The Impact of Postgraduate Initial Teacher Education on Beginning Teachers' Professional Preparedness to Cater for Diverse Learners

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Abstract

This thesis investigates the impact of an exemplary post-graduate initial teacher education (ITE) programme, the MTchgLn, on beginning teachers' professional preparedness to cater for diverse learners. In comparison to similar cohorts in other OECD countries, a huge gap exists between high-achieving Pākeha students and low-achieving [1]priority learners (Education Review Office, 2012; OECD, 2015). With existing studies mapping the exemplary ITE terrain, the research field is now moving towards building a sounder basis on which to benchmark equity-centred ITE programme design.

For this purpose, a mixed-methods approach was adopted to assess the effectiveness of the programme on the Graduate Teachers' (GTs) practice. Twenty-five GTs completed an online questionnaire to assess their perceptions of confidence to teach all learners, as well as to assess their perceptions of the value of the programme in enabling them to teach all learners. Interviews were then conducted with 12 GTs and four Lead Teachers (LTs) to better understand the GTs' responses and to investigate the LTs' perceptions of the GTs' professional preparedness. The present study findings indicate that most GTs were confident in developing the professional standards required for the profession and felt that their learning was supported by the programme's innovations: (i) extended clinical placements in partner schools; (ii) evidence-informed inquiry; (iii) exemplary school visits; (iv) culturally responsive practices; and (v) community placements. Likewise, all the LTs felt that the GTs were professionally prepared with the necessary skills and competencies to teach diverse students effectively and improve their outcomes.

[1] Groups of students who have been identified as historically not experiencing success in the New Zealand schooling system. These include many Māori and Pacific learners, those from low socio-economic backgrounds, and students with special education needs (Education Review Office, 2012, p. 4).

This study has provided evidence of the positive contributions of an equity-centred ITE programme's design to create an informative learning experience for the GTs to ensure informed links between research and practice, driven by equity and social justice. Implications based on these findings are considered for ITE educators and education policy makers to respond to the challenges of today's multicultural education by prioritizing equity.

Table of Contents

List of Figures

List of Tables

List of Appendices

Glossary

CRPs	Culturally Responsive Practices.
Graduate Teachers (GTs)	Student-teachers who are now graduates of the MTchgLn programme.
Initial Teacher Education (ITE)	The foundation on which teacher education programmes are formed.
Lead Teachers (LTs)	School-based teacher educators who are responsible for the facilitation of the MTchgLn in their schools. They are expert practitioners in charge of student-teachers during clinical placements and the extended practicum. They work collaboratively with the university to ensure student-teachers have relevant experiences linked to uni classes.
Māori	Indigenous Aotearoa New Zealanders.
Mentor Teachers (MTs)	Mentor Teachers are expert classroom teachers who facilitate teaching and learning opportunities for University Teacher-Educators within their own classes. These include opportunities to work with individual students, groups of students and at times a whole class.
OECD	The Organisation for Economic Co-operation and Development.
Pākeha	New Zealanders of European descent.
Partner Schools	Normal schools and secondary schools used in the programme as clinical sites. Lead Teachers and Mentors from these schools work together with the University Teacher-Educators to develop the course content.
Pāsifika	A multi-ethnic group of indigenous peoples from Pacific Island nations.
Priority Learners	Groups of students who have been identified as historically not experiencing success in the New Zealand schooling system. These include many Māori and Pacific learners, those from low socio-economic backgrounds, and students with special education needs.
Student-Teachers	Graduate Teachers as referred to in LTs reflections when they were in their year of teacher education.
TaI	Teaching as Inquiry.

The MTchgLn	The Master of Teaching and Learning Programme under investigation in the present study.
The New Zealand Curriculum (NZC)	The New Zealand Curriculum is a statement of official policy relating to teaching and learning in English medium New Zealand schools. Its principal function is to set the direction for student learning and to provide guidance for schools as they design and review their curriculum.
University Teacher-Educators	University staff members who teach within the MTchgLn programme. They liaise with Lead Teachers and Mentors and make regular visits to Placement Schools. University Teacher-Educators are responsible of the overall supervision.

Chapter 1: Introduction

The present study focuses on a postgraduate initial teacher education (ITE) initiative in Aotearoa New Zealand. This chapter establishes the background, justification and aim of the present study. It also gives reasons for my personal interest in the research topic. A brief overview of the pilot postgraduate ITE programme is also provided. The remaining part of this chapter outlines the structure of the thesis.

1.1 Background

Aotearoa New Zealand is recognised as one of the highest performing educational systems with its diverse multi-ethnic educational system that consistently ranks above average on international measures (Organisation for Economic Co-operation and Development [OECD], 2011; Spoonley & Macpherson, 2004). However, an ever-widening gap in achievement between Pākeha (New Zealanders of European descent) and students of Māori (indigenous native) and Pāsifika (Pacific Island) in comparison to similar cohorts in the OECD countries remains evident (Bolton, 2017; Chandra & Karem, 2018). Data provided by the Programme for International Students Assessment (PISA) reflects the persistent underachievement for Māori and Pāsifika students in comparison to their Pākeha (and Asian) peers (OECD, 2016). Likewise, the education system has been criticized for not "addressing the persistent long tail of underachievement between the highest and lowest performing students" (New Zealand Productivity Commission, 2020, p. 1).

This evidence suggests that a major challenge facing educators in Aotearoa New Zealand is to work towards a more equitable distribution of educational opportunities and outcomes for all learners, thereby eliminating the achievement disparities for priority learners. Priority learners are defined as "groups of students who have been identified as historically not experiencing success in the Aotearoa New Zealand schooling system. These students include

many Māori and Pacific learners, those from low socio-economic backgrounds, and students with special education needs" (Education Review Office [ERO], 2012, p. 4). *The Education for All National Review Report* announced that improved outcomes for priority learners was one of two priorities in the Ministry of Education's (MoE) 2013-2018 Statement of Intent (Ministry of Education, 2013a).

One of the most remarkable features of the population in Aotearoa New Zealand is its changing cultural and linguistic diversity (Hall & Bishop 2001; Prestidge, 2004; Rocha, 2012). A substantial demographic change is projected between 2013 and 2038, particularly for the Māori, Asian, and Pacific ethnicities with a predicted rapid increase in their share of the total population (Statistics New Zealand, 2015). In this regard, Nusche et al. (2012) report:

> In 2009, 68% of the population identified as New Zealand European and 15% as Māori, while 9% of the population were of Asian origin and 7% were of Pacific Island origin (Pāsifika). Population projections indicate that over half of the school-age population will identify with multiple and non-European ethnic heritages within the next five years (p. 14).

The above statistics indicate that the proportion of school-age population from Māori, Pacific and Asian ethnic groups is growing "at a much faster pace than their European counterparts" (Smeith & Dunstan, 2004, p. 14), which reflects significant demographic changes in the ethnic mosaic of Aotearoa New Zealand's population. In line with the Ministry of Education's forecasts, the increasingly diverse student body in Aotearoa New Zealand creates considerable opportunities but poses a serious challenge to ensure all students are receiving a high-quality education (Conner, 2015). Hence, innovative solutions need to be sought to promote the academic performance of Aotearoa New Zealand's underachieving priority

learners considering the persisting educational inequities (Airini, 2015; Bishop et al., 2012; Savage et al., 2011).

1.2 Justification

ITE plays a critical role in building Graduate Teachers' (GTs) professional practice through preparing them for inclusive and diverse educational environments and enabling them to implement theoretical and practical contextual knowledge in the classroom to promote student teaching (Darling-Hammond, 2017). As den Heijer (2018) states: "When a flower doesn't bloom you fix the environment in which it grows, not the flower" (p. 22). Incorporating this inspirational quote into the realm of education and ITE, one can consider the need to build an environment where student-teachers are offered favourable opportunities to become the best teachers possible.

The rapidly changing Aotearoa New Zealand population demographics, coupled with priority learners' educational disparities, underscore the importance of developing new initiatives in the design of exemplary, equity-centred ITE programmes. Craig (2016) defines ITE as the "foundation on which teacher education programmes are formed" (p. 72). A strategic focus for current movements of education reform and school improvement around the world has prioritized improving teacher quality to improve the outcomes of low achievers (Blömeke et al., 2016; Darling-Hammond, 2017; Ingvarson et al., 2014).

The Education Workforce Advisory Group (2010) stated that "improving the quality and consistency of teaching requires strong, initial education" (p. 12). Research within Aotearoa New Zealand indicates that the long-standing problem of priority learners' underachievement can be addressed through improving the equality of ITE quality (Grudnoff et al., 2016; Sewell et al., 2018).

Indeed, ITE provision has been viewed as “an ideal site for increasing teacher quality, providing it is subject to reform” (Ell & Grudnoff, 2013, p. 79). A major challenge facing ITE in Aotearoa New Zealand, therefore, is how best to prepare 21st century, culturally-responsive teachers who can develop the adaptive expertise to eliminate priority learners’ achievement disparities and to enhance their academic and life outcomes (Gunn et al., 2020; Heng et al., 2019).

Previous studies have established the strong relationship between effective teachers and improved student achievement (Froumin, 2007; Gess-Newsome et al., 2019; Ingvarson et al., 2014). Hattie et al. (2016), for example, provided an in-depth analysis of several constructs of variables which can influence student learning. Of all the synthesized 1137 meta-analyses that promote successful learning experiences, teacher quality was found to be the most constant variable over which we have control. Another major study conducted by Mourshed et al. (2010) explored some of the world’s best performing school systems within 20 education systems around the world. These researchers found teacher quality to be a critical success factor in these education systems and concluded that “(t)he path to school system improvement now relies on the fidelity of educators’ practice in their teaching” (p. 40).

Over the past decade, the Ministry of Education (2011) approved new initiatives in postgraduate ITE programmes underpinned by a focus on cultural inclusiveness and evidence-based knowledge to address these well-known educational disparities. To prepare equity-oriented, knowledge-based teachers who can adapt their teaching to the needs of priority learners, requires a significant shift in the ITE programme design (Grudnoff et al., 2016; Nusche et al., 2012).

1.3 Study Aim

The present study investigates the perceived effectiveness of the Master of Teaching and Learning (MTchgLn), a one-year postgraduate ITE programme, through the eyes of GTs and Lead Teachers (LTs). This equity-centred ITE programme was designed to prepare teachers who can adapt their practice to cater for diversity and address the challenge of achieving educational equity in evidence-informed ways to enhance priority learners' academic outcomes through a robust school-university partnership.

With this challenge in mind, this study seeks to investigate the effectiveness of a one-year postgraduate ITE programme designed to develop graduate teachers who have the skills and competencies to adapt their practice in evidence-informed ways to enhance priority learners' academic outcomes. In as much as the postgraduate ITE programme was in its pilot phase at the time the present study was conducted, it is critical to understand its impact to prepare future teachers to effectively teach the diverse students in Aotearoa New Zealand and achieve equity and excellence in student outcomes, especially priority learners. The research presented in this thesis, therefore, examines the various perceptions of the GTs and LTs of the impact of the distinctive ITE programme features on the GTs' preparedness to teach all learners.

This study employs a mixed methods design to gather evidence of the GTs' confidence to teach as well as the GTs' and LTs' perceptions of the GTs' preparedness to teach all learners. In so doing, questionnaires with closed and open-ended items were used followed up by face-to-face interviews with the GTs and LTs.

1.4 My Personal Background

I was drawn to this study because of the NZ Ministry of Education's repeated concerns about the variable quality of ITE provision and the paucity of previous research on the topic. Existing research suggests that teachers' practices are a powerful influence on student achievement (Hattie et al., 2015; Timperley et al., 2009). My own personal experiences as a teacher also motivated me to undertake this study. Having been in education-related fields with 20 years of teaching, programme coordination, teacher professional development and initial teacher education, I have experienced first-hand the opportunities, challenges, and uncertainties that surround teacher preparation, in secondary and tertiary sectors in Egypt, Saudi Arabia and New Zealand. My experiences working mainly as a teacher mentor sparked an interest in ITE provision. This interest has continued to grow, particularly as I moved into an initial teacher educator role offering formative and summative evaluations, connecting with a wider range of teachers from across the secondary and tertiary sectors.

From working closely with teachers and observing evidence of their practice first-hand, I became aware that many GTs find their first years of teaching to be challenging. As my own knowledge of teaching and ITE grew, so too did my questions. Both my interest in the topic and the paucity of evidence about the effectiveness of ITE in New Zealand have led directly to this research study.

1.5 Pilot Postgraduate ITE Initiative

A brief overview of the postgraduate ITE programme, the focus of this study, is presented in this section. At the core of recent ITE proposals endorsed and implemented by many governments around the world, is a course-taught master's degree and without a thesis component. The MTchgLn programme, that is the focus of this study, is such an exemplary postgraduate, ITE programme that aims to prepare teachers by embedding practice-based experiences with research-informed professional knowledge. The MTchgLn marks a

substantial change to traditional undergraduate and postgraduate ITE programmes around the world as it builds a close link between theory and practice within a new partnership model with selected schools. Close collaboration is established between the University and Partner Schools to provide a consistent supply of practicum placements for the GTs (Davies et al., 2013; Ingvarson et al., 2014; Sewell et al., 2018).

In 2013, the Ministry of Education in Aotearoa New Zealand issued tenders for selected tertiary providers to develop a future focused ITE programme. This initiative aimed at supporting the GTs to work effectively with an increasingly diverse student population (Parata, 2013). The 'pilot' status of the programme helped stakeholders to identify aspects of delivery that could be improved. The major objective of the MTchgLn programme, that is the focus of this case study, was to integrate authentic teaching experiences (Korthagen et al., 2016) and evidence-informed practice (Darling-Hammond & Bransford, 2005) to enhance teachers' adaptive expertise (Timperley, 2013) to address priority learners' learning needs (Grudnoff et al., 2016). The Education Review Office (2015) articulated the goal behind the launch of the new ITE initiatives to achieve "excellence and equity of outcomes for every student" (p. 6). As such, this new model of ITE represented a significant shift in the direction of ITE towards actively pursuing more equitable outcomes for priority learners.

1.6 Thesis Structure

The dissertation is structured into six chapters. This first chapter establishes the context, background and justification of the present study; states the research aim, gives reasons for personal interest in the research. Chapter Two provides a critical review of the literature relating to the need for an ITE, before it scrutinizes key dimensions of effective ITE models, drawing upon local and international evidence. Then it identifies the framework that forms the design of the MTchgLn programme. Finally, the scope of themes outlined within the framework of the study is specified before the research questions are presented.

Chapter Three describes the research design and the methods. The underlying philosophical assumptions are investigated, and the study's mixed methods design, and its rationale is described. Finally, the ethical considerations undertaken by the researcher throughout the study are explained. Chapter Four presents the findings from the study's two phases - questionnaire and semi-structured interviews. Chapter Five discusses the findings using the research questions as a framework for discussion. Findings retrieved from both phases of the study are also integrated to offer a comprehensive explanation of the issue under investigation. Chapter Six summarizes the main research findings; draws major conclusions in relation to the research questions, sets out practical implications for practice and policy, recognizes the methodological limitations of the study and makes suggestions for future research.

Chapter 2: Literature Review

This chapter explores the literature about the essential components of effective international and national equity-centred initial teacher education (ITE) designs. It begins by identifying the key words and databases used in my search to identify relevant literature. The connections between closing the equity gap in teaching priority learners and reconceptualizing theory and practice in Aotearoa New Zealand ITE provision are also explored. Key dimensions of exemplary ITE designs are then outlined, along with a scrutiny of the features of the Master of Teaching and Learning (MTchgLn), the programme under investigation. Finally, the framework of the study is presented along with the research questions. The two objectives of this literature review are to: (i) explore the global challenge of designing an equity-centred ITE design; drawing upon the setting in Aotearoa New Zealand; and (ii) examine the key constructs in ITE practices incorporated within the theoretical framework of this study.

2.1 Literature Search

A variety of databases were accessed to conduct the literature search including: Discover, ERIC (Educational Resource Informational Centre), EThOS (Electronic Theses Online Service), Google Scholar, ProQuest Dissertations & Theses A&I, Taylor & Francis Journals, SAGE Journals Online, SAGE Research Methods, Scopus and Wiley Online Library. The key terms were developed, tested by a librarian and then used to guide my literature search. These terms were: Initial Teacher Education; clinical placements; practicum; adaptive teaching/expertise; culturally responsive teaching; culturally responsive pedagogy; teaching as inquiry; community placement; equity in ITE; university-school partnerships, 21st century teaching/learning pedagogies/skills, along with derivatives and combinations of these terms. The search also employed citation tracking, whereby the references cited in influential studies are identified, evaluated and synthesized (Booth, 2016).

Conducting a literature review serves several purposes: (i) to identify what is already known about the research topic; (ii) to develop new theories and frameworks; (iii) to collect experimental findings regarding a narrow research question to support research-based practice; (iv) to establish a theoretical foundation for a proposed study; (v) to establish the extent to which a specified research area interprets any explicable patterns; and (vi) to identify the paucity or lack of previous research (Hart, 2018; Levy & Ellis, 2006; Paré et al., 2015). The purpose of conducting the literature review in the present study was twofold: first, to identify the research gaps, and second, to establish the study's theoretical foundation. To this end, I used a concept matrix or chart method to select each resource "according to predetermined categories" (Imel, 2011, p. 152). Creating categories guides and adds value to the literature review as it can underscore "types of variables examined, level of analysis, gaps in the literature, or other important theoretical issues" (Webster & Watson 2002, p. xviii).

While not exhaustive, the current review provided the basis for consolidating a considerable amount of recent literature addressing the current research problem. After identifying and reviewing relevant studies, the data were coded. Coding is the procedure of arranging the data into some meaningful order by bracketing chunks and writing a word (or code) in the margins to represent each category (Rossman & Rallis, 2017). To ensure quality of the study, the researcher reached a point of theoretical saturation with the selected resources. Theoretical saturation is reached when no new categories emerge from the data (Müller-Bloch & Kranz, 2015). During the coding procedure, the sample was deemed sufficient for theoretical saturation. Hence, no further data were required.

2.2 Closing the Equity Gap in Teaching Priority Learners

Education has a key role to play in bridging the educational achievement divide and challenging the educational inequities through ensuring that all students, particularly those disadvantaged, can access new knowledge, skills and opportunities. Two decades ago, calls for

ITE transformation in priorities, scope and commitments urged the need for "placing equity front and centre" (Nieto, 2000, p. 180) to address the persistently inequitable learning outcomes for students traditionally marginalized by the education system, henceforth referred to as priority learners. Recent evidence highlights the need for radical changes in, and through, ITE provision (Forghani-Arani et al., 2019; Gunn et al., 2020; Heng et al., 2019).

In their important study "*Initial teacher education: What does it take to put equity at the centre?",* Cochran-Smith et al. (2016) examined ITE's role to improve teacher quality through adopting a critical socio-historical lens of equity and equitable education to raise the GTs' social consciousness needed to promote priority learners' educational outcomes. Their research underlined the persistent need for equity-centred ITE provision to improve the GTs' quality to challenge inequitable practices inside and outside of the classroom. In so doing, the researchers position equity at the core of the ITE programme's "coursework, fieldwork, and partnerships with schools" (Cochran-Smith et al., 2018, p. 583). Cochran-Smith et al.'s (2016) research urged education policy makers and the professional community in Aotearoa New Zealand to make tangible changes to this effect to ensure a successful and equitable learning environment for all students, particularly for priority learners. The Education Review Office (2016) published the *School Evaluation Indicators: Effective Practice for Improvement and Learner Success*, which is underpinned by the premise that all students must be provided "effective, sufficient and equitable opportunities to learn", as a major indicator of teaching and learning effectiveness (p. 33).

Highly effective education systems[2] are fundamentally underpinned by values of equity to create fairer societies irrespective of ethnicity, social class or gender by ensuring equitable distribution of educational opportunities and outcomes for all students (Fickel et al., 2018; Polat, 2011; Snook & O'Neill, 2014). Many educational researchers have investigated the

[2] with respect to student outcomes on PISA (Programme for International Student Assessment).

question of enhancing educators' understanding of diverse students' social and learning needs to make notable advances in their learning (Allard & Santoro, 2006; Forghani-Arani et al., 2019). Accommodating the diverse needs of all students, particularly from indigenous low socio-economic ethnic minority communities, has been the focus of education systems around the world (Cochran-Smith, 2020; Howe & Lisi, 2020). Others (see Gillan et al., 2017; Vale et al., 2020), however, stress ensuring equitable educational outcomes for indigenous people is still one of the toughest challenges in many nations. Bishop et al. (2014), for example, expressed this challenge as they highlighted the "ongoing issue of educational disparities that characterise indigenous peoples in many countries and continue to plague them for the rest of their lives" (p. 2).

Several lines of evidence suggest that educating for equity and diversity is key in the pursuit of excellence (Burris, 2016; OECD, 2012; Sahlberg, 2011). An OECD (2012) report reviewed a range of educational policies that foster quality and equity in several highly effective education systems to create respectful and socially just communities. Of those educational systems which were found to have consistently performed well across all OECD countries were mostly "those that combine quality with equity" (OECD, 2012, p. 37). For example, the steady educational progress Finland has made over the past three decades were mostly attributed to its equitable educational system as an important vehicle for fostering equity in society (Sahlberg, 2011; Savage & Lingard, 2018). The present study adopts the following definition of equity:

> (Equity) means more than just opening access to equal education for all. Equity in education is the principle that aims at guaranteeing high quality education for all in different places and circumstances. In the Finnish context, equity is about having a socially fair and inclusive education system that is based on equality of educational opportunities. (Sahlberg, 2010, p. 45, as cited in Burris, 2016, p. 59)

2.2.1 Towards Preparing an Equitable-Minded Teaching Workforce

Many of the current education systems are characterised by an increasing number of stakeholders than ever before, such as "policymakers, academics, researchers, philanthropists and entrepreneurs" (Al Barwani et al., 2019, p. 4), who challenge the status quo in ITE to prepare more equitable-minded GTs (Burns et al., 2016). As such, identifying, addressing and sustaining all these collaborators' interests poses a challenge, particularly in planning and implementing ITE reform (OECD, 2019). ITE is a major component of educational processes that cannot operate in a vacuum as it has become "embedded in the wider social, cultural and economic context of a country" (OECD, 2019, p. 19). Growing international evidence reveals that effective ITE should promote diversity, inclusion and equity (UNESCO, 2014). ITE provision has long been criticized for failing to adequately prepare "a teaching force capable of producing equitable learning opportunities and outcomes for diverse students in the context of enduring inequalities" (Cochran-Smith & Villegas, 2016, p. 494). However, recognition of these prominent values does not equalize academic achievements between marginalized students and their high-achieving peers (Mills & Gale, 2007). On account of these criticisms, ITE needs to commit to justice and equity in inclusive classrooms (Hickling-Hudson, 2004; Landa & Stephens, 2017; Santoro, 2009). For example, Forghani-Arani et al. (2019) argue that:

> In order to fulfil the growing expectations teachers face, they need to be equipped with relevant knowledge, capabilities, dispositions, values and skills, such as knowledge and understanding of diversity issues, reflectivity about identities, perspectives and practices, teacher agency and autonomy, empathy, and pedagogical judgement and tact. (p. 3)

However, the core principles underpinning ITE programmes vary across countries in accordance with educational, political, economic, social, and cultural priorities (Mitchell, 2005). These principles are essential to inspire prospective teachers "to challenge the inequities

that are deeply embedded in systems of schooling and in society" (Cochran-Smith, 2001, p. 3). Grudnoff et al. (2016), for instance, investigated a postgraduate ITE programme in Aotearoa New Zealand for its integral role in the advocacy of social justice to cater for the needs of priority learners. Among other findings, their study underscored ways in which the programme could be further enhanced, including the need for maintaining a greater focus on the impact of poverty on priority learners' learning (Grudnoff et al., 2016). Agency beliefs refer to one's expectations to have access to the means needed to achieve several results (Eccles & Wigfield, 2002). The issue of developing appropriate skills for the GTs to be culturally aware, and politically conscious has received considerable critical attention as such professional preparedness can play an important role in ensuring they can plan for and promote more inclusive classrooms (O'Neill et al., 2014).

Furthermore, despite the academic knowledge, practical skills and professional competence of great teachers, teaching and managing a diverse student population still poses a major challenge. The increasing number of teachers who lack the necessary skills and knowledge to successfully teach diverse students reflects the growing need to prepare teachers who are "capable of sensitive cultural responsiveness and of promoting success for all students" (Ell, 2011, p. 436). The persistence of this central dilemma has probably been attributed to the growing evidence that diversity has not been properly addressed within ITE (Mills, 2008). Likewise, this view is supported by Ambe (2006) who calls for considerable changes to be made in ITE provision so that it can contribute to "a more humane, equitable, socially just and democratic society" (Ambe, 2006, p. 694). Therefore, addressing equity and diversity within ITE should not be underestimated, as the teacher's role is indispensable in promoting "more equitable educational outcomes for marginalized students from low socioeconomic backgrounds" (Mills & Ballantyne, 2016, p. 263).

To sum up, the evidence reviewed in the previous section supports a critical value for ITE provision to be more "pedagogically and culturally responsive to the needs, abilities, and experiences of the growing numbers of ethnically diverse, bilingual, and low-income students" (Irvine, 2003, p. 71). Hence, to help combat the persisting educational inequities in the New Zealand education system, new ITE initiatives need to be endorsed to ensure the values of continued commitment to equity, diversity and inclusion are maintained.

2.3 Reconceptualising Theory and Practice in New Zealand ITE Provision

Adopting a socio-political lens, a critical reading is undertaken of contemporary ITE policy discourse in Aotearoa New Zealand. Such a stance entails a broad interpretation of the official narratives about ITE policy problems, proposed solutions and the choices made in line with the contemporary educational, social and political context. The education system in Aotearoa New Zealand is historically a site of tension for its perceived "higgledy-piggledy" policies (Higgins et al., 2006) that perpetuated educational, social and economic inequality among diverse learners. The political reforms of 1996, when the government adopted a neoliberal ideology prioritizing a market-based economy (Alcorn, 2014), saw ITE reforms implement evidence-informed and culturally responsive models. These newly adopted paradigms of educational change represented a gradual, albeit tenuous shift towards a more "meritocratic" education promoting equality of opportunities and outcomes (Kearney & Kane, 2006). However, despite these system-wide improvements, ITE practice was fragmentary as more conclusive evidence was yet to be obtained and evaluated about its effect on raising the achievement of the most poorly served students by the education system, i.e. priority learners (MoE, 2018a; O'Neill, 2017).

ITE provision has drawn significant attention, debate, review and endorsements from many countries around the globe (Darling-Hammond, 2017; Ell et al., 2019). The persistent achievement gap between students has driven the Ministry of Education (2013b) to fund new

initiatives to build a high-quality equitable education system that has the potentials to address Aotearoa New Zealand's persisting educational inequities (Bishop et al., 2012; Education Review Office [ERO], 2012; Savage et al., 2011).

To address the challenges of inequity and disadvantage in educational outcomes in Aotearoa New Zealand, two influential research papers were designed to integrate theory and practice and achieve a comprehensive reform in Aotearoa New Zealand ITE provision; these are, *Initial teacher education outcomes: Standards for graduating teachers* (Aitken et al., 2013) and *Learning to practice* (Timperley, 2013). The first research paper was designed to enable the student-teachers to fulfil the teacher registration expectations through highlighting "the knowledge, competencies, dispositions, ethical principles, and commitment to social justice that they should possess" (Aitken et al., 2013, p. 4). The second initiative helps "to describe and exemplify the design of practice-based experiences that will promote the outcomes identified in the first paper" (Timperley, 2013, p. 4). Both research papers will be given specific attention considering their key significance in ITE reform in Aotearoa New Zealand.

Drawing heavily on *The New Zealand Curriculum* (MoE, 2007) and the then current *Graduating Teaching Standards* (New Zealand Teachers Council, 2007), Aitken et al. (2013) developed their *Teaching for Better Learning Model* (Appendix A). Envisaging graduate teachers (GTs) as "inquiring professionals who are focused on better learning for themselves and their students" (p. 30), Aitken et al. set specific parameters of defined guidelines and anticipated outcomes employed in an established, comprehensive framework. Aitken et al. argue that knowledge needs to be emphasized within ITE ahead of practice to ensure that the desired characteristics and quality of the GTs' professional preparedness are obtained. As such, ITE is required to empower student-teachers with "the knowledge, competencies, dispositions, ethical principles, and commitment to social justice" (p. 4). Their inquiry-based model is considered "a crucial component of the graduating teacher's knowledge base", comprising "the

technical aspects of assessment" (Aitken et al., 2013, p. 25) to ensure high-quality teaching performance.

The second paper *'Learning to practise'* (Timperley, 2013) aims to foster teachers' pedagogical reasoning and professional judgment through describing and demonstrating the design of practice-based experiences that could affect the outcomes identified in the companion paper '*Initial teacher education outcomes: Standards for graduating teachers'* (Aitken et al., 2013). Timperley (2013) noted the shift in focus from self to student as a signifier of developing adaptive expertise through establishing five interrelated[3] principles that underpin the design of ITE experiences to promote the development of the GTs' 21st century skills and pedagogies. According to De Arment et al. (2013) adaptive expertise can be described as "the interaction of efficient and innovative uses of knowledge" (p. 217). Developing the GTs' adaptive expertise marks a significant shift in the kinds of learning experiences offered during their ITE as it will "require rethinking the relationships, roles, responsibilities, and expertise of all those involved" (Timperley, 2013, p. 37).

The evidence presented in this section highlights several key initiatives employed as part of educational reform to alleviate the educational disparities within the Aotearoa New Zealand education system. The following section highlights key features of local and international high-quality ITE programmes. Recurring principles for improvement in ITE provision in nearly all these countries to develop teachers' capacities to teach all students, particularly priority learners, are presented.

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1. [3] Develop knowledge of practice by actively constructing conceptual frameworks,
2. Build formal theories of practice by engaging everyday theories,
3. Promote metacognition and self-regulated learning,
4. Integrate cognition, emotion, and motivation,
5. Situate learning in carefully constructed learning communities (Timperley, 2013).

2.4 Dimensions of Exemplary ITE Programmes

There is a paucity of large-scale, cross-institutional educational research that has investigated the key dimensions of exemplary components underpinning an exemplary ITE design to prepare effective teachers who can foster learning in the 21st century (Cochran-Smith et al., 2015). Employing Webster and Watson's (2002) concept matrix to identify gaps in the literature, three evidence-informed categories are identified describing the key principles underlying an exemplary ITE design: i) university-school partnership; ii) coherence between coursework and clinical placements; and iii) 21st century teaching competencies.

Several lines of evidence suggest that quality professional learning within exemplary ITE programmes contributes to teachers' success (Cochran-Smith & Villegas, 2015; Darling-Hammond et al., 2005; Kennedy et al., 2008). Levine (2006) defines exemplary as the implementation and integration of academic and clinical instruction whereby "field experience is sustained, begins early and provides immediate application and connection of theory to real classroom situations" (p. 81). Compelling evidence suggests that to improve students' educational outcomes, teacher educators need to understand "what strong preparation for teachers looks like and can do, and to undertake the policy changes needed to ensure that all teachers can have access to such preparation" (Darling-Hammond et al., 2005, p. xi).

There is a growing body of international literature recognizing the importance of exemplary ITE designs to improve teacher quality and to promote effective teaching. For example, in her well-known study investigating seven exemplary ITE programmes in the United States, Darling Hammond (2006a) identified six key features that need to underpin an exemplary ITE design. All programmes scrutinized had common features, including: (a) coherence between academic coursework and clinical practise; (b) evidence-informed inquiry (e.g., research inquiries, logs/journals, and self-reflection, etc.); (c) integrating traditional roles of teachers, mentor teachers (MTs) and Principals through coordinating responsibilities; (d

professional community for student learning; (e) supervised extended practicum (almost 12 weeks) with diverse student populations; and (f) close partnerships between schools and universities.

In a comprehensive international review, Darling-Hammond (2017) draws on four high-performing teacher education systems compared to the United States and identified some leading practices that can improve teachers' teaching and learning. Of relevance to the present study, are the opportunities these well-developed ITE systems provide to connect theory and practice through the design of top-quality coursework and the integration of effective clinical practise in 'training schools' to ensure good practice is supported. The second distinctive feature common to all these systems was their increased integration of "multiple, coherent and complementary components" (Darling-Hammond, 2017, p. 294).

In another major study, *Best practice teacher education programs and Australia's own programs,* Ingvarson et al. (2014) investigated several innovative models and features of ITE within six high-performing countries, including Australia. The researchers sought to articulate exemplary features of ITE models that need to be developed to prepare competent GTs to meet the *Australian Professional Standards for Teachers*. Their synthesis of the findings from these exemplary ITE models indicated that they all have: (a) coherence in coursework/practicum experiences; (b) a robust and context-oriented core curriculum; (c) extensive practicum experiences; (d) foundation of rigorous standards of professional knowledge and practice; (e) explicit culturally-responsive strategies; (f) genuine inquiry stance connecting theory and practice; (g) the establishment of sustainable, collaborative school-university partnerships; and (h) assessment based on teacher portfolios and professional standards (Ingvarson et al., 2014, p. 12).

Lind (2013) also reviewed the characteristics of exemplary ITE programmes in seven countries based on their comparability to Aotearoa New Zealand. The overarching features of exemplary ITE programme features that can be drawn from his review are: (a) robust and credible frameworks for teacher selection (Bamber & Moore, 2016; Barber & Mourshed, 2007); (b) strong grounding in practice (Darling-Hammond, 2010); (c) strengthened partnerships between schools and tertiary providers (Cochran-Smith, 2003); (d) comprehensive content whereby the GTs can link 'learning and teaching' and implement a variety of teaching approaches to meet their learners' needs (Sahlberg, 2011); and (e) a robust induction programme in the first years of teaching (Donaldson, 2011). Lind (2013) suggests employing these design features as "a template against which current ITE programmes are compared" (p. 97). According to Lind (2013), this framework offers some important insights into an exemplary ITE programme design by integrating theory and practice to reflect coherence and ensure overall comprehensiveness of the GTs' professional experience. Table 2.1 shows a concept matrix used to categorize the themes synthesised.

Table 2.1

Concept Matrix of Exemplary ITE Principles

Source	***Principle***		
	University-School Partnership	Coherence between Coursework and Clinical Placements	Twenty-First Century Teaching Pedagogies
Darling-Hammond (2006, 2017)	√	√	√
Ingvarson et al., (2014)	√	√	
Lind (2013)	√	√	

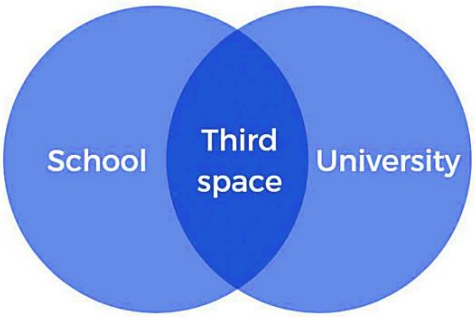
2.4.1 University-School Partnership

The importance of establishing sustainable and collaborative relationships between the ITE provider and the professional community is argued within recent innovation in ITE

provision (Bernay et al., 2020; Green et al., 2020; Sewell et al., 2018). Ell et al. (2017) claimed that ITE is considered "a cluster of simultaneous interactions at multiple levels which people become part of for a period of time" (p. 328). Several lines of evidence (e.g. Grossman et al., 2009; Jackson & Burch, 2019) have explored the value of creating a "third space" (Green et al., 2020, p. 404), also known as a "hybrid space" (Zeichner, 2010, p. 89) in ITE to support the GTs' professional preparedness. Such paradigm shifts in ITE provision require all stakeholders to "collaborate in the development of a common language for describing (a) how teachers learn to practice and (b) the pedagogies teacher educators enact to support teachers in learning to practice" (McDonald et al., 2014, p. 381). The *third space* (Figure 2.1) can be defined as a separate place for new shared learning, neither the university's space nor the school's space, whereby unique understandings are developed by each partner to create new shared knowledge that could not be gained without either partner's participation (Bernay et al., 2020; Gilbert, 2005).

Figure 2.1

The Third Space Concept



Note. Adapted from Zeichner (2010, as cited in Green et al., 2020, p. 404).

The significance of the third space partnership model employed within ITE provision lies in the close integration of the core classroom pedagogies enacted by teacher educators to support the GTs' professional learning (McDonald et al., 2014). Previous research has

confirmed the effectiveness of overstepping the traditional school and university boundaries to work successfully in truly collaborative partnerships and greater coordination between university-and school-based teacher educators (Darling-Hammond, 2017; Grimmett et al., 2018; Grudnoff et al., 2016). Such a shift in ITE design entails complementarity between all teacher educators to collaborate in constructing new forms of practice and deeper understandings (Ellis et al., 2020). This collaboration is key for ITE to establish and communicate interdisciplinary learning goals to build the GTs' knowledge base (McDonald et al., 2014).

Several authors have considered the cohesive effects of integrating both theoretical and practical practices within the ITE programme to broaden the GTs' learning experiences so that they can provide all students with equitable opportunities to learn. For example, on their large-scale longitudinal study, Mayer et al., (2015) surveyed thousands of GTs across their first year's teaching and their Principals to inform policy about the effectiveness of teacher preparation in Australia. The integrated design features of the Australian-medium ITE provision were endorsed by most participants for offering the GTs a holistic experience of the reality of a teacher's full-time job. Integration of theory and practice was particularly praised for allowing the GTs to reflect on and develop a broader perspective of different teaching practices in a range of school cultures and community settings. The researchers concluded that ITE provision needs to "embed connection of theory and practice through problem solving of real-life practice experiences" and reflect an "enduring commitment to school and university collaboration" (p. 152).

In the same vein, reflecting on the Aotearoa New Zealand context, the launch of exemplary postgraduate programmes in 2014 was considered to be particularly unique in "providing a much more integrated and collaborative approach between the ITE provider and the school" (Menter et al., 2017, p. 11). Similarly, Sewell et al. (2018) highlighted the need to

ensure genuine university-school partnerships to enrich the GTs' learning experiences. As such, Sewell et al. (2018) observed that: "Current ITE policy in New Zealand is requiring greater collaboration between universities and schools to develop teachers' adaptive expertise in order to respond confidently and resiliently to the challenges posed by our priority learners" (p. 336). To ensure the comprehensiveness of the GTs' professional learning, the researchers pointed to the value of maintaining "significantly deeper levels of joint participation in a school-university co-design of a postgraduate teacher education programme" (p. 335).

2.4.2 Coherence between Coursework and Clinical Placements

Coherence between ITE components has been widely acknowledged as a key distinctive feature in exemplary teacher education models (Darling-Hammond, 2017; Goh & Canrinus, 2019; Hansen et al., 2017). A coherent ITE programme can be defined as "a set of courses that are conceptually linked … [and] is designed to deliberately build understanding of teaching over time" (Hammerness & Klette, 2015, p. 8). To create programme coherence, ITE educators need to "build upon intentional clinical placements that coherently align theory to practice" (Fitchett et al., 2018, p. 330). Therein lies the essence of coherence in ITE programmes whereby all essential course components and learning experiences are clearly outlined and blended harmoniously in a sequence (Fullan & Quinn, 2016). Maintaining coherence between the ITE programme components is "increasingly being acknowledged to be an important feature in teacher education programs" (Ingvarson et al., 2014, p. 9). A rigorous ITE model bridges the theory-practice divide through integrating context, pedagogy and inquiry to ensure cohesiveness in the delivery of the programme and support the GTs' development of reflective practice about their professional experiences (Forgasz, 2016; Le Cornu & Ewing, 2008).

An integrated approach, which brings together the theoretical and practical elements of high-leverage practices, needs to be at the heart of an exemplary ITE model (Allen & Wright, 2014; Ingvarson et al., 2014; Kennedy, 2016). High-leverage practices can be defined as a set of practices that "include explicit learning goals that encompass the range of skills, knowledge, understandings, orientations, and commitments that underlie responsible teaching" (Ball & Forzani, 2011, p. 38). These highly-effective practices are characterized by their practicality as they can be "learned and implemented by those entering the profession" (Windschitl et al., 2012, p. 880) and are, therefore, understood to "have the greatest impact on student learning" (Hlas & Hlas, 2012, p. 78).

However, despite the considerable importance placed on content integration within these postgraduate models of ITE programmes, sufficient evidence is yet to be found about their full potential to "provide strong theoretical foundations and the skills required to be an adaptive practitioner, offer rich practical experience that supports effective integration of theory and reality, and provide good understanding of day-to-day teaching practice" (Education Council New Zealand, 2016, p. 1). The evidence presented by the Education Council aligns with other recent Aotearoa New Zealand studies in reaffirming the need to integrate context, pedagogy and inquiry components within an ITE programme to optimize the GTs' professional learning (Cochran-Smith et al., 2016; Grudnoff et al., 2017).

2.4.3 Twenty-First Century Teaching Pedagogies

To build a high-quality, equitable education system in Aotearoa New Zealand, ITE designs need to "change dramatically if they are to succeed in preparing 21st century teachers who can work effectively with all students, particularly those traditionally marginalized by the education system" (Cochran-Smith et al., 2016, p. 68). To this end, the pedagogical innovations underpinning teaching in the 21st century need to inform the design of exemplary ITE

frameworks if the student teachers are to succeed (Darling Hammond, 2006a). Kim et al. (2019) explored the role ITE plays in preparing the GTs to become lifelong learners, competent in using a repertoire of effective 21st century teaching practices and pedagogical tools to support the transfer of skills. Providing a comprehensive definition of a core 21st century skillset can be challenging as it may "encompass a range of competencies, including critical thinking, problem solving, creativity, meta-cognition, communication, digital and technological literacy, civic responsibility, and global awareness" (p. 100). Recent attention has focused on the importance of providing student-teachers with key 21st century skills to address the diverse learning needs of their students and build inclusive lifelong learning environments (Hansen et al., 2017; Kim et al., 2019). The 21st century skills comprise versatile knowledge and skills and can be grouped under three major categories (see Table 2.2).

Table. 2.2

Twenty-First Century Skills

Learning skills	***Literacy skills***	***Life skills***
Critical thinking	Information literacy	Flexibility
Creative thinking	Media literacy	Initiative
Collaborating	Technology literacy	Social skills
Communicating		Productivity
		Leadership

Note. Adapted from Dada (2019, p. 93).

The importance of developing teachers' competencies to enact 21st century pedagogies to promote their pedagogical reasoning, problem-solving and adaptive expertise is well-established (Darling Hammond, 2006a, 2010; Timperley, 2013). Such an active learning-focused culture entails "the ability to assess individuals' own learning" and helps them determine and assess areas "where improvements can be made in their understanding" (OECD,

2019, p. 126). In considering the global drive towards 21st century learning, and the remarkable development of the knowledge society, Fullan and Langworthy (2014) identify the need for ITE educators to implement the conditions required to develop lifelong learning skills and dispositions that will empower teachers new to the profession to prosper in today's complex society. The authors emphasize that considering such major societal changes, beginning? teachers need to be competent to enable their students to "gain the competencies and dispositions that will prepare them to be creative, connected, and collaborative life-long problem solvers" (p. 2).

The ability to promote digital literacy in the classroom is a key 21st century pedagogy student-teachers need to master during their ITE (Feistritzer & Gollnick, 2018; Instefjord & Munthe, 2016). The term digital natives refers to "a generation or population growing up in the environment surrounded by digital technologies and for whom computers and the Internet are natural components of their lives" (Dingli & Seychell, p. 9). Digital pedagogy can be defined as "the study of how to teach using digital technologies" (Kivunja, 2013, p. 5). Developing the student-teachers' digital pedagogies in ITE is argued to be essential to ensure they are "well prepared to be effective teachers for the digital generation" (Kivunja, 2013, p. 131).

Aotearoa New Zealand research (e.g. Bolstad et al. 2012; Hipkins et al. 2018), highlight the fundamental role ITE plays in developing 21st century pedagogies within a collaborative approach to teaching and learning. To address the 21st century teaching and learning imperatives, Hargreaves and Fullan (2009) embrace reflective and collaborative reforms in education and ITE in what they called 'a theory of action'. One of the core premises underlying this term, of relevance to the present study, fosters a holistic view of collaborative learning in the context of an inspiring and inclusive vision of all the cultural and ethnic diversities of students in multi-cultural communities.

Bolstad et al. (2012) established a thematic framework for considering the nature of learning and education in the 21st century. Bolstad et al.'s concept of future-oriented learning and teaching reflects unpredictability, fluidity and complexity as it puts the diversity of learners' needs at the centre. Due to the unpredictable nature of learning, teachers are required to develop the pedagogies required to prepare the 21st century citizen. In so doing, Dumont and Istance (2010) proposed seven learning principles to help teachers to direct students' own learning and become confident in their identities and abilities. These principles were embedded in the *New Zealand Curriculum* (MoE, 2007) as they meet relevant professional requirements in Aotearoa New Zealand educational practice, whereby learning is attuned to individual differences and needs, and thus moves away from the non-functioning 'one-size-fits-all' industrial model.

The literature reviewed in this section has highlighted three key principles of high-quality professional experiences in exemplary ITE programmes which were deemed relevant to this study's focus. The first key principle underlined the importance of the need for sustaining school-university partnership within ITE provision. The second underscored the importance of achieving better coherence between coursework and clinical placements. The third emphasized the significance of promoting 21st century teaching pedagogies within the programme. The following section scrutinizes the framework of the recently introduced postgraduate teacher preparation model in Aotearoa New Zealand.

2.5 The Master of Teaching and Learning

The Master of Teaching and Learning (MTchgLn) is at the core of the educational reform proposals implemented to meet the expectations of the Ministry of Education, namely to ensure equity-centred ITE provision (Cochran-Smith et al., 2016). In 2013, the Ministry of Education initiated a competitive tendering process for an exemplary one-year postgraduate ITE programme (MoE, 2013a, b) aimed at preparing GTs with the adaptive expertise and

cultural responsiveness to teach all learners, especially priority learners. The exemplary ITE postgraduate initiative is unique in Aotearoa New Zealand in prioritizing "the cultural responsiveness and agency to achieve equitable outcomes for priority student groups" (MoE, 2012, as cited in Hipkins et al., 2015, p. 57). This initiative represented a focused shift in ITE towards pursuing a more equitable educational system for students who come from economically disadvantaged communities (Grudnoff et al., 2016). Of significance is the importance of equipping the GTs with the essential tools to cater for their culturally and ethnically diverse learners, as well as other contributing socio-cultural factors that inform the nature of teaching in the heterogeneous classrooms of the 21st century. In the same vein, all schools in Aotearoa New Zealand are requested to ensure "equality of educational opportunity for all New Zealanders, by identifying and removing barriers to achievement" (*"National Education Goal 2,"* n.d.).

Making connections with students' cultural backgrounds and the communities from which they come has also become critical for today's teacher education in light of global dynamics in teacher reform. Carter and Darling-Hammond (2016) further point out that the GTs are required to "learn how to use the local cultural tools that students bring with them to the classroom" (p. 605). Accordingly, launching new initiatives to develop teacher educators' own culturally responsive pedagogy as well as that of the GTs is an essential prerequisite for ITE (Gunn & King, 2015). Ensuring that Aotearoa New Zealand has the best teachers possible is manifested through the shift in focus in the Ministry of Education's policies focusing on quality teachers and teaching. A key component of the Education Council's reforms is related to developing new initiatives in ITE and a set of *Standards for the Teaching Profession* (Education Council, 2017). For example, these set of Professional Standards request all teachers to "create an environment where learners can be confident in their identities, languages, cultures and abilities" (p. 20). All teachers under these Professional Standards are

also required to “harness the rich capital that learners bring by providing culturally responsive and engaging contexts for learners” (p. 20).

2.6 Study Framework

From the outset it is imperative to emphasise that a formal evaluation of a postgraduate ITE programme is vast and complex and as such lies beyond the scope of this study. Thus, the study’s focus will only be limited to those aspects deemed to be relevant to its critical concerns. The theoretical framework which was used in this study is underpinned by *The Standards for the Teaching Profession* (Education Council, 2017), Timperley’s (2013) criteria for the development of adaptive expertise and Hansen et al.’s (2017) foundational distinctive design components included within the conceptual basis for the MTchgLn programme. The present study’s framework is also premised on the three evidence-informed categories found in the literature (see Table 2.1), as these can develop the GTs’ adaptive expertise and cultural responsiveness to teach diverse learners, especially priority learners.

The five main innovations of the MTchgLn are:

i. *Sustained clinical practice in partner schools,* which creates partnership between teacher-educators and MTs by enriching the sustained clinical component with evidence within a ‘third space’ learning community (Williams, 2014).

ii. *Evidence-informed inquiry,* which provides the GTs with personalised learning opportunities to help them become more self-regulated by making evidence-informed inquiries.

iii. *Exemplary school visits,* which aims to acquaint the GTs with a range of learning and teaching practices which are embedded into a variety of school cultures.

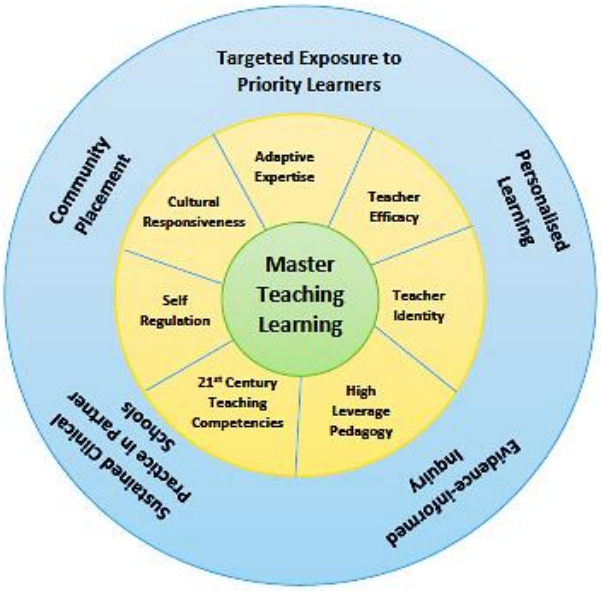
iv. *Culturally responsive practices*, which involves increasing the GTs' targeted exposure to diverse students and focusing their attention on their worldview and learning needs.

v. *Community placement,* which provides the GTs with service-learning experience within diverse social and cultural groups so that they continue to understand and apply the concept of cultural capital (ERO, 2013).

Figure 2.2 shows the conceptual basis for the MTchgLn programme framework, which comprises two concentric circles; the inner circle presents the key principles, and the outer circle presents the design features. These innovations are interconnected to promote the high-quality teaching competencies as expressed in the then current *Graduating Teaching Standards* (New Zealand Teachers Council, 2007). These five distinctive design features were specifically designed to ensure the GTs develop: "adaptive expertise, cultural responsiveness, positive teacher-efficacy, a strong sense of identity, self-regulation, 21st century teaching competencies, and ability to use high-leverage pedagogies" (Hansen et al., 2017, p. 40).

Figure 2.2

The MTchgLn Programme Framework



Note. Adapted from Hansen et al. (2017, p. 40).

So far, previous sections have discussed the theoretical constructs derived from a consolidated series of ITE programme features, especially designed to meet the needs of priority learners. What follows is an analysis of these innovations as drawn from the extant contemporary research in ITE literature cited in this thesis. The rationale for each of the selected features is also discussed.

2.6.1 Extended Clinical Placements in Partner Schools

The school placement/practicum experience has long been established as a key component of ITE programmes (MacBeath, 2011) and is widely accepted to be a critical period for the GTs' professional growth (Busher et al., 2015; Fazio & Volante, 2011). Clinical placement or practicum has been shown internationally to be one of the most effective features in many ITE programme designs to ensure supervised practical applications (as in classroom or clinic) and maintain future practical competence in the classroom (Darling-Hammond,

2006b; Starkey & Rawlins, 2012; Tadesse Degago, 2007). This professional experience builds the GTs' professional practice by helping them develop more personalised teaching strategies to explore student learning needs and endorse effective intervention to personalize student learning (Ure & Gough, 2009).

The academic literature on clinical placement has revealed the introduction of several terms that have changed over time (Le Cornu & Ewing, 2008), and each has diverse implications for how teacher placement is perceived. For example, "practicum" is one of the terms that has been used for professional practice as an ITE feature whereby a GT is based in a classroom as a significant feature of learning to be a teacher (Kemmis & Ahern, 2011; Simpson et al., 2007). Other alternative terms for the school-based component of teacher education are "field experience" (Butler & Cuenca, 2012), "professional experience" (Ingvarson et al., 2014) and "clinical experience" (Bransford et al., 2005). Previous New Zealand studies evaluating clinical placements raise concerns over the practicality of these experiences and there are calls for change as simply spending time in a school on practicum is not enough for effective professional learning (Grudnoff, 2011; Johnston, 2020; Timperley, 2013).

The new initiatives of extended clinical placements in ITE in Aotearoa New Zealand provide the student-teachers with additional time, energy, commitment and partnership arrangements that should not be underestimated (Cooper & Grudnoff, 2017; Grudnoff et al., 2017). Embedding the student-teachers in Partner Schools for sustained periods can increase their opportunities to broaden their understanding of the annual cycle of school 'life' and help them integrate theory and practice (Bellett & Fanselow, 2018). Furthermore, the effective modelling of lessons observed and critiqued during practicum can prepare the student-teachers to become more reflective (Arvanitis, 2018; Darling-Hammond et al., 2002). Engaging the student-teachers in such reflective practices during their practicum experiences is crucial for

their learning as it helps them "take a first step in making their own assumptions about teaching and learning explicit" (Bransford et al., 2005, p. 85).

Sustaining school-university partnership has long been integral to the GTs' professional learning to deepen trusting mentor-mentee relationships that are key to learning and teaching effectiveness (Darling-Hammond, 2017; McLean Davies et al., 2015). Evidence suggests that "without effective mentoring support, many beginning teachers struggle and fail to learn the nuances of effective teaching" (Spooner-Lane, 2017, p. 254). For example, the focus of Mukeredzi's (2017) research explored the mentoring experiences of 17 MTs and 16 GTs during a residential practicum in an urban South African school. Mukeredzi's in-depth group discussions highlighted the significance of increasing professional dialogical mentor-mentee engagement to improve the GTs' competencies in the classroom. This finding was also reported by Allen et al. (2017) who investigated how MTs and GTs can effectively collaborate as professional learners during practicum when these relationships are embedded in strong school-university partnerships. They arrived at similar conclusions in their research about the value of a strong and trusting mentor-mentee relationship to help the GTs assess and make sound judgements about their own practice.

Similarly, Matsko et al. (2020) examined thousands of GTs in Chicago Public Schools during 2014-2015 from 44 ITE institutions to investigate the impact of MTs' practices on the GTs during practicum. Most of the GTs reported that they felt better prepared to teach when allocated instructionally effective MTs who offered more frequent and adequate feedback and created collaboration opportunities during their professional experience. They confirmed that mentoring can improve the GTs' competence to address social and academic issues that they may need to face during their professional experiences, as well as to develop their competence in teaching (Matsko et al., 2020). This finding is consistent with that of Aitken et al. (2017) who also explored an ITE programme partnership with local Aotearoa New Zealand schools

and recognized the power of strong mentor-mentee relationships and the university-based teacher educators to foster the GTs' professional learning during their practicum. Their study also highlighted the value of the MTs' role as being integral to sustaining school-university partnership and concluded that the four key factors for supporting the GTs into their teaching careers are "relationships, communication, commitment and collaboration" (p. 36).

2.6.2 Evidence-Informed Inquiry

The 'evidence-informed professional learning cycles' (Timperley, 2011) and the Teaching as Inquiry (TaI) model (Aitken & Sinnema, 2008) involve encouraging the GTs to employ research to critically assess the effectiveness of their teaching and thus modify their everyday practices to address students' individual needs. Inquiry can be defined as "a professional positioning, where questioning one's own practice becomes part of an educator's work" (Dana et al., 2011, p. 11). According to Aotearoa New Zealand's *Standards for the Teaching Profession,* all teachers are required to "(u)se inquiry, collaborative problem-solving and professional learning to improve professional capability to impact on the learning and achievement of all learners" (Education Council, 2017, p. 18). The TaI model offers the GTs the opportunity to learn and implement theoretical and practical contextual knowledge in the classroom (Cian et al., 2017).

The value of the TaI model lies in the GTs taking a principled inquiry stance in their search for ways to adapt their practice to design learning activities which inspire students to think, understand, interpret, and demonstrate new academic knowledge (Bransford et al., 2005). This view is supported by Dana and Yendol-Hoppey (2008) who maintain that developing an inquiry stance in teaching entails introducing the GTs to the relevant research evidence base whereby they continually reflect on their teaching practices. These researchers urge teacher educators to inspire each GT to "continually unearth and discover new questions about his or her own teaching" (p. 16). In the same line, Hadar and Broady (2016) also pointed

out that, “When teachers explore their students’ learning they adopt a different stance, placing themselves in the role of learners” (p. 102). Similarly, Niemi and Nevgi (2014) evaluated the strength of ITE provision in Finland and found that the GTs’ “authentic experiences of being a researcher strengthen their wide and comprehensive role as a teacher” (p. 140).

Adaptive expertise has been well accepted as a worthy goal of teacher education (Aitken et al. 2013; Anthony et al., 2015; Carter & Darling-Hammond, 2016; Hammerness et al., 2005; McNaughton & Lai, 2009). There is widespread recognition of the concept of adaptive expertise to inspire teachers to experiment, make mistakes, and attempt different methods (Von Esch & Kavanagh, 2018). Bransford et al. (2005) investigated ITE’s important role in developing the GTs’ inquiry skills to adapt their teaching to support students’ learning. In so doing, they framed the concept of adaptive expertise to prepare effective teachers who understand how learning occurs by exercising “trustworthy judgment on a strong base of knowledge” (Bransford et al., 2005, p. 2). The notion of teachers as adaptive experts breaks new ground in preparing teachers to be morally committed to “promote the engagement, learning and well-being of each of their students” (Timperley, 2013, p. 5). They are particularly perceived as distinct for having “pedagogical dexterity” (Epstein & Gist, 2015, p. 58), that is, “the ability to be pedagogically reflexive and reflective” (Santoro & Kennedy, 2016, p. 209). Another distinctive characteristic of building the GTs’ adaptive expertise is related to the development of their creative problem-solving abilities. For example, Carter and Darling-Hammond (2016) maintain that effective teachers are “diagnosticians who understand the learning process and have a large repertoire of teaching methods at their disposal” (p. 620). Adaptive expert teachers, therefore, demonstrate the ability to be more flexible to accommodate individual learners’ needs and “continually learn, add new knowledge, and refine their understandings of students, instruction, and learning” (Von Esch & Kavanagh, 2018, p. 241).

2.6.3 Culturally Responsive Pedagogy

A large and growing body of literature has investigated the key role education plays in "developing all students as culturally aware citizens who respect, value and understand cultural and linguistic difference in the communities in which they live" (Santoro & Kennedy, 2016, pp. 216-217). Accomplishing this goal requires preparing culturally responsive teachers as emphasized by several educational researchers for more than two decades, (see Banks, 2006, 2008, 2014; Cochran-Smith, 2004, 2006, 2016; Gay & Kirkland, 2003; Howard, 2003; Valentin, 2006; Villegas & Lucas, 2002).

The importance of embracing culturally responsive practices in teaching is well documented (Alim, 2004; Fisher, 2007; Ladson-Billings, 2014; Nieto, 2013). The conceptual bases of CRP have permeated education system policy discourse in several educational systems around the world. Three decades ago, Irvine (1990) found that lack of what she termed "culturally synchronous pedagogy" between teachers and students of colour may be responsible for students' academic failure. She noted that, "because the cultures of African Americans and other students of colour are different and often misunderstood, ignored, or discounted, these students are likely to experience cultural discontinuity in schools" (p. 247). A few years later, Ladson-Billings (1994) coined the term 'culturally relevant pedagogy' in which she pointed to the need for empowering students "intellectually, socially, emotionally, and politically by using cultural referents to impart knowledge, skills, and attitudes" (Ladson-Billings, 2009, p. 20).

Geneva Gay (2000, 2002, 2010, 2018), a leading advocate of culturally responsive practice (CRP), revealed compelling evidence of its effectiveness in ITE to reflect the ethnic and cultural features of schools and communities (Gay, 2018). She argued that embedding CRP within ITE prepared GTs to be reflective, critical decision-makers as it enabled them to set high expectations for their students (Gay, 2018). She argued that teachers should "encourage

and enable students to find their own voices, to contextualize issues in multiple cultural perspectives, to engage in more ways of knowing and thinking, and to become more active participants in shaping their own learning" (Gay, 2000, p. 35). Gay (2010) captures the essence of CRP by explaining that it entails "using the cultural knowledge, prior experiences, frames of reference, and performance styles of ethnically diverse students to make learning encounters more relevant to and effective for them" (p. 29). This definition suggests that honouring and respecting students' ethnic identities, histories and cultural backgrounds makes learning more relevant, which is indispensable to facilitating students' educational experiences.

Teaching is not culturally neutral as it can either engage or disaffect students from low socio-economic backgrounds (Carter & Darling-Hammond, 2016). Gay's definition includes reference to the importance of teachers' roles as "change agents for social justice and academic equity" (Gay, 2010, p. 31). CRP is grounded in basic principles of education equity, social justice and the intercultural sensitivity within and beyond the classroom (Green, 2007; Leung et al., 2014). Intercultural sensitivity is defined as "the ability to communicate effectively and appropriately in intercultural situations based on one's intercultural knowledge, skills, and attitudes" (Deardorff, 2006, pp. 247-248). This definition of intercultural sensitivity encompasses awareness of the complexity of people's different perceptions of cultural difference enabling greater understanding, flexibility and adaptability (Leung et al., 2014).

The critical need to prepare culturally responsive teachers (Santoro & Kennedy, 2016) is indicative of its value, particularly in the most culturally diverse contexts in the world such as Aotearoa New Zealand. This role has become even more crucial considering the growing cultural diversity of Aotearoa New Zealand schools, and the rapid promotion of cultural responsiveness in many classrooms around the world (Cody, 2015; Gibbs 2005; Hynds et al., 2011; Maged, 2014). GTs in Aotearoa New Zealand are provided with opportunities to increase their knowledge and skills to support the learning of all students, particularly priority

learners (Grudnoff et al., 2016; Sewell et al., 2018). Alton-Lee (2003), for example, drew on international evidence to highlight the role cultural norms, such as *tuakana–teina*, play when integrated into learning contexts and proved that application of such norms showed "a marked positive impact on higher student achievement" (p. 35).

Employing personalized learning approaches in ITE design can help the GTs to identify the learning interests and characteristics of individual *ākonga* that enables educational engagement of Māori, Pāsifika and other disadvantaged communities in Aotearoa New Zealand. However, the Education Review Office (2013) reported on accelerating the progress of priority learners and concluded that, "Many teachers still do not fully understand the concept of cultural capital or the need for a culturally responsive curriculum that takes account of the identity, language and culture of their students" (p. 14). Any lack in a teachers' ability cultural responsiveness or their lowered expectations of 'at-risk' priority learners will have serious implications in their learning outcomes. This scenario has been the driver for the Ministry of Education's new set of reform strategies that aim to promote and to encourage priority learners through stressing the importance of their identity, language and culture.

In relation to Māori learners, for example, the Ministry of Education's commitment to raising Māori learners' achievement is mirrored in several initiatives including *Ka Hikitia – Managing for Success Māori Education Strategy 2008-2012* (MoE, 2009), *Ka Hikitia Accelerating Success 2013-2017* (MoE, 2013c), the cultural competencies for teachers of Māori learners, *Tātaiako* (MoE, 2011) and *Me Kōrero-Let's Talk* (MoE, 2012). The *Tātaiako* focuses on enhancing teachers' relationships and engagement with Māori students and with their whānau and iwi (Education Council, 2011), whereas *Me Kōrero-Let's Talk* seeks to "make a greater and faster difference for and with Māori learners over the next five years and beyond" (MoE, 2013c, p. 3).

Another key research and professional development project, *Te Kotahitanga*, shares Māori students' narratives of their learning experiences (Bishop & Berryman, 2006; Bishop et al., 2012). *Te Kotahitanga* emphasizes how establishing sustainable relationships of respect and interdependence can improve students' academic achievement through understanding and respecting Māori people's cultural aspirations (Bishop et al., 2009; MoE, 2012). Similar to these culturally responsive initiatives to improve Māori students' educational achievement, an essential prerequisite for the GTs is to be pedagogically and culturally responsive for their Pāsifika students to achieve success through preserving their unique cultural identities as Pāsifika people who are proud of their origins and strengths (Siilata, 2014). The recent initiative is the Ministry of Education's strategic plan proposed to raise Pāsifika learners' achievement and encourage their engagement in the Aotearoa New Zealand classroom through engaging Pāsifika families and communities in the teaching and learning process as part of the *Action Plan for Pacific Education 2020-2030* (Education Council, 2020).

However, more evidence is needed to determine if the Ministry of Education's attempts to improve diverse students' outcomes are successful, particularly for Māori students to succeed as Māori (Ford, 2013; Henderson, 2013). Glynn (2015) argues that "participation in mainstream education has come for Māori at a cost of their own language, culture and identity" (p. 104). To succeed "as Māori", from a broad perspective, the Māori student needs to be fully connected with te reo, their tribal homeland and tikanga Māori and express themselves freely, in whichever context they are in, be it urban or rural (Averill & McRae, 2019; Berryman et al., 2018).

In the same line, the evidence is not yet sufficient about accommodating Pāsifika students' cultures and worldviews in all schools in Aotearoa New Zealand (Siilata, 2019). Several researchers stated that the Ministry of Education's policies to improve Pāsifika students' outcomes may not succeed unless teachers prioritise inquiry into culturally

responsive teaching practices that suit Pāsifika students' learning needs (Cooper & Hedges, 2014; Porter-Samuels, 2013). Hunter et al. (2016), for example, stressed the importance of integrating family in fostering dynamic classroom interactions with Pāsifika learners. The researchers concluded that "when educators consider the language and culture of Pāsifika students and explicitly establish respectful and reciprocal relationships with the students and their family, learning is enhanced and their cultural identity positively affirmed" (p. 197).

Similarly, in their report to the Ministry of Education, Chu et al. (2013) synthesised findings from empirical research (2002–2012) of the Pāsifika education literature and presented a comprehensive summary. Their report found conclusive evidence of a causal relationship between the role culturally responsive pedagogies implemented by teachers and the improvement of Pāsifika learners' academic achievement (Chu et al., 2013). While the former research aims to provide culturally responsive professional learning for teachers in primary and secondary schools, the latter is designed to build Māori and Pāsifika teachers' capability so that they "have a strong understanding of their own and their students (*sic*) identities, languages and cultures" (MoE, 2013d, p. 3). Therefore, one of the most influential factors that ITE educators need to consider enhancing Pāsifika students' learning is to establish positively affirmed and reciprocal relationships with the students and their families (Reynolds, 2018; Siilata, 2019).

Despite these educational reform strategies, compelling evidence shows that Māori and Pacific learners "continue to experience high disparities in New Zealand's education system" (Porter-Samuels, 2013, p. 17). Glynn et al. (2010) provide coherent explanations for these disparities, as they point out:

> When students continually find little or no evidence of their culture being reflected in the curriculum and pedagogy of their classroom and school, and find that the knowledge they do have is never called upon, there is a concern that they might experience the

> classroom and school as alien, uncaring and unsafe places, where they do not belong, and for these feelings to be reflected in their challenging or disruptive behaviour, and truancy. (p. 119)

Overall, the studies reviewed here support the hypothesis that ITE programmes are required to develop culturally responsive teachers. Despite the Ministry of Education's firm commitment to implementing educational reforms, the ITE sector in Aotearoa New Zealand has yet to prepare teachers who can adapt their teaching to align with the needs and expectations of priority learners.

2.6.4 Exemplary School Visits

The existing literature on the clinical or applied aspect of teacher preparation focuses particularly on the role of the clinical component in shaping the GTs' teaching practices (Whatman & MacDonald, 2017; Williams, 2014; Wilson & I'Anson, 2006). Recent developments in ITE have heightened the need for GTs to observe, practise and test teaching strategies and approaches in different teaching and learning contexts while on practicum (Forghani-Arani et al., 2019; Hansen et al., 2017). Herold and Waring (2018), for example, identified the power of the school's social and cultural norms to 'institutionalise' teachers and recognised their importance in helping the GTs adapt their practice to the reality of the classroom. They found that having the GTs observe the "variability of teaching in different schools", as part of their practicum experiences, was key to their learning as it afforded them "alternative perspectives on school culture and teaching practices" (p. 100).

Likewise, Forghani-Arani et al. (2019) maintain that teacher educators are required to design ITE programmes that include professional experiences where the GTs can observe, practise and reflect on varied teaching practices in a variety of school settings. They pointed out the importance of considering "the contextual factors and the situational nature of teaching

and learning to teach" (p. 19) within any ITE programme design in light of "the growing diversity in classrooms and societies" (p. 13). This view is also supported by Lindblom-Ylänne et al. (2006) who analysed the questionnaire responses of 340 teachers from a variety of disciplines to explore ''how approaches to teaching are affected by discipline and teaching context'' (p. 285). Lindblom-Ylänne et al. found that "teachers who experience different contexts may adopt different approaches to teaching in those different contexts" (p. 294).

The visits to a range of schools deemed to model exemplary practices can serve as an effective mechanism for generating student-teacher critical reflections about their own teaching. For example, Hansen et al. (2017) highlighted the value of exemplary school visits for student-teachers "to consider their own cultural identity and to engage with evidence about what was known to best support priority learners" (p. 47). Such early reflections student-teachers make during the exemplary school visits can serve as a starting point to develop their professionalism and offer a favourable opportunity for professional conversations. For example, several researchers (e.g. Cochran-Smith & Lytle, 2004; Dana & Yendol-Hoppey, 2008) argued that reflecting in and on classroom practice is essential to the knowledge construction for the teacher's teaching and learning. Similarly, in her assessment of ITE in England, Meierdirk (2016) highlighted the role of the student-teachers' critical reflections in helping them to develop new knowledge. Meierdirk found that such reflections student-teachers make during their clinical placements to be crucial in actual teaching and therefore, recommended including and assessing these in the Teaching Standards (Department for Education, 2012). The researcher argued that "if the student teachers are only judged by how well they meet a 'standard', then they are less likely to think 'outside the box' and create new ways of seeing and teaching" (p. 376).

2.6.5 Community Placements

Despite teacher preparation innovations, very little was found in the ITE literature about the relationship between teacher preparation and the community outside of the school (Zeichner, 2016; Zygmunt et al., 2020). A community can be defined as "the neighbourhood, with all of its agencies, cultural organizations, assets and challenges that are located outside of the school building, but that have impact on the lives and academic success of the children" (Catapano & Huisman, 2010, p. 80).

Growing ITE literature has paid attention to the valuable contribution community-based clinical experiences can have in supporting the development of the GTs' professional learning. Brudevold-Iverson (2012) stated that strong home-school partnership can positively impact diverse student's learning and engagement and improve their educational outcomes. Community Placement experiences can offer the GTs with authentic learning opportunities to inform their pedagogy and practice to explore their students' family lives. These placements are key in helping the GTs establish "connections between the classroom, school, and local communities" (Gallego, 2001, p. 314) because these communities are different from their own which can make these experiences confronting for them (Hansen et al., 2017). Undertaking a community placement in a diverse community setting can help the GTs reflect on their assumptions to ensure a safe and successful learning environment for all students (Forghani-Arani et al., 2019; Lafferty & Pang, 2014). Likewise, Sleeter (2008) argues, "As long as teacher candidates see themselves as normal but not cultural, they use their own unexamined frames of reference against which to judge students, students' families and their communities" (p. 561).

Evidence shows that student teachers' professional learning experiences should take place in "authentic, relevant, real-world contexts, where students' interests, aptitudes and the issues and opportunities within their own communities can form the basis for learning"

(Koerner & Abdul-Tawwab, 2006, p. 20). Koerner and Abdul-Tawwab's finding was based on their study investigating the strategies implemented to help prepare and retain the GTs as well as to improve students' achievement in high-need, urban schools in the US. In so doing, Koerner and Abdul-Tawwab explored an ITE programme's endeavour to prepare teacher educators to better understand the background and experiences of the children in the surrounding disadvantaged community. The researchers found that teacher educators' knowledge about the marginalized position of the individuals who live in the community is critical to the success of the programme "through community bridging, making and sustaining authentic collegial relationships with parents of students in urban schools and community organizations" (p. 44). Koerner and Abdul-Tawwab concluded that ensuring a greater coordination between ITE providers and school communities is crucial as it "expands the possibility of the resources typically available to teacher education programs" (p. 44). Their study encouraged the teacher educators to further improve relevant curriculum for teacher education courses as well as to model community involvement for the GTs to support the development of their professional learning. Koerner and Abdul-Tawwab argued that students' learning should take place in "authentic, relevant, real-world contexts, where students' interests, aptitudes and the issues and opportunities within their own communities can form the basis for learning" (p. 20).

2.7 Chapter Summary

The persistent educational inequities of many impoverished communities globally place in the foreground the validity and currency of assuring equal access to education to all students (Cochran-Smith et al., 2016; Zeichner, 2020). Knowing what it takes to address educational inequity involves recognizing and explaining the educational disparities between historically advantaged and disadvantaged communities and including this knowledge in the ITE programme design. Given the importance of high-quality ITE for Aotearoa New Zealand's

education system, several initiatives within ITE provision have been proposed over the past two decades to bridge the ever-widening gap in the academic performance between student groups in Aotearoa New Zealand. Prior studies in Aotearoa New Zealand have called for a rethink on ITE to prepare 21st century culturally responsive teachers capable of promoting inclusive education and equitable educational outcomes for all learners. The recent reforms implemented in ITE provision in Aotearoa New Zealand focused on ITE quality foreground equity to bridge the ever-widening gap in the academic performance between high-achieving Pākeha students and low-achieving priority learners (Alcorn, 2014; Grudnoff et al., 2019; Sewell et al., 2017).

The evidence presented in this literature review has demonstrated that focusing on equity in ITE design plays a core role in preparing equitable-oriented GTs, capable of supporting students and overcoming their persistently inequitable learning outcomes. The key best practice characteristics of exemplary ITE designs have been synthesised from relevant models, particularly in highly effective education systems, designed to address local history of inequality through embedding the social, organisational and intellectual contexts within the ITE design. Three critical components identified in these well-designed programmes include university-school partnership, coherence between coursework and clinical placements, and 21st century teaching pedagogies.

The design elements of the MTchgLn programme under investigation were scrutinized before outlining the study framework. The five distinctive design features around which the framework of this study is constructed are: (i) extended clinical placements in partner schools; (ii) evidence-informed inquiry; (iii) exemplary school visits; (iv) culturally responsive practices; and (v) community placements.

The literature review found that partnerships between the university-based ITE provider, school and community and the integration of the theoretical and practical

underpinnings of teaching can help prepare adaptive teachers, capable of providing equitable learning opportunities for all students. Of the major recommendations and practical implications the present literature review makes for ITE provision is the importance of equipping the GTs with the necessary evidence-based knowledge, cultural responsiveness and 21st century pedagogies to promote all students learning, particularly the historically disadvantaged ones. This development can represent a key step in addressing inequity and thus close the education gaps between learner groups in Aotearoa New Zealand. The present study seeks to answer the following three research questions:

Research Question 1: *How confident are graduates of the MTchgLn programme to perform key teaching competencies/tasks that demonstrate their capability of developing high-quality teaching practices to teach all learners in Aotearoa New Zealand?*

Research Question 2: *What are Graduates Teachers' perceptions of the value of the distinctive design features of the MTchgLn programme in preparing them to teach all learners in Aotearoa New Zealand?*

Research Question 3: *What are Lead Teachers' perceptions of the preparedness of Graduate Teachers to teach all learners in Aotearoa New Zealand?*

Chapter 3: Research Methodology and Design

This study sets out to identify the Graduate Teachers' (GTs) perceptions of their confidence to teach all learners (Phase One). The second and third aims of this study are to assess the GTs' perceptions of the value of the distinctive design features of the Master of Teaching and Learning (MTchgLn) programme and the Lead Teachers' (LTs) perceptions of the GTs' preparedness to teach all learners (Phase Two). The study was conducted in two sequential phases. Questionnaires were conducted first followed up by semi-structured interviews to pursue a more cohesive and comprehensive interpretation of the GTs' responses about their perceptions of preparedness to teach all learners. Interviews were also used to find out the LTs' perceptions of the GTs' preparedness. Prior to explaining this two-phase design, the research paradigm and rationale for employing a mixed methods typology are described. Finally, the data collection phases, data analysis and the study's ethical considerations are discussed.

3.1 Research Paradigm

Providing sufficient philosophical justification of the research paradigm is fundamental to the research process (Johnson & Onwuegbuzie, 2004; Teddlie & Tashakkori, 2009). Educational research uses the term paradigm to describe a researcher's philosophical worldview or conceptual lens through which available information is interpreted and principles are constituted (Kivunja & Kuyini, 2017; Mackenzie & Knipe, 2006). Working within a theoretical paradigm "can help the novice researcher align their choices with their values" (Shannon-Baker, 2016, p. 321). Hence, a theoretical framework is essential for informing the study design as it influences the choice of methodology which ensures the integrity of the research findings, thus confirming the researcher's pre-conceived perceptions have been overcome (Creswell, 2009; Shannon-Baker, 2016; Teddlie & Tashakkori, 2011).

This study investigates the GTs' perceptions of the usefulness of a pilot postgraduate programme designed to develop their adaptive expertise to enhance the learning of priority learners (Bishop et al., 2012; Education Review Office, 2012; Savage et al. 2011; Timperley, 2013). It also investigates the GTs' confidence perceptions as well as the LTs' perceptions of the GTs' preparedness to teach all learners. To address these research aims, this study is grounded in a pragmatic conceptualization. Pragmatism is favoured because it supports the use of more "practical" research methods to generate reliable knowledge that can be applied in a similar context (Biesta, 2010; Patton, 1990; Tashakkori & Teddlie, 2003).

Pragmatic educational philosophy is underpinned by the assumption that societal and educational issues are ever-changing; therefore, a constant exploration of practical solutions to these issues needs to be emphasized (Ardalan, 2008). Research within this paradigm also stresses that multiple realities exist. Consequently, the present study seeks to investigate the GTs' perceptions of confidence to teach, as well as their perceptions of the value of the programme in enabling them to teach all learners. It also seeks to assess Lead Teachers' (LTs) perceptions of the GTs' professional preparedness.

3.1.1 Pragmatic Philosophical Assumptions

A philosophical paradigm is comprised of four fundamental elements, namely, ontology, axiology, epistemology, and methodology (Lincoln & Guba, 1985). *Ontology* is the first element of a research paradigm. This branch of philosophy focuses on what can be known about the nature of reality. Ontologically, pragmatists tend to offer more realistic solutions to the research problem through prioritizing "the outcomes of the research-the actions, situations, and consequences of inquiry- rather than antecedent conditions" (Creswell & Porth, 2017, p. 26). In other words, a pragmatist researcher stresses that reality is essentially practical and therefore solutions should be sought by prioritizing "what works" in the research context to

reach realities through mixing characteristics of qualitative and quantitative approaches (Alise & Teddlie, 2010; Feilzer, 2010; Morgan, 2007).

Axiology refers to the researcher's perception of reality and examines the ethical issues arising when undertaking research. Axiologically, a pragmatist researcher claims that absolute objectivity cannot be consistently maintained considering the unpredictable nature of reality. Thus, researchers can merely describe how reality is perceived under the assumption that "values are relative and situational, and as the culture changes so do its values" (Beatty et al., 2009, p. 109). Therefore, pragmatists advocate maintaining "both subjectivity in their own reflections on research and objectivity in data collection and analysis" (Shannon-Baker, 2016, p. 322). As the researcher, I have entered the Initial Teacher Education (ITE) field with prior insight due to my experience of 20 years both as a teacher and mentor. This background will influence my interpretation of the data collected.

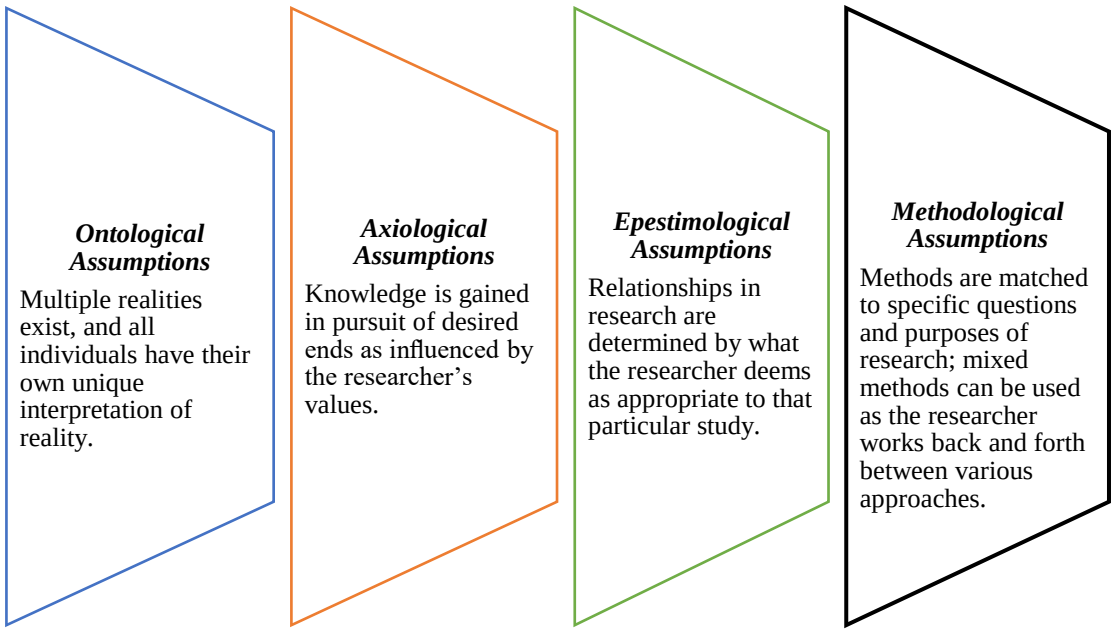
Epistemology is a key philosophical concept that pertains to understanding what truth is and how knowledge is generated. Epistemologically, pragmatism is premised on the notion that knowledge and reality are based on socially constructed beliefs and habits (Campbell, 2018). Hence, pragmatist philosophy has been favoured as it increases the potential to empower oppressed and marginalized communities via advocating for social justice issues (Kaushik & Walsh, 2019). Another advantage of adopting pragmatism in my study is that it promotes the best of both deductive and inductive tools of research in collecting and analysing data within a mixed methods study to generate useful knowledge (Eaves & Walton, 2013; Feilzer, 2010; Johnson & Onwuegbuzie, 2004).

Finally, *methodology* sets out to explain the principles behind the procedures undertaken to conduct research. Methodologically, the distinctive theoretical perspectives of a pragmatic approach are usually assessed by adopting any methods which suit the research

purpose and stage of the study (Morgan, 2014). The study uses a mixed methods (MM) design, which supports pragmatic philosophical assumptions and socially constructed views of knowledge (Denscombe, 2014; Denzin & Lincoln, 2011). I used a pragmatic methodology as it provides a sound philosophical framework for my research foci justifying the Mixed Methods design that is explained in the following section. Figure 3.1 provides a summary of the pragmatic philosophical assumptions employed in the present study.

Figure 3.1

Pragmatic Philosophical Assumptions Employed in the Study



Note. Adapted from Mertens and Wilson (2012, p. 92).

3.2 Mixed-Methods Design

A MM design is defined as "the class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study" (Johnson & Onwuegbuzie, 2007, p. 120). The purpose of mixed methods research is to provide a deep understanding of the phenomenon under investigation through mixing qualitative and quantitative methods (Morse & Niehaus, 2009; Schoonenboom &

Johnson, 2017). A MM researcher is recommended to adopt and adapt a distinct design that guides their research to answer the research questions (Creswell & Plano Clark, 2017). The MM philosophical stance favours a pragmatic approach for making more convenient methodological choices by employing both qualitative and quantitative methods to provide practical solutions to the research problem (Shannon-Baker, 2016; Tashakkori & Teddlie, 2003; Zha & Tu, 2016). It is by integrating the findings across the two phases that more reliable evidence can be attained compared to a single method to understand a phenomenon (Creswell & Plano Clark, 2017; Morse & Niehaus, 2009; Yin, 2014).

3.3 Research Approach

The research approach explains how researchers use theory to outline the research plans and procedures (Creswell & Creswell, 2018; Saunders et al., 2015). The dominant forms of logical reasoning comprise: an *inductive approach*, whereby inferences are made from the specific to the general; a *deductive approach*, whereby inferences are made from the general to the specific; and an *abductive approach*, where inferences are made by moving flexibly back and forth between these two approaches (Morgan, 2014; Reichertz, 2019). MM researchers often incorporate both inductive and deductive approaches by analyzing findings from one type of data (e.g. qualitative) to explain, explore or confirm findings from another type of data (e.g. quantitative) (Creswell et al., 2011; Leeman et al., 2015), particularly in a sequential MM design (Morgan, 2007). Hence, I employ an abductive approach to answer the research questions. This approach is often recommended as a "third type of logic" which enables researchers to draw strong conclusions "about best possible explanations" (Teddlie & Tashakkori, 2009, pp. 89, 329). The abductive approach of reasoning is often employed by pragmatist researchers who seek to generate "a kind of if-then formulation" in assessing the likely outcomes of their actions and reflections on the nature of the problem (Morgan, 2014, p. 29). Another purpose for using an abductive research approach in my study is that this approach

underlines switching between data collection and analysis, which reflects the "iterative" nature of qualitative research (Sargeant, 2012, p. 1). In view of all that has been mentioned so far, abduction was used in this study as it emphasizes identifying practical solutions by connecting theory before and after data collection phases (Morgan, 2014).

3.4 Research Design

Different theories exist in the literature regarding the availability of a single design that captures the actual diversity of MM research as several typologies exist (Greene, 2007; Leech & Onwuegbuzie, 2009; Morgan, 2014; Morse & Niehaus, 2009; Teddlie & Tashakkori, 2009). To date, inconsistencies and diverse classifications in the use of MM terminology could well continue to present a challenge particularly for new researchers and doctoral students who lack enough training in MM research (Bergman, 2011; Bishop, 2015; Frels et al., 2012; Niglas, 2009). Other conceptual and practical issues include the current shortage of a comprehensive listing of all aspects of MM studies (Bryman, 2007; Guest, 2013; Maxwell et al., 2015; Maxwell & Loomis, 2003), the increasingly growing reviews made to current designs and the considerable disparity between such proliferation of typographies (Mertens et al., 2016). In this regard, Teddlie and Tashakkori (2009) observe that "methodologists cannot create a complete taxonomy of MM designs due to the designs' capacity to mutate into other forms" and therefore preferences are increasingly polarized towards a single variation (p. 139).

Despite its perceived conceptual challenges, choosing one distinct typology is arguably indispensable in providing novice researchers with the confidence to adapt a conceptual framework as fits study objectives (Creswell & Plano Clark, 2017; Guest, 2012; Plano Clark & Ivankova, 2016). Therefore, employing a specific design is recommended as it inherently provides structure that can "help novice researchers understand how different methods can be combined" (Guest, 2013, p. 142). In seeking to answer the research questions, I have employed Ivankova and Stick's (2007) two-phase explanatory sequential mixed methods design. This

framework was preferred to ensure that the initial quantitative data collected via the questionnaire could be used to provide a general picture of the research problem and to inform the nature of the interview questions asked in the second phase (Creswell & Creswell, 2018; Ivankova & Stick, 2007).

Drawing on the American Educational Research Association's (2006) Standards for Reporting on Empirical Social Science Research, it is essential that research reports are both "warranted" and "transparent." While the former refers to providing adequate evidence that supports the study conclusions, the latter underlines the importance of producing an accurate and honest description of the research process (AREA, 2006). To this end, the chosen two-phase method, as well as the research procedures, are briefly explained in the following section.

3.5 Explanatory Sequential Design

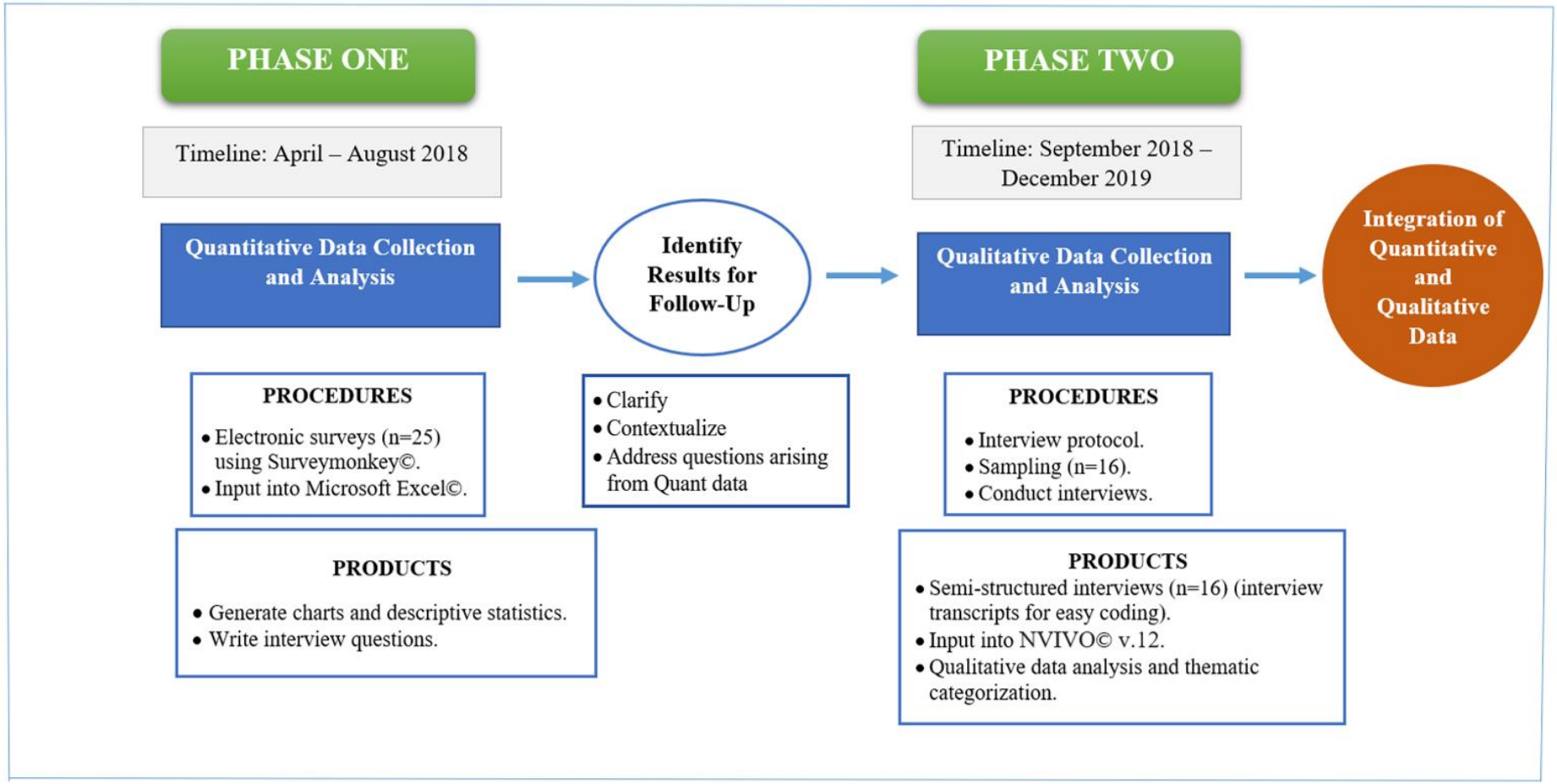
Sequential MM designs are usually undertaken when the collection of data using one type of research approach establishes the foundation of data collected using another type (Faulkner & Faulkner, 2018). Hence, sequential time orientation is particularly relevant to researchers who employ one data set initially to inform a subsequent practice such as development of an instrument, designing an intervention or selecting participants (Creswell & Plano Clark, 2017; Onwuegbuzie et al., 2010). This study addressed the issue of what constitutes an exemplary postgraduate ITE programme designed to develop graduate teachers who have the skills and competencies to adapt their practice in evidence-informed ways to enhance priority learners' academic outcomes. The explanatory sequential mixed methods design employed in the present study involved collecting quantitative data first and the explaining these results with in-depth qualitative data (Creswell & Creswell, 2018; Ivankova & Stick, 2007).

Phase One was quantitative in nature to assess the GTs' confidence to develop effective teaching practices for all learners, having graduated from the MTchgLn programme. The

research also aimed to investigate the effectiveness of each of the MTchgLn programme's distinctive design features on developing the GTs' teaching practices. These data were collected through an online questionnaire. These quantitative results guided the formulation of interview questions in the second phase. This second and final qualitative phase involved conducting semi-structured interviews with the participants. The purpose of the interviews with the GTs was to support a comprehensive and coherent explanation of the questionnaire responses (Creswell & Creswell, 2018; Creswell & Plano Clark, 2017). The interviews with LTs provided a different perception of the GTs' preparedness. Both quantitative and qualitative data were finally integrated to provide a deeper 'explanation' of the data under investigation- the value of the MTchgLn programme. Data retrieved from the GTs (RQ2) and LTs' perceptions of the GTs' preparedness (RQ3) were integrated and juxtaposed in the Discussion Chapter. An overview of the study's MM design is presented in Figure 3.2.

Figure 3.2

Study Design - A Mixed Methods Explanatory Sequential Design



Note. Adapted from Ivankova and Stick (2007, p. 98).

3.6 Phase One - Questionnaire

A questionnaire can be used to understand a research problem before planning the actions to address it (Abowitz & Toole, 2010; Tomal, 2010). This study used a questionnaire to investigate the GTs' perceptions of their teaching competence as well as to inform the design of the subsequent interview questions. Questionnaires are usually used to collect information from "between 100 and 1,000 (Rowley, 2014, p. 310). However, in my study using a questionnaire suited the wide geographical area of participants who had been employed in different schools across New Zealand or overseas. The questionnaire was also preferred as it investigates a sample of GTs' perceptions who represent the wider population of the GTs. The questionnaire has, therefore, conveyed a panoramic view of the situation under study (Denscombe, 2014).

Phase One of the present study aimed to identify the GTs' perceptions of their competence to develop effective teaching practices as well as their perceptions of the impact the MTchgLn programme had on developing their teaching practices. To this end, descriptive data were collected by means of an online questionnaire consisting of demographic questions, as well as closed and open-ended questions. Two major challenges with questionnaires are their low return rate when sent by email and the possible of misunderstanding survey items. To address these challenges in my study, relevant survey items were adapted from existing instruments (see Appendix B), which were relevant to this study and piloted in two piloting groups. The first strategy was to adapt previously validated and published survey questions as this practice can help to ensure reliability and validity of the collected data (Blair et al., 2014). Reliability confirms whether research findings can be replicated, whereas validity investigates the extent to which an instrument assesses what it emphasises to measure (Mertens, 2018; Riger & Sigurvinsdottir, 2016). The second strategy is explained in the following section.

3.6.1 Pilot Questionnaire

A preliminary pilot study was conducted to overcome the limitations of questionnaires. Two piloting groups perused the questionnaire draft to establish the suitability and neutrality of its modified questions before the final version of the questionnaire was distributed to the GTs. The first piloting group comprised of six post-graduate students in education; the second group included three GTs. Piloting the survey twice proved particularly useful, not only for assessing response bias, but also for improving the effectiveness of the survey process. For example, the first open-ended question was corrected for bias. The first draft of the question read: "*How effectively do you think the MTchgLn programme enabled you to personalize priority learners' learning?*" The modified question had the loaded adverb "*effectively*" removed and other options were included for respondents to comment on.

Another key change was made to limit the number of closed questions from 30 to 24 items and to add two open-ended questions. Mixing open-and closed-ended items on the questionnaire can produce a more detailed description and analysis of the phenomenon under investigation (Johnson & Christensen, 2000; Leech & Onwuegbuzie, 2010; Tashakkori et al., 1998). This type of mixing is often identified as "data triangulation". Examples of data triangulation include the sequential use of an open-and closed-ended questionnaire items in the same research study (Johnson & Turner, 2003). A few open-ended questions are often embedded to web-based questionnaires to retrieve a range of responses by allowing respondents an opportunity for feedback or further clarification of their answers (Behr et al., 2014). Data triangulation is also favored for its administrative convenience in facilitating automatic transcriptions and web-based coding (Singer & Couper, 2017). The two open-ended questions generated a range of responses that helped to assess the impact of the MTchgLn programme on graduates' current teaching

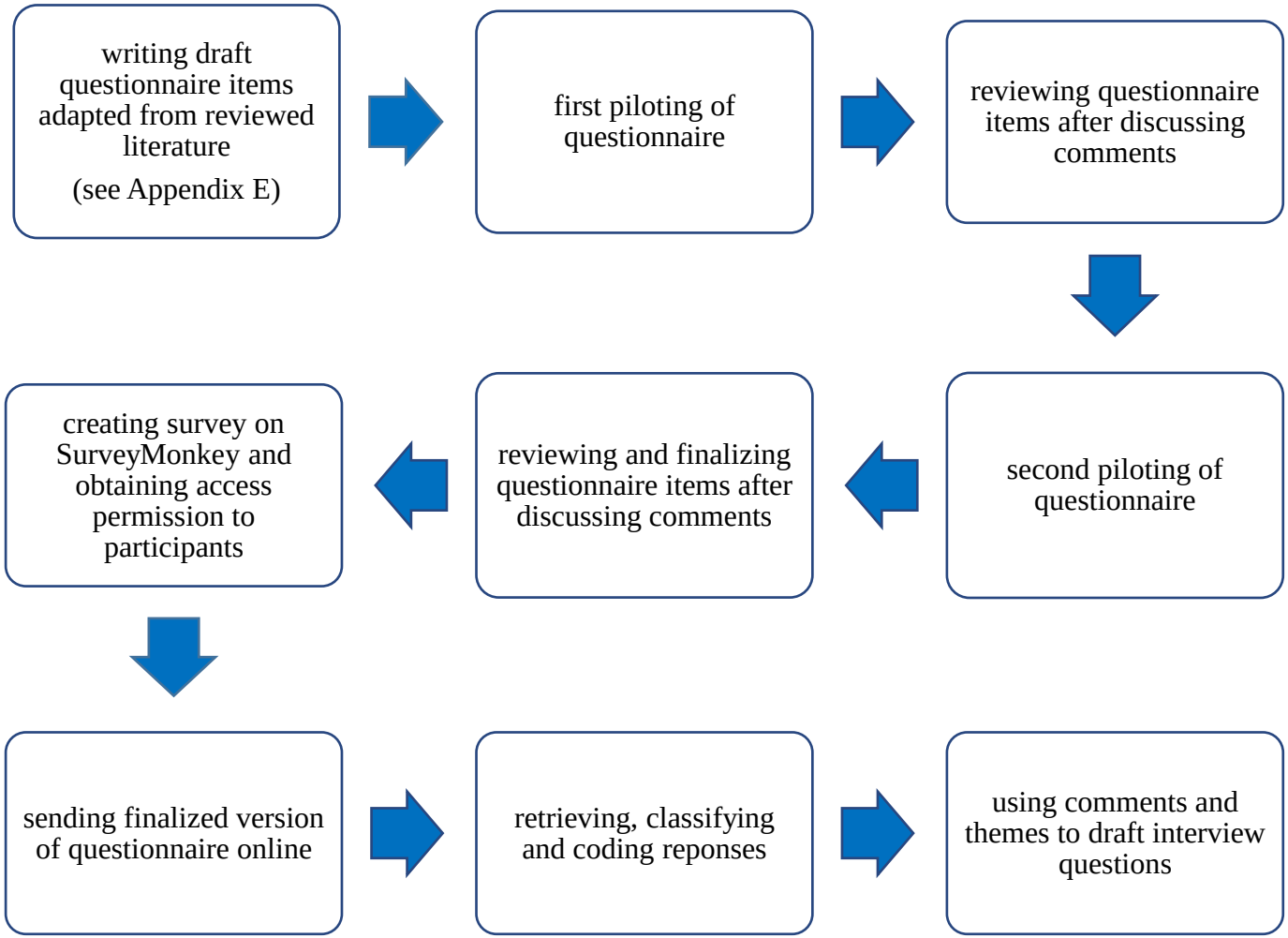
practices. In addition, the second pilot survey resulted in the inclusion of further questions in the demographics section to inquire about participants' prior qualification levels and majors (see Appendix C – Graduate Teacher Questionnaire).

3.6.2 Phase One - Data Collection Procedures

Phase One involved surveying the GTs to assess their perceptions of their confidence to teach all learners. Following the piloting stage, questionnaires were distributed through an online survey research software company, http://surveymonkey.com. Figure 3.3 summarizes Phase One data collection procedures.

Figure 3.3

Phase One - Data Collection Procedures



3.7 Phase Two - Interviews

A research interview is defined as a "process in which a researcher and participant engage in a conversation focused on questions related to a research study" (DeMarrais, 2008, p. 54). This purposeful conversational practice is often conducted to obtain interviewees' description of their worldview to provide a complete understanding and interpretation of the described phenomena (Kvale & Brinkmann, 2008). The semi-structured interview is a convenient qualitative data collection instrument guided by prepared broad questions for maintaining the researcher's interests while facilitating the development of respondents' more spontaneous narratives (Brinkmann, 2014). In a semi-structured interview, considerable flexibility is enhanced by probing the interviewee responses to elicit rich qualitative data to complement results retrieved from the previous phase. Interviews, therefore, were a valuable method for exploring participants' purposes, practices and knowledge.

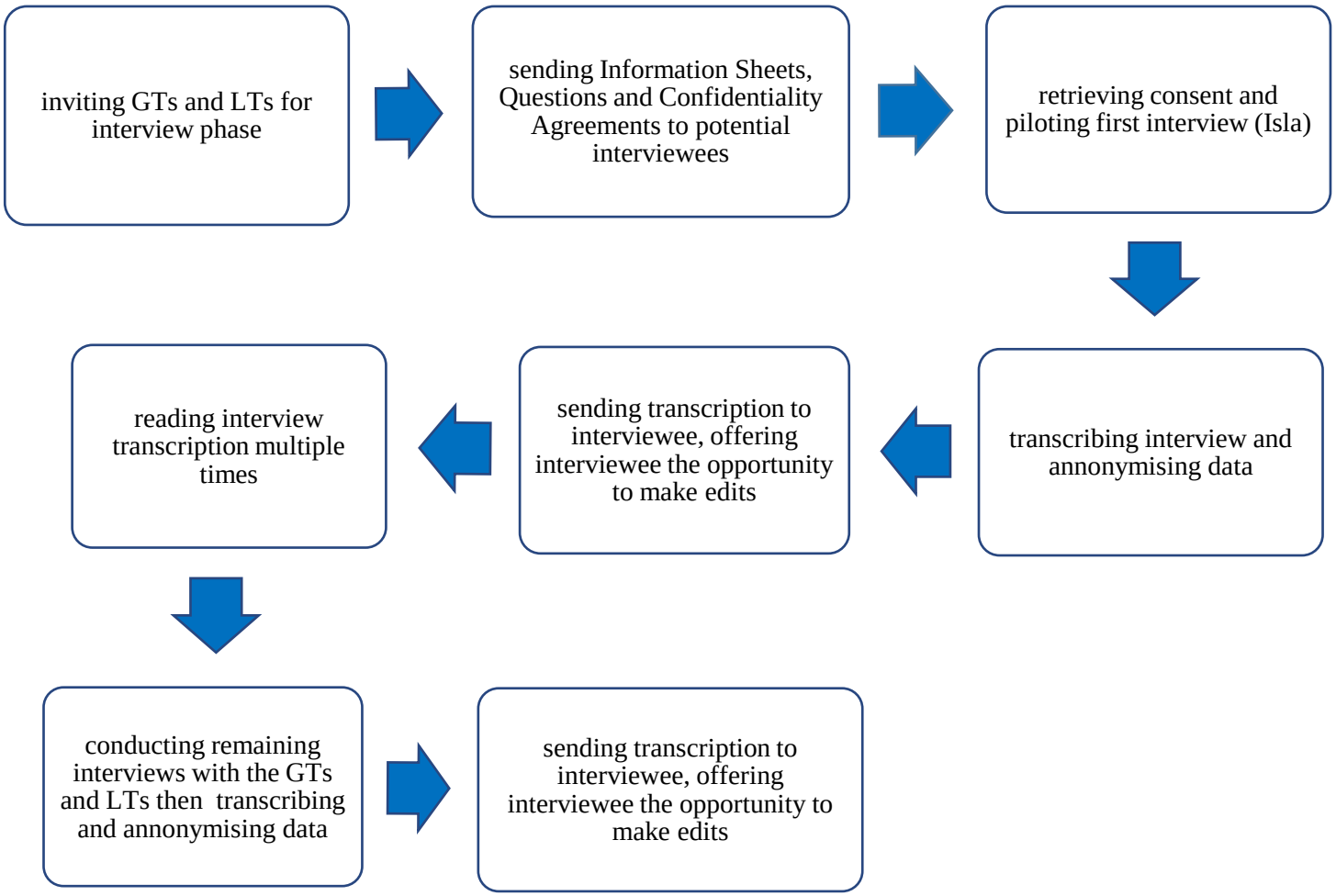
3.7.1 Phase Two - Data Collection Procedures

Phase Two involved conducting semi-structured interviews with 12 GTs to further explore their perceptions of the impact of the MTchgLn programme on their professional preparedness to teach all students in Aotearoa New Zealand. I also interviewed four LTs to understand their perceptions of the GTs' preparedness to teach diverse learners. An interview protocol was used, including follow-up questions with the aim of exploring the GTs' open-ended questionnaire responses that were particularly interesting or ambiguous. A similar format was used to probe their responses. In so doing, a generic list of questions was prepared to further explore the GTs' perceptions of the effectiveness of the MTchgLn distinctive design features to investigate the LTs' perceptions of preparedness to teach diverse learners, especially priority learners. The questions enabled much richer interpretations to be made. For example, one question used was: "*Is there anything else you would like to say about the impact of the programme design on your teaching practice?"* (Appendix D - Teacher Interview Protocol &

Interview Questions). Another question addressed to the LTs read*, "What aspects would you change in the programme if you had the chance to develop your role more? Why?"* (Appendix. E – LT Interview Protocol & Interview Questions). All interviews were audio-recorded and transcribed. Following the transcription phase, the interviewees were offered the opportunity to read their transcripts and decide whether to approve or remove any part of it (see Appendices F – Authority for the release of transcripts). Phase Two data collection procedures are summarized in Figure 3.4.

Figure 3.4

Phase Two - Data Collection Procedures



3.8 Research Setting and Participants

The MTchgLn programme is a 12-month intensive postgraduate qualification offered across the seven providers in Aotearoa New Zealand (at the time this study started). The programme under study is structured around three interconnected strands: Pedagogy, Curriculum, and Inquiry, and maintains coherence between coursework and clinical placements with a particular focus on priority learners. Student-teachers also must spend almost four months at University and another four months in two Partner Schools to complete two mandatory sustained teaching block placements of seven-weeks as well as spend three days a week for almost 31 weeks of the school year. *Sunrise University* is the pseudonym used to refer to the education provider where graduates completed their MTchgLn programme in an Aotearoa New Zealand city between 2015 and 2017. The MTchgLn programme 2016-year plan is outlined in Appendix G.

Partner Schools play a central role in the programme as clinical sites, where student-teachers spent three days per week (except block weeks and extended practicum) engaged in specific professional learning with one Lead Teacher (LT) and Mentor Teacher (MT). Partner Schools get sent a comprehensive guide at the start of each term to identify the learning opportunities that need to be part of the school placements, particularly in relation to university lectures. The Partner School Guide stemmed from intensive efforts of school and university-based teacher educators who collaborated to lay out the overall learning outcomes of the MTchgLn and the recommended activities, tasks and assessment criteria.

The MTs who coach and mentor the student-teachers during practicum are provided professional development to improve their mentoring competencies. Extended practicum entails completing a sustained block of seven weeks in the Partner School they had been allocated. The

student-teachers are also required to conduct five to six visits to a number of local ‘exemplary schools’, as part of their practica experiences. Each exemplary school displays a specific exemplary feature to meet the aims of the programme, e.g. cultural responsiveness, adaptive expertise, 21st century pedagogies and evidence-informed inquiry. The final requirement that must be met is for student-teachers to spend 40 hours (later reduced to 25 hours) in a community placement in settings that work with groups identified by the Ministry of Education (MoE) as priority learners. These community groups include English language schools; church-run camps; social services; red cross refugee services and disability services.

Recruiting a statistically representative participant sample enables conclusions from my study to be generalized to a wider population in similar contexts (Rea & Parker, 2014; Ritchie et al., 2013). To date, some writers (e.g. Bazeley, 2017; Leech & Onwuegbuzie, 2010) have recognized the challenge of sampling in MM designs compared to mono-method studies. Adopting Onwuegbuzie and Collins’ (2007) MM sampling typology, the two components used for choosing participants for the questionnaire were mainly comprised of the sequential time orientation and “nested” relationship of samples, whereby “the sample members selected for one phase of the study represent a subset of those participants chosen for the other facet of the investigation” (Onwuegbuzie & Collins, 2007, p. 292). Initially, the three cohorts of 72 graduates were invited to complete the online questionnaire, with 25 graduates completing it giving a 35% response rate. A subset of these, (n=12), agreed to be interviewed later. Seventeen of the 25 GTs who completed the survey were in the secondary sector while eight were in the primary sector. Seven GTs graduated in the first cohort (2015), seven in the second (2016) and 11 in the third (2017). The profile of the GTs who completed the questionnaire is presented in Table 3.1.

Table 3.1

Questionnaire Profile - Graduate Teachers

Participant Code	***MTchgLn Cohort***	***Major/Sector***
P1	2016	Primary /Education
P2	2017	Architecture / Industrial Design
P3	2017	Geography & Psychology
P4	2017	Psychology & Spanish.
P5	2016	Geography & Environmental Studies
P6	2016	Physical Education
P7	2016	Statistics & Nutrition
P8	2015	Psychology
P9	2017	English
P10	2017	BA - Environmental Studies with a Development Studies minor.
P11	2015	Theatre Studies & English Literature
P12	2015	Secondary
P13	2017	Education
P14	2017	Animal Science
P15	2015	Physical Education
P16	2016	Classical Studies, History & English
P17	2016	Sport & Exercise
P18	2016	Psychology
P19	2017	Mathematics
P20	2017	Secondary
P21	2017	Graphic Design
P22	2015	Design
P23	2017	Education
P24	2015	Secondary
P25	2015	Physical Education

After analysing of the quantitative data from Phase One, an email was sent to participants who had indicated their willingness to be interviewed. Detailed information about the study and their rights throughout their participation was also emailed (see Appendix H). Of the 25 GTs who completed the survey, 13 declined to participate in Phase Two, leaving 11 GTs who participated in the face-to-face interviews. One GT opted to send her responses by email due to time constraints at her school. Out of six invitations sent to LTs, four agreed to be interviewed. The profile of each interviewee is presented in Tables 3.2 and 3.3.

Table 3.2

Interview Profile - Graduate Teachers

Participant (pseudonym)	***MTchgLn Cohort***	***Major***	***Total yrs. of experience***	***Sector***	***School (pseudonym)***	***School Decile***
Jack	2015	Psychology	18	Primary	PRS1	1
Emily	2017	Media & Communication	1	Primary	PRS2	7
Mai	2017	Early Childhood Education	1	Primary	PRS3	9
Isla	2017	Geography & Psychology	1	Primary	PRS4	10
Harper	2017	Exercise & Sport Science	1	Primary	PRS12	6
Violet	2017	Education	1	Primary	PRS13	8
Noah	2017	Mathematics	1	Secondary	SS1	6
Sophie	2015	Sport & Exercise	3	Secondary	SS2	7
Amelia	2016	English	2	Secondary	SS3	9
Chloe	2016	Geography	2	Secondary	SS4	6
Hunter	2017	Geography	1	Secondary	SS4	6
Susie	2017	Animal Science	1	Secondary	SS5	9

Table 3.3

Interview Profile - Lead Teachers

Lead Teacher (pseudonym)	***School (pseudonym)***	***School Decile***
Charlotte	SS4	6
Lagi	SS1	6
Tai	PRS3	9
Olivia	PRS5	10

3.9 Data Analysis

Data analysis can be defined as the process of "getting the most out of a dataset, approaching it in several different ways so that the data tell the complete story" (Kent, 2015, p. 74). Data collected in the present study were prepared for analysis as guided by the research questions. Analyzing data involved the use of mixed method analysis whereby qualitative methods

were employed to analyse the quantitative results and vice versa (Creswell & Plano Clark, 2017). This section outlines the data analysis methods used in this study.

3.9.1 Phase One

For the first research question, I needed to evaluate the GTs' confidence to develop effective teaching practices for all students, particularly priority learners. As such, I used the questionnaire closed-question responses to develop descriptive statistics and generate charts and graphs using Microsoft Excel. The survey open-item questions were then coded to identify common themes and notable sub-themes using thematic coding (Saldaňa, 2015). Thematic coding entails using a single word or short phrase to describe and summarize the main idea or theme (see Appendix I-Sample of Descriptive Data Coding). A preliminary analysis of phase one questionnaire findings was undertaken. The themes identified needed further exploration but provided a useful framework from which interview questions were developed. The sequential and complementary nature of this study's mixed method design meant that data gathered during the interviews could be used to help explain the questionnaire results in more depth (Klassen et al., 2012).

3.9.2 Phase Two

Data for the second and third questions were analysed differently. Firstly, I outsourced the transcription of the interviews to use the time more effectively. Following transcription, I used a qualitative data analysis software, *QSR NVivo v.12* (QSR International, 2018) to establish a more accurate and transparent picture of the data. *NVivo Coding* was first employed to analyse the raw data and categorize them to identify common themes pertaining to each question response (Braun & Clarke, 2013). Using participants' actual words became especially important to prioritize their voices (Miles et al., 2014). Secondly, *Open Coding* was employed whereby concepts were

identified and later grouped into conceptual categories (Khandkar, 2009). Using this type of coding is recommended because it generates "higher-abstraction level type categories from sets of concepts/variables" (Wolfswinkel et al., 2013, p. 51). The themes were then placed within categories to show similar responses across the sample, a process referred to as *Axial Coding* (Corbin & Strauss 2008; Hilal & Alabri, 2013). The final cycle of data analysis entailed grouping the codes into sub-themes and categories to develop findings statements (see Appendix J- Sample of Axial Data Coding). During this final coding process, the sample was perceived as adequate for theoretical saturation, whereby no new concepts and/or categories emerge from the data (Low, 2019). Key concepts were derived from the analysed data in response to each of the second and third research questions.

3.10 Ethical Considerations

Researchers are ethically obligated to protect participants from any sort of physical, emotional, mental or spiritual harm (O'Reilly & Kiyimba, 2015). Identifying different levels of ethical challenges and complexities that can arise from designing a study to reporting findings is key for any researcher (Creswell & Poth, 2017; Preissle et al., 2015). I adhered to ethical rules and practices for the whole research process from the study design, sampling, data collection, and analysis of the findings. These ethical challenges are discussed below.

3.10.1 Ethics of Study Purpose and Design

A growing body of literature has recognised the importance of anticipating ethical challenges, particularly when a sequential MM design is employed due to the emergent nature of this framework (Leavy, 2017; Östlund et al., 2011; Preissle et al., 2015). Potential ethical issues, e.g. anonymity, privacy and confidentiality, as well as their solutions were considered and

discussed in detail with my supervisors prior to commencing this study. In addition, the PhD confirmation expert panel consulted and helped me to analyse the ethical issues present in this project at the planning stage. I consulted the Code of Ethical Conduct for Research, Teaching and Evaluations Involving Human Participants (Human Ethics Committee, 2017). Ethical clearance was sought from the university, which comprised a detailed explanation of the purpose of my study in addition to all necessary documents - such as the Low Risk Notification, as well as the "Screening Questionnaire to Determine the Approval Procedure"- in accordance with university guidelines. The current research project was considered a low risk project as indicated in a preliminary assessment (see Appendix K - Ethics Committee Report).

3.10.2 Ethics of Sampling and Selection

Sampling participants can pose serious ethical concerns for the research, particularly within a sequential MM design (Preissle et al., 2015). One of the principal concerns is that participants may find their long-term involvement in such projects to be burdening, resulting in their attrition for a variety of reasons, e.g. disinterest or staff turnover (Creswell & Plano Clark, 2017; Plano Clark & Ivankova, 2016; Teddlie & Yu, 2007). In mitigation of participants' extended time commitment, research information was fully disclosed, and the value of their participation was communicated throughout the research process to encourage continued engagement in the study (Hammersley, 2015). In addition, rationalizing the collection of demographic data in the survey presented a direct ethical challenge to the first phase. The underlying justification for seeking demographic data was to help describe the sample and answer the research questions. Participants' demographic information helped assess who to invite for an interview and how-to breakdown overall survey response data into meaningful groups of respondents.

The researcher-participant relationship can pose a potential ethical threat to the research. As a researcher, I did not have any conflict of interest nor any influential relationship with the participants. However, one way to mitigate this ethical risk is though employing reflexivity (Lahman et al., 2011). Guillemin and Gillam (2004) define reflexivity in research as "a process of critical reflection both on the kind of knowledge produced from research and how that knowledge is generated" (p. 274). Reflexive researchers openly locate themselves in the project as they recognize any potential effects that their philosophy, feelings, and personal experience may have on the research process and outcomes (Berger, 2015).

3.10.3 Ethics of Data Collection and Analysis

Research projects need to maintain compliance and integrity to be considered ethical (Preissle et al., 2015). The former term focuses on the ethical treatment of participants, whereas the latter assesses the quality of the research. Underscoring the importance of design quality, Teddlie and Tashakkori (2009) urge researchers to carefully select and implement "the most appropriate procedures for answering the research questions" (p. 302). To this end, the tools employed in the study for data collection and analysis were evaluated according to the following logical tests: internal validity, external validity and reliability. The first tool, internal validity, also known as credibility, confirms that "the changes observed in the dependent variable are due to the effect of the independent variable, not to some other unintended variables" (Mertens, 2015, p. 130). Triangulation was employed to ensure internal validity of the research. This key component of MM designs entails studying the same phenomenon whereby the results obtained from qualitative and quantitative methods are directly compared for convergence and divergence (Flick, 2018; Flick et al., 2012; Plano Clark & Ivankova, 2016; Yin, 2015). Triangulation of data was used to seek a comprehensive understanding of the situation under investigation through

employing multiple data collection sources, i.e. document analysis, open- and closed- ended questionnaire items and semi-structured interviews.

External validity, also referred to as generalizability, involves evaluating the extent to which one study findings can be replicated in another situation (Mertens, 2015). The present study investigated one programme and therefore the research findings and conclusions are not generalizable. Pragmatists utilize this logical test to "investigate the factors that affect whether the knowledge we gain can be transferred to other settings" (Morgan, 2007, p. 72). To this end, descriptions of participants, research sites and contexts were described in detail to maximise transferability. The third and final test, reliability, or dependability, refers to demonstrating that any of the study phases - such as the data collection procedures - can produce consistent results if repeated (Yin, 2014). Reliability of the data was ensured by including detailed descriptions of the data collection methods. In addition, I engaged in a thorough data analysis process to ensure my findings were accurate within the context of the study (Brodsky et al., 2016).

3.10.4 Anonymity, Confidentiality and Privacy

Maintaining participants' anonymity, privacy and confidentiality throughout all stages of the research cycle is well-documented (Surmiak, 2018; Thorne, 2016). In the present study, participants' anonymity, privacy and confidentiality were carefully considered throughout the research process as explained below.

Anonymity is an ethical prerequisite which refers to "the degree to which the identity of a message source is unknown and unspecified" (Scott, 2005, p. 243). Researchers may encounter participants who wish to have their identity connected to their story, and therefore may use given names to respect their wishes (Lahman et al., 2015; Newell, 2010). In the present study, I discussed

with participants whether to use their real names and decided to use pseudonyms to conceal their identity and their schools in transcripts and reporting of findings, as per their preferences.

Researchers are required to adhere participants' right to privacy, whereby the participant has control within the collection and discrimination of information (Dinev et al., 2013). Participants in this study had control over information they wanted to share and how. In so doing, each participant was given the opportunity to read the interview transcript and add more information or delete anything they did not want to be published. Importantly, participants were assured that the research did not involve any form of deception. To assure the participants' privacy, pseudonyms were used for all participants as well as their schools. As such, each participants was provided with an Information Sheet and a Consent Forms to protect against the disclosure of information. Norton (2018) defines *consent* as "asking people to agree to take part in our research without any coercion" (p. 181). Another important practice for establishing the ethical basis of social science research involves ensuring voluntary participation (Kılınç & Fırat, 2017). Voluntary contribution in this project was also established by offering all participants the opportunity to withdraw without providing any reason at any time during the study.

The last ethical concept is confidentiality, which reflects the application of the principle of respect for persons in both anonymity and privacy concepts (Wiles et al., 2008). Confidentiality is a major ethical concept which ensures that "the data will be reported in such a way that they cannot be associated with a particular individual" (Mertens, 2012, p. 36). The risk of a breach of participants' confidentiality was considered prior to commencing the study and, therefore, a few steps were taken to ensure transparency. Prior to data collection, I fully explained what involvement in the study entailed, and retrieved signed consent forms accordingly. Another important step to ensure confidentiality was to securely save the data on the *H* directory, as the

most secure directory on a single computer at the university. Saved data were password protected and only I knew the password. I ensured that these were not identifiable back to the original respondents to mitigate the risk of unauthorized access. Data will be disposed of at the time of the disposal (APA, 2010, recommends 5 years after completion of the study).

3.11 Chapter Summary

The reasoning to ground my study in a pragmatic paradigm has been explained. The rationale for using pragmatist philosophical assumptions - ontological, axiological, epistemological and methodological - was to investigate the pilot ITE programme under investigation. The study's mixed methods, explanatory sequential design was justified and explained. The research process was also described and justified, such as specific methods of data collection, data analysis as well as the research ethics observed. The findings in relation to each of the three research questions will be presented in the next chapter.

Chapter 4: Findings

Introduction

This chapter firstly reports the findings of Graduate Teachers' (GTs) self-perceptions of their confidence to teach all learners in Aotearoa New Zealand (RQ 1). Secondly, the chapter reports the GTs' perceptions of the value of the distinctive design features of the Master of Teaching and Learning (MTchgLn) programme to prepare them to teach all learners (RQ 2). Thirdly, the chapter reports Lead Teachers' (LTs) perceptions of the GTs' preparedness to teach all learners (RQ 3).

Data were gathered through closed and open-item questionnaire items and interviews. These data sources were then triangulated to build a fuller picture of the GTs' confidence to teach diverse learners. Providing compilation and synthesis of data also contributed to the identification of the GTs' perceptions of the value of the programme's five features in preparing them to teach all learners as well as the LTs' perceptions of the GTs' preparedness to develop effective teaching practices to teach all learners. Table 4.1 describes codes allocated to the research tools to enable a clear understanding of data sources.

Table 4.1

Codes of Data Sources

Research Tool	***Code Sample***	***Code Sample Description***
Questionnaire open-ended response	P1	P (Participant/GT); 1 (First)
Interview GT	Emily GT/INT	Emily (Pseudonym); GT (Graduate Teacher); INT (Interview)
Interview LT	Olivia LT/INT	Olivia (Pseudonym); LT (Lead Teacher); INT (Interview)

This chapter comprises three main sections. First, findings are presented from the GTs' questionnaire closed-question responses are presented. Next, salient themes from the survey open

item responses, integrated with interview findings are presented. Finally, the LTs' responses are outlined before conclusions are reached.

4.1 Perceptions of Teaching Competence

Quantitative data retrieved from the questionnaire's closed-item questions indicated the GTs' self-perceptions of their competence to develop effective teaching practices underpinning the aims of the MTchgLn programme. The basic premise of the exemplary Initial Teacher Education (ITE) postgraduate initiative is to enhance the GTs' professional capability "to ensure excellent and equitable outcomes for all learners" (Ministry of Education [MoE], 2018a, p. 1). Survey closed items measured the GTs' confidence to enact high-quality teaching practices that reflect *The Standards for the Teaching Profession* for GTs and therefore, meet the expectations of the MoE in Aotearoa New Zealand. These criteria comprise six standards: i) Te Tiriti o Waitangi partnership; ii) professional learning; iii) professional relationships; iv) learning-focused culture; v) design for learning; and vi) teaching, and form the structure for reporting in the following section.

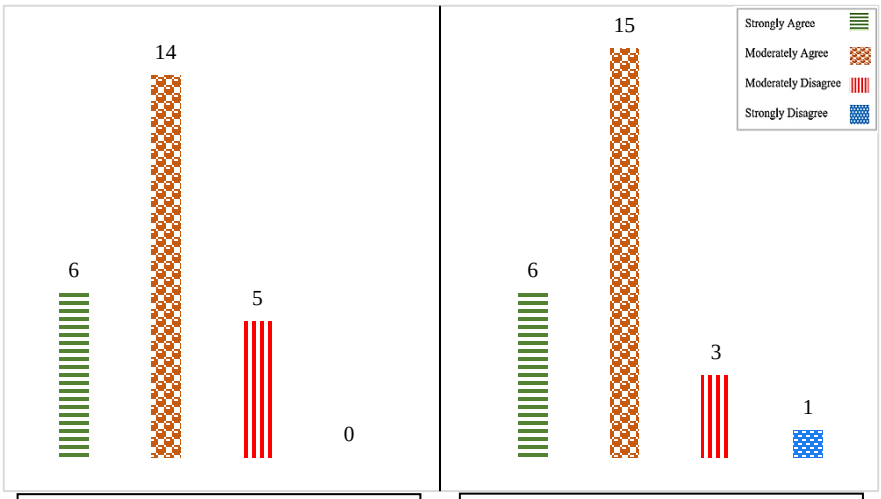
4.1.1 Te Tiriti o Waitangi Partnership

Professional Standard One ensures that all teachers are committed to honouring Te Tiriti o Waitangi and to understand its implications such as creating a positive future for tangata whenuatanga through maintaining ongoing peaceful power-sharing relationships between Māori and all other New Zealanders. As indicated in Figure 4.1 below, items 3 and 4 aimed to capture how well the GTs believed the MTchgLn had assisted them to honour and understand Te Tiriti o Waitangi. A large proportion of the GTs indicated that the programme was effective in supporting their commitment to the principles of Te Tiriti o Waitangi to inform their teaching practice (80%), while less than a quarter (20%) disagreed. Furthermore, responses to Item 4 show that 86% of the

GTs generally felt that the programme boosted their cultural awareness to use Māori students' experiences and knowledge to enhance their learning.

Figure 4.1

Response for Te Tiriti o Waitangi Partnership –Items 3 and 4



Item 3: I am confident I can use the principles of Te Tiriti o Waitangi to inform my teaching practice.

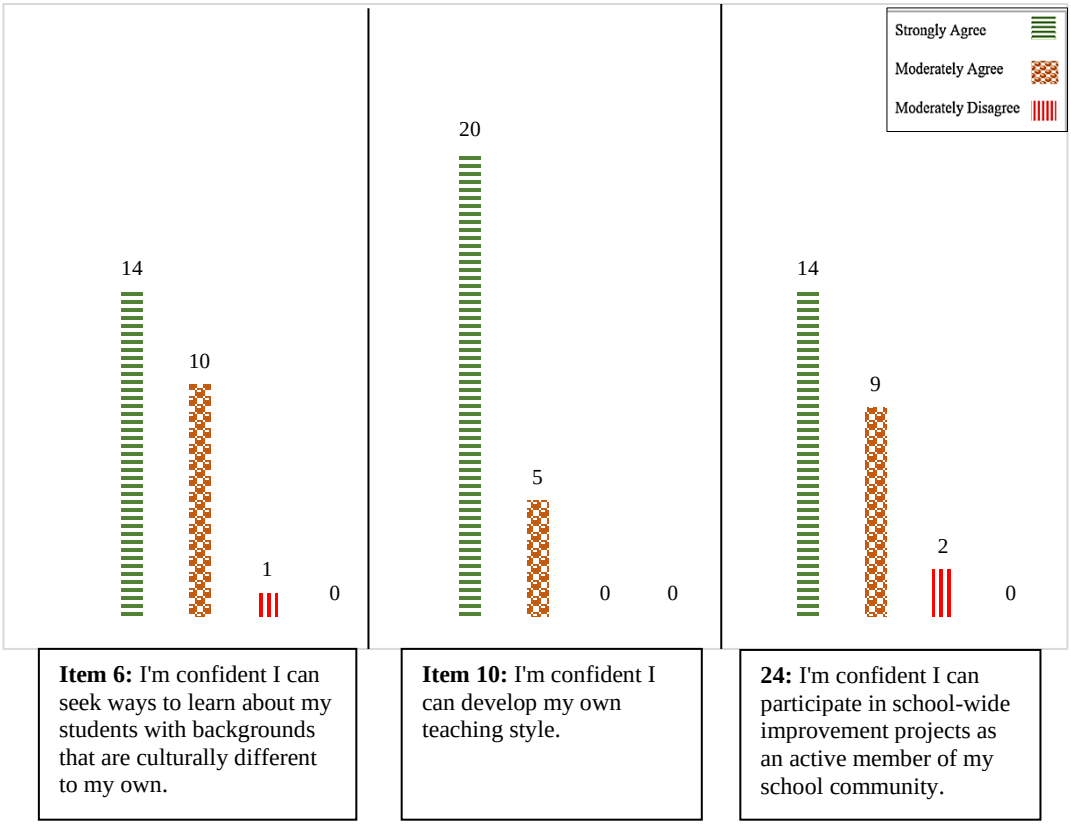
Item 4: I am confident I can use Māori students' experiences and knowledge to enhance their learning.

4.1.2 Professional Learning

Professional Standard Two proposes that all teachers need to engage in professional learning to develop their capability to enhance all learners' learning. The GTs were asked to rate how confident they were that the MTchgLn programme had prepared them to use an evidence-based inquiry process to evaluate their professional knowledge and skills and to understand the impact on students' learning and achievement. Figures 4.2 and 4.3 depict the summary statistics for the GTs' responses to three items related to this standard respectively (six in total).

Figure 4.2

Responses for Professional Learning-Items 6, 10, 24

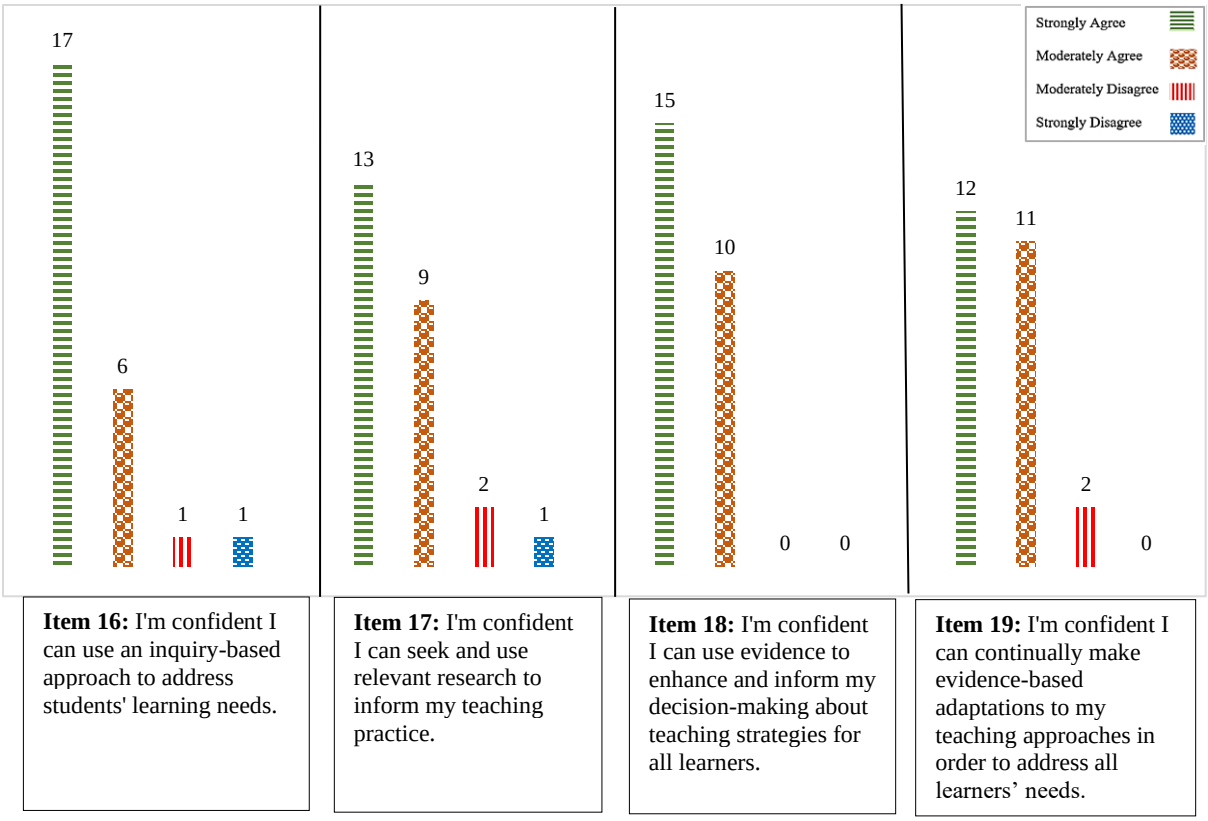


The three items in Figure 4.2 asked the GTs to indicate whether their commitment to their professional learning gained whilst on the MTchgLn programme had enabled them to adopt an investigative evidence-informed inquiry approach to their teaching. Regarding item 6, almost all the GTs reported feeling confident to seek ways to learn about students with backgrounds that are culturally different to their own (96%). Likewise, when asked about their academic preparedness to articulate their own teaching philosophy and practice (item 10), all surveyed GTs (100%) expressed that they felt confident to develop their own teaching philosophy, whereas only 12% of the surveyed GTs disagreed. Similarly, in response to item 24, most of the GTs (92%) felt

confident in participating in school-wide improvement projects as active members of their school community, while only the remaining 8% disagreed.

Figure 4.3

Responses for Commitment to Professional Learning-Items 16, 17, 18, 19



Rresponses to the four items in Figure 4.3 retrieved positive responses overall. For example, in response to item 16, most of the GTs (92%) felt confident about their preparedness to use an inquiry-based approach in their teaching. Similarly, in response to item 19, almost all of the participants (92%) expressed confidence to make ongoing evidence-based adaptations to their teaching approaches to address students' learning needs. In addition, item 17 showed that most GTs (88%) were confident they could seek and use relevant research to inform their teaching

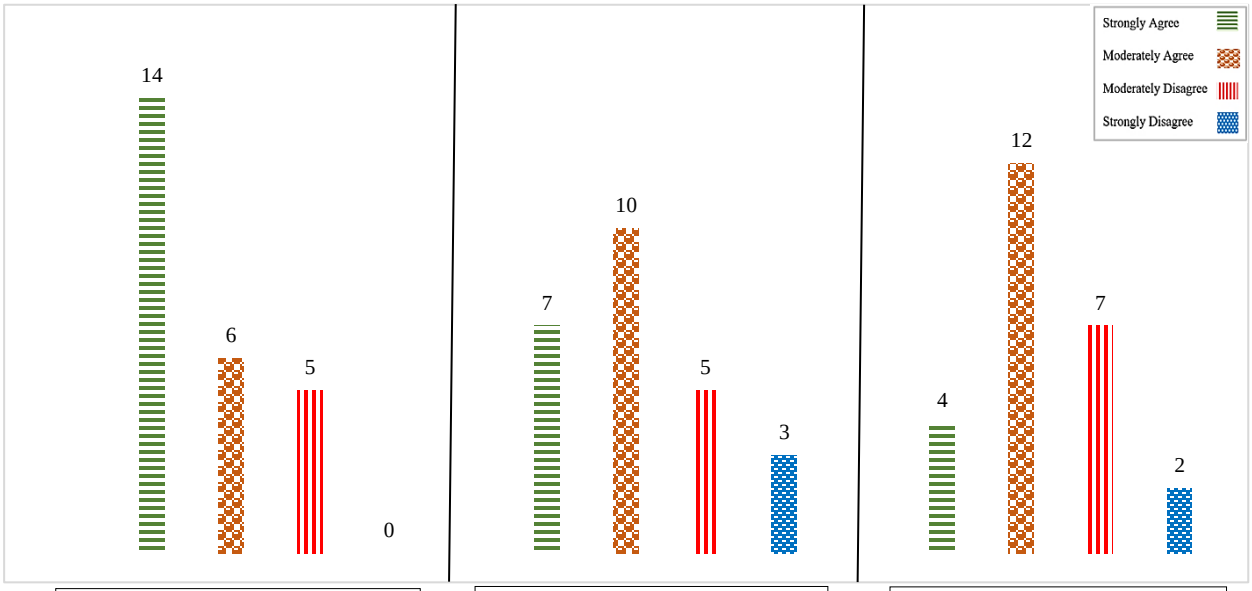
practice. Item 18 also showed an overwhelming consensus (100%) that all GTs felt efficacious about using evidence to inform their decision-making about teaching strategies for all learners.

4.1.3 Professional Relationships

Professional Standard Three articulates that all teachers can establish and maintain professional relationships focused on the learning and wellbeing of learners and their whānau. The surveyed GTs expressed their confidence to develop and maintain collaborative learning-focused relationships with all learners and their whānau. Figure 4.4 provides the summary statistics for the GTs' responses to three items.

Figure 4.4

Responses for Professional Relationships-Items 20, 22, 23



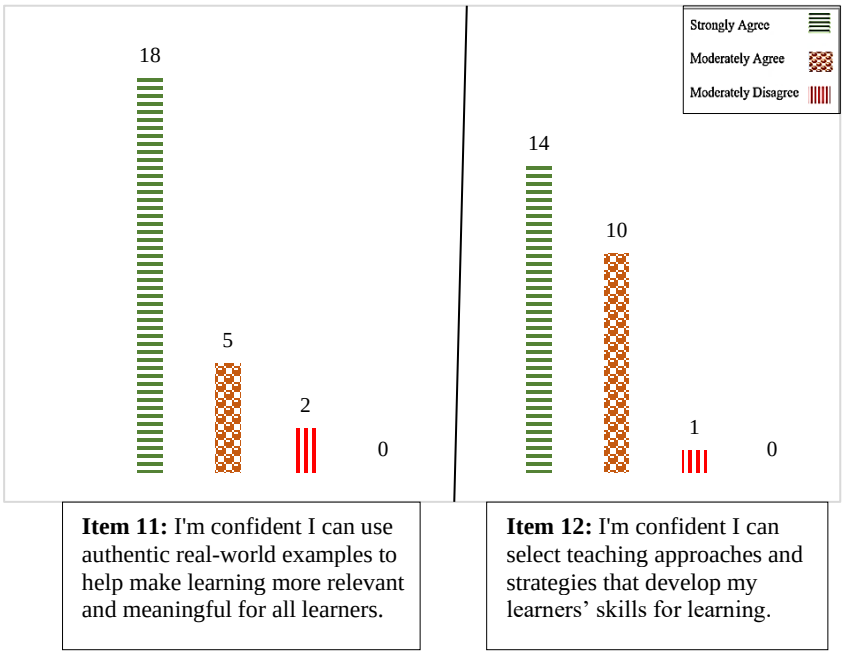
In response to item 20, a large proportion of the GTs (80%) indicated that they felt confident about their professional preparedness to develop meaningful relationships with learners and whānau, while less than a quarter (20%) believed they lacked confidence to develop these relationships. In response to item 22: “I'm confident I can include whānau/families as full partners in planning appropriate teaching strategies for all learners”, a range of responses was elicited. While a large proportion (68%) of the surveyed GTs believed that the MTchgLn programme was useful in assisting them to engage whānau/families in the learning process approximately one third (32%) disagreed. Similarly, item 23 elicited the GTs’ degree of confidence to incorporate interests and needs of the society at large in planning students’ learning. Almost two-thirds of the GTs (64%) felt confident about their professional preparedness to accommodate the interests and needs of the wider community in creating a nurturing learning environment for students, whereas the remaining 36% did not feel confident.

4.1.4 Learning-Focused Culture

Professional Standard Four focuses on teachers’ capability to promote a culture that is focused on learning, where collaboration, safety, respect, inclusion and empathy are maintained. The GTs were asked to rate how confident they felt that the MTchgLn programme had prepared them to create an environment where the uniqueness of each learner was recognized and valued. Figure 4.5 provides the summary statistics for the GTs’ responses to two items.

Figure 4.5

Responses for Learning-Focused Culture -Items 11 and 12



The results of item 11 show that most GTs (92 %) felt the MTchgLn programme greatly assisted them to use authentic real-world examples to make learning more relevant and meaningful for all learners. Likewise, in response to item 12, most of the GTs (96%), felt that the teaching experience opportunities on the MTchgLn programme had boosted their confidence to select teaching approaches and strategies that developed their students' skills for learning.

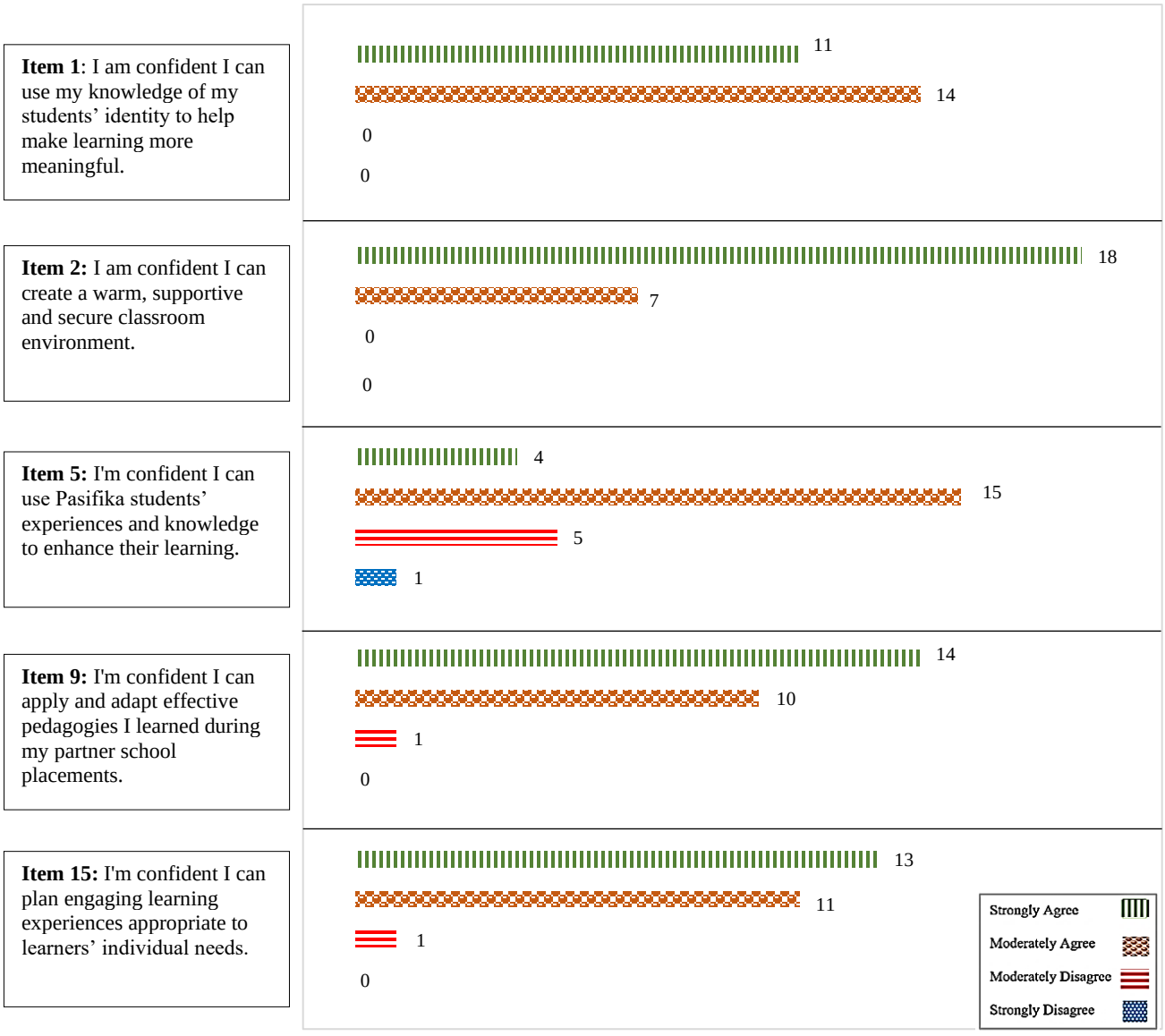
4.1.5 Design for Learning

Professional Standard Five ensures that all teachers can design learning based on pedagogical knowledge, curriculum and an understanding of each learner's identity, needs and interests. The GTs were asked to express whether the programme enabled them to develop agency over their learning to understand diverse students' social and cultural milieus to adapt effective

pedagogies in response to each student's individual needs. Figures 4.6 provides the summary statistics for the GTs' responses to five items.

Figure 4.6

Responses for Design for Learning -Items 1, 2, 5, 9, 15



Item 1 retrieved an overwhelming consensus (100%) that all the GTs felt the programme had helped them to use students' identities to add meaning to their learning. Likewise, item 2

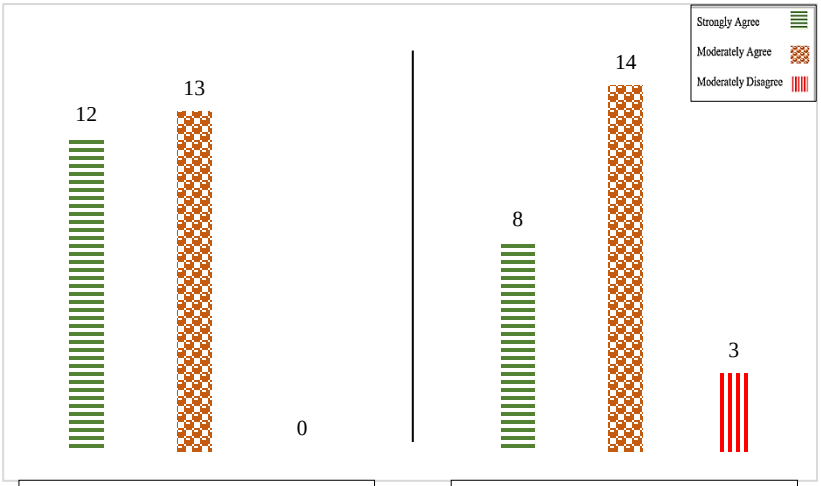
revealed that all the GTs (100%) were confident to create a warm, supportive and secure classroom environment. Regarding item 5, almost three-quarters (76%) indicated that the programme was effective in enabling them to use Pasifika students' experiences and knowledge to enhance their learning, whereas the remaining quarter disagreed (24%). Item 9 showed that nearly all GTs (96%) felt confident to apply modern learning pedagogies they learned throughout their extended clinical placements. Item 15 also had the same high response with 96% of the GTs reporting that the programme was beneficial in enabling them to plan engaging learning experiences appropriate to learners' individual needs.

4.1.6 Teaching

Professional Standard Six ensures that all teachers can teach adaptively and knowledgeably to facilitate their students' learning at an appropriate depth and pace. The GTs were asked to indicate how effectively they believed the programme had fostered the development of their adaptive expertise to enable all learners to collaborate, regulate and to develop agency over their learning. Figures 4.7 and 4.8 provide the summary statistics for the GTs' responses to five items.

Figure 4.7

Responses for Teaching - Items 7 and 8



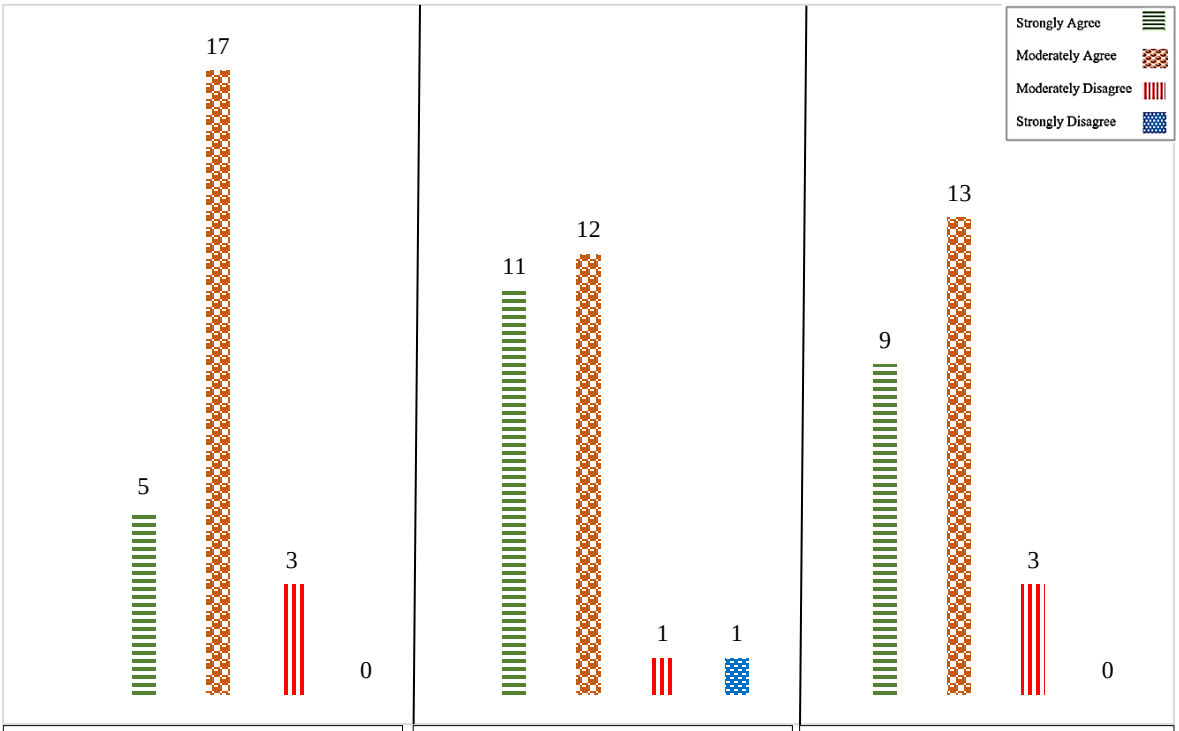
Item 7: I'm confident I can be culturally responsive, to support and engage all learners.

Item 8: I'm confident I can foster critical thinking and problem-solving in all learners.

Item 7 shows that all the GTs (100%) strongly or moderately confident they could be culturally responsive, to support and engage all learners. Likewise, in response to item 8, the majority (88%) of the GTs felt capable of fostering critical thinking and problem-solving in all learners.

Figure 4.8

Responses for Teaching -Items 13, 14, 21



Item 13: I'm confident I can engage all learners in decisions about their learning.

Item 14: I'm confident I can use digital technologies in my teaching to support learning.

Item 21: I'm confident I can foster priority learners to be active participants in the classroom.

Most surveyed GTs (88%) reported a high degree of satisfaction to item 13 which elicited their confidence to engage all learners in decisions about their learning. In response to item 14, most surveyed GTs (92 %) reported that they felt that the MTchgLn programme had enhanced their ability to use digital technologies to support learning. The results of item 21 also showed that

most of the GTs (88%) felt capable of fostering priority learners to be active participants in the classroom, whereas only 12% felt they were not capable of this active teaching approach.

4.1.7 Summary of Quantitative Data

The above section has presented the quantitative results of the first research question which explored GTs' perceptions of confidence to develop high-quality teaching practices as stated in *The Standards for the Teaching Profession* (Education Council, 2017). Findings suggest that most of the surveyed GTs were committed to the principles of Te Tiriti o Waitangi *(Standard One)*. In addition, they felt that the programme had equipped them with sufficient professional learning needed for optimizing students' opportunities to learn *(Standard Two)*. Results also show that the MTchgLn programme had provided most GTs with a firm foundation to establish learning-focused partnerships with parents, wider whānau, and members of the school to support learning *(Standard Three)*. Many GTs felt confident to promote equity, diversity and inclusion to develop their students' skills for learning *(Standard Four).* Furthermore, most of the GTs felt able to develop agency over their learning, which helped them reflect on the evidence of the quality of their practice (Standard Five). However, almost a quarter of the GTs felt less confident in addressing Pāsifika students' learning needs. Finally, most of the GTs felt adequately prepared to develop high quality teaching practices *(Standard Six)*.

4.2 Graduate Teachers' Perceptions of Programme Effectiveness

This section of the chapter reports the key findings against the second research question, namely of the GTs' perceptions of the effectiveness of each of the MTchgLn programme's distinctive design features to support their professional learning. The programme's innovations comprise five distinctive design features: extended clinical placements in partner schools;

evidence-informed inquiry; exemplary school visits; culturally responsive practices; and community placements. The qualitative data retrieved from both the survey open-item questions and the interviews were integrated to present a more comprehensive analysis of the GTs' perceptions of the effectiveness of these five distinctive design features to prepare them to teach. The themes identified under each feature are presented in the next section.

4.2.1 Extended Clinical Placements in Partner Schools

The GTs were asked to comment on the impact that they believed the Extended Clinical Placements in Partner Schools had had on preparing them to teach all learners. Overall, they recognized the importance of the extended practica in fostering practical teaching competence although some GTs reported certain negative aspects of their placements. Five themes were derived from the GTs' views about the effect of the extended practicum on their learning including: mentoring, realistic insights, relationship-building, student population and placement structure.

4.2.1.1 The Importance of Mentoring. Establishing and maintaining a strong mentoring relationship was crucial to the GTs' learning experiences on the extended practicum. More than a half of those surveyed (n=13) expressed that having dedicated mentors who were passionate about building relationships with them had greatly contributed to their academic preparedness to teach. For example, P24 stated that "90% of [her] learning as a student teacher came from working in schools alongside [her] mentor teachers." This mentoring was represented in the mentor teachers' passion for teaching and ability to model effective practice offering "hands on tips and feedback" (P13).

The importance of mentoring was echoed by eight of the 12 interviewed GTs who indicated that their mentoring relationship was critical to developing their professional practice. The

MTchgLn programme's work to ensure a good match between the mentor teacher and the student-teacher was key to the quality of these relationships. Both Isla and Chloe, in turn, emphasized that they "had really lovely mentors who they [had been] paired up with really well" and "getting on really well with [them]." Furthermore, receiving ongoing support from competent mentors was beneficial for boosting their confidence to teach. Another aspect of effective student-mentor relationships was the ability to foster a culture of open communication. Four of the 12 interviewed GTs indicated that the opportunity to establish interpersonal communication with their mentors during their extended practicum was beneficial to their learning. Isla, for instance, praised her mentors for holding frequent meetings to "look over planning or discuss my observation or whatever it might have been" (Isla GT/INT). Similarly, Mai had benefitted from regularly attending staff meetings and team meetings and found these experiences key to her learning (Mai GT/INT).

While in the main, the relationships with mentors was positive and supportive of learning, some adverse effects were experienced when the mentoring relationship became strained. Four of the 12 GTs who were interviewed, indicated that a clash of personalities had resulted in an unsatisfactory mentor-GT relationship which had implications for their learning. Susie (GT/INT) asserted that "it's hard when you don't see eye to eye" especially "if you have massively different personalities; it's not going to work no matter how hard each party tries" (Susie GT/INT). Similarly, Amelia (GT/INT) expressed that she "didn't feel welcome, and it was basically just four months of discomfort" (Amelia GT/INT). Further evidence shows that these unsatisfactory relationships had stemmed from receiving insufficient feedback from the mentor which inhibited the GTs' learning. Hunter (GT/INT) questioned doing a "practicum and not gaining feedback every day" (Hunter GT/INT).

4.2.1.2 Gaining Realistic Insights. Overall, there was a common perception among the GTs that the practical experiences gained throughout their extended practicum were invaluable for their learning, particularly for increasing their readiness for the reality of the classroom. Of the 25 GTs who completed the questionnaire, 15 described the extended clinical placements as valuable for providing a realistic learning experience. One practical aspect that made these experiences more appealing representations of reality is their perceived authenticity. P16 reported that such longevity of the placements had offered "a realistic look or experience into a teacher's life". The same view was also echoed by P8 who praised this feature of the programme for affording his "only real experience of what teaching was like." Furthermore, the practica had helped the GTs to develop a realistic view of teaching whereby they gained valuable practical experience through undertaking "a range of teaching practices" (P1) and "teaching multiple units" (P16) at "a variety of curriculum and year levels" (P5).

In addition, the follow-up interviews also offered coherent responses. Nine of the 12 interviewed GTs, acknowledged the importance of experiencing the practical realities of the day-to-day running of a school day throughout their extended practicum. For example, two GTs valued the "really big impact and influence" (Amelia GT/INT) that extended practicum had on their developing identity as teachers as this had empowered them to become "real teachers" (Emily GT/INT). Another GT, Harper, also appreciated experiencing "how to teach at this age (primary)" and recognized the authentic value of "planning some resources/lesson plans" that she could utilize in her teaching (Harper GT/INT). Similarly, Isla recognized the reality of "teacher planning workload" as it reflected "what teaching was actually like long term." In addition, she felt that the practicality of the extended practicum enabled GTs to become more "realistic in what you should be expecting out of students" (Isla GT/INT). Overall, these results suggest that the extensive

realistic experience the GTs gained during the extended practicum had enriched their learning and shaped their teaching identities and practices.

4.2.1.3 Professional Relationship-Building Opportunities. The extended practicum provided the GTs with invaluable opportunities to build effective relationships with their students and school staff - and these relationships, in turn, were perceived to be central to their learning to teach. In particular, the extended placements had helped them to become contributing members of their partner schools. Almost half of the total population, 12 of the 25 surveyed GTs, valued the longevity of the placements for enabling them to "build genuine relationships with staff and students" (P2) since "it takes time, and this is an area I felt was a real plus for the extended placement" (P17). In addition, the extended practicum experience improved their understanding of "the importance of relationships" (P16) and developed "an initial sense of confidence that (they) belonged in the classroom" (P8).

The findings from the follow-up interviews further confirmed that continuity of placements had supported the GTs to cater for students' learning needs. Ten of the 12 interviewed GTs recognized the importance of extended practicum to help them to establish effective collegial relationships. For instance, Emily asserted that "teaching is 100% about the relationships you build, before anything else, and you can't have a functioning classroom without those relationships" (Emily GT/INT). The extended practicum helped the GTs to see themselves as "part of the fabric of the school" (Mai GT/INT). Responses also showed that the GTs appreciated the remarkable "degree of continuity" (Isla GT/INT) of placements to build relationships with students and to support them to make "contextualized teaching or planning" decisions to address "their individual learning needs" (Amelia GT/INT).

4.2.1.4 Access to Priority Learners. A placement in low-decile partner schools proved to be crucial in helping the GTs to access, understand and accommodate priority learners' strengths and needs. Seven of the 25 surveyed GTs highlighted the important role that extended placements in low decile schools had played in broadening their understanding of teaching priority learners. For example, P1 maintained that "[his] first extended practicum at a lower decile school taught [him] more than [he] could have imagined about NZ's priority learners." Similarly, P2 was particularly appreciative of the significance of the teachers' role in creating a safe classroom environment for "priority/diverse learners."

Additionally, the follow-up interviews confirmed the survey findings as six of the 12 interviewed GTs felt that extended practicum was appropriately structured to enable them to design effective learning opportunities for priority learners. Such experience in teaching PLs was key for the GTs' learning. For example, Emily felt that extended practicum created a suitable opportunity to develop her "teaching practice, especially for priority learners" (Emily GT/INT). Likewise, Jack also felt that the practicum had helped him to get sufficient opportunity to work with priority learners in general and Māori students. He stated:

> I enjoyed that, the first teaching job that I took when I finished was in a decile 1 school, over in (PRS1), which is 97% Māori or other ethnicities, but 1% white and so I think that was the sort of, that was the impact of my time at (PRS5), and on the course, I wanted to get straight into a school where I could work with priority learners. (Jack GT/INT)

However, a common view amongst all 12 interviewed GTs was the lack of sufficient opportunity to work with priority learners mainly due to the higher decile rating of the partner school placements. To have had access to lower decile schools would have provided "a very different experience with different focuses and expectations" (Amelia GT/INT). Similarly, Noah

stated that being culturally responsive is a vital component in teaching priority learners as he emphasized that “with the extended practicum, we did do a little bit of work with the priority learners, in particular the lower ability students, but not so much the cultural side of things” (Noah GT/INT). In support of the same view, Jack also expressed that they lacked experience “in the schools which are in the sort of tougher neighbourhoods” (Jack GT/INT). Hence, placements in low decile schools were of crucial importance to enable the GTs to apply their pedagogical content knowledge to address learners’ diverse social, cultural, linguistic and educational needs.

4.2.1.5 Placement Structure. The interview data captured a concern about the timetabling pattern of the weekly school day placements outside of the extended practicum which took place on three days per week (Tuesdays-Thursdays). Only being at the school for these three days meant missing opportunities to experience the variety of school-related activities and duties that occurred across the whole week. Half of the interviewed GTs raised concerns over the structure of the weekly placements, noting that teaching different students due to scheduling difficulties in their placements at the first partner school had had a disruptive effect on their experiences. Susie, for instance, stated that, “I really struggled with that three days a week later on because it was inconsistent for the type of students that I had” (Susie GT/INT). Amelia also criticized this structure since “you miss things like the beginning of units, and the end of units; also, assessment days are usually at the beginning or end of the week, so you miss some of those more crucial parts” (Amelia GT/INT). Similarly, Mai felt that the weekly school day scheduling should be re-arranged to ensure the GTs observed and practiced the whole week’s activities at school, as these were perceived to be crucial to their learning. She remarked that “you miss the whole set up for the week, and it's when tasks were launched and you feel like you come in half way through, and then you sort of leave before it’s finished as well on a Thursday” (Mai GT/INT).

Taken together, these results provide important insights into the importance of extended clinical placements on GTs' professional preparedness. In general, the GTs praised their practicum experiences for systematically integrating them into the realities of their school lives. Many GTs also benefitted from their mentors' advice in scaffolding their learning. Practicum was also praised for helping the GTs to develop functional relationships with school staff and their students; an aspect they found essential for promoting student engagement. However, the GTs were unanimous in reporting the limited opportunities offered to work with priority learners and thus requested more experience to teach them. Findings also identified common timetabling issues of the weekly school day placements and therefore many GTs requested that these be re-arranged to enable them to explore and maximize their opportunities in schools.

4.2.2 Evidence-Informed Inquiry

The GTs were asked to comment on the impact that engagement in ongoing evidence-informed cycles of professional inquiry had had on preparing them to teach all learners. Evidence-informed inquiry was an important design feature, not only to shape the GTs' abilities to perform teaching competencies/tasks but to learn to be reflective and to use evidence to determine the impact of their teaching on students' learning. Analysis of the qualitative responses from the survey and interviews identified five broad themes; four of which point to the value of evidence-informed inquiry, whereas the remaining point suggest difficulties. These findings include: familiarization with teaching as inquiry; articulating teaching philosophies; innovative pedagogies; relational pedagogy; and challenges of evidence-informed inquiry.

4.2.2.1 Familiarization with Teaching as Inquiry. The GTs' responses reflected that TaI had been beneficial for preparing them to develop their practices in evidence-informed ways. In

this respect, 11 of the 25 surveyed GTs stated that undertaking their inquiries had proved to be "a great asset" (P9) to their learning as it prepared them well for their teaching practice and gave them "a real taste of what it is like to be a classroom teacher" (P10). For instance, emphasizing the significance of inquiry in her professional practice, P23 stated that, "I am currently doing a writing inquiry at my first job and doing one during my Masters year was the perfect preparation." Making a similar comment about the impact that the evidence-informed component had on her learning about TaI, P17 stated that "it is hard to imagine how my development would have been without being exposed to inquiry-based teaching." Accordingly, the evidence-informed component is a key feature of the programme, which may have "set it apart from other teaching courses hugely" (P10). Engaging in TaI had been perceived to be an efficient future-oriented preparatory process of the GTs' appraisal process to meet the requirements for provisional certification as a teacher. Ten of the 25 surveyed GTs felt that TaI prepared them for completing their appraisal process. P24, for example, recognized that "it is very evident that I am one of the few teachers that can complete the inquiry process and report properly each year." P17 also indicated that the fact that "it was a part of the teaching appraisal" proved to be a great asset in his teaching career.

These findings are consistent with responses in the follow-up interviews highlighting the important implications TaI had for developing the GTs' professional practice. Five of the 12 interviewed GTs maintained that TaI was key as it "ingrained the process" (Isla GT/INT) in their teaching. Madeline, for instance, emphasized the importance of engaging in teaching as inquiry while on the programme and reported that "I'm presenting my teacher inquiry for school soon… and it's awesome to know that I've already had some experience and some understanding of what to do" (Madeline GT/INT). Similarly, nine of the 12 interviewed GTs felt that the exit presentation, as a formal venue for disseminating evidence of GTs' learning, had helped them showcase their

learning. Emily, for example, found compiling evidence in a comprehensive portfolio, comprised mainly of numerous videos and photographs, so beneficial in preparing her for her teaching job. She explained that:

> The process of collecting evidence was really valuable, like now I have to create a portfolio of my evidence, and I think that preparing for the presentation was really helpful, for knowing what was important and making sure you do record things, and not be afraid to record things. (Emily GT/INT)

4.2.2.2 Formulating Teaching Philosophies. Engaging in TaI was commended for enabling the GTs to articulate their own teaching philosophies. Having satisfactorily completed the inquiry cycles, eight of the 25 surveyed GTs felt satisfied they could articulate their own teaching philosophies that had been affirmed or changed in their inquiry work. P19, for instance, appreciated being offered the opportunity to reinforce her "beliefs and values" through completing the inquiry cycles as this practice had made her more self-reflective and purposeful considerably developing her "teaching practices." In addition, other GTs were also appreciative of their professional preparedness to develop their teaching philosophies as part of their teacher registration requirements. P11, for example, praised the practical value of TaI and maintained that "formalising it becomes part of our appraisal."

The interview data confirmed open-item survey responses as four of the 12 interviewed GTs praised TaI for promoting their reflective capacities, self-awareness and confidence, which in turn helped them to articulate their teaching beliefs and practices. Chloe, for example, appreciated the benefits of learning how to articulate her teaching philosophy which had helped her to "learn so much about [herself]." Amelia felt that engaging in inquiry had allowed her the opportunity to develop her "own pedagogies". Similarly, Isla felt that being capable of articulating her teaching

philosophy provided her with a valuable practical experience; boosting her confidence and helping her to find a job. She stated that:

> It was quite useful having like in one of our assignments, we had to talk about our teaching philosophies, and where that stemmed from, and that really helped in terms of me finding a job, because schools wanted to know what's my teaching philosophy, how did I get to that, so I think having that built into assignments was quite a good way to draw it out of us. (Isla GT/INT).

4.2.2.3 Promoting 21st Century Pedagogies. Engagement in TaI enhanced and supported the GTs' application of key 21st century pedagogies, such as critical thinking, creativity and problem-solving skills. Closer inspection of the interview responses shows that five of the 12 interviewed GTs recognized the practical significance of learning innovative learning pedagogies and teaching methods during the programme. For instance, when asked about the potential benefit of being informed by research in teaching, Amelia stated that this design feature "really makes you look outside of the box and think critically." Furthermore, engaging with inquiry cycles was perceived to be effective in cultivating the GTs' "resilience" and open questioning mindset and had helped them to become "more reflective", as Mai and Emily expressed, respectively. Emily further maintained that inquiry helped her to develop "a critical eye, and a bit of open mindedness" (Emily GT/INT). Such innovative teaching methods were not only perceived as essential to GTs' teaching practice but were also key in helping them to complete the inquiry assignments, as these "trained [the GTs'] minds to do it" (Isla GT/INT). Hence, pursuing teaching as inquiry appears to have encouraged the GTs to be more open-minded and to adopt more creative and evidence-informed teaching practices.

4.2.2.4 Using Relational Pedagogies. The teacher educators' adoption of relational pedagogies offered the GTs a valuable learning experience which supported their learning in general, and their engagement in TaI in particular. When asked about the value of these pedagogies, nine of the 25 surveyed GTs identified their importance to support their teaching preparedness. Those GTs recognized the emphasis lecturers put on establishing caring, respectful, and trusting relationships with them as part of their inquiry pedagogy. For example, two GTs appreciated "having a dedicated group of staff" (P20) who "did everything in their power to provide a quality experience in teaching New Zealand's diverse learners" (P17). Analysis of the follow-up interviews also showed that five of the 12 interviewed GTs shared the same view about the value of their learning through relational pedagogy. Isla, for example, explained that "having really close relationships with the lecturers made a big difference, really personal like, you weren't just another person in the room; they knew you, they could see your progress as a teacher" (Isla GT/INT). Likewise, Mai also appreciated her teacher educators' forming close professional relationships which supported her learning. She stressed that:

> They [teacher educators] do honestly treat you like you're their kid, and like your wellbeing and your hauora (health) is so valued, so they check on you and your mentor teacher, like that relationship is so important because they love you too, like they want to make sure you're doing really well, and they root for you the whole time. (Mai GT/INT)

Another GT also acknowledged the significance of relational pedagogies adopted by lecturers and its key role in promoting their learning about teaching. In so doing, Sophie reflected on her experience while completing her TaI component and underlined the importance of creating effective relationships with her students. She appreciated that:

> All the lecturers knew us personally, they took the time to get to know us personally, and that just makes it a lot more enjoyable as a student to learn, obviously and now as a teacher that's what I want to be like. (Sophie GT/INT)

4.2.2.5 Challenges of Implementing TaI. While the above findings indicate a positive response to Inquiry, some interview data indicated that TaI was problematic for some GTs – mainly those in the secondary sector. Six of the 12 interviewed GTs identified certain challenges, mostly related to the structure; pace of delivery, and implementation of this component. Firstly, due to the strong theoretical grounding TaI offered, some GTs were overwhelmed by the structural constraints which they perceived had inhibited their ability to engage in teaching as inquiry. For example, one GT indicated that the programme overemphasized the theoretical foundation rather than practical application of TaI. Jack questioned the practicality of TaI as he indicated that, "in terms of like practical, putting together a reading programme, suddenly that was one of the things that we we're supposed to learn in a classroom context, as in on the placement, rather than in a lecture theatre" (Jack GT/INT). Another GT also found gathering qualitative data quite challenging as she stated that "going from writing science evidence, numbers-based articles to writing about pedagogy and all this airy-fairy stuff just did my head in" (Chloe GT/INT).

Interestingly, three interviewed GTs considered the concept of TaI as a matter of common sense, raising questions as to whether they would engage in it in their teaching. Sophie, for example, recognized TaI as "a natural thing which doesn't need to be formalized" (Sophie GT/INT) considering "teachers do it anyway as they are obviously self-reflective" (Amelia GT/INT). Likewise, Emily felt that "it (Inquiry) just felt like an extra that I had to get done" (Emily GT/INT). Another concern was expressed by two secondary GTs at the unsuitability of an inquiry focus and purpose for secondary teachers. Hunter, for example, perceived TaI as "creative writing" where a

lot of the GTs "pulled strings or pulled stuff together in the last minute" (Hunter GT/INT). On the other hand, another GT felt that TaI needed to be examined in greater depth and that it could have been investigated more thoroughly. To this end, Susie remarked: "…I felt that in Inquiry, I was being patronized by being told problems and being told solutions that were not necessarily going to work for my class, and treated as though I couldn't solve a problem with my own research, that's how I felt" (Susie GT/INT). Comparing her experience of Inquiry with the current one as a full-time teacher, she further explained:

> …because this year I found a genuine concern for a group of students who were genuinely struggling and we, me and the students, came up with a solution together…so this year at school as a teacher now I have completed a proper cycle. Last year I'm going to be very honest, I found it too wishy washy! (Susie GT/INT)

Clarifying this point further, particularly regarding the perceived limits of framing Inquiry assignments, Susie added:

> …it was ticking in a box, cause I'm a scientist so for me I need hard evidence, I need a hard line to follow and I need to make sure that it is an actual problem that I'm trying to fix and not something that someone is telling me is a problem. (Susie GT/INT)

Secondly, the other concern was the pace of developing the first inquiry cycle in being unmanageable so early in the programme. Further analysis showed that five of the 12 interviewed GTs- all in the secondary sector- felt that more scaffolding was needed to embed teaching as inquiry in their practice. More specifically, pursuing the initial inquiry process seemed to require "more of a lead-in" (Violet GT/INT) by introducing more exemplars during lectures. Violet, for example, stressed the importance of providing a reasonable time for inquiry to become embedded

in their practice. She stated that, “Some of the timeframes, actually the first one was really quick, I don’t think we really had enough time to collate enough data and actually make a difference” (Violet GT/INT).

The final challenge which was reported only by secondary GTs regarding the considerable difficulty of pursuing teaching as inquiry with students who study regularly with another Form Teacher. Five out of the 12 interviewed secondary GTs expressed their concern when undertaking Inquiry with students who had different learning goals. Amelia, for example, objected to doing an inquiry on “a whole new set of kids” when she was placed in “an established class” who “already got their dynamic” (Amelia GT/INT). This view was echoed by Chloe who found initiating in the process of teaching as inquiry quite impractical, as she remarked that “it’s their (Form Teachers’) kids, they’ve got their own focus with their class when you’ve got a different focus. It’s hard to pull them away to fulfil our needs as student teachers to do that” (Chloe GT/INT).

Other GTs challenged the way their inquiry had to focus on students who the MoE had defined as being a priority learner. Sophie, for instance, spoke of the difficulty of having to make students “fit a category”, adding that she “had to pick boys that fit a category rather than pick boys that needed help” (Sophie GT/INT). Hunter also criticized the priority learners’ criteria used in applying inquiry as he pointed out that “when they talked about inquiry they really encourage you to just focus on five kids, whereas if we do an inquiry now we do a whole class” (Hunter GT/INT). Similarly, casting doubt on the actual practicalities of implementing these criteria, Jack found that “the real-life application as a teacher quite challenging” (Jack GT/INT).

In summary, when asked to comment on how well they felt the MTchgLn programme had

equipped them to undertake TaI, most of the GTs appreciated the valuable contribution this component made to their professional development. Survey open-ended results suggest that embedding TaI in the programme's assignments had offered the GTs multiple opportunities to work with data – using it in planning and to assess students' learning. Many GTs praised TaI for developing their self-reflective abilities to better articulate their teaching philosophies and thus become more purposeful in developing their teaching practices. TaI was found useful in assisting the GTs in becoming 21st century teachers, equipped with high-leverage pedagogies, and able to use critical thinking, and problem-solving skills to support students' learning. However, some GTs – mainly those in the secondary sector – noted several challenges of engaging in TaI, mostly related to its structure and pace of delivery, which they perceived had inhibited their professional preparedness.

4.2.3 Exemplary School Visits

The MTchgLn programme's design aimed to expose the student-teachers to a variety of school cultures, which model different kinds of learning and teaching practices. The GTs were asked to comment on the impact of their visits to exemplary schools on preparing them to teach all learners. Overall, the exemplary school visits were identified as another valuable design feature of the programme. Qualitative responses from both interviews and open-item survey responses yielded three major themes including: exposure to a wide variety of school cultures; the need to increase exemplary schools in the secondary sector; and the lack of time during these visits.

4.2.3.1 Broadening Exposure to a Variety of School Cultures. The exemplary school visits served to broaden exposure to a variety of schools and to increase the scope of possible effective teaching practices. Overall, the importance of observing day-to-day teaching practices in different schools was central to the GTs' learning to effectively teach diverse learners. Further

analysis showed that nine of the 25 surveyed GTs perceived the exemplary school visits had widened their worldviews about teaching and learning and "displayed everything [the GTs] had been taught throughout the year" (P17). For example, one form of broadening the GTs' experiences was exemplified in the increased exposure to "a range of schools and students" (P23), particularly those "with different focuses and expectations" (P16). These exemplary visits had enlightened the GTs of the importance of observing different school cultures to identify "the common threads amongst schools" (P17). Another finding that was connected to the benefit of these visits was that the range of teaching and learning environments they were exposed to, had encouraged them to reflect on their own teaching practices and helped them to decide "what [they] want [their] classroom to look and feel like" (P10). Such experiences were deemed to be valuable in broadening the GTs' perceptions about "how teaching looks in different settings", especially how a modern learning environment looks like in action. Observing the innovative use of digital technology in one of the Exemplary Schools made these visits effective in widening the scope of the GTs' learning, according to P8.

The value of seeing different learning cultures also came up in the follow-up interviews as five of the 12 interviewed GTs made similar reflections about the importance of setting educational priorities within different schools wherein the focus shifted to diverse aspects of students' learning. For example, Violet acknowledged the importance of the exemplary school visits because it gave her more opportunities to observe "different ways that schools interpret the curriculum and the ways in which they implement it to suit the needs of their school and their students" (Violet GT/INT). Similarly, talking about her visit to (PRS6), Emily observed a culture of learning and behaviour management implemented across that school community. She noted that:

> Students belong to a really specific community, and a lot of their practice like their attitudes and the school values, and the behaviour management and the kids themselves reflect that community, and it made you think right, you step into a culture of some kind, and theirs was so obvious I suppose. (Emily GT/INT)

Broadening exposure through exemplary school visits also helped the GTs to identify theory-practice links such as "what principles line up, what pedagogies line up" (Violet GT/INT). Hence, these visits were "great" (Susie GT/INT) as they served as "an eye-opener to a wide range of learners" (Sophie/INT) and showcased "a variety of specialities" (Susie GT/INT). Another GT valued seeing a wide variety of teaching strategies through observation of teachers, whom they would have not otherwise had the opportunity to talk to and "see the different teaching approaches" (Sophie GT/INT).

However, nine of the 25 surveyed GTs remarked that the exemplary visits had not benefitted their learning, due to the relatively limited number of these visits with similar curricula and student needs. These GTs had wanted to see a more diversified curriculum and a wider variety of students' needs and capabilities. P12, for example, felt that she needed to experience "a variety of schools, including rural and modern learning environments (MLE) secondary schools…" in order to collect "more evidence of how teaching will evolve with use of technology and MLE." These responses suggest that affording the GTs the opportunity to observe "a wider variety, across curriculum and extra-curricular areas" (P5) would have increased their learning experiences and broadened their horizons.

Issues related to the lack of diverse experiences in the exemplary visits were also prominent in the interview data. Six of the 12 interviewed GTs indicated that they would have liked exposure

to a wide variety of schools. Jack, for instance, stressed that “it would be a good way of getting a broader spectrum of types of school and different programs.” Other GTs also felt that some of these visits “were quite similar to the placements” (Violet GT/INT); a result that could explain Hunter’s statement about exemplary visits that “(he) can’t say it changed (his) worldview” (Hunter GT/INT). Likewise, two other GTs challenged the existing concept of exemplary visits since “the word exemplary means … like the best sort of thing” (Mai GT/INT).

4.2.3.2 Increase of Secondary School Visits. When asked about their perceptions of the effectiveness of exemplary visits in support of their learning to teach all learners, 12 of the 25 surveyed GTs, mostly secondary teachers, cited the impracticality and inapplicability of their visits since they were mainly in primary school. P11 made this point by arguing “As a secondary teacher I found the multiple primary visits interesting, but couldn't apply a lot of what I had observed.” P22 was disappointed that he “only did one high school visit”. Similar findings emerged from the follow-up interviews as six of the 12 interviewees- mostly secondary GTs reported that the Exemplary Schools lacked the relevant practical experience of the secondary system. For example, Chloe remarked that “when we’re secondary trained we want to see what it’s like in the secondary sector more so.” Another GT raised the question regarding the extent to which the needs of secondary school graduates had been recognized. Reflecting on her exemplary visits experience, Amelia argued that “it was predominantly set up for primary, and we just kind of felt like we weren't being acknowledged or respected for choosing to go into secondary.”

However, while 75% of the secondary GTs wanted more exposure to exemplary secondary schools, 25% believed that visiting primary schools had been fundamental in their learning about students’ transitions and growth across school sectors. As a secondary GT, P16 stated that “this was good - especially as a secondary teacher to see primary schools and intermediate.” Two

interviewed GTs confirmed this finding as they perceived undergoing the experience of visiting schools from different sectors was quite informative. For example, Isla who is a primary GT enjoyed "seeing where students get funnelled through", as this experience assisted her in bridging "the transition between lower primary to intermediate, to secondary school." Sophie – a secondary GT maintained that she was also inspired using technology at one primary exemplary school and emphasized that "while I'm a secondary school teacher, I enjoyed going there …I otherwise would have never seen what a modern learning environment looks like in action."

4.2.3.3 Lack of Time Dedicated to Exemplary Visits. Another recurring theme in the interviews was a sense that the exemplary school visits required more time to enable longer observations. Of the 25 surveyed GTs, 13 indicated that spending short amounts of contact time with students and teachers in schools during their exemplary visits reduced their anticipated benefits. For example, P18 commented that "it was just a snapshot! Our time in the classroom was very brief and there was not a lot of time to talk to the teachers." This view was echoed by other GTs who also felt that the time spent in each school was insufficient to reflect on their observations and evidence. For example, in assessing the impact of exemplary visits on her learning, P9 commented that "We were kind of pressured into touring around schools quickly and didn't have enough time to observe everything! Good things take time!" Furthermore, when the interviewees were asked whether the visits benefitted their learning, five of the 12 interviewed GTs indicated that there was insufficient time during the visits to observe and obtain enough evidence to benefit their learning. Emily, for instance, felt that her visits were rushed as she stated that, "we were just walking through classrooms and watching a snippet, and not really being sure how we were meant to connect it to that [their learning] exactly" (Emily GT/INT).

The exemplary school visits were deemed to be useful for many GTs for exposing them to a range of school cultures. Most of the GTs felt that their five or six exemplary school visits had positively impacted their learning as they had broadened their scope to a range of school cultures. The exemplary school visits had equipped the GTs with unique learning experiences inferred from observing innovative teaching pedagogies with a range of diverse students. However, despite the overall positive comments made about the benefit of the exemplary visits, two concerns related to the school sector and the time spent during these visits.

4.2.4 Culturally Responsive Pedagogies

The GTs were asked to comment on the impact that learning about culturally responsive pedagogies (CRP) had on preparing them to teach all students. Many of them identified the role that CRP played in the classroom to promote inclusive practices to help them to identify and use learners' cultural resources and experiences. Four themes were derived from the GTs' views about the effect of learning about and having exposure to CRP including: recognizing students' needs; lack of exposure to te reo and tikanga Māori; exposure to multicultural content; theoretical delivery of CRP.

4.2.4.1 Recognizing and Accommodating Students' Diverse Learning and Cultural Needs. Findings indicated that the programme had helped the GTs to design and plan CRPs which enabled them to recognize and address diverse learning and cultural needs. Almost three quarters (69%) of the surveyed GTs were satisfied that learning about CRP in the programme enabled them to develop an inclusive learning environment characterised by empathy, respect and safety. When asked about the importance of this feature of the programme, P23, for example, felt that learning about CRP had helped him "to better engage and promote positive cultural practises." Similarly,

P20 also found learning about CRP to be valuable as these "provided some excellent insight into what it means to teach priority learners."

The focus on CRP was also beneficial in developing innovation in the GTs' teaching practice designed to address diverse student' needs. In their accounts of the importance of CRP to being innovative, seven of the 25 surveyed GTs appreciated learning about CRP and relational teaching strategies, considering these to be "a real strength of the MTchgLn programme" (P10). P11 explained the value of this feature in commenting that "being a cross-cultural communicator is vital as a teacher and necessary as a 21st century skill for our students." Another value of learning about CRP was the way it supported them to reflect on their own cultural assumptions and beliefs and how these could negatively impact diverse learners' achievement. P13, for instance, pointed out that "as my background is not the same as my children so I need to be able to tune into my children's backgrounds and beliefs." Another GT endorsed the programme's focus on CRP to challenge her assumptions and increase her pedagogical knowledge and skills. P4 also underlined the importance of CRPs to critically examine her assumptions and beliefs as this component had given her "experience and widened my thinking and understanding of culture, diversity and what it is to be 'others'."

CRP also helped the GTs to promote and protect the principles of social justice and manage the learning setting to ensure they responded to all students' needs, especially those of priority learners. The results obtained from the follow-up interviews further confirmed such perceived importance of focusing on CRP during their ITE as emphasized by five GTs. Sophie, for example, maintained that this feature "opened my eyes up to the wide range of learners" and considered CRP "the main thing" (Sophie GT/INT) that prepared her to teach diverse learners. Amelia also acknowledged the significance of CRP in "understanding the different types of learners … as it

gives you the confidence to identify and recognise learning needs and difficulties" (Amelia GT/INT). Consistent with survey findings, Emily spoke of the benefit of designing and planning CRPs for the GTs to challenge their existing worldviews. She reflected on her own experience stating:

> I'm a white middle class from a farming family, with parents that are still married. I actually don't have any clue what it would be like to struggle in lots of ways, so I think that [CRP] was invaluable in that respect, yeah and I think that that's the purpose too, it was to step into somebody else's shoes for a bit. (Emily GT/INT)

4.2.4.2 Lack of Time Dedicated to Te Reo and Tikanga Māori. The limited time spent learning te reo and tikanga Māori was a common concern for interviewees which impacted their use of it in their professional practice. Half of the interviewed GTs (n=6) stated that they needed more experience of te reo and tikanga content for teaching Māori learners considering the unique position of the Māori culture in Aotearoa New Zealand. Violet, for example, acknowledged that "it's part of who we are." Similarly, Mai contended that learning about Māori tikanga is key as it provides a holistic perspective about all other cultures, arguing that "what's good for Māori is good for everyone" (Mai GT/INT).

In addition, stressing the importance of building the GTs' confidence in te reo as an official New Zealand language, Amelia perceived that all the GTs "should have a solid grasp of te reo coming out; it's one of the native languages of this country." Likewise, Hunter's lack of confidence in speaking te reo by the end of the programme was perceived as a major source of dissatisfaction as he maintained that "there was this big thing about how we'd be able to speak te reo reasonably well by the end, which didn't happen" (Hunter GT/INT). These GTs requested that te reo and tikanga Māori be more directly embedded in the programme. Harper, for example, indicated that

she only recalled attending a few "lessons on te reo Māori or on Māori customs, traditions, tikanga etc., that could broaden our knowledge in this area and that we can use in the classroom" (Harper GT/INT). This perception of tokenism led Sophie to argue for a greater emphasis be put on te reo and tikanga Māori "instead of just doing it for the sake of like to tick a box" (Sophie GT/INT).

4.2.4.3 Exposure to Multicultural Content. Many GTs expressed that their exposure to CRPs encouraged and promoted their development of cultural teaching practices, which ensured that all learners' backgrounds, genders, identities, languages and cultures abilities and needs are accommodated. In addition, many GTs found receipt of immediate feedback on implementing CRPs quite beneficial for their learning. Seven of the 12 surveyed GTs found receiving feedback on their implementation of CRP to be quite useful in teaching diverse learners, stating that "the assignments enabled [her] to explore this (CRP) and receive feedback on [her] practice for this" P12. P17 was also appreciative of implementing CRP in his teaching because this component provided him "with a quality experience in teaching New Zealand's diverse learners." In addition, experiencing CRP has probably helped prepare the GTs to share their knowledge and learning experiences with their colleagues in their schools. To this regard, P15 stated that:

> I actually feel that I have a far better understanding of this (CRP) and how to do this than a lot of other teachers at my school. I often cringe when I see some things that teachers do and I feel obliged to help them if they get stuck. (P15)

Even though the findings indicated that the programme provided the GTs with valuable experiences which enabled them to recognize and meet Māori cultural and learning needs, there was a demand for an equal exposure to learners of a wider range of linguistic and cultural milieus, beyond those ethnicities. Seven of the 12 interviewed GTs needed to experience teaching and

learning about a range of ethnic groups to be culturally responsive to teach students from diverse races and ethnicities. For example, notwithstanding the importance of learning about Māori culture, as tangata whenua, indigenous people, the content of this feature was challenged on the grounds it "very much focused on Māori students" (Chloe GT/INT) and that it "didn't cover on any other ethnicity" (Sophie GT/INT). This view was also echoed by another GT who felt that "other cultures were pushed to the side, neglected, and, worst of all, incorrect in certain settings", which raised a presumption for him that "in some cases it got pretty racist" (Noah GT/INT). The perceived unbalanced coverage of other cultures in the content has, therefore, led to Jack "feeling a bit frustrated at times" as he expressed that CRP content "felt a little bit politically correct" (Jack GT/INT). Nevertheless, when I pointed out the role of CRP in meeting the Ministry's key strategic goal to raise achievement - for priority learners (PL) in general and for Māori students in particular- two GTs offered alternative interpretations of their perceptions of the meaning of this term. For example, they perceived a PL as "any student who needs support in learning" (Isla GT/INT) given that "ethnicity is really nothing when it comes to that [learning]" (Hunter GT/INT).

This finding that some GTs expressed limited knowledge about diverse cultures led GT's to suggest that the programme should include a broader range of cultural and/or linguistic backgrounds/worldviews in the content of this feature. For example, Susie recognized that greater emphasis should be placed on "how to differentiate for a multitude of cultures." Additionally, Chloe argued that the programme's focus on CRP needed to shift towards "being inclusive rather than culturally responsive" (Chloe GT/INT) and thus embracing a wider conception of "multicultural New Zealand instead of just bicultural" (Noah GT/INT) to eliminate societal and contextual barriers against diverse students.

4.2.4.4 Perceived Theoretical Delivery of CRP. The findings indicated the need for a more practical pedagogical approach in teaching about CRP. Six of the interviewed GTs requested a more "tangible approach" (Hunter GT/INT) in teaching this component indicating that it probably was "a harder one to put into practice and I do not recall any aha moments" (Jack GT/INT). Another GT expressed concern with the perceived lack of practical application of cultural responsiveness theories in teaching and emphasized the importance for them to "see it in action" (Susie GT/INT). The importance of including practical demonstrations of CRPs seems to have been critical for those GTs who identified as European so as "to tune into my children's backgrounds and beliefs" (P13). Further suggestions for enhancing this feature also included incorporating "prime examples of things that [she] can do" (Violet GT/INT) such as "videos of it actually working in a school or in a classroom" (Susie GT/INT). Furthermore, the perceived insufficient time allotted to CRP cast doubt on its practical relevance in a real teaching context. While one GT recalled having "only a few PD stuff on that (CRP)" (Chloe GT/INT), another stated that he attended "just one pedagogy session on it" (Hunter GT/INT). For these two GTs, the perceived lack of time led to their view that there wasn't a strong focus on CPR, and what there was, was "not that useful as it hasn't left me with much practical takeaways or ways to find to apply this to my own teaching" (Hunter GT/INT).

To sum up, most of the GTs identified the role CRP played in preparing them to teach all students in culturally sensitive ways. Those GTs felt that embedding CRPs in the programme had helped them to incorporate learners' experiences, cultures, and community resources into their instruction, which promoted learning, particularly for priority learners. However, while many GTs recognized the importance of CRP in developing an inclusive approach to their teaching, others cited insufficient knowledge and/or experiences of diverse cultures, ethnic groups and

communities. Concerns were raised regarding the perceived lack of cultural competency for some GTs who wanted a more diversified range of identities, languages and cultures of students be included in the programme.

4.2.5 Community Placements

The GTs were asked to comment on the impact that the community placement had on preparing them to teach New Zealand's priority learners. Analysis of the qualitative responses from the survey and interviews showed that these placements had helped to shape the GTs' teaching practice. Two key findings were identified: broadening the GTs' worldviews about cultural identity and developing their teaching competencies.

4.2.5.1 Broadening Worldviews about Cultural Identity. The findings indicated that the community placements had provided the GTs with a rich opportunity to develop a holistic perspective to understand the diverse lives of priority learners and their whānau/families. Eleven of the 25 surveyed GTs recognized the value of community placement in helping them to identify the social, psychological and educational needs of priority learners. The community placements had helped the GTs to be empathetic towards priority learners' home lives. Violet, for example, highlighted the importance of being in a "safe environment but also being able to learn from it." In addition, the community placements were reported to promote the GTs' abilities to be inclusive in their practice. Isla, for example, reflected on her experience as it helped her "to connect with people better" (Isla GT/INT). P13 also indicated that "It was an eye-opening experience which helped support [her] to recognise ways to make each child feel valued and respected." Likewise, P18 reported that this feature of the programme "reinforced how challenging priority learners' lives can be and how important it is to provide a safe place for them in our schools." In these ways, community placements offered them the opportunity to develop a deeper

understanding of diversity. For instance, P17 recognized that these placements offer the GTs with a valuable experience "to see the community at a deeper more intimate level" (P17). Another student stated that these placements made him become "more sympathetic to why they may be behaving or feeling the way they do" (P3).

Seven of the 12 interviewed GTs confirmed the findings from the surveys, indicating that the experiences they gained from the community placements had helped them to understand and address priority learners' needs. Jack, for instance, explained that his placement had provided him with "a perspective on kids who do not fit into the mainstream" (Jack GT/INT). Isla also felt that her community placement helped her in a high needs school and expressed that "what I was exposed to during my community placement [had] helped considerably." Another GT also indicated that her placement had helped her to communicate effectively with priority learners, their families and whānau, as his experience inspired her "to be more empathetic and culturally aware…and that's been pretty helpful" (Harper GT/INT).

4.2.5.2 Developing Teaching Identity. Seven of the 25 surveyed GTs recognized that the community placements had had a major impact on their teaching competencies and practices. Those experiences were deemed valuable as they had facilitated the GTs' exploration of personal identity and belonging to the profession. For instance, P23 stated that "I absolutely loved it! It shaped not only my teaching but who I am as a person." Similarly, P10 expressed that her placements helped her to identify "the kind of teacher [she] wanted to be."

In addition, community placements had supported the GTs' future job requirements. P11, for example, perceived the practicality of this community component as it developed her professionalism in her current job as she "continued that role." Likewise, three of the 12

interviewed GTs found that the varied experiences they gained from their community placements had served to increase their exposure to different cultural situations. Mai, for example, indicated that “it’s really important to get as much experience with as many different situations as you can” (Mai GT/INT). Sophie acknowledged the importance of the community placement as “something that teachers should definitely be doing, and like it definitely helps in my practice as a teacher” (Sophie GT/INT). Violet also explained that these community experiences “provide so many opportunities for [the GTs] to be in schools” (Violet GT/INT).

In summary, these findings show that the community placements had helped to promote the GTs’ awareness and deepen their understanding of diversity and equity through the varied experiences they offered. Many GTs recognized the role community placements had played in the development of deepening their understandings of diversity and capacities for empathy. These short-term placements were particularly valuable in allowing a clearer and more profound insight into the lives of diverse students and what might be appropriate culturally responsive approach to take in their teaching.

4.3 Lead Teachers’ Perceptions of the GTs’ Competence

This section of the chapter reports the key findings of the third research question, namely of the Lead Teachers’ (LTs) perceptions of the GTs’ preparedness to develop effective teaching practices to teach all students in Aotearoa New Zealand. Three major themes were identified from the LTs’ interviews: i) the GTs’ preparedness to promote equity through Inquiry; ii) the GTs’ competence to promote equity through cultural awareness and responsiveness; and iii) the GTs’ ability to create a learning environment using 21st century pedagogies.

4.3.1 Preparedness to Promote Equity through Inquiry

All the LTs endorsed the GTs for their competence to foster an effective learning environment to enhance equity through their evidence-informed inquiry. The LTs felt that the GTs were equipped with the necessary skills and knowledge needed for interpreting and analysing classroom data to assist student learning and therefore enhance equity. Tai emphasized the value of Inquiry to help the GTs to "evaluate the impact of their own teaching practices on students' learning and social-emotional development." Olivia also found the GTs ready to "engage with evidence to make their classrooms more intellectually challenging and ensure equitable learning opportunities are created."

The relevance of the artefacts the GTs gathered throughout the course reflected the significant impact that Inquiry had on using evidence to foster ongoing professional learning in order to provide an equitable learning environment. For example, Lagi recognized the potential value of this component for the GTs "to continue to reflect on the effectiveness of their teaching practice to maintain equity." Another common view reported by all four LTs was the need for the GTs to be continually prepared for engaging in the process of inquiry which had helped them to become more reflective and articulate their own teaching philosophies in preparation for the teacher registration requirements. Such practice, LTs felt, had helped the GTs to focus meeting the needs of all students supporting equitable outcomes for all students – a capability that is at the very core of their careers as teachers. Supporting this observation, Tai asserted that:

> It's good that it [inquiry] prepares you [the GT] that you get that whole insight into what you're doing right now of constantly collecting and assessing evidence to ensure you're offering equitable learning opportunities for all students. This is what you are going to have to do next year as a teacher, when you're a first year teacher, and you will have to do it

every single year if you want to meet the provisionally certified teacher requirements. (Tai LT/INT)

4.3.2 Preparedness to Promote Equity through Cultural Awareness and Responsiveness

All the LTs indicated that most GTs were culturally aware and responsive to all students and felt that they were adaptive experts, capable of creating equitable learning opportunities for all students. Introducing CRPs in the course theory and clinical placements was found beneficial for the GTs' professional learning considering the growing cultural diversity in New Zealand's schools, which have become "a lot more multi-ethnic" (Lagi LT/INT). All LTs felt the GTs were equipped with the necessary adaptive expertise and CRPs to implement differentiation and relational pedagogies which helped them position equity at the core of their teaching. For example, Tai indicated that the CRP component of the programme ensured that "students are getting the same level of care, and being able to be themselves, and not have to be white middle-class Europeans." When asked if diverse students' profiles were sufficiently covered in the content of CRP, Charlotte (LT/INT) felt that these were not meant to include all cultures, rather the GTs learn how to become more adaptable to provide all students an equitable opportunity to learn. She felt that the different placements offered to the GTs during their ITE had enriched their professional learning to become more empathetic and culturally responsive to meet the expectations of a teacher in New Zealand's diverse and inclusive society. As such, she urged the GTs to be more "intellectually and socially curious" and to foster the diversity of all learners' identities and languages as "every student has a unique culture" (Charlotte LT/INT).

The LTs cited evidence of the GTs' enthusiasm to foster equitable, inclusive and cohesive education where students can be confident of their own cultures and identities. The LTs provided an example of the GTs' ability to foster equity through establishing constructive,

professional relationships with students, their families and communities "given that learning is mostly social by nature" (Lagi LT/INT). For example, Charlotte (LT/INT) praised the GTs' ability to develop "proper, deep relationships with their students, and the colleagues that they work with", given that "learning is mostly social by nature" (Lagi LT/INT). In particular, promoting cultural awareness and responsiveness within both the extended clinical and community placements had had a positive impact on the GTs' practice as they gave the GTs an overall view of the country's rich cultural diversity and enabled them "to see a broader perspective, more diversity to understand the struggles" (Charlotte LT/INT). The LTs indicated that these placements had helped the GTs to develop "a bit of empathy which would help them [the GTs] open their eyes to people that have struggles that they don't have" (Tai LT/INT). They had also strengthened the GTs' preparedness to employ their experiences with CRPs to identify and recognize the history, tikanga, and worldviews of their students' and all other school staff. Tai, for instance, endorsed the GTs' ability to "put culturally responsiveness theory into practice in such culturally-diverse learning environment", as he argued that "teaching nowadays is all about building relationships and these develop over time" (Tai LT/INT).

4.3.3 Preparedness to Create a Learning Environment Using 21st Century Pedagogies

The four LTs (100%) argued that the GTs utilized essential 21st century pedagogies to promote initiative and creativity and to foster authentic learning experiences in the classroom. The GTs were deemed as competent lifelong practitioners and that they had key critical thinking skills to encourage their students to make sense of their own knowledge. Tai (LT/INT) endorsed the GTs' fostering innovative pedagogies to create a "passion for lifelong learning which is key for their students to become more curious to undertake their own investigations." Olivia (LT/INT) also recognized the GTs' ability to weave digital and media literacies into their classes, which was

evidenced by their flexible use of technology shown in “using online tools in their teaching and in timetabling their own days” as well as their students’ effective “use of technology throughout the day” (Olivia LT/INT). Likewise, Charlotte (LT/INT) praised the GTs’ digital skills as she perceived these to be essential “when teaching this generation born into the digital era.”

Furthermore, the LTs felt that the programme placements had improved the GTs’ professional capability to analyse evidence and employ innovative teaching styles and practices to create an engaging classroom environment where learning was facilitated, and students were guided to undertake their own investigations. These practices include the ability to demonstrate key critical thinking skills and creativity which enabled them to gain a clearer understanding of students’ needs and abilities. Charlotte (LT/INT) endorsed the GTs’ competence in employing key 21st century pedagogies they observed and reflected upon during the extended practicum. She stated that this feature offered the GTs “a 360-view of teaching, which is much more realistic, and I find that builds realistic stamina for the job itself and helped them become more inquisitive, reflective and creative” (Charlotte LT/INT). Charlotte also indicated that offering the GTs the opportunity to observe a much broader spectrum of schools through the exemplary school visits had helped them to become more adaptable and flexible lifelong learners. Her analysis well summarized the significance of the GTs experiencing a variety of scenarios to create a supportive and positive learning atmosphere, as she concluded that:

> We're just all educators and we are teaching the same student, that student in that primary school, 4 years from now is going to be my student, I need to see the environment they've come from, I need to see the pedagogy that works for them, I need to understand and be empathetic to them, to what the learning environment has looked like. (Charlotte LT/INT)

The previous section of the chapter reported the key findings against the third research question, namely of the LT's perceptions of GT preparedness to teach all students. The LTs cited strong evidence to indicate the GTs' preparedness to ensure a successful and equitable learning environment for all students through implementing inquiry, cultural responsive pedagogies and 21st century pedagogies to promote skills to embrace the goal of social justice and addressing priority learners' persistent inequitable learning outcomes.

4.4 Chapter Summary

The findings in this chapter indicated that most GTs and LTs perceived that the MTchgLn programme succeeded in creating a professional atmosphere through laying the essential groundwork for the GTs to integrate theory and practice to enable them to teach all learners. The findings of the present study suggest that most of the GTs felt confident that the MTchgLn programme had enabled them to teach diverse learners in Aotearoa New Zealand. In addition, most GTs perceived that the programme's five distinctive design features were useful in preparing them to teach diverse learners. The extended practicum enabled the GTs to experience the reality of a teacher's full-time job and helped them develop their relationship-building skill. The TaI feature helped inform the GTs' instructional decision-making to address all students' needs and equipped them with the needed skills and the competencies to articulate their teaching philosophies. exemplary school visits were perceived key in enabling the GTs to observe and reflect on a diversified range of school environments. CRPs were found beneficial for increasing the GTs' targeted exposure to priority learners and prepared them to plan engaging learning experiences appropriate to students' individual needs. Finally, community placement offered the GTs' more empathetic insight into their students' family lives which in turn reinforced the GTs' commitment to social justice.

A few factors that were perceived to act as barriers to the GTs' professional learning were also identified. For example, many GTs needed more opportunity to work with priority learners. Also, some secondary school GTs felt that the structural characteristics and pace of delivery of TaI inhibited their professional learning. Other concerns were expressed concerning the perceived short duration of the exemplary school visits, and the preference of most secondary school GTs to visit schools from their sectors to maximize the depth of their learning. Finally, some GTs needed more exposure to te reo and tikanga Māori and to other diverse cultures, ethnic groups and communities.

The LTs perceived that the GTs were professionally prepared to ensure an equitable learning environment for diverse learners. The LTs also perceived that the programme design features played a valuable role in enabling the GTs to employ inquiry, cultural responsive pedagogies and 21st century pedagogies to teach all learners.

Chapter 5: Discussion

Recently implemented educational policies have prioritised preparing a teaching force capable of teaching for diversity and social justice, in highly effective education systems (Cochran-Smith et al., 2018; Guthrie et al., 2019; Zeichner, 2020). In countries such as Aotearoa New Zealand, these policies have manifested in the introduction of major reforms in Initial Teacher Education (ITE) focused on developing Graduate Teachers' (GTs) competencies to provide equitable learning opportunities for all students (Ministry of Education [MoE], 2019; OECD, 2012; O'Neill et al., 2009).

The present study investigates the perceived effectiveness of the Master of Teaching and Learning (MTchgLn) programme in response to these calls for teachers, new to the profession, who can adapt their practice to meet the learning needs of all students. While this research focuses on preparing GTs to respond to the learning needs of all learners, some survey questions relate specifically to the needs of priority learners.

The purpose of this chapter is to discuss, in relation to contemporary literature, the findings from the quantitative and qualitative phases which have been integrated. The quantitative findings from Phase One are first discussed in relation to the first research question about the GTs' confidence to develop high-quality teaching practices to teach all learners. Findings from the second qualitative phase are then discussed in relation to the GTs and Lead Teachers' (LTs) perceptions of the impact of the MTchgLn programme on GTs professional preparedness to teach all learners. An overall interpretation of the GTs' perceptions is finally juxtaposed with the LTs' views about the GTs' preparedness to teach all learners. The following three research questions provide a framework for this discussion.

Research Question 1: *How confident are graduates of the MTchgLn programme to perform key teaching competencies/tasks that demonstrate their capability of developing high-quality teaching practices to teach all learners in Aotearoa New Zealand?*

Research Question 2: *What are Graduates Teachers' perceptions of the value of the distinctive design features of the MTchgLn programme in preparing them to teach all learners in Aotearoa New Zealand?*

Research Question 3: *What are Lead Teachers' perceptions of the preparedness of Graduate Teachers to teach all learners in Aotearoa New Zealand?*

5.1 Perceptions of Teaching Competence

The main aim of Phase One was to assess the GTs' confidence to develop effective teaching practices for all learners (Research Question 1). It is acknowledged that engaging the GTs in the survey was an educative process because it may have helped them to better understand their practice, and their reasons for making pedagogical decisions which may have shaped the data being sought. This reflexive process was evident in a recent longitudinal study designed to explore the development of professional identities of two cohorts of GTs who were enrolled on a postgraduate ITE programme in Portugal (Flores, 2020). As the GTs in Flores's study became more conscious of the complexities of teaching and learning through the data collection processes, their assumptions, expectations and beliefs about becoming teachers were examined in ways that could have made them reconsider their ITE experiences and review their current learning experiences and identities as graduate teachers.

The MTchgLn programme, designed in 2013, was underpinned by the then current *Graduating Teaching Standards* (New Zealand Teachers Council [NZTC], 2007). However, the

present study uses the new *Standards for the Teaching Profession* (Education Council, 2017) as a benchmark to write the survey items and to interpret the results. In this way, the findings are discussed in relation to the current teaching standards.

These six professional standards "describe the essential professional knowledge in practice and professional relationships and values required for effective teaching" (p. 16). Many educational authorities have developed and implemented standards for teachers, describing the expectations of effective teaching practice (Darling-Hammond, 2013; Sachs, 2016). The practice of using prescriptive standards and norms to describe teacher quality has been challenged on the grounds of its lack of practicality, because such standards tend to be complexly interrelated (Darling-Hammond, 2013). Sinnema et al. (2017), for example, highlighted the inadequacy of separating the strands of subject matter knowledge, classroom management skills and pedagogical techniques due to the interrelatedness of teacher knowledge and the complex nature of teaching. The present study found that areas of teacher competence were not easily mapped as separate entities; that they were indeed interrelated. The following section discusses the findings in relation to the GTs' confidence to teach according to the six Standards for the Teaching Profession (Education Council, 2017).

5.1.1 Commitment to Te Tiriti o Waitangi Partnership

The MTchgLn programme had served to reinforce their commitment to understand the unique status of tangata whenuatanga and Te Tiriti o Waitangi partnership (Education Council, 2017). Reflecting on their commitment to the principles of Te Tiriti o Waitangi, most participating GTs (80%) said they were confident in their commitment to build partnerships of integrity with tangata whenua to create an effective learning environment for all students. Most of the GTs indicated that they were committed to the bicultural partnership as the basis of their practice and

that they focussed on equity and excellence for all students, particularly Māori students. These results reflect the obligations the Treaty holds towards its partners which are apparent in its documentation at all levels of the education system (Treaty of Waitangi [English version], 1840).

These findings suggest that the programme had successfully prioritized the implementation of culturally responsive practices (CRPs) to teach Aotearoa New Zealand's indigenous students. Prior studies have also noted a strong relationship between the GTs' use of CRPs to teach Māori students and their competence to create meaningful learning experiences for them. The present study reflects Fickel et al.'s (2018) findings emphasizing the importance of equity-oriented ITE programmes to develop the GTs' broader perspective about Māori students and to help them to teach with empathy and to advocate high expectations for these learners. These authors urge ITE providers to develop policies that promote GTs' commitment to the principles underpinning Te Tiriti o Waitangi, especially through engaging in local community knowledge so that they can use these "funds of knowledge" (Hogg, 2011) to create authentic learning opportunities for Māori students (Fickel et al., 2018).

The important role ITE can play to integrate Te Ao Māori within the GTs' teaching practices is further supported by McRae and Averill's (2020) research. These researchers urge teacher educators to nurture relationships with local Māori communities, by adopting indigenous learning perspectives, incorporating CRPs and teaching and speaking te reo Māori. Similarly, most GTs in the present study endorsed the implementation of CRPs in the programme because they offered them the opportunity to learn about and to implement bicultural contextual knowledge in the classroom. In the same vein, the findings from this study align with Berryman (2014) who maintained that any successful ITE framework needs to prioritise developing teaching practices that recognise and affirm indigenous students' identities.

5.1.2 Confidence to Engage in Professional Learning

Most of the participating GTs (almost 94%) reported that the evidence-informed inquiry design woven into the fabric of the programme, was beneficial for teaching them a mechanism to support their current and future professional learning. These GTs felt confident to use a professional learning inquiry cycle that saw them assess students' needs, adapt their practice according to evidence and to evaluate the impact of their changed practices on their students' outcomes. These teacher actions are in accord with Standard Two (Education Council, 2017) which ensures that teachers possess high-quality professional knowledge and competence to optimize opportunities for all students to learn. The present study findings show that the MTchgLn programme put an increased emphasis on the importance of the Teaching as Inquiry (TaI) model to encourage the GTs to effectively incorporate classroom and research-informed evidence to drive the direction of their professional growth.

Furthermore, the programme was unanimously endorsed for providing collaborative professional learning opportunities and for embedding theories of teaching and learning around 21st century knowledge and skills into the GTs' teaching practice. Fostering collaborative professional learning environments is a key pillar integral to the political and educational reform in Aotearoa New Zealand as represented in the introduction of the Community of Learning | Kāhui Ako model. The present findings further support the value of the Community of Learning | Kāhui Ako model as an efficient educational policy introduced by the government along its chosen road to educational and political reform (MoE, 2017). Each community of Learning is a cluster of inter-connected and networked education and training providers which collaborate their efforts to help students achieve their full potential, particularly "ākonga/students that are at most risk of underachieving" (MoE, 2014, p. 5). Consistent with prior studies, these findings underscored the

importance of promoting TaI to offer the GTs a high-quality teaching and learning experience and incorporate a sense of professional learning (Le Cornu, 2015; Sinnema et al., 2017). For instance, Sinnema et al. (2017) argued that, "to teach well, and to improve their teaching, teachers need, in our view, to demonstrate their ability to inquire into that uncertainty in ways that address the particular complexities, conditions, and challenges they face" (p. 9). Sinnema et al. recognize teachers under TaI premises as active change agents in their own contexts, able to identify each student's learning priorities and defend their decisions. As agentic decision-makers, those teachers can make defensible decisions drawing on extensive knowledge resources which comprise knowledge about the student, the subject, and the community mediated by commitments to equitable learning opportunities to all students (Sinnema et al., 2017).

Similar to the present study findings, Darling-Hammond (2017) maintained that an exemplary ITE programme should first and foremost have a clear vision of good teaching and professional learning characterized by adaptive expertise, knowledge and beliefs to prepare reflective teachers to develop their creative problem-solving abilities. Such distinctive ITE innovations should foster the GTs' continuous professional learning experiences designed to encourage reflections on their own learning and practice to cater for students' learning needs through close collaboration between school-staff and teacher educators.

5.1.3 Confidence to Develop Professional Relationships

Most GTs (80%) felt confident to establish effective learning-focused relationships with their students and whānau to support learning. This finding is consistent with Standard Three (Education Council, 2017), which ensures that teachers can establish and maintain reciprocal and collaborative relationships among students and their whānau. These findings support previous ITE research on how establishing collaborative relationships between the GTs and diverse learners and

their families can improve students' engagement in learning. For example, a major factor associated with raising Māori learners' achievement includes the teacher's success to establish respectful relationships with Māori students, their whānau and iwi (Bishop et al., 2012; Glynn, 2015). Similarly, several lines of evidence (e.g. Hunter et al., 2016; Reynolds, 2018; Siilata, 2019) noted that to positively affirm Pāsifika students' cultural identity and enhance their learning outcomes, teachers are required to include the students and their family in the learning process and maintain respectful and reciprocal relationships with them. Siilata (2019), for example, underlined the importance of teachers developing inquiry-focused, collaborative, and success-oriented relationships in the classroom to enable Pasifika learners to use all of their linguistic repertoires to master the linguistic and cognitive demands of school.

Interestingly, this study responds to the importance of preparing culturally responsive teachers who understand the complex dynamic between culture and classroom. This focus resonates with the recent work of Caldera et al.'s (2020) investigation of an ITE programme preparing teachers to teach in urban schools from disadvantaged areas in the US. Their study underscored the importance of centralizing CRPs in ITE to assist GTs to build effective professional relationships with their students and families. In so doing, they recommend enabling the GTs to reflect upon the cultural influences that promote students' academic performance and behaviour (Caldera et al., 2020). The evidence found in this study aligns with Caldera et al.'s (2020) conclusion of the value of the ITE programme to develop mutually respectful relationships between the student teacher and their students by seeking cultural guidance from students' communities.

5.1.4 Confidence to Develop a Learning-Focused Culture

Most GTs (approximately 94%) felt confident to create an inclusive learning-focused culture where empathy and compassion could be maintained, and learning experiences are personalized. This capability aligns with Standard Four (Education Council, 2017) ensuring that teachers promote a learning-focused culture in which the classroom conditions are optimized for learning to grow as successful and responsible citizens in the 21st century. In this study, the GTs said they held high expectations for their students' learning and felt confident to select teaching approaches and strategies to optimise learning. The MTchgLn programme was endorsed by the GTs for enabling them to co-operate with school staff to plan for and prepare effective learning-focused environments.

Most GTs in the present study felt they were enabled to demonstrate dispositions consistent with positive emotional judgment, collaboration and problem solving to create a more supportive learning atmosphere in their classroom. This study supports evidence from previous research recognizing the GTs as change agents, fully engaged in the process of becoming reflective lifelong learners. For example, previous research highlighted ITE's important role to engage student-teachers in professional communities where they can collaborate with colleagues, teacher and school educators to build diversified repertoires and nurture their emotional intelligence (EI) (Bernay et al., 2020; Sutherland et al., 2010). EI involves "the ability to perceive accurately, appraise and express emotion; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions" (Mayer & Salovey, 1997, p. 10). The relevance of promoting a learning-focused culture in ITE has been underlined in recent models which explicitly teach EI at university to prepare student-teachers to manage learner–teacher relationships in the classroom (Gallardo et al., 2019). Several studies (e.g. Hascher & Hagenauer, 2016; Turner & Stough, 2020)

highlighted the importance of supporting student-teachers to cope with their emotions throughout their ITE professional learning to create more positive learning-focused environments during their clinical placements. In accordance with the present study findings, these studies argue for a close correlation between high levels of EI and promoting student-teachers' well-being and effective teaching.

Furthermore, student-teachers need to be professionally prepared on how to ensure an inclusive learning-focused culture in which learning is personally relevant and students' efficacy as learners is valued and supported (Ovbiagbonhia et al., 2019). For example, Koh and Fraser (2014) investigated the learning efficacy perceptions of 2216 secondary school students in Singapore taught by student-teachers professionally prepared to create engaging learning-focused environments compared to 991 secondary-school students taught by traditional teachers. Students in classes focused on establishing a learning-focused culture expressed more positive outcomes as they could construct, arrange and modify knowledge (Koh & Fraser, 2014).

In line with the research discussed, the MTchgLn programme was commended for equipping the GTs with the key 21st century skills and competencies to adopt an active approach to promote students' confidence and develop their skills for lifelong learning. The programme was also praised for offering both flexibility and depth to the GTs' learning experiences to create personalized learning-focused environments in which creativity and critical thinking are promoted to enable students to construct knowledge and take risks to become active, independent learners.

5.1.5 Confidence to Develop Designs for Learning

The results of the present study indicate that nearly all the GTs were confident to plan for their teaching based on curriculum, pedagogical knowledge and assessment information. The

GTs felt confident to adapt their teaching and select teaching practices that enhanced their students' learning outcomes and developed learning skills. The GTs cited examples of positive anecdotal feedback of how the distinctive features of the MTchgLn programme supported them to personalise learning designs for their students. This finding aligns with Standard Five, which states that teachers need to develop a sound understanding of each learner's strengths, interests, needs, identity, language and cultures (Education Council, 2017).

Consistent with wider research, the present study found that the university-based teacher educators played a significant role in laying a solid foundation of pedagogical knowledge (McDonald et al., 2014). This theoretical foundation, backed by quality practica experiences, enables GTs to improve their ability to develop plans focused on learning worthwhile content aligned to students' needs (Darling-Hammond, 2014). Darling-Hammond emphasizes the value of clinically-rich ITE designs in helping student-teachers to "grow roots on their practice, which is especially important if they are going to learn to teach in learner-centred ways that require diagnosis, adaptations to learners' needs, intensive assessment and planning, and a complex repertoire of practice" (p. 551). However, rather than merely focusing on the amount of time spent during practica placements, a crucial element of these experiences is to ensure they are "well supervised" (Darling-Hammond, 2014, p. 547). In the present study, the extended practica experiences supervised by mentors helped the GTs to design clear next steps in their planning for learning to support students to succeed. Darling-Hammonds' finding aligns with other researchers who also indicated that high-quality clinical practica can establish and maintain a bridge between theory and practice which helps the student-teachers to develop their planning skills. Creating this bridge "is a relatively new phenomenon" and is still perceived as a core part of improvements in ITE ideologies, policies, and practices in Aotearoa New Zealand (Sewell et al., 2017, p. 323). A

more meritocratic education should ensure sustained cooperation between theory and practice to enable student-teachers to meet the aspirations of priority learners and adequately address the challenges of the current neoliberal ideology (Kearney & Kane, 2006).

In addition, the school-based teacher-educators contributed to the GTs' learning in ways at least as meaningful as their university-based counterparts by supporting the GTs to understand and implement the planning process (Grimmett et al., 2018). Grimmett et al. (2018) outlined three essential roles for mentor teachers (MTs) as key for fostering a student teacher's growth. First, the "supervisor and assessor" (p. 345) involves the traditional apprenticeship model which helps student-teachers to improve their teaching practice. Second, the "fellow teacher educator" (p. 350) underscores professional experience partnerships with university-teacher educators as colleagues engaging in theory-practice reflection. Finally, the "supporter and co-constructor of pre-service teachers' learning" (p. 350) provides nurturing support through community of practice model. For example, Jimenez-Silva and Olsen (2012) emphasize this key role of MTs to enrich student-teachers' professional learning by helping them "to research, study, think, reflect, and share about their own positionality, identity, and assumptions as both teachers and learners in community" (p. 341). Similarly, Behrstock-Sherratt et al. (2014) surveyed National and State Teachers of the Year in the US and found that the top-cited factor which improved their teaching effectiveness during their ITE was "access to a high-quality clinical practicum" (p. 8). Most of the respondents cited the support offered by skilled MTs as invaluable to their professional learning (Behrstock-Sherratt et al., 2014).

5.1.6 Confidence in the Teaching Role

Most GTs (91%) in this study felt confident that they were equipped with the requisite pedagogical knowledge and learning experiences to teach in evidence-informed ways. These

teaching capabilities reflect Standard Six (Education Council, 2017) which ensures that teachers develop a depth of knowledge about the subject matter through implementing evidence-based instructional adaptations to best support students' learning at an appropriate depth and pace. Consistent with the literature, this study found that embedding 21st century teaching pedagogies, particularly the inclusion of TaI model in the MTchgLn programme curriculum, helped to develop the GTs' essential professional knowledge and skills to engage in all aspects of teaching including understanding the content knowledge and pedagogical content knowledge.

While no consensus has been reached on the definition of effective teaching (Muijs & Reynolds, 2017; Strong, et al., 2011), Coe et al. (2014) argue that quality teaching promotes "improved student achievement using outcomes that matter to their future success" (p. 2). A broader perspective has been adopted by Sinnema et al. (2017) who argue that teaching is complex and challenging given the uniqueness of every teaching situation. These researchers perceive effective teachers as inquiring professionals capable of deciding on the best teaching practices based on the learning priorities of their students and are aware of the wider education policies.

ITE has recently witnessed a trend towards practice-based approaches in Aotearoa New Zealand, (Aitken et al., 2013) that aim to equip the GTs with equitable learning opportunities, rich pedagogical content knowledge and advocacy for adaptive expertise through robust collaboration between ITE providers and partner schools (Cochran-Smith et al., 2016). For example, Aitken et al. (2013) highlighted the importance of fostering high quality standards of student-teachers and mentoring support and concluded that promoting equity, raising self-awareness and fostering commitment were essential professional values that are worth further exploration in ITE programmes. Cochran-Smith et al. (2016) further highlighted the value of an equity-centred ITE through collaborative partnerships to enable the GTs to engage in research to develop confidence

to use their learning experiences to teach in evidence-informed ways. Despite the significant contribution of implementing more practice-based approaches as part of the government's educational reforms, other indicators, however, still show the integral need for a more comprehensive paradigm shift in ITE provision to take account of the world of tikanga Māori and help student-teachers address the current political, social and cultural challenges (O'Neill, 2017).

The following section discusses the Phase Two findings, collected through individual interviews about the GTs' perceptions of the effectiveness of the MTchgLn programme's five distinctive design features to prepare them to teach in Aotearoa New Zealand.

5.2 Perceptions of the Programme's Design Features

The ultimate objective of the MTchgLn programme design was to effectively prepare teachers to enhance priority learners' academic outcomes and their ultimate life chances. While this study does not evaluate the impact of the MTchgLn programme against school students' achievement, it does explore the GTs' perceptions of the value of the distinctive design features of the MTchgLn programme in preparing them to teach all learners in Aotearoa New Zealand. The major findings of Phase Two are discussed according to Table 5.1.

Table 5.1

Research Question Two - Major Findings

Research Question Two		**Major Findings**
What are graduates' perceptions of the usefulness of the distinctive design features of the MTchgLn programme in preparing them to teach all learners in Aotearoa New Zealand?	*5.2.1 Extended Clinical Placements in Partner Schools*	5.2.1.1 The Importance of Mentoring. 5.2.1.2 Gaining Realistic Insights to Classroom Life. 5.2.1.3 Experience in Teaching Priority Learners.
	5.2.2 Evidence-Informed Inquiry	5.2.2.1 Benefits of Engaging as Inquiring Teachers. 5.2.2.2 Challenges of Implementing TaI.
	5.2.3 Exemplary School Visits	5.2.3.1 Broadening Exposure to a Variety of School Cultures.

	5.2.3.2 Challenges of Exemplary School Visits.
5.2.4 Culturally Responsive Practices	5.2.4.1 Recognizing and Accommodating Māori Students' Cultural and Learning Needs. 5.2.4.2 Lack of Exposure to Multicultural Content.
5.2.5 Community Placements	5.2.5.1 Broadening World Views. 5.2.5.2 Accommodating the Interests and Needs of the Whānau and the Wider Community.

5.2.1 Extended Clinical Placements in Partner Schools

Extended clinical placements in partner schools were perceived by the GTs to be the most important feature of the MTchgLn programme design because of the opportunity this presented for i) quality mentoring; ii) gaining a realistic sense of the classroom; and iii) providing experiences with priority learners. The clinical practice or practicum is an integral component of any ITE provision because it can help to build and maintain the GTs' future practical competence in the classroom (Darling-Hammond et al., 2002; Williams, 2014). The following sections discuss these three themes to find the alignment with existing literature paying particular attention to the role longer block practicum plays in the GTs' professional preparedness.

5.2.1.1 The Importance of Mentoring. A key finding from this study indicates the importance of high-quality mentoring during the extended clinical placements to promote the GTs' confidence and competence to teach. In this study, the establishment of effective mentor-mentee relationships was enriching for most of the GTs' learning. This finding is consistent with research evidence highlighting the importance of a strong and mutually trusting mentor-mentee relationship to enhance student-teachers' learning and reflective capabilities (Allen et al., 2017). These researchers describe the mentoring role as being an expert guide, a reflective observer and provider of timely feedback. Similar to the current findings, Matsko et al. (2020) also found that mentees in Public Schools in North America felt better prepared to teach when their Mentor Teachers (MTs)

coached them by offering frequent performance feedback and modelling effective instruction. These findings also resonate with Mukeredzi's (2017) conclusion about the significance of positive mentor-mentee relationships on developing the student-teachers' competencies in the classroom particularly in preparing them to become more reflective. Mukeredzi advocated for fostering dialogical mentor-mentee engagement and focusing on the mentoring practices during practicum, such as team teaching and modelling of lessons observed and critiqued.

The findings from the present study reflect the value of maintaining close collaborations between the ITE provider and their partner schools. This finding aligns with the studies conducted by Aitken et al. (2017) and Allen et al. (2017) who found that robust professional mentee-mentor relationship in school-university partnerships enhanced the GTs' professional learning. Their studies emphasized that the stronger partnerships are made between universities and partner schools, the more effectively MTs and student-teachers can collaborate as professional learners.

Consistent with the literature, these findings highlight the importance of building close collaboration between university and school-teacher educators by means of integrating the theory taught at university and related practice in the classroom to support the GTs' professional learning. The present study identified the role of fostering a collaborative relationship between the university and partner schools to co-design the 'Partner School Guide' which helped provide comprehensive and cohesive professional learning opportunities for the student-teachers. Another key finding of the present study is the value of the extended placements in facilitating strong mentor-mentee relationships whereby the GTs' critical and reflective thinking was refined. This finding is consistent with that of Wray (2007) who confirmed the alignment between the GTs' preparedness to establish professional relationships with their mentors and teaching effectiveness. Wray

concluded that the more space offered to the GTs to collaboratively discuss the teaching context, the more capable they become to forge effective relationships as teachers.

Despite the overall positive impact of mentoring to shape the GTs' practice, 25% spoke of problematic mentoring relationships such as a clash of personalities, or not getting enough timely feedback. These challenging mentoring situations, interfered with their ability to build a positive relationship with their mentor, with negative effects on their professional learning. The ability to establish a collaborative relationship between the MT and the GT is a key skill required for effective mentoring, as identified in the *Guidelines for Induction and Mentoring and Mentor Teachers* (ECNZ, 2011). Given its crucial role as an essential component of induction, mentoring needs to promote a "co-constructive relationship" (p. 2) and remain consistently "focused on educative mentoring, recognised and resourced" (ECNZ, 2011, p. 11). The problematic mentoring relationships reported by a few GTs in the present study reflect one of Mukeredzi's (2017) findings about the significance of developing positive mentor-mentee relationships on developing the GTs' competencies with poor mentor communication adversely affecting mentees' learning. The researchers also discussed the value of offering student-teachers numerous opportunities to apply their pedagogical content knowledge in more diverse teaching contexts. This finding also accords with evidence from the present study which found that curriculum knowledge and awareness of educational contexts can help student-teachers establish effective communication and support their learning.

In another New Zealand study, Sewell et al. (2017) studied the capabilities that quality MTs bring to their work with GTs, arguing for targeted professional learning for them to ensure a positive mentoring relationship and to overcome the "absence of any substantive professional learning" for mentors (p. 25). Sewell et al. underscored the importance of developing the MTs'

specialized knowledge, skills and dispositions to promote effective mentoring of the GTs in the practicum. Sewell et al. found that provision of mentoring is too often undertaken haphazardly and criticized the highly variable quality of these experiences in Aotearoa New Zealand schools. Sewell et al.'s (2017) finding aligns with another recent case study whereby Fyall et al. (2020) interviewed three GTs and their MTs about their mentoring experiences. Fyal et al found that more attention needs to be put on selecting and training nominated MTs and concluded that "it cannot be assumed that teachers themselves have mentoring expertise just because they are qualified teachers" (p. 24). In contrast to Sewell et al.'s (2017) and Fyall et al.'s (2020) findings, however, mentoring education was provided for the MTs who worked with the GTs in the present study, which perhaps goes some way towards explaining why most GTs found their mentors' to be confident and competent in their mentoring role.

5.2.1.2 Gaining Realistic Insights. A major finding to emerge from the present study is that the extended practicum allowed a period of continuity which provided the GTs with a realistic insight into classroom teaching. Many GTs underscored the value of this component to facilitate numerous opportunities for them to observe and engage in the realities of classroom life, and to apply different teaching approaches and high leverage practices. The ongoing and varied demands of the GTs' extended clinical placements enhanced their opportunities to engage in, critically reflect on, and learn from real-life teaching practice to teach diverse students. The GTs' views in this study are supported by Zeichner (2010) who found "an equal and more dialectical relationship between academic and practitioner knowledge" (p. 486). Such carefully developed, extended clinical placements are arguably one of the most essential components of an ITE programme because it promotes their awareness of full time teaching in real-life settings (Darling-Hammond, 2017; Mayer et al., 2015).

The above finding from the present study is contrary to some research that suggests ITE provision often lacks integration between clinical, professional and academic learning. Darling-Hammond (2009), for example, refers to the disconnect between theory and practica experiences as the Achilles heel of ITE. Similarly, Fullan (2013) also criticizes ITE provision for its inherent rigidity of content and structure and inability to adapt to the students' changing social needs. Any perceived lack of connection between theory, research and practice renders ITE as inadequate to prepare GTs for the realities of the classroom (Wilson & I'Anson, 2006). Furthermore, research has indicated that if the GTs cannot apply their understandings of pedagogical theories in realistic teaching situations during practicum, the overall learning experience is thwarted potentially contributing to higher attrition rates (Lind, 2013; Sim, 2006).

The political and educational reforms under Labour and Labour-led coalition governments (1999–2008) in Aotearoa New Zealand gradually introduced student-centred learning and inquiry curriculum to improve learning (O'Neill, 2017). The reforms recommended further realignments in ITE to focus on developing student-teachers' adaptive expertise using inquiry-led designs. Enhancement of the ITE provision also prioritized establishing solid connections between theory and practice as part of the reforms to address the educational, social and cultural challenges (Sewell et al., 2018). To address the criticism that ITE provision sometimes lacks theory-research-practice connections (praxis), exemplary models of ITE across the world, particularly in high-performing countries[4], have been designed to enable student-teachers to reflect on theoretical and evidence-based knowledge in their clinical practice (Boyd et al., 2009; Mayer et al., 2015). The simultaneous application of research-informed strategies embedded in clinical practice, as seen in the TaI process, is vital to prepare GTs for the classroom (Darling-Hammond et al., 2017). The present

[4] With respect to student outcomes on PISA (Programme for International Student Assessment).

study supports evidence from studies suggesting that ITE, grounded in practice, improves the GTs' practical competence in the classroom (Darling-Hammond, 2017). The MTchgLn was particularly endorsed for supporting the GTs' application of knowledge through embedding research and theory in the clinical experiences, marking what Mattsson et al. (2011) called in the title of their book *A Practicum Turn in Teacher Education*. Such a 'practicum turn' was characterized by providing the MTchgLn student-teachers with realistic opportunities for rich school experiences emphasizing the role of 'practical' or 'field' experiences in their ITE.

***5*.2.1.3 Teaching Experience with Priority Learners.** The main aim of the MTchgLn programme was to develop the GTs' professional competencies and values to teach in ways that raised the educational achievement of all learners while targeting priority learners. The present study underscored the value of the Extended Placements, especially in low decile schools, where the GTs had more opportunity to observe and teach priority learners. This experience enabled many GTs to observe their MTs modelling of high leverage pedagogies, contributing to their professional learning. Through these clinical experiences, the GTs came to understand a range of social and cultural learning needs as well as seeing the strengths priority learners had to be built upon.

Responses identified that the GTs' felt they needed to teach and observe more priority learners from diverse social, cultural, linguistic and educational backgrounds to support their efforts to create equitable educational opportunities and outcomes for all learners. ITE provision has been criticized for only preparing student-teachers to think about teaching in general, rather than developing their adaptive expertise through specific practical and research-informed tools to successfully teach diverse students (Philip et al., 2019). These researchers argue that merely organizing ITE around practice-based approaches may peripheralize equity and justice, and thus

education policy makers need to consider "making questions of justice—Justice for whom? And, according to whom? —the precondition for practice" (p. 260).

In the same vein, Burnett and Lampert (2016) posit that ITE programmes need to build bridges with schools from low socio-economic communities, their teachers and students, particularly in communities that have historically experienced the consequences of the structural inequities. Findings from the present study show that the MTchgLn programme began to build these bridges with low decile schools, but that these important partnerships needed to be further developed. As mentioned, some GTs were placed in relatively high decile schools whose demographics did not include many priority learners, depriving them of sufficient opportunities to develop their adaptive expertise. Aligned to this finding, the evaluation of new exemplary ITE programmes (Bellett & Fanselow, 2018), also found that some GTs had not gained adequate experience to teach priority learners. Findings from the present study, corroborated by the commissioned report, suggest that some GTs were less well-prepared than their peers to work with the complex and wide-ranging needs of priority learners.

In summary, this section has discussed three major findings underscoring the positive impact of the extended practicum on the GTs' professional preparedness. The first major theme discussed the value of ensuring quality mentoring and providing numerous relationship-building opportunities between GTs, MTs and other school staff during clinical placements. Also discussed was the importance of extended placements to ensure a realistic experience in all aspects of school life. Finally, greater exposure to priority learners is needed to reinforce GTs' professional learning to develop their adaptive expertise.

5.2.2 Evidence-Informed Inquiry

The findings from this study underscore the importance of the GTs engaging in evidence-informed inquiry approaches, albeit with some perceived challenges. The results of this study agree with previous research which indicates that adopting an inquiry stance in ITE supports teachers to implement strategies that promote high-leverage practices that are adaptive and differentiated to cater for each student's learning needs (Darling-Hammond, 2005). For decades, teacher educators have known the importance of using a systematic evidence-informed inquiry approach to ensure GTs can impact positively on all students' learning outcomes (Campbell & Groundwater-Smith, 2013; Medwell & Wray, 2014). Recent innovative approaches in ITE provision in Aotearoa New Zealand have incorporated this inquiry stance (Fowler, 2012; Sinnema et al., 2017; MoE, 2007). The following section discusses the GTs' views of the perceived benefits of practising as inquiring teachers, as well as some of the challenges inherent in this process.

5.2.2.1 Benefits of Practising as Inquiring Teachers. The reported evidence shows that developing an ongoing critical inquiry stance on teaching and learning was key to the GTs' professional experience promoting critical thinking using research. These findings resonate with Timperley et al. (2014) who argued that "inquiry is not a 'project,' an 'initiative' or an 'innovation' but a professional way of being" (p. 21). The TaI model has been unanimously endorsed for being an effective pedagogy (MoE, 2007) that can provide the GTs with a robust research evidence base to best promote students' achievement. Building on the discussion in 5.1.2, the present study supports findings from previous research regarding the positive effect of the TaI model to empower the GTs to take an inquiry stance in their practice.

The power of developing an inquiry stance has been widely investigated (Bransford et al., 2005; Dana & Yendol-Hoppey, 2008). For instance, similar to the present findings, Dana and

Yendol-Hoppey (2008) underlined the importance of teachers engaging in TaI as they work on investigating core aspects of teaching to tailor effective practices that address student needs. Likewise, Niemi and Nevgi (2014) found that the GTs' "authentic experiences of being a researcher strengthen(ed) their wide and comprehensive role as a teacher" (p. 140). The *New Zealand Curriculum* (NZC) (MoE, 2007) highlights for teachers the content, values, skills and pedagogies they are required to undertake as part of their professional duties and responsibilities (Major, 2012; Timperley et al., 2014). The NZC presents TaI as an effective pedagogy for teaching and to engage in professional learning where "teachers inquire into the impact of their teaching on their students" (MoE, 2007, p. 35).

Several lines of evidence highlight the critical role ITE plays to promote a vision of practice that encourages inquiry as a means to enhance teachers' and students' learning. Commenting on this role, Sinnema et al. (2017) emphasized that to promote improvement in the quality of teaching, teachers need to be professionally prepared to be more inquisitive to " address the particular complexities, conditions, and challenges they face" (p. 9). The present study elaborated the value of the TaI model which was deliberately embedded in the MTchgLn to support student-teachers identify and address on priority learners' learning needs. Interestingly, findings showed that for most GTs this deliberate embedding of TaI assisted their capacity to critically reflect on their teaching practices and seek evidence-informed solutions to analyse and resolve any problems arising in the classroom. Findings also revealed that the TaI process was a key feature of the programme as it helped to develop their adaptive expertise to shape their inquiry mindsets, which in turn, promoted their adoption of an inquiry approach to teaching.

International literature points to the significance of embedding an inquiry type framework within ITE programmes (Cochran-Smith et al., 2008; Willegems et al., 2017) thus aligning with

Aotearoa New Zealand's advocating the TaI model (MoE, 2007: Sinnema et al., 2017). For example, Cochran-Smith et al. (2008) outlined necessary conditions that enable student-teachers to engage into pedagogical learning activities. Of these conditions, the researchers concluded that observing other teachers, seeking feedback, exchanging ideas and inquiring into their teaching practices have a significant impact on professional learning. In the same vein, promoting professional inquiry appears to be closely linked to improved outcomes for students in Aotearoa New Zealand. Several lines of evidence (e.g. Dyson, 2020; Timperley et al., 2009), suggest that using an evidence-based, data-driven approach to teaching and learning is required to develop the GTs' inquiry teaching competency to improve teaching and support inquiry-based learning. Cochran-Smith et al. emphasized the value of collecting and analysing evidence from the classroom of students' learning to understand the impact of GTs' teaching. Understanding the cycles of inquiry supports the skills necessary for developing the GTs' questioning and adaptive mindset to enhance their capacity to address, and disrupt, problems of practice and ultimately support school reforms (Timperley et al., 2014).

5.2.2.2 Challenges Engaging in Teaching as Inquiry. The present study found that despite the GTs' beliefs in the value of TaI, its implementation was complex and challenging. For instance, most of the interviewed secondary GTs found that their clinical experiences did not provide them with sufficient opportunity to engage authentically with TaI. This finding suggests that the structure of secondary schools in Aotearoa New Zealand makes the implementation of the TaI model potentially problematic.

Findings from the present study are consistent with those of Major (2012) who conducted a case study investigating the perceptions of six student-teachers in a postgraduate ITE programme in Aotearoa New Zealand, concluding that engaging in TaI was invaluable but not without its

challenges. Her participants perceived their inquiry to be superficial and undermined their chances to engage in authentic work to support students' real learning needs. It is noteworthy that the inquiry topic in Major's study was directed, "core questions were determined by the scenarios and many core resources were provided" (p. 9). However, this scenario contrasts with the MTchgLn model where the inquiry focus was directly related to the real needs of priority learners in the partner schools. Similarly, the challenges of practitioner inquiry were also evident in Schroeder's (2020) study wherein 30 GTs' inquiry experiences were investigated in their final undergraduate semester in North America. Her study also found that the GTs lacked autonomy in selecting their inquiry, so that "many inquiries were conducted with the goal of trying to mould students to fit into an existing classroom environment rather than asking how the classroom environment might be altered to meet individual student needs" (p. 12).

Interestingly, consistent with the findings obtained by Major (2012), most of the secondary GTs in the present study felt that their unsatisfactory implementation of TaI impeded their learning and potential capability to adopt this approach in their teaching. Major (2012) highlighted the value of TaI as an efficient pedagogical process whereby student-teachers can explore issues relating to teaching linguistically and culturally diverse learners. Unlike Major's study findings, however, the GTs in the present study had a higher level of autonomy and empowerment. As such, responses retrieved from the interviews indicated that other logistical issues, such as the lack of time and pace of students' engagement, constrained the efficient implementation of TaI approach. Likewise, significant time constraints emerged to pose a challenge for the GTs' learning in Schroeder's (2020) study. She concluded that time management was "by far the most often cited challenge to implementing an inquiry in a systematic and intentional way in the practicum classroom" (p. 11).

In the same vein, previous studies have demonstrated that factors, other than demands on new teachers, can hinder the GTs' implementation of an inquiry approach to their teaching. For example, Kim et al. (2013) indicated that the GTs' initial reluctance to embrace inquiry could be attributed to their limited or distorted understanding of its value. Reaume (2011) also cite adherence to examination requirements within a tight timeframe as a barrier to the use of TaI in the secondary sector. Similarly, most of the secondary GTs in the present study identified the relatively longer time taken for getting familiar with all aspects of NCEA as a perceived impediment to their learning to implement the TaI model.

Taken together, the discussion suggests that evidence informed inquiry was important for the GTs' professional preparedness providing them with a robust research evidence base needed to make effective pedagogical decisions. The evidence presented in this section has emphasised the importance of professional experiences being embedded in the programme's theoretical and practical components. Engaging as inquiring teachers enhanced the GTs' knowledge and practice and helped them to reconcile prior knowledge with new ideas and experiences, encouraging them to become curious, reflective and lifelong learners. The present study corroborates the findings of previous studies in reporting challenges such as structural constraints which limited the secondary GTs' abilities to engage in an authentic inquiry.

5.2.3 Exemplary School Visits

This section discusses how exposure to a variety of exemplary school cultures was found to have a positive impact on the professional preparedness of most GTs. The discussion will focus on how the exemplary school visits enabled the GTs to observe, practise and reflect on varied teaching practices in a variety of school settings as part of their clinical experiences. The discussion also explores two challenges that were perceived as negatively impacting the professional

preparation for some GTs: insufficient secondary school exemplary visits; and lack of time dedicated to exemplary visits.

5.2.3.1 Observing a Variety of Teaching and Learning Practices. More than one third of the GTs found the observations they made during their exemplary school visits had helped to broaden their understanding of a range of students' backgrounds, learning needs and abilities, as well as diverse teaching practices, and school cultures. The findings show that observing several different school cultures was most beneficial in helping the GTs to collect evidence of learning and teaching inside the classes and schools they visited. The observations teachers made of other teachers' practice in their ITE is crucial given that teaching is a 'craft-profession' wherein acquiring content knowledge to teach is as important as the pedagogical content knowledge. For example, Gove (2010), noted that "teaching is a craft and it is best learnt as an apprentice observing a master craftsman or woman. Watching others … is the best route to acquiring mastery in the classroom" (Gove, 2010, Improving teaching, para. 10).

Growing evidence reported in the ITE literature highlights the importance of observing varied teaching practices in a variety of settings to encourage discussions about how these practices are interpreted (Orchard & Winch, 2015). More recently, Forghani-Arani et al. (2019) posit that an exemplary ITE programme needs to be proactive about offering different models of teachers who successfully address diversity through observation so that student teachers to effectively connect theory to practice. These researchers noted that ITE programme design needs to, among other factors, approach diversity as an asset through integrating it into the curriculum and practicum experiences. This finding is consistent with that of O'Neill (2017) who described the demographic challenge for future ITE and emphasised the importance to develop CRPs that can "accommodate the diverse educational world views, experiences and household aspirations of the

European, Pacific and Asian traditions in which children live their everyday lives outside school" (p. 598). Hence, the evidence reviewed here suggests that ITE provide multiple opportunities for visiting a variety of schools known for their exemplary practice, and then to reflect on these practices as part of their clinical experience (Meierdirk, 2016).

5.2.3.2 Challenges of Exemplary School Visits. While exemplary school visits were beneficial to support the GTs' professional preparedness, the present study found that these visits did not meet all the GTs' expectations for two main reasons. Most of the secondary GTs (75%) felt that they would have benefitted from only visiting secondary schools. These findings indicate that the majority of the interviewed secondary school GTs felt disadvantaged compared to their primary counterparts. However, many of the primary GTs commended their visits to secondary exemplary schools.

Prior studies have noted the importance of offering student-teachers the opportunity to observe classes in different sectors as being a crucial factor for showcasing the totality of the education system. The perceptions of these GTs in the present study contradict McDowall and Hipkins' (2019) study which explored the approaches implemented by 23 Aotearoa New Zealand primary and secondary school teachers to improve school students' learning. Unlike the secondary school GTs' views, McDowall and Hipkins emphasized the importance of student-teachers taking a more holistic view of different phases of students' learning. In this regard, one of their participants indicated that "[a]ll teachers need to see the whole picture: Year 0 to Year 13 and Year 13 to Year 0" (p. 50).

The second challenge which was perceived to be an impediment to the learning of more than half of the surveyed GTs was the insufficient time to interact properly with the staff and

students during the exemplary school visits. This perceived shortage of time proved unsatisfactory for observing and reflecting on the different teaching practice. This finding is contrary to that of Burn and Mutton (2015) who urged their student-teachers to prioritize the quality of their knowledge and clinical experience rather than focus on the quantity of time spent in class, noting that "it is the quality of the clinical experience that matters" (p. 228).

This section has discussed the benefits of exemplary school visits across sectors because they enabled opportunities to observe, analyse and interpret a variety of teaching practices in different school. This section also discussed the lack of empirical evidence about the impact of exemplary school visits in different school sectors on the GTs' learning.

5.2.4 Culturally Responsive Practices

Priority learners are consistently over-represented among the highest numbers of underachieving groups of students in Aotearoa New Zealand's education system (Education Review Office [ERO], 2012; Heng et al., 2019). This increase in marginalized students has inspired new initiatives in ITE, such as the MTchgLn, to develop GTs' culturally-responsive repertoires to successfully teach a wide range of students from minority socio-economic and cultural milieus (MoE, 2012, 2013a, b, c, d; O'Neill et al., 2014). The first theme to be discussed in the following section is the GTs' views of CRP programme content to accommodate Māori student' cultural and learning needs. The second theme under discussion is the GTs' perceptions of their need for more multicultural content.

5.2.4.1 Accommodating Māori Students' Cultural and Learning Needs. The GTs unanimously recognized the programme's emphasis on Māori students' cultural and learning needs and its value in their professional learning. These findings underscore the importance of preparing

culturally responsive teachers capable of fostering trust, respect and cooperation among all students, particularly Māori. However, half of the interviewed GTs (n=6) felt that they needed more learning experiences to develop their knowledge of te reo and tikanga Māori, as well as pedagogical knowledge for teaching Māori learners. The present study findings reflect those of Bishop and Berryman (2009) who affirmed the inseparable link between the learning and cultural contexts in which te reo and tikanga Māori are used. The importance of establishing this close link was mirrored in *Ka Hikitia* which states that "identity and culture are essential ingredients of success for Māori" (MoE, 2009, p. 20).

An important and particularly unique feature of the educational context in Aotearoa New Zealand is the high value placed on its educational policies designed to support Māori students' needs – specially to establish trustworthy relationships with them and their whānau, focused on their learning and wellbeing (Grudnoff et al., 2016). For instance, the *Te Kotahitanga Project*, (Bishop et al., 2009) developed a power-sharing model designed to increase academic achievement in young Māori. These researchers' work was made the focus of learning in the MTchgLn, supporting the GTs to recognize the value of affirming Māori students' cultural identities and background knowledge in their learning. The GTs learned about the importance of drawing on cultural funds of knowledge when planning for learning to strengthen their relationship with Māori students. Bishop et al.'s professional learning programme promoted effective teacher–student relationships, teacher reflection, and questioning to promote educational success for Māori students (Bishop et al., 2009). Although many GTs in the present study felt they needed more exposure to Māori students, the evidence supports previous observations (e.g. Hunter et al., 2016; Hynds et al., 2011) that when student-teachers are well prepared to recognize and meet Māori students' cultural, social and linguistic needs they are well positioned to positively engage them in

meaningful learning. Similarly, O'Neill (2017) argues that much needed reform should be widely implemented to ensure that ITE "could become safe, inviting and familiar places for Māori to be within an authentic institutional commitment to working and learning biculturally" (p. 596). Consistent with the literature, the present study found that many student-teachers felt that this aspect of the programme lacked sufficient depth to adequately address their professional learning needs to be able to adequately meet their students' cultural, social and learning needs.

5.2.4.2 Lack of Multicultural Content. While the programme provided the GTs with valuable bicultural experiences to teach Māori students, almost 60% of the GTs felt that they lacked enough exposure to students from multicultural backgrounds. The GTs expressed that more exposure to multicultural content would have supported their teaching of all students from diverse races, cultures and ethnicities. For example, almost 25% of the GTs felt less confident in understanding Pāsifika students' strengths and needs. A possible reason might be the perceived limited content in the programme about students from Pāsifika and other multicultural communities. Another possible explanation is that some GTs had less interaction with diverse students from different cultural backgrounds during their practicum experiences and felt they lacked the pedagogical expertise for teaching them.

An essential goal of quality ITE programmes is to prepare GTs to develop agency over their learning (Moate & Ruohotie-Lyhty, 2014) and to help them to adapt effective pedagogies in response to each learner's individual needs, especially those from ethnic minority communities (Cochran-Smith & Villegas, 2016). Similar to the evidence with Māori students, previous studies identified the need for ITE to prioritise CRP content to ensure GTs understand and respect diverse students' identities. The present study supports evidence from previous observations (e.g. Hunter et al., 2016) about the importance of professionally preparing GTs to build a culturally responsive

learning environment that engages ethnically diverse students including Pāsifika students. This finding also aligns with international research that highlights the significance of CRPs in helping the GTs to develop a culturally inclusive context in their classroom.

This section has discussed the importance of embedding CRPs in the MTchgLn programme to provide the GTs with a broader repertoire of social and cultural profiles. Incorporating CRPs within the programme raised the GTs' cultural awareness and responsiveness and helped them to create a more supportive learning atmosphere in today's diverse classroom. In line with the discussed literature, most of the GTs felt that embedding different cultural experiences in the programme was vital to their professional learning. However, to develop their intercultural sensitivity, the GTs felt that more experience was required to apply CRPs to better support their culturally diverse students, particularly to cater for the varied needs and aspirations of Māori students and those from other minority cultures.

Embedding CRPs within the ITE experience can help student-teachers to promote targeted opportunities to raise priority learners' achievement, which is a high priority on the educational policy agenda (Ministry of Education, 2018a). Equipping student-teachers with the necessary tools to understand the impact of culture on learning has been a feature of recent ITE reforms. However, more evidence is needed to confirm whether these ITE reforms are better preparing teachers to work effectively with priority learners (Reynolds, 2018; Siilata, 2019).

5.2.5 Community Placements

The highly diverse student population in today's schools has been one of the major driving forces for teacher educators to provide GTs with substantial opportunities to adequately recognize the cultural and ethnic diversity in the classroom and the local community (Lee et al., 2009). As

such, the inclusion of high-quality clinical experiences in a variety of community-based settings is argued to be a central tenant of ITE for the contextually meaningful learning experiences these placements provide (Ballard, 2013; Forzani, 2014). The present study found that integrating a community placement in various settings was beneficial to the GTs' professional learning as these provided them the opportunity to broaden their worldviews to help them to understand the diverse and often difficult lives of priority learners. The discussion also explores the importance of community placements to accommodate the wider community interest and needs, and the positive impact on GTs' professional learning.

5.2.5.1 Broadening the GTs' World Views. Most GTs appreciated the opportunity to expand their worldviews through their community placement. Worldviews reflect one's own subjective cultural context and perspectives in the world (Hammer et al., 2003). For most of the interviewed GTs in the present study, the experience of interacting with priority learners' whānau and the wider community during their community placements supported their professional learning because the placement setting was such a different community to their own[5]. Evidence shows that teachers from a monocultural socialisation context often lack the intercultural sensitivity towards others, due to the limited experiences gained in interacting with people from other cultures (Beutel & Tangen, 2018). The programme's inclusion of one community placement from a range of diverse communities laid essential groundwork for the GTs' development of CRPs, helping them to reflect on and make explicit connections to key aspects of priority learners' social and cultural lives.

[5] Ten out of the twelve GTs who were interviewed identify as White European.

Comparison of the findings with those of other studies confirms the importance of incorporating high-quality clinical experiences for the GTs to work with students from diverse backgrounds, their whānau and the wider community. For example, employing an equity-centred ITE framework, Cochran-Smith et al. (2016) underline the significance of making links to the local community in an ITE programme. Cochran-Smith et al. argue that establishing these strong connections "demands an open mind, an inquiry stance, and an awareness of one's own cultural positioning as well as knowledge of how assumptions about others shapes teaching practice" (p. 73). Similarly, the present study aligns with other recent New Zealand studies (e.g. Bellett & Fanselow, 2018; Fickel et al., 2018; Heng et al., 2019) in emphasizing the key role these community experiences play in nurturing the GTs to become culturally responsive teachers, capable of reconsidering and broadening their own understanding of priority learners' backgrounds. In line with these researchers' conclusions, the present study also stresses the value of this important clinical component in a quality ITE programme.

5.2.5.2 Accommodating the Interests and Needs of the Whānau and the Wider Community. The survey results showed that most of the surveyed GTs (64%) felt prepared to build on the interests and meet the learning needs of students' whānau and their wider community. The present study found that preparing the GTs to engage with students' whānau and the wider community in planning their lessons is key to their professional learning because it helped them to understand and use students' diverse funds of knowledge. Engaging whānau and the wider community in ITE priorities can strengthen their social partnership and help teachers make learning more meaningful and relevant for priority learners (Abbiss & Astall, 2014; Fickel et al., 2018).

Learning, from a social constructivist perspective, is perceived as being essentially social and relational (Hargreaves & Fullan, 2009). Enabling student-teachers to establish professional relationships with students, their families and the wider local community is a major aim of ITE provision (Villegas & Cochran-Smith, 2020). Similarly, Martin et al. (2020) cited empirical evidence of the efficacy of collective practice that can have a positive impact on the development of teachers' instructional practice. The researchers underlined the significance of learning in and from practice through developing an authentic learning community. The Ministry of Education (2017) also recognizes the importance of adequately preparing teachers to be inclusive to support students from diverse cultural backgrounds "through social interaction … and by respecting the achievements and aspirations of each child's family and community" (MoE, 2017, p. 31). To this end, teacher educators are required to show their "commitment to inclusivity through engaging with the prior knowledge of the local community in the development of the programme" (Heng et al., 2019, p. 1026). Aligning with Heng et al.'s (2019) findings, this study also found that community placements play a key role in helping the GTs to be inclusive by establishing meaningful, professional relationships with the whānau and community of priority learners.

The evidence discussed in this section underscored two important characteristics of the community placements, mainly the opportunity they presented to broaden the GTs' worldviews and help them to accommodate the wider community interests and needs. The most interesting finding was the strong understanding the GTs gained about priority learners' lives through their community placements (see section 5.2.5.1). The second important finding underlined the value the student-teachers gained to promote their CRPs through pursuing the interests and learning needs of the students' whānau and their communities (see section 5.2.5.2).

5.3 Lead Teachers' Perceptions of GTs' Preparedness to Teach

This section discusses key findings from the third research question, namely of the LTs' perceptions of the GTs' preparedness to develop effective teaching practices. Fostering a fair and equitable learning environment for all students is a major priority of the educational policy agenda in Aotearoa New Zealand (MoE, 2018a). The LTs indicated that the GTs were well prepared for teaching all learners, as seen in their inquiry abilities, cultural responsiveness and engaging in 21st century pedagogies. ITE has a significant role to play in preparing student-teachers to teach with empathy in the 21st century classrooms. Recent evidence has focused on the importance of designing equity-centred, exemplary ITE programmes to address disparity and improve the outcomes of students traditionally marginalized by the education system (Cochran-Smith et al., 2016; Grudnoff et al., 2019). At the heart of this undertaking, three themes were identified and are discussed here: i) GTs' preparedness to promote equity through inquiry; ii) GTs' competence to promote equity through cultural awareness and responsiveness; and iii) GTs' ability to create an inclusive learning environment using 21st century pedagogies.

5.3.1 Preparedness to Promote Equity through Inquiry

All the LTs found the student-teachers to be well-prepared to promote equity through demonstrating their ability to engage in collaborative inquiry. Collaborative inquiry is a key component in ITE that involves facilitating adaptive and evidence-informed processes, whereby "dialogue, collaborative reflection, developing trust, and collegial relationships" (Sinnema et al., 2011, p. 250). The MTchgLn emphasized the importance of strengthening collaboration between university- and school-based teacher educators to foster an efficient professional learning environment, whereby equity is enhanced through promoting collaborative inquiry (Grudnoff et al., 2019). To address inequitable student outcomes, the Education Review Office (2016) identified

a set of indicators of teaching effectiveness to recognize the professional community's - including the GTs' - ability to engage in "systematic, evidence-informed professional inquiry to improve outcomes for students" (p. 38).

All four LTs indicated that employing the TaI model within the programme provided the GTs with a critical lens to enhance equity through adopting evidence-led practices. This critical lens helped them to become self-regulated learners, capable of encouraging and responding to their students' thinking. These results confirm Bellett and Fanselow's (2018) recent findings in their evaluation of the MTchgLn programmes across the seven ITE providers. Similar to findings from the present study, most of these researchers' participants - GTs, LTs and teacher educators - also commended the TaI component for enabling the use of evidence and adapt their teaching practices accordingly. These researchers concluded that compared to other ITE Graduates, the MTchgLn's GTs, from all seven ITE providers, have "much more experience in working with inquiry" (p. 11), and that they "stand out for their ability to research and use data – a skill built through the use of inquiry approaches" (p. 12).

Furthermore, research has established that student-teachers who completed an ITE programme underpinned by embedded adaptive expertise, and other advanced inquiry skills, managed to incorporate a sense of ongoing professional learning in their career compared to their peers who lacked such focused feature in their ITE (Henard & Roseveare, 2012; Jacobs et al., 2015). The four LTs in the present study recognised the student-teachers' strong analytical skills and creative, inquisitive approach to teaching with a keen desire to apply learning to real problems of practice. They attributed these skills to the programme's success to nurture the student-teachers' collective professional agency to promote equity and adapt their teaching to the changing needs of students. The LTs also endorsed the student-teachers' critical thinking and adaptive expertise, as

seen in their active engagement with evidence - both from the classroom and from the research - to reflect on the impact of their own teaching practices on students' learning.

All the LTs in this study endorsed the student-teachers' ability to differentiate their teaching practices to deal with the complexities of teaching diverse learners. One interesting finding in my study is the similarity between the views expressed by all LTs and GTs and evidence from previous researchers. For example, Bransford et al. (2005) and Timperley (2013) argued that the adaptations the student-teachers make throughout their practica experiences were crucial for their learning to reflect critically and build "the knowledge that is the core of professionalism" (Timperley, 2013, p. 5). Such reflections the student-teachers make during their ITE are key to their learning as they enhance the shifting of knowledge from theory to practice and help build their adaptive expertise to develop their professional skills to differentiate learning (Timperley, 2013).

5.3.2 Preparedness to Promote Equity through Cultural Awareness and Responsiveness

All the LTs perceived the GTs to be culturally aware and responsive as seen in their success to incorporate diverse students' cultural backgrounds to offer equitable learning opportunities to all students. ITE plays a fundamental role in deepening the GTs' understanding of diverse students' cultures through enabling them to establish professional relationships with their students, their whānau and the wider community (Berryman et al., 2018; Mills et al., 2020). The present study's findings align with Bishop and Berryman's (2009) *Effective Teaching Profile*, whereby teachers need to be supported to be culturally responsive, adaptive experts, capable of creating inclusive, equitable learning environments in the classroom. Bishop and Berryman's findings align with the recent education policy reforms within the scope and focus of ITE provision in Aotearoa New Zealand. The reforms underline the importance of urging teacher educators to develop CRPs to

help student-teachers adopt strategies that integrate students' cultural, social and linguistic backgrounds competent in teaching for equity to address priority learners' inequitable learning outcomes (Ell et al., 2018; Grudnoff et al., 2019). These recent policy changes require teachers to recognize the complex dynamic between culture and classroom by developing specific CRPs and by developing adaptive expertise required to ensure equitable learning outcomes for all students (Dyches & Boyd, 2017).

The LTs highlighted the value of providing the student-teachers with positive relationship models with the professional community, all students and their whānau to help these student-teachers identify and maintain diverse students' educational and cultural needs and aspirations. Central to ITE is the inextricability of relationships and learning due to the perceived social nature of learning (Darling-Hammond et al., 2020; Noddings, 2018). In the present study, the GTs were recognized for accommodating Māori students' history, tikanga, and world views, which is a key mandate of the Ministry of Education in Aotearoa New Zealand to ensure "Māori students enjoy education success as Māori" (MoE, 2008, p. 13). This finding of the present study was also reported by Bishop et al.'s (2003) Te Kōtahitanga project in which Māori students emphasized "the high aspirations they have for themselves in education, their willingness to participate and their desire to achieve…" (p. 31). Aligning with Te Tiriti o Waitangi (Treaty of Waitangi [English version], 1840), McRae and Averill (2019) adapted the underpinnings of CRP and proposed some strategies to maximize the GTs' confidence and competence to enhance teaching of Māori learners. The present study supports evidence from the growing body of literature about the importance of promoting "positive relationships with culturally and linguistically diverse learners" (Hammond, 2015, p. 73) through "emphasising social, emotional, physical, and spiritual well-being alongside academic progress" within the ITE programme (Averill & McRae, 2019, p. 298).

5.3.3 Preparedness to use 21st Century Pedagogies

The four LTs cited positive evidence in support of the assertion that the GTs utilized 21st century pedagogies to create supportive and authentic learning experiences in the classroom. Many definitions refer to the specific meaning of the concept 21st century pedagogies, as mentioned in Chapter 2. As such, only the most consistently identified ones by the LTs and in the academic literature reviewed in the present study are discussed in this section. The LTs praised the GTs for their readiness to become lifelong learners capable of employing critical thinking, problem solving and creativity (OECD, 2019; Silva, 2009); digital pedagogy (Instefjord & Munthe, 2016; Kivunja, 2013); pedagogical reasoning and adaptive expertise (Darling Hammond, 2020; Stewart, 2017).

The LTs' responses in the present study corroborate the findings of a great deal of the previous work highlighting the importance of embedding educational and instructional activities in the ITE to prepare student-teachers to become creative, and lifelong problem solvers (Fullan & Langworthy, 2014; Kim et al., 2019; OECD, 2019). All the LTs endorsed the GTs for demonstrating key critical thinking and problem-solving skills during their Extended Practicum and through the inquiry cycle. The LTs observed that the student-teachers' design of engaging activities and interventions, as part of the TaI process, had made students more inquisitive, reflective and creative. Several reports have shown that students need to be supported to master essential 21st century skills required in the society in which they will work and live (Beers, 2011; Sural, 2017). To unlock their students' potential and success, teachers need to possess key skills such as critical thinking, problem solving and creativity (Dada, 2019). Aligning with the present study findings, the education providers in Bellett and Fanselow's (2018) study recognised the shift in the programme towards 21st century teaching whereby equity-minded GTs are equipped with the necessary evidence base to enable a successful learning outcome for priority learners. They

concluded that, “our Master’s graduates perceive their role as teachers differently [to other ITE graduates]. They bring a critical layer, they challenge equity, work from an evidence base and see their job as a problem solver” (Bellett & Fanselow, 2018, p. 10).

Another underpinning goal of exemplary ITE designs is to prepare student-teachers to develop 21st century digital pedagogy to succeed. All LTs in the present study cited evidence of the student-teachers’ competence to embrace digital technologies and use these in their teaching. Comparison of the findings of the present study with those of other studies confirms the value of introducing 21st century digital pedagogies during ITE. Prior studies noted the importance of integrating digital pedagogy into ITE curricula to prepare the student-teachers to teach the digital generation (Instefjord & Munthe, 2016; Kivunja, 2013).

The last two 21st century pedagogies which all LTs perceived key to student-teachers’ learning during ITE comprise pedagogical reasoning, and adaptive expertise. All the LTs identified solid evidence of the student-teachers’ success to enable students to assess their own learning and collaborate with their teachers and peers to construct, arrange and modify knowledge. Compared to traditional teaching pedagogies, 21st century ones are more effective in eliciting the best from each student as they involve employing scaffolded instruction, relevant, engaging tasks and collaboration knowledge-construction to elicit the best from each student (Darling-Hammond et al., 2020). Student-teachers’ development of adaptive expertise during their ITE was perceived to be key to promote students’ learning and wellbeing as it eases the process of knowledge construction in a more dynamic and personalized environment (Timperley, 2013). Hence, in line with Darling-Hammond et al. (2020) and Timperley’s (2013) conclusions, the present study found the student-teachers competent in employing their pedagogical reasoning and adaptive expertise

as highly effective teaching and analytical practices which helped students make sense of their own knowledge.

5.4 Chapter Summary

This chapter discussed key findings from the three research questions in relation to contemporary literature. In response to the first research question, data retrieved from Phase One were discussed to explore the GTs' perceptions of confidence to develop high-quality teaching practices to teach all learners. In response to the second research question, both quantitative and qualitative data retrieved from both phases were integrated to discuss the GTs' perceptions of the impact of the MTchgLn programme on their professional preparedness to teach all learners. Finally, responses to the third research question discussing the LTs' perceptions about the GTs' preparedness to teach all learners were juxtaposed against the GTs' views to enrich the discussion about the perceived effectiveness of the MTchgLn programme.

The following chapter will summarise the key findings and present key conclusions of the study. Methodological limitations will be acknowledged and recommendations made. Finally, practical implications are suggested for ITE provision.

Chapter 6: Conclusion

The aim of this study was to investigate the impact of a one-year post-graduate initial teacher education (ITE) programme, the Master of Teaching and Learning (MTchgLn), to determine the Graduate Teachers' (GTs) professional preparedness to adapt their practice in evidence-informed ways to teach all learners. To this end, a mixed methods approach was adopted to explore practical solutions to this contemporary and ever-changing ITE issue (Biesta, 2010; Kaushik & Walsh, 2019). Contemporary ITE policy discourse in Aotearoa New Zealand was analysed through a socio-political lens to try and identify the underlying systemic issues in ITE policy challenges, proposed solutions and government decisions. The present study commenced during the pilot phase of the MTchgLn programme – the focus of this investigation. Pragmatism, my adopted philosophy, is linked to the pursuit of equity and social justice (Collins, 2017), which supports the central theme underpinning my study of building a high-quality equitable education system in Aotearoa New Zealand.

This chapter first summarizes the study's key findings against the three research questions. Secondly, several practical implications for ITE provision are discussed in line with the study's aim. Thirdly, consideration is given to the contributions made by this study before the implications of these for ITE educators and education policy makers are presented. Finally, limitations are identified and suggestions are made for future research. A summary of the key findings of the study is reported next.

6.1 Overview of the Findings

The current study investigated the various perceptions of the effectiveness of the exemplary ITE programme through the eyes of the GTs and Lead Teachers (LTs). The findings have provided

a deeper insight into the value of the MTchgLn to equip the GTs with professional learning experiences to enable them to develop equitable learning opportunities for all their students. Specific findings relating to each of the three research questions are summarized below.

6.1.1 Summary of Findings for Research Question One

The first aim of the present study was to assess the GTs' confidence to perform key teaching tasks that demonstrate their capability to develop high-quality teaching practices in line with *The Standards for the Teaching Profession* (Education Council, 2017). The findings confirmed that overall the GTs perceived themselves to be highly confident to teach diverse learners in Aotearoa New Zealand.

Most GTs felt genuinely committed to the principles of Te Tiriti o Waitangi *(Standard One)* and highly confident in their professional learning level *(Standard Two)*. Likewise, most GTs were shown to be confident to establish learning-focused partnerships with parents, wider whānau, and members of the school to support learning *(Standard Three)*. Responses also indicated that most GTs felt confident to promote equity, diversity and inclusion to develop their students' skills for learning *(Standard Four).* Additionally, most of the GTs felt confident to personalise learning designs for most students, however almost one third of the surveyed GTs felt less confident to meet Pāsifika students' learning needs *(Standard Five)*. Finally, most of the GTs were confident to develop high quality teaching practices *(Standard Six)*.

6.1.2 Summary of Findings for Research Question Two

The second aim of the study was to investigate the GTs' perceptions of the effectiveness of the MTchgLn programme's five distinctive design features to prepare them to teach all learners in Aotearoa New Zealand. Most GTs felt that these design features had supported their

development of pedagogical competencies and professional knowledge to become culturally responsive, adaptive experts, capable of teaching all learners. Data analysis identified five key findings and are briefly summarized below.

The first key finding was the value of the extended practicum placements with more regular days in partner schools. This practica arrangement gave flexibility and depth to the GTs' learning experiences and confirmed that partner schools make a valuable contribution to GTs' professional growth. The study further confirmed the valuable role Mentor Teachers (MTs) played as a consistent source of practical knowledge and expertise for teaching all learners. This finding aligns with prior studies highlighting the value of the support offered by a skilled mentor as a crucial element of effective ITE (Behrstock-Sherratt et al., 2014; Olson & Jacques, 2014).

The second key finding emphasized the importance of developing the GTs' inquiry stance in the programme to enable them to be critically reflective of their use of high leverage pedagogies. Teaching as Inquiry (TaI) enabled them to identify and to explore problems of real practice and to find solutions to these. As Cardno et al. (2017) pointed out, the goal of TaI "is to get teachers to improve teaching in order to improve learning outcomes" (p. 22). In line with this goal, the present study indicated that the programme design planted the seeds for the GTs' future professional learning as inquiry-focused teachers-as-learners. The findings also confirmed the value of TaI in strengthening the student-teachers' evidence base as a pre-requisite of teacher registration.

The third key finding to emerge from the study highlighted the value of exemplary school visits to help the GTs to reflect on the teaching strategies and approaches observed in the diverse exemplary schools. Most GTs requested more time during the exemplary school visits and wanted a wider range of exemplary schools – especially secondary schools. This finding aligns with the

conclusions of other researchers (e.g. Forghani-Arani et al., 2019; Lindblom-Ylänne et al., 2006) who emphasized the value of broadening the student-teachers' professional experience in diverse teaching and learning contexts during their ITE.

The fourth key finding promoted the value of employing authentic CRPs within the programme's professional learning opportunities to help develop the GTs cultural awareness and ability to be responsive. The evidence from the present study aligns with previous research investigating the important role ITE plays in preparing culturally aware and responsive GTs who have the potential to address Aotearoa New Zealand's persistent educational inequities (Bishop et al, 2012; Education Review Office, 2012; Savage et al. 2011).

Finally, the study emphasized the value of community placements that provided the GTs with opportunities to learn about and critically reflect upon priority learners' lives to deepen their understanding of educational needs and inequities in meeting them. The acquired knowledge about the lived realities of priority learners' lives developed the GTs' awareness of cultural diversity social disadvantage and also supported them to recognise evidence of their own conscious bias. In so doing, the GT's were supported to develop more inclusive practices for all learners. These findings align with recent studies (e.g. Fickel et al., 2018; Heng et al., 2019) highlighting the value of providing student teachers with authentic, clinical experiences that reflect diverse students' social and cultural lives outside school.

6.1.3 Summary of Findings for Research Question Three

The final aim of the present study was to investigate the LTs' perceptions of the GTs' preparedness to teach all learners. All LTs felt that the GTs had been well-prepared with the necessary inquiry abilities, cultural responsiveness and 21st century pedagogies to raise the achievement for all learners. Three key findings are briefly summarized below.

All LTs in the present study endorsed the GTs' competence to engage in TaI to improve teaching effectively and to support students' social wellbeing and personal development. In line with the reviewed literature (e.g. Education Review Office, 2016; Harris & Jones, 2019), the GTs were endorsed for fostering equity through engaging in TaI and employing its principles as a "professional way of being" (Ministry of Education, 2011, p. 3). Furthermore, all LTs felt that the GTs were culturally aware and responsive as seen in their competent employment of CRPs in their teaching. This finding is consistent with the recent evidence focusing on the need to offer the GTs authentic learning experiences to reflect on their own cultural lens and employ effective CRPs to provide priority learners an equal chance for success (Berryman et al., 2018; Cochran-Smith et al., 2018; Grudnoff et al., 2019). Finally, the LTs endorsed the GTs' competence to employ 21st century pedagogies, such as critical thinking, problem solving, creativity, digital pedagogy, pedagogical reasoning and adaptive expertise.

6.2 Contributions to Knowledge

This study has investigated, through the eyes of GTs and LTs, how the design of one MTchgLn programme has supported GTs to teach in ways that raise achievement for all learners, in an attempt to overcome historical educational inequality. The study adopts Sahlberg's (2010) definition of equity in education which ensures "guaranteeing high quality education for all in different places and circumstances" (p. 45, as cited in Burris, 2016, p. 59). Using Sahlberg's definition, the present study contributes to ITE literature in two major ways.

The first contribution the present study has made is to confirm the effectiveness of the MTchgLn programme's design framework (Hansen et al., 2017) to develop the necessary skills, values and knowledge needed for GTs to support equitable educational outcomes through their competence to use *The Standards for the Teaching Profession* (Education Council, 2017). The

study has suggested that the exemplary programme's design holds the potential to prepare beginning teachers to adapt their practice to cater for diversity and to address the challenges of achieving educational equity. The study has also identified the practical value of integrating the five features across modules and between the university, school and community settings.

The second contribution is the confirmation of the value of developing school-university-community partnerships in order to offer an exemplary programme that is both practical and research-informed. The study confirms the importance of strong school-university-community partnerships underpinned by a shared commitment to being culturally responsive and inclusive through an evidence-informed inquiry stance. While it is a challenge to gain such productive collaborations (Darling-Hammond, 2009; Fullan, 2013), particularly in settings where students experience disadvantage (Gunn et al., 2016; Heng et al., 2019), the present study argues that ITE programmes need to be perceived as "complex systems" (Reynolds et al., 2020, p. 390), comprising "multiple parts and interactions" whereby "the whole is more than the sum of its parts" (Ell et al., 2019, p. 180). To create strong partnerships with local schools and communities is a key requirement for ITE providers through their "authentic consultation … with relevant key partners" (Teaching Council of Aotearoa New Zealand, 2019, p. 10).

6.3 Implications

Several important implications for exemplary ITE programme design for equity and social justice can be derived from the findings. These implications are determined for four groups: teacher educators, school leaders, education policy makers and educational researchers.

6.3.1 For Teacher Educators

The key implication for *teacher educators* is to design equity-related interventions that can enable their student teachers to identify and respond appropriately to all learners' needs and expectations during their practica experiences. In line with contemporary research (e.g. Cochran-Smith, 2019; Darling-Hammond et al., 2020), the present study found that the GTs whose professional learning experiences were centralized on equity and social justice were capable of prioritizing and developing their understanding of diverse learners' learning needs and were capable of creating change to raise students' learning outcomes.

Another key implication for teacher educators is to encourage closer engagement with local partner schools to co-design modules of the ITE programme. In this way, theoretical and research rigour can be combined with practical or craft knowledge. While the theory-practice divide in ITE provision still exists (Grudnoff et al., 2017; Gunn & Trevethan, 2020), ITE providers can clarify new shared roles and responsibilities with partner schools.

A third implication for teacher educators is the need to offer student-teachers opportunities to engage with community members in low socio-economic contexts to offer them practical opportunities to develop understanding disadvantage and in inequality and to learn to use CRPs. This finding aligns with evidence from Koerner and Abdul-Tawwab (2006) about ITE providers' key role to make connections with local diverse communities that experience a range of disadvantages.

6.3.2 For School Leaders

The key implication for *school leaders* is to promote the student-teachers' cultural awareness and responsiveness during their practicum experience. To this end, school leaders may consider providing the student teachers with relevant information describing the type of school

and community. This information can be used to develop targeted equity-related interventions aimed at enabling their student-teachers to understand different cultures, traditions and values and help them build positive relationships with their students and their families to ensure equitable learning opportunities for all. Findings from the present study confirmed that embedding rich theoretical and practical CRPs in ITE can broaden the student-teachers' cultural and historical knowledge and encourage them to actively pursue an equity agenda.

Another key implication for *school leaders* is to discuss the nature of quality mentoring with local schools so as to optimise student-teachers' professional learning opportunities. The school-based mentoring role is essential in ITE to ensure the student-teachers' learning is embedded in a rich community of teachers and school leaders (Behrstock-Sherratt et al., 2014; Olson & Jacques, 2014). Therefore, school leaders may consider offering MTs more opportunities to upskill themselves to work more effectively with student-teachers.

6.3.3 For Policy Makers

The key implication for *policy makers* is to prioritise and fund the MTchgLn programmes so as to optimize the preparation of capable, reflective and empathetic teachers who can deliver equitable outcomes for all students. This study produced evidence that most GTs and all LTs perceived the programme to have been instrumental in providing its graduates with a positive level of preparation to cater for all learners.

A second implication for *policy makers* is to offer scholarships to support a more culturally diverse applicants for ITE – applicants who themselves have experienced disadvantage. Scholarships might also be designed for GTs to develop their te reo and tikanga Māori knowledge and skills. Many GTs repeatedly suggested that they needed more time to improve their te reo

and tikanga Māori to help them embrace diversity and to meet the needs for Indigenous Māori learners.

The current study suggests the need to validate new and shared roles and responsibilities in ITE. This suggestion supports evidence from recent research which discussed the importance for teacher educators, school leaders and education policy makers to prioritise an evidence-informed student-teachers' preparation for equity (Ell et al., 2018). A major thrust of the new ITE approval requirement policies needs to focus on ways to establish genuine collaborations in ITE provision, particularly in contexts where students have been traditionally disadvantaged through education, to foster the GTs' and students' learning (Sewell et al., 2018).To this end, consultation with key stakeholders needs to be held to establish new and robust partnerships between universities and schools and their communities.

6.4 Limitations

The limitations of the study are those methodological or content-specific challenges that may impact data collection or the interpretation of the study findings (Fetters & Freshwater, 2015). The first limitation was embedded in the mixed method design. Employing a two-phase, sequential mixed-methods design in this study was effective but posed considerable challenges. For example, due to its complex data collection procedures, using this design has been criticized for being more time-consuming than using a single method of research (Johnson & Onwuegbuzie, 2004). Similarly, the longitudinal data analysis involved and the need for the researcher's considerable familiarity with both qualitative and quantitative forms of research can be challenging to handle (Creswell & Creswell, 2018). However, this issue was addressed by seeking advice from experts.

The second limitation lies in the relatively small sample of participants from two categories, (GTs and LTs). The small sample size can reduce the generalisability of this study findings, and

thus these data should be interpreted with caution to increase its validity/credibility. Nevertheless, scrutinising the impact of the MTchgLn programme on the GTs' professional preparedness is timely and informative and warrants further investigation with a larger sample and a wider group of participants, i.e. teacher educators, curriculum developers and education policy makers, to offer a more thorough examination of the programme's impact. My inclusion criteria and choice of programme location have probably limited the study sample to only include 25 GTs who completed their programme (35%) in addition to four LTs from four schools between 2015 and 2017 in one city in Aotearoa New Zealand.

However, notwithstanding the relatively limited sample, the present study is an early example of an investigation of an exemplary ITE programme in its pilot phase through employing a sample that reflects the diversity of participants from three cohorts (2015-2017), representing both secondary and primary. Also, despite the relative constraints of generalizing and applying the findings to other research settings, evidence shows that studies employing qualitative data collection tools in the second phase can compensate for the weakness of a small sample size in the first quantitative phase (Dennis & Garfield, 2003). The interviews conducted in the second phase offered a thorough understanding of phase one findings.

6.5 Suggestions for Future Research

The present study has provided insight into one ITE initiative in the midst of considerable political and social change and tension about *how* to best prepare student-teachers to cater for equity and diversity. As the ITE field moves forward with reforms, the study's findings provide evidence to inform possible ITE programme designs aimed at teacher preparation for equity and diversity. The study also opens doors for future studies aiming to compare the MTchgLn programme design features with other ITE programmes.

This evidence can also feed into ongoing debates about ways to transform ITE provision to overcome social disadvantages currently faced by children and young people in Aotearoa New Zealand. While the study indicates key design features to best prepare a teaching force capable of producing equitable learning opportunities and outcomes for diverse students, the findings also indicate that much work is yet to be done to ensure that the student-teachers' professional experiences are equity-oriented and that they are aligned to the education workforce needs.

Conducting a larger study across all seven providers in Aotearoa New Zealand is now needed generalize the findings and to confidently assess the MTchgLn programme's impact on the GTs' learning to improve priority learners' outcomes. The present study might act as a catalyst for further research investigating new ITE initiatives also designed to enable GTs to eliminate priority learners' achievement disparities and to enhance their academic and life outcomes in the Aotearoa New Zealand context (Gunn et al., 2020; Heng et al., 2019; Sewell et al., 2018).

This study supports evidence from O'Neill (2017) about the need to implement reforms in both education policy and practice in Aotearoa New Zealand for ITE to better prepare student-teachers to face the realities and challenges of the decades ahead. A key policy priority is to promote university-school partnerships in ITE design and delivery to bring together the theory and practice of culturally-responsive and inquiry-based pedagogies known to support GTs who are capable of breaking the cycle of underachievement and inequality.

Finally, findings from the present study will be of interest to educational researchers particularly in contexts where indigenous communities have been historically disadvantaged by the education system. Establishing authentic collaborations with key partners is fundamental to

ensure that the practice-based experiences are interwoven with the evidence-based inquiry to help GTs to make a positive difference to all learners.

6.6 Concluding Thoughts

In conclusion, this study is one of the first of its kind in Aotearoa New Zealand aimed at investigating the impact of a pilot postgraduate ITE programme, specifically designed to promote graduates' competencies to adapt their practice to diminish educational inequity and enhance diverse learners' academic outcomes. The findings across both phases of the study offer valuable insights into the perceptions of GTs and LTs regarding their preparation to demonstrate exemplary practices to respond resiliently to the challenges posed by priority learners' persistent underachievement in Aotearoa New Zealand.

Given the importance of the teachers' role to ensure more equitable educational outcomes for all students, there is a critical need to challenge and improve GTs' capabilities, practices values and skills during ITE to help combat the persisting educational inequities (Forghani-Arani et al, 2019; Grudnoff et al., 2016). Shifts in emphasis are evident in the recent requirements of the Teaching Council of Aotearoa New Zealand (2019) to approve all ITE programme providers and to align programme outcomes with *The Standards for the Teaching Profession* (Education Council, 2017) referred to in the study. It is, therefore, timely to ensure that all ITE programmes are exemplary and equity-oriented to prepare teachers who can promote the learning of all students, particularly the historically disadvantaged ones.

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Appendices

Appendix A-Teaching for Better Learning Model

Note. Adapted from Aitken et al. (2013, p. 20).

Appendix B-Origin of Questionnaire Items

I am confident I can…	**Source**
1. use my students' identity to help make learning more meaningful.	Siwatu et al., (2017)
2. create a warm, supportive and secure classroom environment.	Hsiao (2015)
3. use the principles of Te Tiriti o Waitangi to inform my teaching practice.	New Zealand Teachers Council (2007)
4. use Māori students' experiences and knowledge to enhance their learning.	New Zealand Teachers Council (2007)
5. use Pasifika students' experiences and knowledge to enhance their learning.	New Zealand Teachers Council (2007)
6. seek ways to learn about my students with backgrounds that are culturally different to my own.	Lawary (2014)
7. be culturally responsive, to support and engage all learners.	Timperley (2013)
8. foster critical thinking and problem-solving in all learners.	Wright (2017)
9. adopt strategies and techniques I learned during my ITE extended practicum experiences.	Whatman & MacDonald (2017)
10. develop my own teaching style.	New Zealand Teachers Council (2007)
11. use authentic real-world examples to help make learning more relevant and meaningful for all learners.	Garden State Alliance for Strengthening Education (2014)
12. select teaching approaches and strategies that develop my learners' skills for learning.	Holbert (2011)
13. engage all learners in decisions about their learning.	Whipps-Johnson (2016)
14. use digital media to support teaching and learning.	Coble, DeStefano, Shapiro & Frank (n.d.)

I am confident I can…	**Source**
15. plan engaging learning experiences appropriate to learners' individual needs.	Wright (2017)
16. use an inquiry-based approach to address students' learning needs.	American Association of Colleges of Teacher Education (2010)
17. seek and use relevant research to inform my teaching practice.	Ametepee (2016)
18. use evidence to enhance and inform my decision-making about teaching strategies for all learners.	Hallinger (2005)
19. continually make evidence-based adaptations to my teaching approaches in order to address all my learners' needs.	Garden State Alliance for Strengthening Education (2014)
20. engage in collaborative learning-focused relationships with learners and their whānau/families.	Education Council (2017)
21. foster priority learners to be active participants in the classroom.	New Zealand Teachers Council (2007)
22. include whānau/families as full partners in planning appropriate teaching strategies for all learners.	Education Council (2017)
23. respond to wider community interests and needs that might positively affect all learners.	Education Council (2017)
24. participate in school-wide improvement projects as an active member of my school community.	Education Council (2017)

Appendix C- Teacher Questionnaire

This study seeks to investigate the effectiveness of the Master of Teaching and Learning (MTchgLn) programme as an initial teacher education qualification for preparing teachers to confidently teach diverse learners, especially priority learners. The term *priority learners* is defined by the Education Review Office (2012) as "groups of students who have been identified as historically not experiencing success in the New Zealand schooling system. These include Māori and Pacific learners, those from low socio-economic backgrounds, and students with special education needs" (p.4).

Instructions: This survey is made up of three parts. Please think carefully about each item and mark a response for all items. To ensure confidentiality of your responses, all statements will be kept private and no names will be used in my thesis.

Thank you for your participation.
Abdelhamid Safa

Part I: Rate how confident you are that your teacher education prepared you to accomplish each of the tasks below. Please **circle the number on the response scale that reflects how much you agree or disagree with each statement.**

I am confident I can…	Strongly Agree	Moderately Agree	Moderately Disagree	Strongly Disagree
1. use my students' identity to help make learning more meaningful.	1	2	3	4
2. create a warm, supportive and secure classroom environment.	1	2	3	4
3. use the principles of Te Tiriti o Waitangi to inform my teaching practice.	1	2	3	4
4. use Māori students' experiences and knowledge to enhance their learning.	1	2	3	4
5. use Pasifika students' experiences and knowledge to enhance their learning.	1	2	3	4
6. seek ways to learn about my students with backgrounds that are culturally different to my own.	1	2	3	4
7. be culturally responsive, to support and engage all learners.	1	2	3	4
8. foster critical thinking and problem-solving in all learners.	1	2	3	4

I am confident I can…	Strongly Agree	Moderately Agree	Moderately Disagree	Strongly Disagree
9. adopt strategies and techniques I learned during my ITE extended practicum experiences.	1	2	3	4
10. adopt strategies and techniques I learned during my ITE extended practicum experiences.	1	2	3	4
11. develop my own teaching philosophy	1	2	3	4
12. use authentic real-world examples to help make learning more relevant and meaningful for all learners.	1	2	3	4
13. select teaching approaches and strategies that develop my learners' skills for learning.	1	2	3	4
14. engage all learners in decisions about their learning.	1	2	3	4
15. use digital media to support teaching and learning.	1	2	3	4
16. plan engaging learning experiences appropriate to learners' individual needs.	1	2	3	4
17. use an inquiry-based approach to address students' learning needs.	1	2	3	4
18. seek and use relevant research to inform my teaching practice.	1	2	3	4
19. use evidence to enhance and inform my decision-making about teaching strategies for all learners.	1	2	3	4
20. continually make evidence-based adaptations to my teaching approaches in order to address all my learners' needs.	1	2	3	4
21. engage in collaborative learning-focused relationships with priority learners and their whānau/families.	1	2	3	4
22. foster priority learners to be active participants in the classroom.	1	2	3	4
23. include whānau/families as full partners in planning appropriate teaching strategies for all learners.	1	2	3	4
24. respond to wider community interests and needs that might positively affect all learners.	1	2	3	4

25. participate in school-wide improvement projects as an active member of my school community.	1	2	3	4

Part II: This section relates to the effectiveness of the distinctive design features of the MTchgLn and their contribution in preparing you to effectively teach New Zealand's diverse learners, especially priority learners.

1. How effectively do you think the MTchgLn programme enabled you to personalize priority learners' learning?

You may wish to comment on the effect of the MTchgLn programme's distinctive design features, such as the extended clinical placements, culturally responsive practices, evidence-informed inquiry, community placement and exemplary school visits.

---

2. Is there anything else you would like to say about how the MTchgLn programme impacted your teaching of New Zealand's diverse learners, especially priority learners?

Part III: **Demographic Background**

Please answer a few background questions so that your responses can be better interpreted.

Place a √ in the appropriate box that applies to you.

1. Gender

   M ☐ F ☐

2. Age

   20 - 29 years ☐ 30 - 39 years ☐ 40 - 49 years ☐ 50 years or over ☐

3. What is the year of your MTchgLn cohort?

   15 Cohort ☐ 16 Cohort ☐ 17 Cohort ☐

4. What prior qualification type/level did you complete?

   Certificate/Diploma ☐ Bachelor's degree ☐ Graduate certificate/diploma ☐ Honours degree/postgraduate certificate/diploma ☐

   Master's degree ☐ Doctor of Philosophy ☐ Other ☐ Please specify _____.

5. Major: _____.

6. Did you have prior teaching experience?

   Yes ☐ No ☐

7. **If yes,** in which sector did you mostly teach?

   Early Childhood ☐ Primary ☐ Secondary ☐ Maori-medium ☐

8. How long have you been teaching?

   1- 5 years ☐ 6 - 10 years ☐ 11 - 19 years ☐ 20+years ☐

9. Are you willing to participate in a 30-minute-interview to talk more about your experience of the program and its impact on your teaching?

   Yes ☐ No ☐

Thank you for your time to complete this questionnaire.

Appendix D- Teacher Interview Protocol & Interview Questions

Thank you for your willingness to participate in the interview. The purpose of this interview is to better understand the value of the MTchgLn model of postgraduate initial teacher education when preparing teachers to successfully transition to practice. Our interview will be an opportunity to talk together about the impact of your learning in the MTchgLn programme on your ability to teach all learners.

Consent:

_____ I have read the Information Sheet and hereby consent to participate in the research described above. I also give permission for audio/video recording of this interview.

Participant's Signature: _____ Date: _____

Demographics

1. Age

   20 - 29 years ☐ 30 - 39 years ☐ 40 - 49 years ☐ 50 years or over ☐

2. What was the year of your MTchgLn cohort?
   15 Cohort ☐ 16 Cohort ☐ 17 Cohort ☐

3. What was your prior qualification?

   Certificate/Diploma ☐ Bachelor's degree ☐ Graduate certificate/diploma ☐ Honours degree/postgraduate certificate/diploma ☐

   Master's degree ☐ Doctor of Philosophy ☐ Other ☐ Please specify _____.

4. Major: _____.

5. Did you have prior teaching experience? If so, can you talk about these?

   Yes ☐ No ☐

Interview Questions:

Tell me about your current teaching position? etc

1. Cast your mind back to the day you gave your final presentation at Massey, What were you feeling? What ideas were you sharing about your identity as a teacher? How has your identity continued to shape over your years of teaching?

2. Reflecting on your experiences in the programme, can you talk about examples of how these experiences sowed a seed that has continued to grow and develop in your teaching?

3. These are the design features of the Programme. Can you talk about how each one may or may not have helped you to develop your teaching practice to support the learning of all learners – including priority learners.

    - Extended Clinical Placements
    - Culturally-Responsive Practices
    - Evidence-Informed Inquiry
    - Exemplary School Visits
    - Community Placements.

4. Is there anything else you would like to say about the impact of the programme design on your teaching practice?

5. What aspects would you change in the programme if you had the chance? Why?

Thank you.

Appendix E- Lead Teacher Interview Protocol & Interview Questions

Thank you for your willingness to participate in the interview. The purpose of this interview is to better understand the value of the MTchgLn model of postgraduate initial teacher education when preparing teachers to successfully transition to practice. Our interview will be an opportunity to talk together about the impact of the MTchgLn programme on graduate teachers' practice, especially on their ability to teach all learners.

Consent:

_____ I have read the Information Sheet and hereby consent to participate in the research described above. I also give permission for audio recording of this interview.

Participant's Signature: _____ Date: _____

Demographics

1. Age

20- 29 years ☐ 30- 39 years ☐ 40- 49 years ☐ 50– 59 years ☐ 60 years or over ☐

2. How many years' experience do you have as a teacher?

1- 3 years ☐ 4- 5 years ☐ 6- 10 years ☐ more than 10 years ☐

3. How many years' experience do you have as a Lead Teacher?

1- 3 years ☐ 4- 5 years ☐ 6- 10 years ☐ more than 10 years ☐

Interview Questions:

1. Describe your job duties. What does your role as a Lead Teacher entail?

2. What motivated you to volunteer in developing the masters' programme and in becoming a Lead Teacher? What do you think are the highlights/challenges for you/other staff being involved in mentoring?

3. Cast your mind back to the day you started communication with Massey University regarding your duties as a Lead Teacher, how has your role helped in shaping your masters-level graduate teachers' practice?

4. What is the purpose of the mentoring day? To what extent did it have an impact on developing your role?

5. These are the design features of the Programme. Can you talk about how each one may or may not have helped graduate teachers to develop their teaching practice to support the learning of all learners – including priority learners?

    - Extended Clinical Placements
    - Culturally-Responsive Practices
    - Evidence-Informed Inquiry
    - Exemplary School Visits
    - Community Placements.

6. From your experience, is there any difference between masters-level graduate teachers and other beginning teachers (ie at a similar stage in their careers)? (What, if any?)

7. Is there anything else you would like to say about the impact of the programme design on graduate teachers, mentors and Lead Teachers' practice?

8. What aspects would you change in the programme if you had the chance in order to develop your role more? Why?

Thank you.

Appendix F- Authority for the Release of Transcripts

I confirm that I have had the opportunity to read and amend the transcript of the interview(s) conducted with me.

I agree that the edited transcript and extracts from this may be used in reports and publications arising from the research.

Signature: ..... **Date:** .....

Full Name - printed .....

Appendix G-The MTchgLn Programme 2016-Year Plan

2016 Timetables					M TchgLn (Primary & Secondary)
Weeks		IoE ITE Teaching Weeks	University	School	
Mon - Fri	Comment		ACYR	Terms	
11 Jan - 15 Jan					
18 Jan - 22 Jan					
25 Jan - 29 Jan	25 Wtn Anniv	1			26 Jan S1 Starts Block Course
01 Feb - 05 Feb	1 Akl Anniv/ Nelson Anniv	2		Term 1 Start 1-5 Feb	Block Course
08 Feb - 12 Feb	8 Waitangi Day Obsv	3			SSCC
15 Feb - 19 Feb		4			SSCC
22 Feb - 26 Feb		5			
29 Feb - 04 Mar		6			3 days/wk in a Partner School
07 Mar - 11 Mar		7			
14 Mar - 18 Mar	14 Taranaki Anni	8			
21 Mar - 25 Mar	21 Otago Anni/ 25 Good Fri	9			
28 Mar - 01 Apr	28 Easter Monday / 29 Southland Anni	10	Mid Sem Break		
04 Apr - 08 Apr		11			
11 Apr - 15 Apr		Mid Sem Break			Mid Semester Break
18 Apr - 22 Apr	19-22 Alb Grad				
25 Apr - 29 Apr	25 ANZAC Day	12			Block Course
02 May - 06 May		13		Term 2	
09 May - 13 May	9-11 PN Grad	14			3 days/wk in a Partner School
16 May - 20 May		15			
23 May - 27 May	26-27 WLGN Grad	16			
30 May - 03 Jun		17			Extended
06 Jun - 10 Jun	6 Queen's B'day	18	Study Break		Practicum
13 Jun - 17 Jun			EXAMS		
20 Jun - 24 Jun	25 S1 ends				
27 Jun - 01 Jul			Mid-Yr Break		SSCC
04 Jul - 08 Jul		Mid-Yr Break			Mid Year Break
11 Jul - 15 Jul					
18 Jul - 22 Jul	18 Jul S2 Starts	1			18 July S2 Starts Block Course
25 Jul - 29 Jul		2		Term 3	
01 Aug - 05 Aug		3			3 days/wk in a Partner School
08 Aug - 12 Aug		4			
15 Aug - 19 Aug		5			
22 Aug - 26 Aug		6			Extended
29 Aug - 02 Sep		7	Mid Sem Break		Practicum
05 Sep - 09 Sep		8			
12 Sep - 16 Sep		9			
19 Sep - 23 Sep		10			
26 Sept - 30 Sept	26 Canterbury (Sth)	Mid-Sem Break			Mid Semester Break
03 Oct - 07 Oct					
10 Oct - 14 Oct		11		Term 4	
17 Oct - 21 Oct	21 Hawke's Bay Anni	12			
24 Oct - 28 Oct	24 Labour Day	13	Study Break		
31Oct - 04 Nov	31 Marl Anni	14	EXAMS		3 days/wk in a Partner School
07 Nov - 11 Nov	11 Canterbury Anni	15			
14 Nov - 18 Nov	16 S2 Ends	16			
21 Nov - 25 Nov	21 Nov / 25 Nov PN Grad	17			
28 Nov - 02 Dec		18		Latest finish	
05 Dec - 09 Dec	5 Westland Anni	19		Sec 16 Dec	Presentations - Sem 2 Ends 9 Dec
12 Dec - 16 Dec				Prim 20 Dec	

Appendix H- Information Sheet – Interviews

Thank you for completing the survey that was part of my data collection in the first phase and for agreeing to conduct this following up interview. As, you know, my study is investigating the effectiveness of the MTchgLn programme designed to develop teachers who have the skills and competencies to adapt their practice in evidence-informed ways to enhance priority learners' academic outcomes.

An interview schedule has been developed and will be sent to you prior to our interview. Can we arrange a suitable time for this interview? At the start of our interview, I will ask you to sign a consent form enabling me to use the information you give to me for my doctoral studies.

The interview venue will be remotely via Zoom, an online conferencing tool, at your school or place of your choosing, and the interview duration will be approximately 45 minutes. You will be provided with a copy of the interview transcript to check for accuracy and will be asked to verify this within a week of receipt of the transcript.

The information you give to me will be anonymized and will not include any information revealing your identity nor your school. The data will be stored on a password-protected single computer at Massey University and will not be identifiable back to the original respondents, and will be disposed of in 5 years after completion of the study.

Your participation in this second phase is voluntary and you may choose to withdraw from this study at any time. If you decide to participate, you have the right to:

- decline to answer any particular question;
- withdraw from the study (specify timeframe);
- ask any questions about the study at any time during participation;
- provide information on the understanding that your name will not be used unless you give permission to the researcher;
- be given access to a summary of the project findings when it is concluded.
- ask for the audio-recorder to be turned off at any time during the interview.

> This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B (***Application Number 4000018531/2017***).

If you have questions or concerns about this study, you may contact the applicant, Abdelhamid Safa,

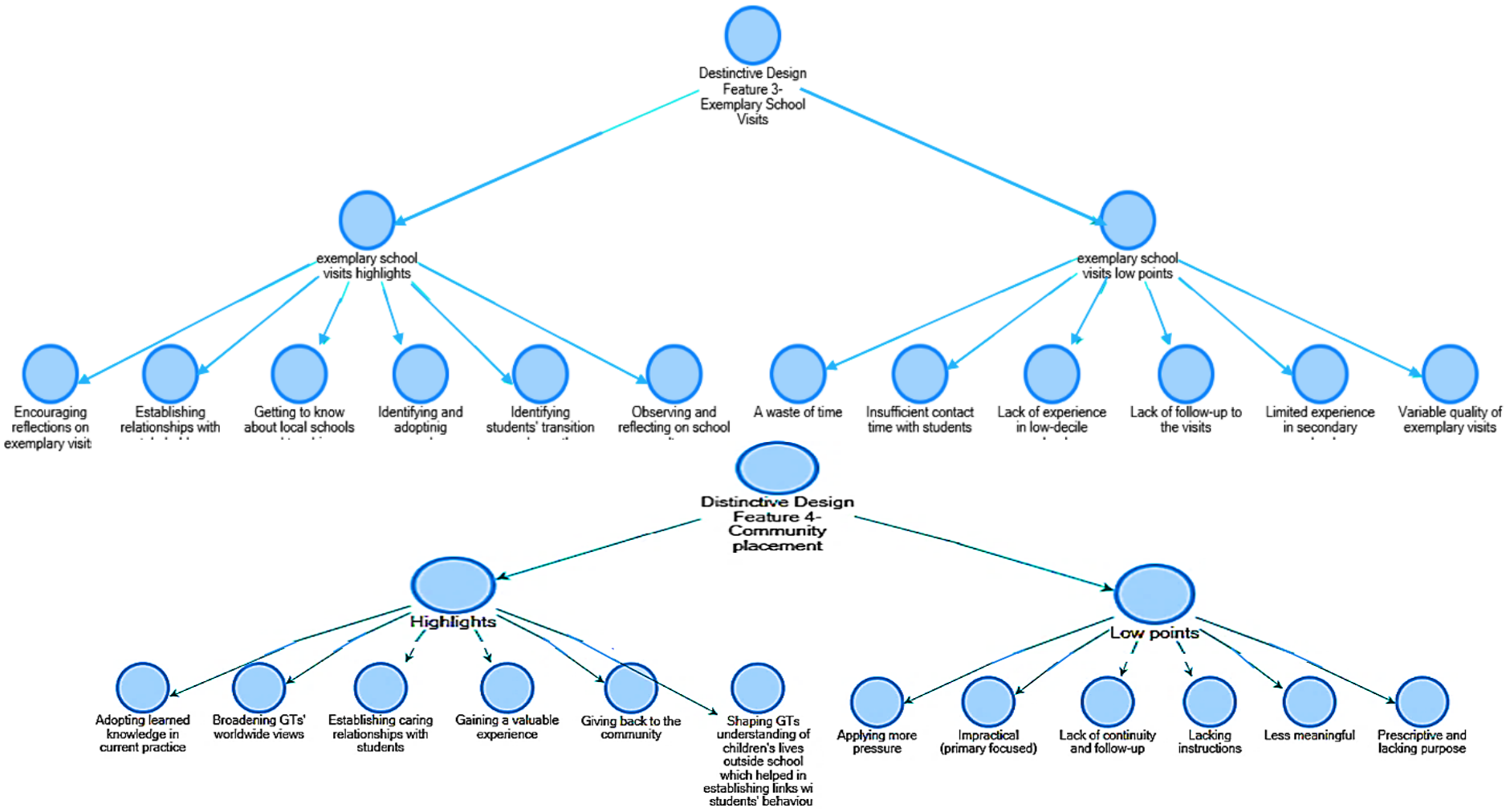
06 356 9099 x 85901 or by e-mail at a.safa@massey.ac.nz. You can also contact my main supervisor, Associate Professor Sally Hansen, Director of Professional Education, 06 356 9099 x 84307 or by e-mail at S.E.Hansen@massey.ac.nz, and my co-supervisor, Associate Professor Alison Sewell, Senior Lecturer, 06 356 9099 x 84456 or by e-mail at A.M.Sewell@massey.ac.nz.

Respectfully,
Abdelhamid S

Appendix I-Sample of Descriptive Data Coding

No	Evidence-Informed Inquiry
1	allowed me to explore research that is effective in teaching priority learners.
2	I feel more prepared for inquiry practice than many of my colleagues who have had it introduced to them during their employment (rather than earlier in their teaching study/career)
3	Inquiry was fantastic to shaping my practice. It means I am equiped to deal with any students I come across as I now know how to educate myself on their needs and how I can best meet them. It is a shame that we lose access to journal articles though.
4	Gives me confidence to tackle ever challenge - like a toolbox I can re- fill with researh, new knowledge and slills as needed.
5	Strong focus, multiple opportunities to complete, and receive feedback in these. Interestingly, this is my second year of teaching and has been the first time I have been asked to complete an inquiry as a teacher
6	This shaped my beliefs and practices a large amount. Although my inquiry cycle is quite different to what it was during the course thanks to little time being available, I still use informal inquiry-style reflections.
7	I get the theory behind it but what a waste of time as causation is often incorrectly being informed. Plus ridiculously small target groups often
8	I felt this was done v well during my MTchgLn, and a lot less well in schools since I graduated
9	Great! They were hugely in depth which has been a asset learning as I am teaching this skill to other teachers
10	The inquiries we undertook were a real taste of what it's like to be a classroom teacher. It was also an opportunity to learn that inquiry is part of effective teaching and that good teachers are constantly engaged in inquiries all the time, even with mini interventions daily. The research aspect of it gave us some experience in backing up our thoughts and turning to experts for guidance/suggestions, and the power of collaborating. I really feel the inquiry side of this course sets it apart from other teaching courses hugely.
11	Very important to developing our practice as it is a not only a necessary step in teaching but formalising it becomes part of our appraisal.
12	I would have liked to have been exposed to different means of recording evidence and assessment. I feel there could have been more constructive mentoring around this. During my course the teachers I were working with did not have active inquiries, this made it hard to see how it would work and evolve outside of a tertiary setting.
13	Going through identifying students needs and how I can improve my teaching to support them was very beneficial.
14	Good in theory but implementing these was difficult to creat effective outcomes.
15	The school I worked at straight after the Masters actually ask myself and another student to help them to develop the way they did this.
16	This programme has put me well ahead for teaching as inquiry. This year I am leading a group of teachers in an inquiry. We are however limited when it comes to 'evidence informed'. We rely general google searches and other teachers skill sets.
17	Evidence based inquiry was a huge focus for the year. Not only did it show me the importance of this teaching practice it allowed me to develop my teaching immensely. It is hard to imagine how my development would have been without being exposed to inquiry based teaching. The school where I was hired used inquiry and it was apart of the teaching appraisal. I was comfortable in this environment and confident doing it as I had already been using it.

Appendix J-Sample of Axial Data Coding



Appendix K-Ethics Committee Report

Date: 02 October 2017

Dear Abdelhamid Safa

Re: Ethics Notification - **4000018531** - An Investigation into the Impact of Postgraduate Initial Teacher Education on Beginning Teachers' Professional Preparedness to Cater for Diverse Learners. Thank you for your notification which you have assessed as Low Risk.

Your project has been recorded in our system which is reported in the Annual Report of the Massey University Human Ethics Committee.

The low risk notification for this project is valid for a maximum of three years.

If situations subsequently occur which cause you to reconsider your ethical analysis, please go to http://rims.massey.ac.nz and register the changes in order that they be assessed as safe to proceed.

Please note that travel undertaken by students must be approved by the supervisor and the relevant Pro Vice-Chancellor and be in accordance with the Policy and Procedures for Course-Related Student Travel Overseas. In addition, the supervisor must advise the University's Insurance Officer.

A reminder to include the following statement on all public documents:
"This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the University's Human Ethics Committees. The researcher(s) named in this document are responsible for the ethical conduct of this research.

If you have any concerns about the conduct of this research that you want to raise with someone other than the researcher(s), please contact Dr Brian Finch, Director - Ethics, telephone 06 3569099 ext 86015, email humanethics@massey.ac.nz.

Please note, if a sponsoring organization, funding authority or a journal in which you wish to publish requires evidence of committee approval (with an approval number), you will have to complete the application form again, answering "yes" to the publication question to provide more information for one of the University's Human Ethics Committees. You should also note that such an approval can only be provided prior to the commencement of the research.

Yours sincerely

Human Ethics Low Risk notification

Dr Brian Finch
Chair, Human Ethics Chairs' Committee and Director (Research Ethics)

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