a middle class Catholic school and knowing that these children are treated differently. And children with disabilities are not treated with the same sort of equal opportunities. So for me I could see the bigger picture from a younger age but a lot of your newer teachers that are coming out may not have had those sort of life experiences (<em>LIFE EXPERIENCE</em>). But I think a lot of the teachers, good teachers, passionate teachers, it comes from somewhere beforehand, before they… yeah it comes from other experiences, life experiences where it gives them that moral purpose to want to make a difference. And when you were saying before about attitude you know that sort of whole moral purpose, everybody deserves an education; that sort of, I think is a very innate thing that does come from life experiences. How you then form that and in other people I think it’s from your own passion and your own energy, your own you know I suppose keep working at it. And I suppose for that small percentage that have it, it’s to encourage them to don’t become discouraged, that you can make a difference I suppose.</td>
</tr>
<tr>
<td>University experiences</td>
<td>Well so you could explain the whole thing with autism and how children do have routine, how routine is and how routine is a… the routine being broken is a trigger to that behaviours (<em>BEHAVIOUR MANAGEMENT ANTECEDENT TRIGGERS</em>). So then you could sort of give examples of all the different things in schools that happen, ‘cause schools are crazy places for change. It’s constantly happening all the time and sort of explain to them that you know you don’t, that child does not have to. I think this is the whole thing, they have to, they have to be seen as doing what everyone else is doing and that’s not the case, It’s not; the first thing is duty of care to that child and providing, now if you’re going to be providing for him and making adjustments that’s an adjustment for him (<em>ADJUSTING AND ACCOMMODATING</em>).</td>
<td></td>
</tr>
<tr>
<td>Experience with people with disabilities</td>
<td></td>
<td>So I think then in my experience is I’ve had brothers that have had dyslexia and had difficulty as well too (<em>LIFE EXPERIENCE</em>).</td>
</tr>
<tr>
<td>Themes</td>
<td>Categories</td>
<td>Quotes (in view of research questions, hypotheses, literature and illuminating insights)</td>
</tr>
<tr>
<td>------------------------------</td>
<td>------------</td>
<td>---------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Prac. experiences (perhaps combine with university experiences)</td>
<td></td>
<td>I think you would have to, they’d have to do a practicum, they’d do a practicum in an environment, in environments that model that and they’d see that model (<em>PROFESSIONAL PRACTICE</em>). And I think the thing is that’s quite difficult is then when they go into schools they will fall back into the old model because that’s what they’re seeing. I think exposure to seeing it happen and that it works and as many as positive situations that they can be put in and see that sort of happening, the children being included (<em>POSITIVE SITUATIONS WHILE ON PROFESSIONAL PRACTICE</em>).</td>
</tr>
<tr>
<td>Skills (themes emerging from literature)</td>
<td>Differentiation</td>
<td>Look at that unit of work and then see how I can include that student, how can I modify… the environment might need to be modified to include that student. That actual, if it’s a worksheet or if it’s a whatever it may need to be enlarged for that student or might need to be reduced so it’s a small amount of work or for them to have breaks (<em>ADJUSTMENTS AND ACCOMMODATIONS</em>). Look at a plan and then see, to look at the plan and then see how you can without having to have a whole new program as well too (<em>UNIVERSAL DESIGN FOR LEARNING</em>). And I think that, I don’t find it that difficult to do but I know some people do, like with a maths game it could be as simple as only doing numbers one to five instead of doing it one to 30… (<em>DIFFERENTIATION</em>) <em>(OVERLAP: RESOURCES OR DIFFERENTIATION)</em> Visual aids, visual aids is the first thing and how to use a visual aid as well too because we’ve had visual aids printed off and they just sit on people desks. And how to have them around the room as well too and how you can use them and how you can put them on a necklace around their neck or how to actually find them, use them in the rooms as well too for visual aids. <em>(DISABILITY SPECIFIC KNOWLEDGE)</em> Also children with autism obviously routine, that the routine needs to be the same and that if you’re going to change that routine there needs to be warning beforehand. <em>(STRATEGIES)</em> Realising that no he’s not going to be able to do this, and you need to have another activity for him to do. I think assessment number one it’s first, the person some first there’s no programming, planning, developing a unit of work for children if you don’t know what they can and can’t do… (<em>ASSESSMENT</em>) continuing assessment.</td>
</tr>
</tbody>
</table>
So then you can, then you know for instance with their phonics and their sounds they need that to read (*FUNDAMENTAL READING STRATEGIES*), they need that to be continually tested to know are they getting those sounds, can they blend and doing things like that Sutherland – the SPAT test (*CONFIRMED THAT SIMILAR TOPIC WAS PLACED UNDER DIFFERENTIATION FOR BEGINNING TEACHERS*).

Best Start testing at the beginning of the year and put the children on the continuum so plotting the children on that literacy and numeracy continuum straight away before they even start school tells us what we need to do for these children (*LEARNING CONTINUUM – supports comment of a BEGINNING TEACHER*).

getting to know the students first (*INDIVIDUAL FIRST*) before they go in guns blazing with these really great units of work and everything of what they’re going to teach them, find out what do my students know and what do they need to know and start your programming and plan from there. Assessing and then start programming and evaluating and assessing again (*LEARNING CYCLE*).

assessment before planning. And then when it comes to planning how you can plan for a number of children in your class with the one concept. So having that big idea, having that concept instead of having building like on Blooms, the whole theory from those children from the bottom to the middle to the top. (*UNIVERSAL DESIGN FOR LEARNING*)

Field notes: impact of socioeconomic status; the interviewee is both an assistant principal and a class teacher and has additional qualifications in special education

Underlined text = process of winnowing; * = process of memoing
Appendix T: Definitions of Themes Significant to this Study

**Attitude:** “An attitude is the way we think and feel about ourselves, another person, thing or idea” (Saldana, 2013, p. 111). Shaw and Wright (1967) define the term attitude as “a relatively enduring system of evaluative, affective reactions based upon and reflecting the evaluative concepts or beliefs which have been learned” (p. 3). More specifically for this thesis the term “attitude” means the acquisition of informed and responsible predispositions towards students with additional needs which lead to beliefs that they have a right to be catered to, and included in regular classes.

**Knowledge:** Knowledge refers to concepts and central ideas considered crucial to a subject or discipline (Hayes et al., 2006). Knowledge is acquired when individuals develop an integrated and comprehensive understanding of these concepts. Knowledge is demonstrated when individuals connect old and new knowledge so that a restructuring of what they know occurs. In other words, knowledge is constructed rather than fixed and is subject to social, cultural and political influences (Hayes et al., 2006).

**Skills:** The term “skill” refers to the ability to perform a particular task. Numerous studies (Alahbabi, 2009; Loreman, 2007; Shaddock et al., 2007) have identified particular skills that pre-service teachers ought to acquire to be effective inclusive teachers. For this study, the term “skill” refers to the ability of teachers to apply effective strategies to include and cater to the needs of students with additional needs. The application of these strategies should contribute to successful learning outcomes for students and be derived from research and workplace knowledge. In this study “skills” comprise the categories of classroom management, collaboration, differentiation, and selection and use of appropriate resources. Each of these categories is defined as follows -

Weinstein (2003) suggests that "the fundamental task of classroom management is to create an inclusive, supportive, and caring environment" (p. 267). **Classroom management** therefore refers to the actions that teachers take and strategies that they use to ensure that the classroom environment supports and facilitates both academic learning and social-emotional growth of students within that class (Evertson & Weinstein, 2011).
Collaboration is a process in which teachers and stakeholders (e.g., the student, parents/caregivers, teacher assistants, itinerant support teachers) engage in reflection, analysis and discussion to increase knowledge about students to improve practices that enhance outcomes for students (Loreman et al., 2011). Collaboration involves working with one or more colleagues to achieve common goals.

Differentiation refers to the pedagogical approaches and techniques used by teachers to ensure that students with diverse needs are provided with instruction that takes into account their individual differences and needs (Loreman et al., 2011).

Resource use generally refers to the appropriate organisation, selection, development and use of materials including Information and Communication Technologies to enhance engagement of, and learning outcomes for students. For the purposes of this study the term “resources” also includes personnel who provide support or professional advice.
Table U 1

*Pre-service Teachers’ Open-ended Responses: Pre-unit Questionnaire*

<table>
<thead>
<tr>
<th>Themes</th>
<th>Example open-ended responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes about inclusive education</td>
<td>Depends on the level of disability. If they are severely disabled or have many additional needs it can be disruptive for the rest of the class. (Tara)</td>
</tr>
<tr>
<td></td>
<td>Children gain understanding that those with special needs needn’t be excluded from mainstream life. Teaches empathy and normalises ‘others’. (Mel)</td>
</tr>
<tr>
<td></td>
<td>It’s catch 22, sometimes it [inclusion] may be helpful but it can take away from other students learning, however with good management can be handled. (Sam)</td>
</tr>
<tr>
<td></td>
<td>This situation [inclusive classes] more accurately mirrors the society in which they live, and creates a greater sense of acceptance and tolerance. (Stewart)</td>
</tr>
<tr>
<td></td>
<td>I have seen how my own kids and their friends have learnt from knowing my kids with disabilities and feel that education is the key as well as exposure. (Debra)</td>
</tr>
<tr>
<td>Apprehension about implementing inclusive education</td>
<td>Not sufficient practical resources to assist in teaching students with disability/additional needs. Too many expectations on the teacher to deal with these students. (Tara)</td>
</tr>
<tr>
<td></td>
<td>I am worried that I won’t be well prepared to teach adequately in relation to inclusive classroom. (Mel)</td>
</tr>
<tr>
<td></td>
<td>Concerns about ‘pigeon-holing’ children as ‘disabled’ or special/different when we all have limitations/specialness. (Stewart)</td>
</tr>
<tr>
<td></td>
<td>They [pre-service teachers] learn very little about disabilities that are invisible – they are scared of children with disabilities and often ignore them hoping they will go away. (Debra)</td>
</tr>
<tr>
<td>Themes</td>
<td>Example open-ended responses</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Learning experiences that provide practical approaches</strong></td>
<td>How to plan lessons to include students with a disability/learning difficulty. Resources available – people as well as equipment. (Tara)</td>
</tr>
<tr>
<td></td>
<td>Practical experience is most important with the back-up of some theoretical knowledge. (Mel)</td>
</tr>
<tr>
<td></td>
<td>We do not get a lot of it [inclusive pre-service training] and does not occur before our first practicum. (Sam)</td>
</tr>
<tr>
<td></td>
<td>Consideration of the range of different types/manifestations of disabilities. Exposure to actual teaching situations. (Stewart)</td>
</tr>
<tr>
<td></td>
<td>Important for teachers to have strategies in their professional ‘kit’ to ensure that all students can have rich, meaningful education irrespective of any disability they may have. (Stewart)</td>
</tr>
</tbody>
</table>

Table U 2

*Pre-service Teachers’ Open-ended Responses: Post-unit Questionnaire*

<table>
<thead>
<tr>
<th>Themes</th>
<th>Example open ended responses</th>
</tr>
</thead>
</table>
| **Attitudes about inclusive education**    | There are many students with special needs in schools so teachers need to know how to best teach them. (Tara)  
Students go to school to become world citizens as much as learn academic knowledge. Part of this should include  
understanding that students with special needs are part of all of our lives. (Mel)  
Gives them [typically developing children] greater compassion and empathy. They [students with disabilities] feel like  
they belong in our society more. They aspire to greater things. They see they can do what others do. (Debra) |
| **Apprehension about implementing inclusive education** | Finding the time. (Stewart)  
Being stopped from inclusion ideas by other teachers. (Debra)                                                                                                           |
<table>
<thead>
<tr>
<th>Themes</th>
<th>Example open ended responses</th>
</tr>
</thead>
</table>
| Learning experiences that provide practical approaches | Practical tools/lessons to teach students with disabilities. When on prac, no feedback/support as to how to adjust curriculum/assess students.  (Tara)  
No practical experience concerning inclusion of pre-service teaching of students with special needs. (Mel)  
Hands–on experience. Practical!! There is NOT [pre-service preparation for inclusive teaching] enough! (Sam)  
The practical tutorial exercises. (Stewart) |
## Themes

### Theory into practice

Most beginning teachers are troubled by the day to day management of challenging student behaviour, and to a lesser extent, teaching students with specific learning disabilities. (Sue, District Guidance Officer and School Counsellor)

This [pre-service teacher training for inclusion] is insufficient at the present time and therefore the needs of teachers and students with disabilities are not being met. (Sue, District Guidance Officer and School Counsellor)

Often universities will forget that while the theory is important and necessary, it does not make sense unless it is [put] into practice. Teaching is a hands-on profession so it makes sense for universities to make programs more hands-on. (Reem, Learning and Support Teacher)

Pre-service teachers need the skills – the know-how that goes with the theory. They need lots of opportunities to practice behaviour management strategies under the guidance of GOOD prac mentor teachers. They need reassurance that they can do it because let's face it, classroom management is a daunting task for even the most seasoned teacher! (Reem, Learning and Support Teacher)

More focus on programming and adjusting programs. (Linda, Assistant Principal)

 Asking students [pre-service teachers] to prepare and implement differentiated learning plans during practicums in collaboration with the classroom teacher. (Linda, Assistant Principal)

Pre-service training should focus on behaviour management and accommodating and adjusting the curriculum to suit the needs of all students. (Gemma, Itinerant Support Teacher – Hearing)

### Changing paradigm in schools

All teachers need to have the knowledge and skills to cater for the ever increasing numbers of students with special needs in mainstream classrooms. (Leonie, Principal)

Teachers are now told it’s law to include all students and they must make adjustments so therefore teachers should be trained in making learning adjustments and adapting. (Siobhan, Assistant Principal)

In every school and in many classrooms there are now children either diagnosed or undiagnosed who have special and specific needs. These children impact on the whole class and the teaching/learning program and for beginning teachers can present challenges in the first years of teaching. (Gillian, Class Teacher)

Even the broad spectrum of 'special needs' is growing (physical disabilities, Asperger’s, autism, ADHD, CP, all of which are present in my school with just 260 pupils). How to address this in pre-service training is huge. (Gillian, Class Teacher)
Appendix V: Changes in Pre-services Teachers’ Ratings regarding the Extent to which Topics should be Covered in an Inclusive Education Unit

Table V1

*Changes in Pre-service Teachers’ Ratings regarding the Extent to which Attitude Topics should be Covered*

<table>
<thead>
<tr>
<th>Attitude</th>
<th>Pre</th>
<th>Post</th>
<th>95% CI</th>
<th>r</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understand educators role is to adapt to meet the needs of all students</td>
<td>6.21 .96</td>
<td>5.94 1.01</td>
<td>.05 ,.49</td>
<td>.25</td>
<td>2.42*</td>
<td>118</td>
</tr>
<tr>
<td>Understand benefits of inclusion</td>
<td>6.28 .76</td>
<td>1.12 1</td>
<td>.05 ,.37</td>
<td>.14</td>
<td>1.50</td>
<td>117</td>
</tr>
<tr>
<td>Develop positive attitudes regarding inclusion</td>
<td>6.48 .97</td>
<td>6.34 1</td>
<td>.08 ,.37</td>
<td>.22</td>
<td>1.27</td>
<td>117</td>
</tr>
<tr>
<td>Examine views about disability</td>
<td>5.42 1.36</td>
<td>5.32 1.31</td>
<td>.20 ,.40</td>
<td>.25</td>
<td>.67**</td>
<td>118</td>
</tr>
</tbody>
</table>

*Notes. M = mean, SD = standard deviation, CI = confidence interval, r = Pearson’s correlation coefficient, t = t-statistic
a 1 = not at all, 7 = extremely well.
*p < .05. **p < .01.*

Table V2

*Changes in Pre-service Teachers’ Ratings regarding the Extent to which Knowledge Topics should be Covered*

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Pre</th>
<th>Post</th>
<th>95% CI</th>
<th>r</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apply disability legislation</td>
<td>5.18 1.22</td>
<td>5.19 1.15</td>
<td>.27 ,.24</td>
<td>.30</td>
<td>0.13</td>
<td>117</td>
</tr>
<tr>
<td>Understand referral processes to gain assistance</td>
<td>6.04 0.99</td>
<td>5.59 1.21</td>
<td>.22 ,.68</td>
<td>.36</td>
<td>3.9***</td>
<td>116</td>
</tr>
<tr>
<td>Know about exam special provisions</td>
<td>5.47 1.21</td>
<td>5.23 1.22</td>
<td>.05 ,.54</td>
<td>.13</td>
<td>1.63</td>
<td>113</td>
</tr>
<tr>
<td>Apply syllabus information to students with additional needs</td>
<td>6.18 0.87</td>
<td>5.84 1.13</td>
<td>.11 ,.56</td>
<td>.25</td>
<td>2.95**</td>
<td>118</td>
</tr>
</tbody>
</table>

*Notes. M = mean, SD = standard deviation, CI = confidence interval, r = Pearson’s correlation coefficient, t = t-statistic
a 1 = not at all, 7 = extremely well.
**p < .01. ***p < .001.*
Table V3

*Changes in Pre-service Teachers’ Ratings regarding the Extent to which Classroom Management Topics should be Covered*

<table>
<thead>
<tr>
<th>Classroom management</th>
<th>Pre</th>
<th>Post</th>
<th>95% CI</th>
<th>r</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apply behaviour management theories</td>
<td>6.17 ± 1.06</td>
<td>6.13 ± 1.12</td>
<td></td>
<td>.22</td>
<td>.28</td>
<td>.18</td>
</tr>
<tr>
<td>Manage co-operative learning</td>
<td>5.92 ± .94</td>
<td>6.03 ± .91</td>
<td></td>
<td>.11</td>
<td>.31</td>
<td>.25</td>
</tr>
<tr>
<td>Develop skills to manage students with challenging behaviours</td>
<td>6.60 ± .12</td>
<td>6.36 ± .79</td>
<td></td>
<td>.08</td>
<td>.41</td>
<td>.21</td>
</tr>
<tr>
<td>Develop strategies to teach social skills to students with additional needs</td>
<td>4.21 ± .82</td>
<td>6.25 ± .82</td>
<td></td>
<td>.12</td>
<td>.21</td>
<td>.41</td>
</tr>
<tr>
<td>Implement risk assessments for students with challenging behaviours</td>
<td>6.07 ± 1.04</td>
<td>5.83 ± 1.1</td>
<td></td>
<td>.02</td>
<td>.45</td>
<td>.41</td>
</tr>
</tbody>
</table>

*Notes. M = mean, SD = standard deviation, CI = confidence interval, r = Pearson’s correlation coefficient, t = t-statistic
*1 = not at all, 7 = extremely well.
*p < .05. **p < .01.*

Table V4

*Changes in Pre-service Teachers’ Ratings regarding the Extent to which Collaboration Topics should be Covered*

<table>
<thead>
<tr>
<th>Collaboration</th>
<th>Pre</th>
<th>Post</th>
<th>95% CI</th>
<th>r</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop skills of collaborating with parents/guardians</td>
<td>6.20 ± .96</td>
<td>6.01 ± .93</td>
<td></td>
<td>.02</td>
<td>.40</td>
<td>.26</td>
</tr>
<tr>
<td>Develop individual education plans collaboratively with colleagues</td>
<td>5.66 ± 1.02</td>
<td>5.79 ± 1.06</td>
<td></td>
<td>.09</td>
<td>.35</td>
<td>.34</td>
</tr>
<tr>
<td>Develop skills of collaborating with specialist/support teachers</td>
<td>6.01 ± .86</td>
<td>5.92 ± .94</td>
<td></td>
<td>.09</td>
<td>.26</td>
<td>.46</td>
</tr>
<tr>
<td>Develop skills of collaborating with teacher assistants/aides</td>
<td>5.81 ± .96</td>
<td>5.86 ± 1.0</td>
<td></td>
<td>.14</td>
<td>.24</td>
<td>.46</td>
</tr>
</tbody>
</table>

*Notes. M = mean, SD = standard deviation, CI = confidence interval, r = Pearson’s correlation coefficient, t = t-statistic
*1 = not at all, 7 = extremely well.*
Table V5
Changes in Pre-service Teachers’ Ratings regarding the Extent to which Differentiation Topics should be Covered

<table>
<thead>
<tr>
<th>Differentiation</th>
<th>Pre M</th>
<th>Pre SD</th>
<th>Post M</th>
<th>Post SD</th>
<th>95% CI</th>
<th>r</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjust and accommodate to cater to students with additional needs</td>
<td>6.58</td>
<td>.84</td>
<td>6.50</td>
<td>.86</td>
<td>.84, .86</td>
<td>.21</td>
<td>.86</td>
<td>118</td>
</tr>
<tr>
<td>Use a variety of assessment techniques to determine the learning needs of students</td>
<td>6.31</td>
<td>.9</td>
<td>6.04</td>
<td>1.2</td>
<td>.04, .50</td>
<td>.32</td>
<td>2.34*</td>
<td>118</td>
</tr>
<tr>
<td>Develop research based strategies that are effective for specific disabilities</td>
<td>6.0</td>
<td>1.03</td>
<td>6.0</td>
<td>1.1</td>
<td>.21, .21</td>
<td>.39</td>
<td>.00</td>
<td>118</td>
</tr>
<tr>
<td>Adapt the physical environment to meet the needs of students with additional needs</td>
<td>6.25</td>
<td>.79</td>
<td>6.10</td>
<td>.90</td>
<td>.03, .33</td>
<td>.33</td>
<td>1.61</td>
<td>114</td>
</tr>
<tr>
<td>Acquire specific skills e.g. questioning skills, task analysis</td>
<td>6.17</td>
<td>.83</td>
<td>6.09</td>
<td>.95</td>
<td>.08, .25</td>
<td>.51</td>
<td>1.06</td>
<td>114</td>
</tr>
<tr>
<td>Differentiate the curriculum to cater to the needs of very capable students</td>
<td>6.39</td>
<td>.71</td>
<td>6.29</td>
<td>.83</td>
<td>.06, .27</td>
<td>.33</td>
<td>1.25</td>
<td>114</td>
</tr>
<tr>
<td>Adopt teaching strategies that cater to different learning styles</td>
<td>6.54</td>
<td>.69</td>
<td>6.39</td>
<td>.83</td>
<td>.01, .31</td>
<td>.42</td>
<td>2.04*</td>
<td>113</td>
</tr>
</tbody>
</table>

Notes. M = mean, SD = standard deviation, CI = confidence interval, r = Pearson’s correlation coefficient, t = t-statistic

* 1 = not at all, 7 = extremely well.
*p < .05.
Table V6

*Changes in Pre-service Teachers’ Ratings regarding the Extent to which Resource Topics should be Covered*

<table>
<thead>
<tr>
<th>Resources</th>
<th>Pre M</th>
<th>SD</th>
<th>Post M</th>
<th>SD</th>
<th>95% CI</th>
<th>r</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop awareness of technology to assist</td>
<td>6.24</td>
<td>.94</td>
<td>6.2</td>
<td>.89</td>
<td>.16, .26</td>
<td>.17</td>
<td>.47</td>
<td>118</td>
</tr>
<tr>
<td>students with additional needs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Understand that resources need to be matched to</td>
<td>6.4</td>
<td>.87</td>
<td>6.3</td>
<td>.82</td>
<td>.10, .25</td>
<td>.35</td>
<td>.85</td>
<td>118</td>
</tr>
<tr>
<td>students' learning needs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop awareness of support personnel</td>
<td>5.96</td>
<td>.86</td>
<td>6.0</td>
<td>.9</td>
<td>.15, .24</td>
<td>.33</td>
<td>.44</td>
<td>114</td>
</tr>
<tr>
<td>Evaluate suitability of available resources</td>
<td>5.77</td>
<td>1.18</td>
<td>5.94</td>
<td>1.02</td>
<td>.06, .39</td>
<td>.39</td>
<td>1.46</td>
<td>114</td>
</tr>
</tbody>
</table>

*Notes.* M = mean, SD = standard deviation, CI = confidence interval, r = Pearson’s correlation coefficient, t = t-statistic

* a 1 = not at all, 7 = extremely well.
### Appendix W: Ranking of Topics according to Importance for Preparing Pre-service Teachers for Inclusive Teaching

Table W1

*Importance of Topics as Ranked by Pre-service Teachers (Post-unit Questionnaire)*

<table>
<thead>
<tr>
<th>Topics by Category</th>
<th>Mean rank</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Attitude</strong></td>
<td></td>
</tr>
<tr>
<td>Develop positive attitudes regarding inclusion</td>
<td>1.83*</td>
</tr>
<tr>
<td>Understand educators role is to adapt to meet the needs of all students</td>
<td>2.06€</td>
</tr>
<tr>
<td>Understand benefits of inclusion</td>
<td>2.39</td>
</tr>
<tr>
<td>Examine views about disability</td>
<td>3.71</td>
</tr>
<tr>
<td><strong>Knowledge</strong></td>
<td></td>
</tr>
<tr>
<td>Apply syllabus information to students with additional needs</td>
<td>1.76*</td>
</tr>
<tr>
<td>Understand referral processes to gain assistance</td>
<td>2.25</td>
</tr>
<tr>
<td>Apply disability legislation</td>
<td>2.53</td>
</tr>
<tr>
<td>Know about exam special provisions</td>
<td>3.46</td>
</tr>
<tr>
<td><strong>Classroom management</strong></td>
<td></td>
</tr>
<tr>
<td>Develop skills to manage students with challenging behaviours</td>
<td>2.22*</td>
</tr>
<tr>
<td>Develop strategies to teach social skills to students with additional needs</td>
<td>2.82</td>
</tr>
<tr>
<td>Manage cooperative learning</td>
<td>2.88</td>
</tr>
<tr>
<td>Apply behaviour management theories</td>
<td>3.08</td>
</tr>
<tr>
<td>Implement risk assessments for students with challenging behaviours</td>
<td>3.99</td>
</tr>
<tr>
<td><strong>Differentiation – ability to cater to the range of student needs</strong></td>
<td></td>
</tr>
<tr>
<td>Adjust and accommodate to cater to students with additional needs</td>
<td>1.53*</td>
</tr>
<tr>
<td>Adopt teaching strategies that cater to different learning styles</td>
<td>2.29</td>
</tr>
<tr>
<td>Differentiate the curriculum to cater to the needs of very capable students</td>
<td>2.59</td>
</tr>
<tr>
<td>Adopt strategies that ignore the individual differences of students (distractor item)</td>
<td>3.59</td>
</tr>
<tr>
<td><strong>Differentiation – general practices for inclusive teaching</strong></td>
<td></td>
</tr>
<tr>
<td>Use a variety of assessment techniques to determine the learning needs of students</td>
<td>2.27*</td>
</tr>
<tr>
<td>Adapt the physical environment to meet the needs of students with additional needs</td>
<td>2.63</td>
</tr>
<tr>
<td>Develop research based strategies that are effective for specific disabilities</td>
<td>2.77</td>
</tr>
<tr>
<td>Acquire specific skills e.g., questioning skills, task analysis</td>
<td>2.83</td>
</tr>
<tr>
<td>Assess all students using the same methods (distractor item)</td>
<td>4.50</td>
</tr>
<tr>
<td><strong>Resources</strong></td>
<td></td>
</tr>
<tr>
<td>Understand that resources need to be matched to students' learning needs</td>
<td>1.90*</td>
</tr>
<tr>
<td>Develop awareness of technology to assist students with additional needs</td>
<td>2.54</td>
</tr>
<tr>
<td>Develop awareness of support personnel</td>
<td>2.55</td>
</tr>
<tr>
<td>Evaluate suitability of available resources</td>
<td>3.01</td>
</tr>
<tr>
<td><strong>Collaboration</strong></td>
<td></td>
</tr>
<tr>
<td>Develop skills of collaborating with parents/guardians</td>
<td>2.26</td>
</tr>
<tr>
<td>Develop individual education plans collaboratively with colleagues</td>
<td>2.54</td>
</tr>
<tr>
<td>Develop skills of collaborating with teacher assistants/aides</td>
<td>2.60</td>
</tr>
<tr>
<td>Develop skills of collaborating with specialist/support teachers</td>
<td>2.60</td>
</tr>
</tbody>
</table>

*Note. The lowest mean rank indicates the most important item.*

*Topic ranked significantly more important than other topics in category, at p < .001; €The difference in ranking between the most important and this topic did not reach significance.
Table W2

Importance of Topics as Ranked by Experienced Teachers

<table>
<thead>
<tr>
<th>Topics by Category</th>
<th>Mean Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Attitude</strong></td>
<td></td>
</tr>
<tr>
<td>Understand educators role is to adapt to meet the needs of all students</td>
<td>1.76*</td>
</tr>
<tr>
<td>Develop positive attitudes regarding inclusion</td>
<td>2.18</td>
</tr>
<tr>
<td>Understand benefits of inclusion</td>
<td>2.47</td>
</tr>
<tr>
<td>Examine views about disability</td>
<td>3.60</td>
</tr>
<tr>
<td><strong>Knowledge</strong></td>
<td></td>
</tr>
<tr>
<td>Apply syllabus information to students with additional needs</td>
<td>1.62*</td>
</tr>
<tr>
<td>Understand referral processes to gain assistance</td>
<td>2.21</td>
</tr>
<tr>
<td>Apply disability legislation</td>
<td>2.51</td>
</tr>
<tr>
<td>Know about exam special provisions</td>
<td>3.66</td>
</tr>
<tr>
<td><strong>Classroom management</strong></td>
<td></td>
</tr>
<tr>
<td>Develop skills to manage students with challenging behaviours</td>
<td>1.90*</td>
</tr>
<tr>
<td>Apply behaviour management theories</td>
<td>2.78</td>
</tr>
<tr>
<td>Manage cooperative learning</td>
<td>3.08</td>
</tr>
<tr>
<td>Develop strategies to teach social skills to students with additional needs</td>
<td>3.17</td>
</tr>
<tr>
<td>Implement risk assessments for students with challenging behaviours</td>
<td>4.07</td>
</tr>
<tr>
<td><strong>Collaboration</strong></td>
<td></td>
</tr>
<tr>
<td>Develop individual education plans collaboratively with colleagues</td>
<td>2.03*</td>
</tr>
<tr>
<td>Develop skills of collaborating with parents/guardians</td>
<td>2.13</td>
</tr>
<tr>
<td>Develop skills of collaborating with specialist/support teachers</td>
<td>2.79</td>
</tr>
<tr>
<td>Develop skills of collaborating with teacher assistants/aides</td>
<td>3.06</td>
</tr>
<tr>
<td><strong>Differentiation – ability to cater to the range of student needs</strong></td>
<td></td>
</tr>
<tr>
<td>Adjust and accommodate to cater to students with additional needs</td>
<td>1.57*</td>
</tr>
<tr>
<td>Adopt teaching strategies that cater to different learning styles</td>
<td>2.13</td>
</tr>
<tr>
<td>Differentiate the curriculum to cater to the needs of very capable students</td>
<td>2.44</td>
</tr>
<tr>
<td>Adopt strategies that ignore the individual differences of students (distractor item)</td>
<td>3.86</td>
</tr>
<tr>
<td><strong>Differentiation – general practices for inclusive teaching</strong></td>
<td></td>
</tr>
<tr>
<td>Use a variety of assessment techniques to determine the learning needs of students</td>
<td>1.54*</td>
</tr>
<tr>
<td>Acquire specific skills e.g., questioning skills, task analysis</td>
<td>2.55*</td>
</tr>
<tr>
<td>Develop research based strategies that are effective for specific disabilities</td>
<td>2.74</td>
</tr>
<tr>
<td>Adapt the physical environment to meet the needs of students with additional needs</td>
<td>3.50</td>
</tr>
<tr>
<td>Assess all students using the same methods (distractor item)</td>
<td>4.68</td>
</tr>
<tr>
<td><strong>Resources</strong></td>
<td></td>
</tr>
<tr>
<td>Develop understanding that resources need to be matched to students' learning needs</td>
<td>1.71*</td>
</tr>
<tr>
<td>Develop awareness of technology to assist students with additional needs</td>
<td>2.44</td>
</tr>
<tr>
<td>Develop awareness of support personnel</td>
<td>2.72</td>
</tr>
<tr>
<td>Evaluate suitability of available resources</td>
<td>3.12</td>
</tr>
</tbody>
</table>

*Note. The lowest mean rank indicates the most important item.

*Topic ranked significantly more important than other topics in category, at p < .001;

$ The difference in ranking between the most important and this topic did not reach significance.
### Appendix X: Effects of Educator Characteristics on Content Topic Areas (factors) for the Preparation of Pre-service Teachers for Inclusive Teaching

#### Table X1

**Effect of School Location on Experienced Teacher’s Views regarding the Importance of Topics for Inclusive Education Units**

<table>
<thead>
<tr>
<th>Factors</th>
<th>School area</th>
<th>n</th>
<th>Mean rank</th>
<th>Median</th>
<th>U</th>
<th>Z</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Inclusive classroom skills</td>
<td>metro</td>
<td>231</td>
<td>145.28</td>
<td>53</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>non-metro</td>
<td>75</td>
<td>178.81</td>
<td>55</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>306</td>
<td>6764.50</td>
<td>-</td>
<td>-2.91</td>
<td>.004</td>
<td></td>
</tr>
<tr>
<td>2. Resourcing and supporting inclusion</td>
<td>metro</td>
<td>231</td>
<td>145.73</td>
<td>38</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>non-metro</td>
<td>75</td>
<td>177.43</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>306</td>
<td>6867.50</td>
<td>-</td>
<td>-2.73</td>
<td>.006</td>
<td></td>
</tr>
<tr>
<td>3. Inclusive strategies for individual needs</td>
<td>metro</td>
<td>231</td>
<td>145.80</td>
<td>39</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>non-metro</td>
<td>75</td>
<td>177.22</td>
<td>41</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>306</td>
<td>6883.50</td>
<td>-</td>
<td>-2.72</td>
<td>.007</td>
<td></td>
</tr>
<tr>
<td>4. Embracing inclusive principles</td>
<td>metro</td>
<td>236</td>
<td>151.65</td>
<td>31</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>non-metro</td>
<td>78</td>
<td>175.19</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>314</td>
<td>7824.50</td>
<td>-1.99</td>
<td>.046</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Inclusive organisational procedures</td>
<td>metro</td>
<td>236</td>
<td>151.42</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>non-metro</td>
<td>78</td>
<td>175.90</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>314</td>
<td>7768.50</td>
<td>-2.09</td>
<td>.036</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* metro = metropolitan area, non-metro = non-metropolitan area (rural and regional were collapsed into non-metropolitan); U = Mann-Whitney
Table X2

*Post hoc Analyses: Differences between Experienced Teachers’ Years of Experience and their Views about Factor 4 “Embracing Inclusive Principles”*

<table>
<thead>
<tr>
<th>Subgroup</th>
<th>n</th>
<th>Mean Rank</th>
<th>Mdn</th>
<th>Subgroup</th>
<th>n</th>
<th>Mean Rank</th>
<th>Mdn</th>
<th>Z</th>
<th>U</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. up to 9 years</td>
<td>83</td>
<td>72.16</td>
<td>30</td>
<td>2. 10–19 years</td>
<td>73</td>
<td>85.71</td>
<td>32</td>
<td>1.88</td>
<td>2503.00</td>
<td>.064b</td>
</tr>
<tr>
<td>1. up to 9 years</td>
<td>83</td>
<td>106.14</td>
<td>30</td>
<td>3. More than 20 years</td>
<td>159</td>
<td>129.52</td>
<td>31</td>
<td>2.49</td>
<td>5324.00</td>
<td>.012b</td>
</tr>
</tbody>
</table>

*Note. 1 = up to 9 years, 2 = 10–19 years, 3 = more than 20 years; Mdn = median, U = Mann-Whitney U, p^b = p with Monte Carlo technique.*

Table X3

*Effect of Role on Experienced Teacher’s Views Regarding the Importance of Topics for the Preparation of Pre-service Teachers for Inclusive Teaching (Kruskal-Wallis)*

<table>
<thead>
<tr>
<th>Factors</th>
<th>Role</th>
<th>n</th>
<th>Mean rank</th>
<th>Median</th>
<th>χ^2</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Inclusive classroom skills</td>
<td>1. class teacher</td>
<td>105</td>
<td>130.79</td>
<td>53</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. teaching-exec and principal</td>
<td>46</td>
<td>173.21</td>
<td>55</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. non-teaching exec and principal</td>
<td>41</td>
<td>183.15</td>
<td>55</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. support teacher</td>
<td>99</td>
<td>161.70</td>
<td>54</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. counsellor</td>
<td>16</td>
<td>128.75</td>
<td>53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>307</td>
<td>128.75</td>
<td>53</td>
<td>16.45</td>
<td>.002</td>
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</tbody>
</table>

(continued)
(continued)

<table>
<thead>
<tr>
<th>Factors</th>
<th>Role</th>
<th>n</th>
<th>Mean rank</th>
<th>Median</th>
<th>χ²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Resourcing and supporting inclusion</td>
<td>1. class teacher</td>
<td>105</td>
<td>137.95</td>
<td>38</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. teaching-exec and principal</td>
<td>46</td>
<td>163.60</td>
<td>39</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. non-teaching exec and principal</td>
<td>41</td>
<td>152.22</td>
<td>39</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. support teacher</td>
<td>99</td>
<td>170.81</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. counsellor</td>
<td>16</td>
<td>132.28</td>
<td>36.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8.68</td>
<td>.07</td>
<td></td>
</tr>
<tr>
<td>3. Inclusive strategies for individual needs</td>
<td>1. class teacher</td>
<td>105</td>
<td>131.80</td>
<td>38</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. teaching-exec and principal</td>
<td>46</td>
<td>167.34</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. non-teaching exec and principal</td>
<td>41</td>
<td>167.61</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. support teacher</td>
<td>99</td>
<td>165.18</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. counsellor</td>
<td>16</td>
<td>157.31</td>
<td>39.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>307</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10.50</td>
<td>.033</td>
<td></td>
</tr>
<tr>
<td>4. Embracing inclusive principles</td>
<td>1. class teacher</td>
<td>107</td>
<td>127.18</td>
<td>29</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. teaching-exec and principal</td>
<td>46</td>
<td>164.63</td>
<td>31.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. non-teaching exec and principal</td>
<td>42</td>
<td>170.39</td>
<td>32</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. support teacher</td>
<td>104</td>
<td>178.66</td>
<td>32</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. counsellor</td>
<td>16</td>
<td>178.25</td>
<td>32</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>315</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>19.69</td>
<td>.001</td>
<td></td>
</tr>
</tbody>
</table>

(continued)
### Table X4

**Post hoc (Mann-Whitney U) Analyses: Differences between Experienced Teacher Roles and their Views about Factor 1 “Inclusive Classroom Skills”**

<table>
<thead>
<tr>
<th>Subgroup</th>
<th>n</th>
<th>Mean rank</th>
<th>Mdn</th>
<th>Subgroup</th>
<th>n</th>
<th>Mean rank</th>
<th>Mdn</th>
<th>Z</th>
<th>U</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. class teacher</td>
<td>105</td>
<td>69.51</td>
<td>53</td>
<td>2. teaching exec/ principal</td>
<td>46</td>
<td>90.82</td>
<td>55</td>
<td>2.80</td>
<td>1733.50</td>
<td>.005b</td>
</tr>
<tr>
<td>3. non-teaching executive</td>
<td>41</td>
<td>90.59</td>
<td>55</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. 1 = class teacher, 2 = teaching executive teachers, including teaching principals, 3 = non-teaching executive, including principals; Mdn = median, U = Mann-Whitney U, p^b = p with Monte Carlo.*
Table X5

*Post hoc (Mann-Whitney U) Analyses: Differences between Educator Roles and their Views about Factor 3 “Inclusive Strategies for Individual Needs”*

<table>
<thead>
<tr>
<th>Subgroup</th>
<th>n</th>
<th>Mean rank</th>
<th>Mdn</th>
<th>Subgroup</th>
<th>n</th>
<th>Mean rank</th>
<th>Mdn</th>
<th>Z</th>
<th>U</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. class teacher</td>
<td>105</td>
<td>70.36</td>
<td>38</td>
<td>2. teaching exec/principal</td>
<td>46</td>
<td>88.88</td>
<td>40</td>
<td>2.42</td>
<td>1822.50</td>
<td>.008b</td>
</tr>
<tr>
<td>1. class teacher</td>
<td>105</td>
<td>68.74</td>
<td>38</td>
<td>3. non-teaching executive</td>
<td>41</td>
<td>85.70</td>
<td>40</td>
<td>2.20</td>
<td>1652.50</td>
<td>.027b</td>
</tr>
</tbody>
</table>

*Note.* 1 = class teacher, 2 = teaching executive teachers, including teaching principals, 3 = non-teaching executive, including principals; Mdn = median, U = Mann-Whitney U, p<sup>b</sup> = p with Monte Carlo.

Table X6

*Post hoc (Mann-Whitney U) Analyses: Differences between Experienced Teachers’ Qualifications and their Views about Factor 4 “Embracing Inclusive Principles”*

<table>
<thead>
<tr>
<th>Subgroup</th>
<th>n</th>
<th>Mean rank</th>
<th>Mdn</th>
<th>Subgroup</th>
<th>n</th>
<th>Mean rank</th>
<th>Mdn</th>
<th>Z</th>
<th>U</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Primary no spec ed</td>
<td>71</td>
<td>68.08</td>
<td>31</td>
<td>3. PG spec ed/counsel</td>
<td>84</td>
<td>86.39</td>
<td>32</td>
<td>2.55</td>
<td>2277.50</td>
<td>.010b</td>
</tr>
<tr>
<td>1. Primary no spec ed</td>
<td>71</td>
<td>43.96</td>
<td>31</td>
<td>5. Other</td>
<td>19</td>
<td>51.26</td>
<td>32</td>
<td>1.09</td>
<td>565.00</td>
<td>.275b</td>
</tr>
</tbody>
</table>

*Note.* 1 = general primary with no unit in inclusion/special education, 3. = postgraduate special education or counselling qualification; 5. = other; Mdn = median, U = Mann-Whitney U, p<sup>b</sup> = p with Monte Carlo.
Appendix Y: A Cluster of Practices emanating from Interviews combined with Learning Experiences from the Inclusive unit Mapped onto the Productive Pedagogies Framework

<table>
<thead>
<tr>
<th>Learning Experiences</th>
<th>Dimensions</th>
<th>Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Attitude: Interaction</strong></td>
<td>Connectedness</td>
<td>Background knowledge, Connections with people with disabilities</td>
</tr>
<tr>
<td>All groups identified interaction with people with disabilities/additional needs as important. Suggestions included:  * attending community organisations,  * experience on professional practice – inclusive settings, support classes and schools for specific purposes (special schools)  Interaction was considered pivotal in addressing negative and pre-conceived ideas about people with disability.</td>
<td>Working with and valuing difference</td>
<td>Group identities Active citizenship</td>
</tr>
<tr>
<td><strong>Attitude, Knowledge and Skills: Case studies and Scenarios</strong></td>
<td>Connectedness</td>
<td>Problem-based curriculum</td>
</tr>
<tr>
<td>Provision of case studies, personal stories, profiles (e.g. in-person presentations, videos, audio, paper based) was considered essential. Want material that is relevant to the Australian setting – “Australianising”. Knowledge about processes and procedures such as preparing individual learning plans and behaviour management plans (real plans presented)</td>
<td>Intellectual quality</td>
<td>Deep understanding</td>
</tr>
<tr>
<td><strong>Attitudes: Language</strong></td>
<td>Intellectual quality</td>
<td>Metalanguage</td>
</tr>
<tr>
<td>Adopt appropriate language: e.g., tutorial exercise in which participants were asked to rephrase real sentences e.g., Spastic Centre → Cerebral Palsy Alliance  Awareness of labelling and pigeon-holing</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Attitudes: Ethics and Social Inclusion</strong></td>
<td>Working with and valuing difference</td>
<td>Narrative</td>
</tr>
<tr>
<td>Google a famous person with an additional need – activity conducted as a “reverse classroom activity”. To demonstrate and highlight a grouping strategy, the activity was conducted as a “think, pair, share activity” Reflect on the rationale for engaging in this activity.  Excerpts from high quality current affairs programs about people with disabilities. For example, 5 ABC programs [<a href="http://www.abc.net.au/tv/">http://www.abc.net.au/tv/</a> programs] such as 7.30 [<a href="http://www.abc.net.au/7.30/">http://www.abc.net.au/7.30/</a>] and Australian Story [<a href="http://www.abc.net.au/austory/">http://www.abc.net.au/austory/</a>]. Consider and discuss topics such as labelling, expectations, self-fulfilling prophecy, language associated with disability and inclusive and segregated settings.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning Experiences</td>
<td>Dimensions</td>
<td>Elements</td>
</tr>
<tr>
<td>----------------------</td>
<td>------------</td>
<td>----------</td>
</tr>
<tr>
<td><strong>Knowledge and Skills: Assessments</strong>&lt;br&gt;Alter assessments to cater to individual needs (Board of Studies site, Curriculum and Syllabus documents to adjust existing assessment tasks to allow a variety of learners access – assessment)&lt;br&gt;Applying the “Learning Cycle” - a concept of how people learn from experience involving number phases.</td>
<td>Intellectual quality</td>
<td>Deep knowledge&lt;br&gt;Deep understanding</td>
</tr>
<tr>
<td><strong>Attitude, Knowledge and Skills: Professional Practice</strong>&lt;br&gt;Greater connection between professional practice and learning that occurs at university. Observing a range of classes, practicums in areas of social disadvantage, longer practicums, observing skilled teachers.&lt;br&gt;Linking opportunities to implement skills with practicum.&lt;br&gt;Stronger links between universities and schools “this is our reality”, establish networks with teachers with positive attitudes (e.g., observation, talks with teachers e.g., focus groups); engage in research based projects linked to professional experience.</td>
<td>Connectedness</td>
<td>Connected to reality of schools,&lt;br&gt;Background knowledge</td>
</tr>
<tr>
<td><strong>Knowledge, Attitudes and Skills</strong>&lt;br&gt;Use of vision, hearing, learning difficulties simulations → empathy tasks (not sympathy) to consolidate need for adjustments, accommodations linked to <em>Universal Design for Learning</em>.&lt;br&gt;Demonstration of strategies (<em>Social Stories</em>, visual timetables, visual cues, visual aids), e.g., visual timetable used in tutorials, demonstrate <em>Social Stories</em> in lecture: When my tutor marks my assignment she/he considers the marking criteria very carefully. I may be unhappy with my mark however ....Pre-service teachers write <em>Social Story</em> in pairs.&lt;br&gt;Task analysis: Teaching an activity that each individual is proficient with (e.g., dribbling a basketball, drawing a Japanese cartoon – “Manga”) to a small group, discuss how they managed the different abilities of their group, reflect on their instructions.&lt;br&gt;Tutor demonstrates scaffolding through modelling.</td>
<td>Supportive classroom environment</td>
<td>Social support,&lt;br&gt;Students’ direction</td>
</tr>
<tr>
<td><strong>Skills: Classroom management</strong>&lt;br&gt;Non-conflict approach → DVD showing various challenging scenarios: Role-plays – develop skills to defuse challenging situations and crisis intervention; Critical analysis of classroom management approaches;&lt;br&gt;Development of pro-active classroom management rather than behaviour management e.g., learn strategies associated with <em>Positive Behaviour for Learning</em>. Discuss and sequence least intrusive to most intrusive classroom management strategies in small groups.&lt;br&gt;Pre-service teacher assessment: develop a portfolio of classroom management techniques.&lt;br&gt;Awareness that students who have “very challenging behaviours” can come under the banner of disability.</td>
<td>Supportive classroom environment</td>
<td>Academic engagement</td>
</tr>
<tr>
<td></td>
<td>Intellectual quality</td>
<td>Higher order thinking</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Deep knowledge&lt;br&gt;Deep understanding</td>
</tr>
<tr>
<td>Learning Experiences</td>
<td>Dimensions</td>
<td>Elements</td>
</tr>
<tr>
<td>----------------------</td>
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</tr>
<tr>
<td><strong>Knowledge and Attitude</strong></td>
<td>Connectedness</td>
<td>Background knowledge, Connects university learning to schools</td>
</tr>
<tr>
<td>Last lecture panel – Question and Answer (Q and A) comprising person with additional need (volunteers from student cohort), sibling or parent (volunteer from student cohort), effective and inclusive class teacher and/or support teacher, &quot;SLSO (teacher’s aide), principal as guest speakers. Mock Q and A (ABC current affairs program) – topics include: roles, issues, solutions, stories.</td>
<td>Intellectual quality</td>
<td>Deep understanding</td>
</tr>
<tr>
<td><strong>Knowledge</strong></td>
<td>Connectedness</td>
<td>Connectedness to schools</td>
</tr>
<tr>
<td>Develop awareness of different roles (e.g., %ESL teachers, itinerant teachers); Mock learning support team meetings, Important to understand role of aides – student with additional need is class teacher responsibility.</td>
<td>Working with difference</td>
<td>Narrative</td>
</tr>
<tr>
<td>Supportive classroom environment</td>
<td>Social support</td>
<td></td>
</tr>
<tr>
<td><strong>Skills</strong></td>
<td>Intellectual quality</td>
<td>Deep knowledge</td>
</tr>
<tr>
<td>Disability specific information and strategies – case studies and collaborative learning, assessment tasks, provision of working documents (research based).</td>
<td>Working with difference</td>
<td>Narrative, Group identities</td>
</tr>
<tr>
<td>Supportive classroom environment</td>
<td>Academic engagement, Student self-regulation</td>
<td></td>
</tr>
<tr>
<td><strong>Skills: Resources</strong></td>
<td>Intellectual quality</td>
<td>Deep knowledge</td>
</tr>
<tr>
<td>Learning experiences that develop knowledge and understanding of resources especially technology. Emphasis on developing proficiency with interactive white boards. Guest speakers with expertise in technology, learning about assistive technology through discovery learning (reverse classroom), websites, applications (apps); Collaborative learning in tutorials and through on-line discussions; create an inventory of resources/ list of apps, on-line resources Relevance for the context ‘Australianising’.</td>
<td>Connectedness</td>
<td>Connected to schools</td>
</tr>
<tr>
<td>Skills: Reading strategies – pre-service teachers should acquire basic skills to teach reading – students with additional needs are in all stages.</td>
<td>Working with difference</td>
<td>Representation</td>
</tr>
<tr>
<td>Learning Experiences</td>
<td>Dimensions</td>
<td>Elements</td>
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<tr>
<td>----------------------</td>
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</tr>
<tr>
<td><strong>Knowledge</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apply experiential learning to become familiar with policy and curriculum documents in tutorials and online; deconstruct policy documents in collaborative groups, Statistics about enrolment numbers of students with disabilities to demonstrate contemporary classes, Real videos of case studies. Role-play Learning Support Team meeting (e.g., parent/caregiver, student depending on age, support teacher, * SLSO, school counsellor). Discuss student support needs, processes to gain support, setting goals, adjustments/accommodation, * ILPs, transition meetings Apply knowledge of legislation to case studies in tutorials and as part of assessment.</td>
<td>Connectedness</td>
<td>Connected to schools</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Intellectual quality</td>
</tr>
<tr>
<td><strong>Skills: Collaboration</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assuming the perspective of a stakeholder (e.g., parent, class teacher etc.) in Learning Support Team meetings regarding the transition of real cases (students from segregated setting to inclusive setting) Active and reflective listening – turn-taking, nodding etc. – use human interest stories (carefully selected newspaper articles); activities in which participants practise listening to others’ opinions and approaches to working collaboratively, skills beyond the classroom, advice to work with parents. To develop collaborative skills: identify issue, identify goal, use pro-forma to provide structure, practice valuing contributions of others and allocate roles, role-play the scenario. In reference to group projects– provide time in university setting so that students engage in collaborative activities with feedback and amendment; for example, prepare lesson together. Use iPads and iPhones to record teaching (for each constructive comment provide two positive comments). Forming groups based on a number of criteria such as thinking styles, geographical location and autonomous peer group selection. Thinking styles activity – diversity game so that students develop an understanding of the perspective of others</td>
<td>Supportive classroom environment</td>
<td>Social support, Student self-regulation</td>
</tr>
<tr>
<td></td>
<td>Intellectual quality</td>
<td>Working with difference</td>
</tr>
<tr>
<td></td>
<td>Intellectual quality</td>
<td>Working with difference</td>
</tr>
<tr>
<td><strong>Skills</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modelling and explicitly highlighting aspects of quality teaching, observe skilled practitioners.</td>
<td>Connected</td>
<td>Knowledge integration</td>
</tr>
<tr>
<td><strong>Contextual Factors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Understanding cultural differences with regard to views about disability Impact of social disadvantage and associated matters such as illiteracy and refugee backgrounds</td>
<td>Working with difference</td>
<td>Cultural knowledge</td>
</tr>
<tr>
<td>Learning Experiences</td>
<td>Dimensions</td>
<td>Elements</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td><strong>Academics’ Expertise and Background</strong></td>
<td></td>
<td>Connected</td>
</tr>
<tr>
<td>Relevancy/connectedness and skills of lecturer/academic – special education background and focus rather than inclusion focus of lecturer/tutor. Academics connectedness with schools</td>
<td></td>
<td>Connected with schools</td>
</tr>
<tr>
<td><strong>Topical Issues</strong></td>
<td></td>
<td>Intellectual quality</td>
</tr>
<tr>
<td>Funding issues, public schools and non-government schools</td>
<td></td>
<td>Deep understanding</td>
</tr>
</tbody>
</table>

*Notes* *SLSO* = school learning support officer; *ESL* = English as a second language teacher; *ABC* = Australian Broadcasting Corporation; *ILPs* = individual learning plans; *UDL* = *Universal Design for Learning*.  

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