Declaration

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This Thesis entitled:

Exploring tensions within the practice of leading ‘Teaching as Inquiry’ in a New Zealand secondary school and its Kāhui Ako

is submitted in partial fulfillment for the requirements for the Unitec degree of

Master of Educational Leadership and Management

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CANDIDATE’S DECLARATION

I confirm that:

• This Thesis represents my own work;

• The contribution of supervisors and others to this work was consistent with the Unitec Regulations and Policies.

• Research for this work has been conducted in accordance with the Unitec Research Ethics Committee Policy and Procedures, and has fulfilled any requirements set for this project by the Unitec Research Ethics Committee.

Research Ethics Committee Approval Number: 018-1064 Bryant

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Abstract

‘Teaching as inquiry’ has been established as a pedagogical model in the New Zealand Curriculum for more than a decade. It is promoted as a highly effective process for professional development and for improving student learning outcomes, particularly in addressing issues of equity. However, it has been ineffectively implemented in schools.

This study investigated the perceptions of Middle Leaders and Kāhui Ako Within-School Leaders regarding the purpose and nature of ‘teaching as inquiry,’ the nature of its leadership and its challenges and benefits. Data were collected using online surveys and focus group interviews within eight schools in one Waikato Kāhui Ako.

Leaders saw the purpose of ‘teaching as inquiry’ as improving teaching and as improving student learning outcomes. It was seen to follow cyclical, iterative steps and promote adaptive pedagogical practice. Leaders used a variety of strategies to lead it and preferred to develop relational trust instead of following compliance-based accountability processes.

There were tensions identified, including confusion over which roles held the primary responsibility to lead ‘teaching as inquiry;’ time limitations that existed within other complex and competing professional expectations; challenges in dealing with resistance from other staff and the visibility and credibility afforded to leader’s roles and the implications of their ‘teaching as inquiry’ processes. These challenges were linked with a perceived lack of professional development opportunities that focussed on leadership.

The benefits of ‘teaching as inquiry’ were seen to be the opportunity to collaborate and connect with other teachers and leaders’ autonomy, enjoyment and ultimately retention in the teaching profession.

It is recommended that the capacity for collaborative inquiry is strengthened at national, local and individual levels.
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CHAPTER ONE

Introduction

This research is a small-scale qualitative project that investigated the tensions experienced by Middle Leaders and Within-School Leaders in their leadership of ‘teaching as inquiry.’ The research was carried out in the Waikato region, New Zealand. It involved a co-educational, decile seven state secondary school and its associated Kāhui Ako; a Community of Learning that also incorporates six primary schools and one middle school. The Kāhui Ako had been formally established for approximately one year at the time the research began. Research participants were drawn from Middle Leader and Kāhui Ako Within-School Leader positions, within these organisations.

This research investigated leaders’ perceptions of ‘teaching as inquiry.’ ‘Teaching as inquiry’ has the potential to act as a powerful model for teachers’ professional development (Timperley, Wilson, Barrar & Fung, 2007); increase opportunities for teacher collaboration (Education Review Office, 2019); improve student outcomes (Weinbaum, Allen, Blythe, Simon, Seidel & Rubin, 2004; Love, Stiles, Mundry and DiRanna, 2008) and address systemic issues of inequity and underachievement (Ainscow, Dyson, Goldrick & West, 2016). ‘Teaching as inquiry’ has been formally established in the New Zealand educational framework since its publication in the Best Evidence Synthesis of Effective Pedagogy in Social Sciences (Aitken & Sinnema, 2008) and its inclusion in the New Zealand Curriculum (The Ministry of Education, 2007). ‘Teaching as inquiry’ processes are also central to Kāhui Ako, which are established in New Zealand, They forming as part of the Investing in Educational Success policies in 2014 (The Ministry of Education, 2017). As such, there have not been many opportunities to investigate the collective impact of these communities, nor collate perceptions of individuals involved in working within them. Due to the ubiquitous nature of ‘teaching as inquiry’ coupled with its position within Kāhui Ako it is very important the perceptions of leaders involved in its implementation are examined and attempts made to identify and isolate the tensions that are apparent in the leadership of these processes.

Rationale

As a teacher, former pastoral and curriculum Middle Leader and current Kāhui Ako Across-School Leader, my research is linked with my own experience of teachers’ and leaders’ view of ‘teaching as inquiry.’ I have seen it perceived alternately as a vehicle for positive change in schools but also as a poorly understood, compliance-driven exercise in accountability, with minimal effort afforded to its successful implementation. The level of hostility involved in discussing ‘teaching as inquiry’ and the minimal effort put into its implementation by some staff surprised me and was in stark contrast to the acceptance that I perceived of all other areas of the New Zealand Curriculum.
In spite of, what I saw as, leaders’ genuine attempts to promote effective ‘teaching as inquiry’ practices within a variety of schools, I perceived, what was best described as, variable success in their implementation. I saw open resistance from some teachers and leaders and a poor understanding of the underlying purpose of ‘teaching as inquiry’ and of the nature of its quality implementation. The national review of New Zealand educational systems (Haque, Ala’alatoa, Berryman, O’Neill & Wylie, 2018) noted that “while schooling policies and strategies are developed at the national level, they are often not properly understood, accepted or implemented at the local and school levels” (p. 117). This was seen as adding to the disparate student outcomes that are becoming systemic and all too apparent in New Zealand’s schools. ‘Teaching as inquiry’ easily fits this description of a nationally developed policy that has experienced ineffective local implementation. Efforts to investigate possible reasons behind this pattern have clear benefits to the advancement of educational research. ‘Teaching as inquiry’ is promoted as an effective tool to personalise professional learning and growth of teachers (Timperley et al., 2007) and I feel that many teachers embrace opportunities to develop professionally. However, based on my experiences in education, I think that ‘teaching as inquiry’ is not effectively or consistently implemented in schools. This perception is matched by national reports (Education Review Office, 2012; Education Review Office, 2014; Education Review Office, 2016a).

Middle Leaders are at the coal face of implementing national policy and their subsequent impact on a school’s vision and their actions can arguably affect how particular policies are enacted in a school. Middle Leaders are described as having an “essential influence” on teacher attitudes (Abolghasemi, McCormick & Conners, 1999, p. 85) and therefore, uncovering their perceptions of the benefits and challenges of ‘teaching as inquiry,’ particularly the leadership of these processes, has particular relevance to education in New Zealand.

This research seeks to investigate leaders’ perceptions of ‘teaching as inquiry’ to identify perceived tensions in its leadership. It is designed to isolate these tensions so that strategies can be developed to strengthen effective ‘teaching as inquiry’ processes to improve schools’ and learning communities’ systems; improve teachers’ practice and, ultimately, improve student outcomes.
Research Aims and Questions
This research covers leaders’ perceptions of ‘teaching as inquiry.’

There are four aims to this research:

1. To investigate school Middle Leaders’ and Kāhui Ako Within-School Leaders’ perception of the purpose of ‘teaching as inquiry’
2. To investigate school Middle Leaders’ and Kāhui Ako Within-School Leaders’ perceptions of the nature of ‘teaching as inquiry.’
3. To explore school Middle Leaders’ and Kāhui Ako Within-School Leaders’ perceptions of the practice of leading ‘teaching as inquiry.’
4. To explore school Middle Leaders’ and Kāhui Ako Within-School Leaders’ perceptions of the challenges and benefits of leading ‘teaching as inquiry.’

This research is based around the following research questions:

1. What are school Middle Leaders’ and Kāhui Ako Within School Leaders’ perceptions of the purpose of ‘teaching as inquiry?’
2. What are school Middle Leaders’ and Kāhui Ako Within-School Leaders’ perceptions of the nature of teaching as inquiry?’
3. What are school Middle Leaders’ and Kāhui Ako Within-School Leaders’ perceptions of the practice of leading ‘teaching as inquiry?’
4. What are school Middle Leaders’ and Kāhui Ako Within-School Leaders’ perceptions of the and challenges and benefits of leading ‘teaching as inquiry?’

Literature Gap and Benefits of Research
New Zealand has one of the largest variabilities of student outcomes within individual schools amongst the OECD (Robinson, Hohepa & Lloyd, 2009). There are existing structures and strategies that aim to address this, including ‘teaching as inquiry’ processes, which are promoted as a vehicle to address context-specific issues of inequity (Timperley et al., 2007; Love et al., 2008; Conner, 2015; Grundnoff, Ell, Haigh, Hill & Tocker, 2019) and Kāhui Ako, which identify “strengthening the use of effective inquiry approaches” as a key purpose of the leadership roles (The Ministry of Education, 2016b, p. 9). However, the uptake and successful implementation of ‘teaching as inquiry’ by schools has been inconsistent and the processes are far from being embedded into educational practice (Fowler, 2012). The literature review conducted as part of this research identified that there is an existing literature base on the nature and purpose of ‘teaching as inquiry’ (Cochran-Smith & Lytle, 2009; Fichtman Dana & Yendol-Hoppey, 2009; Timperley, & Parr, 2010; Higgins, Parsons & Bonne, 2011; Timperley, Kaser,
& Halbert, 2014). These outline the nature of teaching as inquiry as being responsive, cyclical, iterative, intentional and ongoing, and identify the purpose of ‘teaching as inquiry’ as primarily to improve teaching and subsequently improve student outcomes. Wider positive impacts have also been identified, such as the impact ‘teaching as inquiry’ addressing issues of equity and excellence in schools (Conner, 2015) and the contribution that ‘teaching as inquiry’ made to the development of Kāhui Ako (McNaughton, 2017). Professional Learning Communities have also been described in the literature (Bryk, Camburn & Seashore Louis, 1999; Defour, 2004; Biggs, 2017; Curtice, 2017). They are identified as having characteristics such as being communities that collaborate, share data and focus on teachers’ professional learning and student achievement. The centralised location of ‘teaching as inquiry’ within Professional Learning Communities is also established (Hord, 1997; Conner, 2015; Biggs, 2017). Literature exists on the origins and nature of implementation of ‘teaching as inquiry’ (Sinnema & Aitken, 2011) including some successful case studies (Conner, 2015; Cardno, Bassett & Wood, 2017; Jesson & Wilson, 2017). However, although there has been ineffective implementation of ‘teaching as inquiry’ nationally, there have been very few studies that investigate leadership tensions that may contribute to this pattern. There is a recognised scarcity of literature on the nature of middle leadership, compared with research of teachers or principals (Collier, Dinham, Brennan, Deece & Mulford, 2002; Dinham, 2007; Bassett, 2016). Leading on from this, there has been even less research on how Middle Leaders, particularly Kāhui Ako Within-School Leaders, perceive leadership tensions when leading the implementation of ‘teaching as inquiry’ in New Zealand schools. This study will add to the existing knowledge around the leadership of ‘teaching as inquiry’ in schools and Kāhui Ako. By examining the perceived tensions involved in leading ‘teaching as inquiry’ there is the clear potential to identify practices that can improve teaching and, subsequently, student achievement.

**Thesis Organisation**

**Chapter One: Introduction**

The current chapter introduces the research topic with an overview of the research background. It states the research aims and questions, linked to the gap in existing literature and subsequent contribution that this research can make to our wider base of knowledge.

**Chapter Two: Literature Review**

The second chapter presents the existing literature base on ‘teaching as inquiry’ and its leadership. It defines ‘teaching as inquiry’ as part of a wider base of practitioner research and outlines some of its historical implementation. It covers the nature of using ‘teaching as inquiry’ as a model for teachers’
professional growth and it goes on to cover the leadership of ‘teaching as inquiry’ both within performance appraisal contexts and via the newly established Kāhui Ako.

Chapter Three: Methods
The third chapter outlines the epistemological position of the research and the methodology chosen is explained. The two tools, focus group interviews and questionnaires are discussed and justified. Issues of data collection, data validity and ethical considerations are outlined in this chapter.

Chapter Four: Research Findings
The fourth chapter presents the summarised research findings of the focus group interviews and questionnaires. The findings of the online questionnaire are presented in the form of numerical summaries and representative quotes, under the headings: Purpose of ‘teaching as inquiry’; Nature of ‘teaching as inquiry’; Nature of leading ‘teaching as inquiry’ and Challenges and benefits of leading ‘teaching as inquiry.’ The findings of the focus groups interviews are synthesised into four headings: Purpose of ‘teaching as inquiry’; Nature of ‘teaching as inquiry’; Nature of leading ‘teaching as inquiry’ and Challenges and benefits of leading ‘teaching as inquiry.’ The key findings of the questionnaire are summarised at the end of each section. Triangulated multi-method findings, supported by the information gathered from the focus groups are presented at the end of each focus group section.

Chapter Five: Discussion, Conclusion and Recommendations
The last chapter, Chapter Five, outlines the main findings of this research, taking into consideration the literature presented in Chapter Two. Conclusions are drawn with recommendations for strengthening ‘teaching as inquiry’ processes aimed at policy makers, school leaders and individual teachers. Finally, future areas of potential research are discussed.
CHAPTER TWO
Literature Review

This chapter reviews the literature base that covers the nature of ‘teaching as inquiry’ and its national implementation, linked with the leadership of these processes in schools. The inherent link between ‘teaching as inquiry’ models and teachers’ professional growth is explored together with the location of ‘teaching as inquiry’ within teacher appraisal processes. The role of traditional Middle Leaders in schools is outlined in these contexts. Finally, Professional Learning Communities are described with a brief background of the development of Kāhui Ako in a New Zealand context. The Within-School Leaders’ roles in these relatively new structures and the nature of the leadership expectations of them is outlined, to provide background for some of the tensions that emerge when leading ‘teaching as inquiry.’

‘Teaching as Inquiry’
‘Teaching as inquiry’ is a form of practitioner inquiry, which encompasses a range of activities such as “action research; teacher research, self-study, the scholarship of teaching and using practice as a site for research” (Cochran-Smith & Lytle, 2009). It is a powerful tool for change and has been defined as “a vehicle that can be used by teachers to untangle some of the complexities that occur in the profession, raise teachers’ voices in discussions of educational reform, and ultimately transform assumptions about the teaching profession itself” (Fichtman Dana & Yendol-Hoppey, 2009, p. 2).

There is an overlap between the conditions required for good research and good practice in teaching and, due to this, there has been advocacy for teachers to develop effective skills into researching their own practice, with a view to improving the outcomes for students (Poekert, Alexandrou and Shannon, 2016). Similarly, an inquiry mindset is linked with school improvement by Robinson (2003) who advocates for connections to be established between educational researchers and practitioners and states “sustained improvement requires teachers who are skilled inquirers” (p. 28). It is a complex, multi-variable process. Cardno, Bassett and Wood (2017) state that “there is more to these inquiry cycles than meets the eye. They are underpinned by values that challenge teachers to deeply understand their own assumptions and beliefs, examine others’ research practices and take learning risks” (p. 23).

The ‘teaching as inquiry’ cycle, based on the work by Aitken and Sinnema (2008), was established within the New Zealand Curriculum (The Ministry of Education, 2007) as a way of mitigating the risks that were inherent with a non-prescriptive national guide to learning, as the New Zealand curriculum is intended only as a broad guide and practices of teachers can vary significantly (Sinnema & Aitken, 2011). This model places ‘teaching as inquiry’ as a form of pedagogy and includes stages on teaching...
inquiry, focussing inquiry and learning inquiry. When this process is used well, it makes the most of external experts, operates within school systems that were modified to incorporate the ‘teaching as inquiry’ process and links to teachers’ professional learning needs (The Ministry of Education, 2011). There are clear links identified by New Zealand’s Education Review Office between effective inquiry processes and successful schools (Education Review Office, 2016a); findings mirrored in wider Australasian contexts, where ‘teaching as inquiry’ is seen as an “important tool for school improvement” (Groundwater-Smith, Mitchell & Mockler, 2016, p. 81).

‘Teaching as inquiry’, which can be commonly confused with inquiry-based learning (Sinnema & Aitken, 2011), is diverse and can take different forms. ‘Teaching as inquiry’ has alternatively been called teacher research; teacher inquiry; classroom research or practitioner inquiry but it is commonly focussed on using teachers as context-specific knowledge generators. The use of this knowledge subsequently improves teaching and learning (Fichtman Dana & Yendol-Hoppey, 2009). There should be a focus on student learning outcomes. Timperley (2003) defines evidence-based inquiry as a process where “teachers reflect on the effectiveness of their teaching by measuring it against student achievement information and change their teaching methods according to what the achievement information shows is, or is not, working” (p. 3). Timperley (2011) strongly advocates for a student-centred focus for inquiry, stating “the inquiry cycle begins and ends with students” (p. 12).

‘Teaching as inquiry’ is different from simple teacher reflection, in that an inquiry is more structured, intentional, systematic and visible to others (Fichtman Dana & Yendol-Hoppey, 2009). There is commonly a cyclical structure presented in teaching in inquiry models. For example, the spiralling nature of action research in education has been explicated in Cardno (2003) and there are cyclical models of inquiry presented in Aitken and Sinnema (2008) and from the Ministry of Education (2007). Another cyclical model of ‘teaching as inquiry,’ the spiral of inquiry, is detailed in Timperley, Kaser and Halbert (2014). The steps of this process involve teachers “scanning” their context with a student centred approach; “focussing” teacher’s energies on particular area, “developing a hunch” about what might be contributing to the identified educational challenge; undergoing “new learning” to upskill in this area; “taking action” to implement and monitor a change and “checking” to see if a difference has been made in the desired areas (p. 5).

Although each type of approach to inquiry has its own benefits, it is important not to focus entirely on the inquiry model used, rather the models’ underlying purpose. Cardno et al. (2017) summarise the goal of ‘teaching as inquiry’ as “the ultimate aim of encouraging the practice of ‘teaching as inquiry’ is to get teachers to improve teaching in order to improve learning outcomes” (p. 22). Therefore, rather than focussing on the specific steps that individual teachers carry out in ‘teaching as inquiry’ we are encouraged to, instead, focus on the link that the impact that changed practice has on our students,
centralising and prioritising teachers’ focus on them. The Ministry of Education (2011) identified that ‘teaching as inquiry’ is a “professional way of being” (p. 3) and calls for the teaching profession to build a more comprehensive understanding of the ‘teaching as inquiry’ process. This task, as with all educational changes, inherently falls to the leaders of individual institutes to enact.

**Leadership of ‘Teaching as Inquiry’**

Effective leadership in schools is a powerful lever for positive change (Robinson et al., 2009) and there is advocacy for using leadership to strengthen ‘teaching as inquiry’ processes in order to maximise the impact of pedagogical improvements on student learning outcomes. The remainder of this chapter will investigate the nature of leadership of ‘teaching as inquiry.’

There is a need for ‘teaching as inquiry’ to be effectively led, in the systems that are established to support it, the management of collaboration of a wider professional community and the ongoing involvement of leaders in the process (David, 2009). This process applies to teachers in classrooms and to the development of leadership within teaching. Kaser and Halbert (2009) state that “the strongest school leaders are characterised by constant curiosity and a mindset of persistent inquiry” (p. 62). The Education Council (2018) identifies that some of the important facets of leadership development include that it should “offer cognitive challenge, build the capability for professional inquiry, and involve both individual and collaborative learning, in a network of leaders” (p. 16). Poekert et al. (2016) identify three intersecting spheres necessary for teachers’ personal growth, namely “growth as a teacher,” “growth as a leader,” and “growth as a researcher.” In particular, the research growth component has clear links to ‘teaching as inquiry’ processes and is described as “developing a systematic and iterative approach to improving classroom practices” (p. 316). Examples of how leadership through ‘teaching as inquiry’ has been used to address educational issues, through research, professional learning and carefully considered interventions, are identified in McNaughton (2017), Grundnoff, Haigh, Jackson and Passfield (2018) and Grundnoff et al. (2019).

‘Teaching as inquiry’ can be successfully used as an ongoing developmental tool for personalised, professional growth (Sinnema & Robinson, 2007). This can be effective when compared with isolated opportunities for professional development, which can be particularly ineffective if they are viewed as a compliance-based activity. A professional development model that incorporates a “teacher inquiry and knowledge building cycle to promote valued student outcomes” is promoted as a preferred alternative to these isolated opportunities or, conversely, to a one-size-fits-all model (Timperley et al, 2007, p. xliii). Leadership of this process is crucial. In order for teaching as inquiry to have a meaningful, positive impact on students, it needs to be supported at all levels of educational institutes and cannot be delegated to individual practitioners (Reid, 2004). Conner (2015) states “effective teacher inquiry is contingent on a strong vision for the purpose and outcomes related to
professional learning in school and how this is linked to improving student outcomes” (p. 14). Sinnema (2011) looked at changes in teachers’ practice linked with the implementation of the new curriculum in New Zealand and found that the degree of change was strongly influenced by two factors: the confidence of respondents, followed by their perception of the quality of internal support that they received. This had a clear link with leadership practices and successful practice included “collegial support from other staff, the teaching resources available, and the effectiveness of professional development organised and led by the school” (p. 4). Lofthouse, Hall and Wall (2012) identify three different levels of teachers’ practitioner inquiry, namely; “individual practitioner research,” leading to a “collaborative enquiry group” and, ultimately, “institution-wide professional development through practitioner enquiry” (p. 171). The further an organisation proceeds up each level, the greater potential for the positive influence of leadership. Collegial support can be harnessed into collaborative ‘teaching as inquiry’ processes (Nelson, Deuel, Slavit & Kennedy, 2010). Collaborative inquiry can be more powerful than individual inquiry (Reid, 2004) and can be seen as a vehicle for addressing issues of equity in education (Weinbaum, Allen, Blythe, Simon, Seidel & Rubin, 2004; Ainscow, Dyson, Goldrick & West, 2016). It is apparent that leadership has a critical influence on the implementation of ‘teaching as inquiry’ in educational institutes and the following sections will outline the nature of leading these processes.

**National Implementation of ‘Teaching as Inquiry’**

Although the benefits of ‘teaching as inquiry’ have been identified, there has been, at best, inconsistent implementation of it nationally. The responsibility for implementation of ‘teaching as inquiry’ lies with school leaders, which is why this research focusses on the experiences of Middle Leaders with responsibility for leading ‘teaching as inquiry’ and attempts to explore the associated tensions.

Effective leaders have been identified as people who engage in “collaborative internal evaluation where all staff participate and understand the importance of internal evaluation and inquiry.” These qualities have been correlated with high-performing schools and are advocated to be part of a systematic, collaborative culture with high functioning networks of learning, driven by inquiry processes (Education Review Office, 2016a, p. 10). However, there has been inconsistent implementation on a national scale, therefore it can be assumed that there has been inconsistent leadership and direction of ‘teaching as inquiry’ in schools. ‘Teaching as inquiry’ was initially promoted by school leaders, with Education Review Office (2011) finding that “in 72 percent of the schools in Education Review Office’s evaluation, processes had been put in place by school leaders that were either highly, or somewhat informative and supportive in promoting ‘teaching as inquiry’” (p. 2). This initial promotion did not follow through to effective and consistent implementation in schools.
Education Review Office (2012) found “58% of schools had processes in place that were either highly, or somewhat supportive of ‘teaching as inquiry’” (p. 1), implying that 42% of schools did not have such effective systems. Principals have not consistently linked inquiry with appraisal processes. Education Review Office (2014) found that “one-third of principals surveyed thought the school appraisal was somewhat or not effective in promoting inquiry into student learning, progress and achievement” (p. 27). Subsequently, Education Review Office (2016a) used ‘teaching as inquiry’ as an indicator for good practice when undertaking teacher appraisal processes. In a summary of a range of schools, 23% of classrooms studied had minimal or no evidence of ‘teaching as inquiry’ and only 26% of classrooms had a level of inquiry that could be classified as high. On a more granular scale, when the teacher inquiry process was investigated as part of appraisal in more depth in two Auckland secondary schools, disparities were found with the two schools adopting different models for inquiry. Despite a “valiant attempt” by both schools to link inquiry with appraisal, ‘teaching as inquiry’ did not seem to be embedded in the teaching and learning process of the school. Cardno et al. (2017) found that “the procedures for ‘teaching as inquiry’ projects appear to happen in parallel to, rather than within, existing mechanisms that lend themselves to choosing a focus, using evidence to inquire into and discuss teaching and learning” (p. 20). Although challenges such as these are documented, there is also a wide base of literature that calls for ‘teaching as inquiry’ to be used as a model for teachers’ professional accountability and growth.

‘Teaching as Inquiry’ as a Model for Professional Growth

There are advocates for the development of adaptive expertise, which involves teachers using a variety of pedagogical strategies and developing the capacity for innovation rather than prescriptive memorisation and transmission of tasks (Hattie, 2009; Dumont, Istance & Benavides, 2010; Hattie, Masters & Birch, 2016) with an unrelenting focus on the impact of a teacher’s actions on student learning outcomes (Hattie, 2015). ‘Teaching as inquiry’ is proposed as a model for responsive, effective, individualised, context-based, professional growth focussed on student learning outcomes (Timperley et al. 2007; Timperley, 2011). Effective professional development can have a substantial impact on student learning outcomes, although the nature, duration and support provided for that development influences its effectiveness. When used strategically, ‘teaching as inquiry’ can provide a context for leadership development, succession planning and sustainable school-wide improvement (Lofthouse et al., 2012, p. 185). For example, models that engage external expertise are generally not sustainable when the expertise is no longer available (Timperley et al., 2007). As such, ‘teaching as inquiry’ processes that are led within a school, developing the leadership, teaching and research skills of individuals employed within the organisation, have the potential to both develop teachers and
sustainably influence student learning outcomes. These processes are also part of the positive growth of educational organisations with leadership being central to the development of organisational capability (Timperley, McNaughton, Lai, Hohepa, Parr & Dingle, 2010). This is linked with the reasons that Sinnema & Robinson (2007) use to advocate for ‘teaching as inquiry’ to be incorporated into formal appraisal processes. This is now becoming established, albeit inconsistently, in New Zealand. Effective ‘teaching as inquiry’ has been seen in schools where school leaders incorporate ‘teaching as inquiry’ into appraisal processes as a “tool and lever for continuous professional learning that all teachers should be engaged in” (Conner, 2015, p. 14).

It is within these wider contexts that we can investigate the support mechanisms for ‘teaching as inquiry.’ Without leaders’ skills to “uncover barriers to changing practice” it is likely that changes remain superficial and potentially unsustainable (Cardno et al., 2017, p. 23). The role that leaders have in managing teacher engagement in ‘teaching as inquiry’ processes is important. (Timperley et al., 2007). Effective leadership and mentorship is crucial to the success of inquiry. Fowler (2012) notes that “critical friendship, or mentorship, helps build knowledge about inquiry” (p. 4) and identifies regular meetings with a curriculum leader as one of the descriptors of good inquiry practice. Thornely and Mcdonald (2011) describe three case studies involving educational leaders’ successful use of ‘teaching as inquiry’ to support individualised professional learning of staff. It was seen that mentoring support of leaders was essential, particularly as the scale of the inquiry project increased. It is apparent that effective ‘teaching as inquiry’ requires support from educational leaders, either sustainably sourced externally or from leaders within an organisation. Support from leaders can take the form of modelling, monitoring or professional dialogue (Southworth, 2004); coaching and mentoring (Robertson, 2008) or formal appraisal processes (Sinnema & Robinson, 2007). Although the range of interpersonal interactions in a school can be exceptionally complex and demanding (Cardno & Robson, 2016), Cardno et al. (2017) note that deep learning in an inquiry cycle requires “not only quality time but also quality support from those within the school with the content knowledge to coach the teacher” (p. 21). They also contend that one way of strengthening appraisal through ‘teaching as inquiry’ involves leaders that research the “foundational values” of ‘teaching as inquiry’ processes and personalising teacher improvement goals, while still linking within the goals of the wider institution (p. 23). Linking appraisal with the teacher inquiry process has a range of benefits, including that a leader can move from being perceived as a supervisor to one of a coach (Education Review Office, 2014), whereas coaching is promoted as an essential skill that helps to develop not just educational leaders but can help to develop the culture of the wider institute (Robertson, 2004). Kaser and Halbert (2009) identify that this can help leaders develop their own skill set, stating “reflective inquiry can also
contribute to developing the kind of adaptive expertise required to deal simultaneously with the complexity of human relationships and system improvement” (p. 75).

When leading any form of educational change, the importance and ubiquity of positive relationships is outlined in Cardno (2012) including the value of regular dialogue about practice and effective management of dilemmas. There is limited academic literature on the nature of leadership of ‘teaching as inquiry’ in New Zealand, particularly when comparing relatively new versus traditional structures in the New Zealand educational framework. It is with this in mind, that the leadership of ‘teaching as inquiry’ will be further explored within existing Middle Leadership roles and within leadership roles more recently created through New Zealand Kāhui Ako.

**Middle Leaders and the Leadership of ‘Teaching as Inquiry’**

The role of leading ‘teaching as inquiry’ has traditionally fallen to Middle Leaders in schools, particularly those with responsibility for appraisal. The Education Council requires all teachers to “inquire into and reflect on the effectiveness of practice in an ongoing way, using evidence from a range of sources” as part of the standards required for professional registration (p. 18). Middle Leaders in schools are a diverse group, occupying positions in pastoral and curriculum leadership. Most are classroom teachers themselves. It is recognised that they hold an influential place in educational frameworks and Middle Leaders are usually given the responsibility of carrying out performance appraisal processes (The Ministry of Education, 2012). Their roles can be complex, rewarding and demanding (Robson & Bassett, 2017).

Students can benefit when senior leaders devote time and energy to developing the capabilities of Middle Leaders instead of attempting to complete all tasks themselves, particularly in larger schools (Southworth, 2004). The benefits of incorporating a range of leaders into professional growth processes are outlined by Timperley et al. (2007) who identify that having systems that locate individuals as the curriculum or pedagogical leader are not effective in terms of sustainability of professional learning. This is also supported by Fitzgerald and Gunter (2006) who identified benefits of developing leadership potential in a range of staff, not just those with formal responsibilities in senior roles.

However, there are challenges identified with Middle Leaders’ professional development, particularly their perceptions of appraisal. The work of Middle Leaders is “heavily dependent on how their role is constructed” and is linked strongly with the expectations that surround the nature of their leadership and the opportunities provided to enhance their leadership impact (Gurr & Drysdale, 2013, p. 62). Nationally, one of the challenges of effective appraisal is the inconsistency with which the processes are implemented by different Boards of Trustees (Nusche, Laveault, Macbeath & Santiago, 2012). Within schools, Middle Leaders can view appraisal processes as compliance focussed and this can lead
to a disengagement in the dialogical professional development aspects of the process. Middle Leaders view their own appraisal as ineffective and their positions as “undervalued, unsupported and not influential” (Robson, 2012, p. 80). This pattern was also reported in the findings of Chetty (2007), who stated that Middle Leaders were not assisted in appraisal processes and would benefit from mentoring and support. In the absence of support and training for appraisal, some Middle Leaders identify that they simply develop systems independently based on their own limited experience (Cardno & Robson, 2016). This can be problematic if trying to link appraisal to ‘teaching as inquiry,’ particularly in typical cases where appraisal does not concentrate on student learning outcomes, instead identifying teacher behaviour as the area of focus (Sinnema, 2005). These problems are exacerbated when the findings of Bassett and Robson (2017) are taken in account. They found little evidence that Middle Leaders’ appraisal processes were targeted towards development and that “for the majority of Middle Leaders interviewed, appraisal was merely a compliance exercise, if it happened at all” (p. 23). The need to identify barriers to effective appraisal, including the processes involved with ‘teaching as inquiry,’ becomes all too apparent in these contexts.

Although there is an identified expectation that Middle Leaders have responsibility for staff development linked with cycles of ‘teaching as inquiry’ (The Ministry of Education, 2012), there are structural challenges associated with this, such as a lack of time, a lack of dedicated Middle Leader development and tensions in fulfilling school expectations when they diverge from the goals of an individual department (Bassett, 2016). Wise and Bush (1999) identified time pressure as a significant challenge when documenting the increasing scope of middle managers’ roles, with Wise and Bennett (2003) echoing this, more than a decade later, in reporting that Middle Leaders saw time restrictions as the main challenge to completing their roles effectively. Piggot-Irvine (2003) also identified that creating time to carry out meaningful appraisal was a significant challenge to enacting effective appraisal processes, particularly where these processes are advocated as part of a wider culture change within a school. The Education Council (2018) have subsequently acknowledged that there is a need to address leadership development in a range of areas, naming “leaders in early childhood education, Māori medium settings, rural areas, and Middle Leaders in schools” as priorities (p. 17).

Although ‘teaching as inquiry’ is linked strongly with professional learning, there are also structural challenges identified in allowing leaders to lead effective professional learning through ‘teaching as inquiry’ processes. Effective practices in some schools have been identified. Leaders that provide resources, particularly time, can be effective in supporting these processes. Leaders also foster success by facilitating discussion into effective teaching practices (Education Review Office, 2018). However this can be contrasted with the findings in Wylie (2013) who stated that only 51 percent of teachers surveyed identified that they had useful blocks of time for professional learning and only 48 percent
reported that they felt supported to “experiment with new ideas” (p. 22). More recently, a significant gap between the expectation and confidence of secondary school Middle Leaders when “encouraging teacher inquiry practices” has been identified (Cardno, Robson, Deo, Bassett & Howse, 2018, p. 43). Comparably, as reported in Bonne and Wylie (2017), although 85 percent of teachers reported that ‘teaching as inquiry’ influenced their professional development, only 58 percent reported helpful, motivating feedback from their performance management process. It was concluded that “further support is needed for schools to get more out of collective teacher inquiry” (p. 23).

Middle Leaders have opportunities to exercise influence in schools. In particular, Middle Leaders with appraisal responsibility have opportunities to lead ‘teaching as inquiry’ processes. This could be via modelling effective inquiry processes (as every teacher, including leaders would be required to participate in the process); through monitoring of inquiries to ensure teachers’ continued engagement and effective practice and through engaging in professional dialogue about individuals’ ‘teaching as inquiry’ processes, identifying relevant professional development opportunities. However, as ‘teaching as inquiry’ has been ineffectively implemented nationwide, it can be assumed that there are challenges to its effective leadership. Fowler (2012) identified that an embedded, collaborative, school-wide inquiry process was “little more than fiction” in most secondary schools (p. 3). A potential way of addressing issues such as these exists within Kāhui Ako.

**Leading ‘Teaching as Inquiry’ in Kāhui Ako.**

A Professional Learning Community can take many forms within educational institutes. Stoll, Bolam, McMahon, Wallace and Thomas (2006) state that there is “no universal definition” of these communities (p. 222). In spite of their diversity, there are some similarities that they share. They are characterised by being communities that: focus on student learning (as opposed to teaching); build a collaborative culture to create deep team learning opportunities and concentrate on student results (Defour, 2004). Professional Learning Communities can be established formally and informally and exist to develop improved teaching practices and support the subsequent improvement in student learning outcomes (Bryk et al., 1999). Effective Professional Learning Communities have distinctive characteristics in that they share a purpose, analyse data collaboratively and use the data to collaboratively make decisions (Biggs, 2017).

‘Teaching as inquiry’ has a clear place in Professional Learning Communities. Fichtman Dana and Yendol-Hoppey (2009) identify that these structures can augment ‘teaching as inquiry’ processes and ultimately build “inquiry-oriented communities” (p. 14). Dufour, Dufour and Eaker (2008) state that “educators in a Professional Learning Community engage in collective inquiry into 1) best practice about teaching and learning, 2) a candid clarification of their current practices and 3) an honest assessment of their students current level of learning” (p. 16). Connection to a professional learning
network needs to be “strong and pervasive” in order to be effective (Katz & Earl, 2010, p. 42). Mclaughlin and Talbert (2007) state that ‘teaching as inquiry’ can provide cohesiveness through a learning community by providing teachers with a common language and allowing them to see the link between their area and school-wide changes. There are examples of Professional Learning Communities which have been established, through the deliberate use of a ‘teaching as inquiry’ cycle in individual schools, which address specific needs, (Astall, Conner & Wiki-Bennett, 2014). Jackson and Temperley (2007) advocate for Networked Learning Communities to operate in partnership with Professional Learning Communities, in order to scale-up professional learning opportunities and to strengthen the links between “practitioner knowledge,” “public knowledge” and “new knowledge that is created through collaborative work and enquiry” (p. 48).

Stoll et al. (2006) identify a key purpose of Professional Learning Communities as vehicles to enhance “teacher effectiveness as professionals for students’ ultimate benefit” (p. 229). They go on to identify reflective professional inquiry as one of the five common characteristics of these communities, the other four being: shared values and vision; collective responsibility; collaboration and the promotion of both group and individual learning. However, although the term Professional Learning Community is becoming embedded in educational literature and institutes, the practices that are associated with these structures are not fully normalised (McLaughlin & Talbert, 2006). To potentially counter this, we are encouraged to work towards developing individual school cultures of professional inquiry to address isolated, unsustainable approaches to establishing Professional Learning Communities. This can allow continual teacher learning and reduce dependence on outside experts (Bishop, O’Sullivan & Berryman, 2010).

Communities of inquiry-based professional learning have been trialled in countries other than New Zealand. For example, Networks of Performance Based Schools were established in British Columbia in 1999 with subsequent development of leadership roles in specific areas of education such as health and, more recently, improved outcomes for indigenous students (Kaser & Halbert, 2009). Ainscow et al. (2016) identify successes and challenges of establishing networks of collaborative inquiry groups in English schools. They note that high-accountability models and competing national priorities can stifle pedagogical flexibility and innovation. McLaughlin and Talbert (2006) identify that American learning communities are generally weak, with a tradition of teacher autonomy and limited professional discussion of teaching and learning being identified as barriers to genuine collaboration. They also note that Professional Learning Communities are complex, requiring fundamental culture-shifts in order to enact significant change and not well-suited to achieving immediate results.

In New Zealand, neoliberal policies, such as the Tomorrow’s Schools document (Parliament of New Zealand, 1988) leading to the Education Act (1989) were first enacted in the late 1980s. This was followed with Today’s Schools: Governance and Quality which moved away from a model of education
that placed an emphasis on the professional trust on teachers towards adopting visible and easily measured standards that allowed for increased accountability (Openshaw, 2009). Kāhui Ako were introduced within the Investing in Educational Success policy in 2014 with initial funding of $359 million. This process involved setting up Kāhui Ako to allow collaboration between clusters of schools and facilitate further development of leadership capacity within schools (The Ministry of Education, 2017). Leadership roles in Kāhui Ako were preceded by a five-year programme of Woolf Fisher Lead Teachers Research Scholarships, which allowed teachers to follow effective inquiry processes to investigate problems specific to their educational contexts. This programme found that “Lead Teachers can build schools’ capacity to focus systematically on their own improvement needs” (Jesson & Wilson, 2017, p. 2). However, there are different opinions on the success of Kāhui Ako nationally. For example, Thrupp (2017) states “this development has been seen by supporters as a relatively benign exercise in collaboration while critics have regarded it as another form of managerial control” (p. 12). Conversely, some see the establishment and operation of a range of Kāhui Ako as having the potential to succeed, particularly in addressing issues of equity and excellence (Timperley & Parr, 2010; Conner, 2015; Education Review Office, 2016a). They need deliberate leadership, support, monitoring and responsive professional learning opportunities (Bendikson, 2017).

Collaboration is an essential element of Kāhui Ako (Education Review Office, 2019). Collaborative work has been identified as being hugely beneficial in different contexts (Ainscow et al., 2016, Love et al., 2008). One of the myths of collaboration, that should be dispelled, is that collaboration is the same as collegiality (Cardno, 2012). Collegial support is explained by Barth (2006) and includes establishing the culture within educators “in which professionals talk about practice, share their craft knowledge, and observe and root for the success of one another” (p. 13). The explanation includes the contention that it should be differentiated from congenial support, where individuals are supportive and friendly without overlapping into professional spheres, and parallel play, where teachers operate next to each other without interacting in a meaningful way. Collegial conversations are identified as a key tenet of effective collaborative inquiry groups (Nelson et al., 2010). Hargreaves and Fullan (2012) advocate for collectively building teacher quality while being cognisant of the dangers of “pervasive groupthink or contrived collegiality” (p. xv). To maximise collegiality, it is suggested that leaders consciously discuss practice and pedagogy and model collegiality themselves. Other strategies such as formalised protocols or pre-set questions may assist leaders of groups such as these to effectively facilitate meaningful dialogue and avoid congeniality, where relationships are the only dominant focus, at the expense of developing an effective culture of inquiry. A school culture of congeniality can even be seen as a barrier to improving teaching and learning via meaningful dialogue in collaborative inquiry groups (Nelson et al., 2010). Focusing on developing trust and an independent sense of community
amongst education professionals can help lead to genuine collaboration between teachers as opposed to the “contrived collegiality,” which comes from a focus on administrative control, that we are warned of in Hargreaves and Dawe (1990) (p. 227).

There is advocacy to base effective collaboration on an environment of trust and building “professional capital” as opposed to relying on external accountability mechanisms (Fullan, Rincon-Gallardo & Hargreaves, 2015, p. 6). In collaborative environments there is also a tendency for successful schools to focus on developing excellence within a school and within a classroom, through “privileging and school leader expertise” rather than concentrating resources outside it (Hattie, 2015, p. 26). Curtice (2017) notes that existing structures and power dynamics will inevitably influence the nature of the collaborative opportunities, stating “ultimately, where the power and influence lies in the community will affect the direction and outcomes of this collaboration” (p. 6). As Kāhui Ako were being established around New Zealand, 382 primary and secondary principals were surveyed. The three most common expectations of principals were that Kāhui Ako would enable “more sharing of useful knowledge for teaching and learning; improve student transition to secondary school and more use of effective inquiry to improve teaching and learning” with 60% of surveyed principals expressing optimism about the establishment of Kāhui Ako (Wylie, 2016, p. 8).

Together with building collaboration between schools, another of the anticipated outcomes of Kāhui Ako was an increase in the density of leadership within a school community, through distributed leadership models (Education Council, 2015). Distributed leadership “concentrates on engaging expertise wherever it exists within the organization rather than seeking this only through formal position or role” (Harris, 2004, p. 13). Weber (1996) holds the view that organisations should have “multiple leaders drawn from the crew itself” as opposed to one sole leader: “captains walking their bridges in lonely watch” (p. 253-254). Bush and Bell (2002) have called for leadership distribution in schools where “all staff share in the re-creation and adjustment of vision on a daily basis by actions which embody or symbolise the shared values or assumptions” (p. 189). The Education Council has called for more leaders within education, stating “we need more members of the profession to understand that they are leaders and seek to develop and exercise effective leadership” (Education Council, 2018, p. 16). Although some definitions differ, Timperley (2005) identified two commonalities of distributed leadership definitions, namely that distributed leadership is distinctly different from simply dividing tasks but involves “dynamic interactions between multiple leaders and followers” (p. 2) and that distributed leadership should be strongly linked with instructional leadership. It is
suggested that school leaders would be wise to develop the leadership of others rather than try to lead all teachers individually.

Kāhui Ako may be seen as vehicles to develop leadership. Education Review Office (2016b) state “effective leadership is a defining characteristic” of Kāhui Ako (p. 8). The Education Council (2015), in their synthesis of literature on Kāhui Ako, states that “most importantly, it would build leadership density across the system, as well as the conditions for the depth of the interactions needed for innovative change” (p. 5). However, while distributed leadership among teachers may be desirable, some caution needs to be sounded about the potential difficulties involved. Although formally appointed leaders do not automatically command respect and authority, teacher leaders may be particularly vulnerable to being openly disrespected and disregarded because they do not carry formal authority. On the other hand, nomination of teacher leaders by colleagues may not realize potential expertise within the group because colleagues may select their leaders using other criteria (Timperley, 2005). The non-hierarchical nature of leadership within successful Kāhui Ako was identified in the Education Review Office’s (2019) statement:

Activities and actions undertaken in each Kāhui Ako paved the way for building high levels of relational trust between members. The effectiveness of the collaborative endeavour in the Kāhui Ako can be attributed to the approach to leadership. This leadership occurred amongst colleagues and sought to influence rather than mandate change (p. 33).

It is apparent that individuals involved in leading Kāhui Ako will need to exercise leadership through the “personal characteristics or quality of ideas” rather than the “positional authority” basis outlined by Education Review Office (2016b, p. 7).

There are three formal leadership roles within each Kāhui Ako; a Lead Principal, Across-School Leaders and Within-School Leaders. There are approximately 250 Lead Principals, 1000 Across-School Leaders and 5000 Within-School Leaders nationwide. There has been $63.5 million allocated to resource the wages of these positions annually and significant time allowances allocated to each school (The Ministry of Education, 2017). The Ministry of Education has identified two similar purposes of Across-School Leaders and Within-School Leaders. Across-School Leaders are expected to be involved in “promoting best teaching practice across” Kāhui Ako and “strengthening the use of effective inquiry approaches to teaching and learning across schools to achieve the shared achievement objectives.” This can be expanded to include an expectation that these staff “lead, at the request of the kura/school leaders, learning groups within the Kāhui Ako, including those focused on ‘teaching as inquiry’” and “provide and lead structured opportunities, based on the evidence of best practice, for teachers in their Kāhui Ako to support and assist the ongoing development of effective approaches to ‘teaching as inquiry’” (The Ministry of Education, 2016b, p. 9). This can be compared with the purpose
of the Within-School Leader role, which has almost identical expectations regarding ‘teaching as inquiry’ and promoting best teaching practice, albeit located “within a school” rather than across schools (The Ministry of Education, 2016b, p. 11). Across-School Leaders receive a time allowance of 10 non-contact hours per week and Within-School Leaders receive a time allowance of 2 non-contact hours per week. In addition to the time allowance allocated to the roles described above, there is also ‘Inquiry Time’ allocated to each school. This equates to 50 hours for every ten full time staff employed at a school and is designed to “assist kaiako/teachers in the [Kāhui Ako] to work collaboratively with their colleagues, to inquire into and strengthen their teaching practices and meet the shared achievement challenges of their schools” (The Ministry of Education, 2016a, p. 17). Although all teachers are required to complete a ‘teaching as inquiry’ process, there is an expectation, both implied and explicit, that this should be stronger within staff who are involved in Kāhui Ako. Part of the expectation is linked with the higher rate of remuneration associated with these roles and the role descriptions noted above but also matches the perceptions of some individuals already involved in Kāhui Ako. For example, when surveyed on their role, a Within School Teacher noted that it “seems like it is a glorified ‘teaching as inquiry’ project, which all staff have to do but if you are a [Kāhui Ako] teacher you get paid to do” (PPTA, 2017, p. 48).

In spite of this significant resourcing, there is also an explicit expectation that teachers with Kāhui Ako roles stay separate from formal appraisal processes. A document jointly authored by the Ministry of Education, PPTA and the NZSTA (2014) states:

> It is important that this role is kept separate from any responsibility for making appraisal, performance management or competency judgements in relation to other teachers. The role should always be seen in a support and guidance role focussed on professional growth, not making summative judgements of performance (p. 3).

As such, staff in Kāhui Ako roles should not directly be part of compliance and accountability mechanisms associated with performance management. These roles are designed to be “a dedicated point of reference for kaiako/teachers as they address problems of practice in order to lift ākonga/student achievement” (The Ministry of Education 2016a, p. 7). There is a possible tension between the need to strengthen teachers’ practice, yet maintain positive collegial relationships without any recourse possible that involves performance management processes. This tension could easily lead to a dilemma as described in Cardno (2007) as “a complex problem, characterised by multiple demands or goals creating difficult options and presenting irreconcilable choices” (p. 35).

Dialogue around such problems may be beneficial but relational trust is essential for critical conversations and a lack of trust can potentially constrain effective critique in professional learning communities (Biggs, 2017). Conversely, as there is no possibility of formal judgement, the Kāhui Ako
structure may lead to more meaningful opportunities for teachers in these roles to exercise leadership through establishing trusting relationships leading to safe professional dialogue. Leadership, in the form of facilitating professional dialogue appears to be particularly important within ‘teaching as inquiry’ processes. Phillips (2003) found that professional development creates forums for teachers to have collegial conversations on a regular basis with both formal and informal opportunities to learn and Fowler (2012) advocates for personalised discussion of ‘teaching as inquiry’ between teachers and their curriculum leader. Effective dialogue involves individuals taking positions of equal power in a conversation and avoiding using it as “the crafty instrument for the domination of one person by another” (Freire, 1970, p. 62). Furthermore, improving the outcomes of marginalised students can often begin with a focus on changing the dialogic interactions that teachers’ experience, namely where they “use the language and actions provided by the discourses of potentiality” in order to “implement the positive pedagogies that are enabled by positive teacher-student relationships.” (Bishop, 2019, p. 14). Professional dialogue can also act as a platform from which existing ideas can be challenged and significant individual change can occur, leading to meaningful organisational learning (Cardno, 2012). Incorporating coaching and mentoring strategies, using ‘teaching as inquiry’ frameworks can help to formalise these conversations and maximise their effect. Hawk and Hill (2003) advocate that coaching and mentoring processes are essential to teachers’ professional learning and development. They contend that it “must involve teachers having opportunities to observe, practice, reflect and engage in professional discussions about what helps their students to learn” (p. 3). Engaging leaders in meta-cognition as part of an active coaching strategy can also be incorporated within reflective inquiry processes. Kaser & Halbert (2009) identify that this can help leaders develop their own skill set, stating “reflective inquiry can also contribute to developing the kind of adaptive expertise required to deal simultaneously with the complexity of human relationships and system improvement” (p. 75). Key leadership qualities can strengthen social relationships and pedagogies within practitioner inquiry contexts, as Cochran-Smith and Lytle (2009) note:

This is especially true in inquiry communities structured to foster deep intellectual discourse about critical issues and thus to become spaces where the uncertainties and questions intrinsic to practice can be seen (not hidden) and can function as grist for new insights and new ways to theorize practice (p. 37).

There is the opportunity for staff in Kāhui Ako roles to occupy a cutting edge of educational leadership, not only strengthening ‘teaching as inquiry’ but also strengthening teaching and learning across schools, ultimately benefitting all students’ outcomes. Although it is acknowledged that key differences exist, it is apparent that there are significant similarities between Kāhui Ako and the worldwide “practitioner inquiry movement” (Cochran-Smith & Lytle, 2009, p. 52). It is also apparent
that Kāhui Ako are structured in order to potentially maximise the opportunities for staff to lead ‘teaching as inquiry’ and develop their own leadership capabilities in the process, albeit in a collaborative, supportive context, removed from appraisal processes. However, these roles also overlap the formal leadership tasks that have traditionally been the responsibility of Middle Leaders in schools. It can be argued that all leaders can strengthen all practices within schools, particularly ‘teaching as inquiry,’ be it through formal appraisal or supportive collegial practice. There is limited research on the nature of the leadership within Kāhui Ako, particularly on how the leadership practices apply to ‘teaching as inquiry’. This research will involve staff in traditional Middle Leader roles of a large secondary school and staff employed in relatively newly established Kāhui Ako leadership roles. It will use data gathered using online questionnaires and focus group interviews to attempt to describe leaders’ perceptions and experiences of leading ‘teaching as inquiry.’
CHAPTER THREE

Methods

This section outlines the epistemological position of interpretivism, which underlies the methodology used in this study. It details the tools that were used, namely focus group interviews and questionnaires, and it describes, and briefly justifies, the data analysis design that was used. Issues of validity are covered along with ethical considerations that were taken into account in the design of this research.

Interpretivism

Epistemology has been defined by Bryman (2016) as a “stance on what should pass as acceptable knowledge” (p. 690). Crotty (1998) links the idea that an epistemological position is strongly linked to the subsequent research methods employed, defining epistemology as “the theory of knowledge embedded in the theoretical perspective and thereby in the methodology” (p. 3). Research is intrinsically linked with epistemology, particularly with its focus on knowledge. Merriam (2009) links the concepts of knowledge and research with the statement that, “in its broadest sense, research is a systematic process by which we know more about something than we did before engaging in the process” (p. 4). Taber (2013) contends that although it may be possible to avoid using the specific vocabulary that is associated with epistemological questions, at times, considering the epistemological and ontological position is an essential part of the early stages of effective educational research.

An absolute, empirical approach to research has drawbacks in some areas, particularly education. Cohen, Manion and Morrison (2011) state that the “immense complexity of human nature and elusive and intangible quality of social phenomena contrast strikingly with the order and regularity of the natural world” (p. 7). The inescapability of subjectivity in social contexts is also raised by Phillips and Burbles (2000), who state “human investigators are always imperfect and situated in social and historical contexts in which multiple motivations operate and not just a disinterested pursuit of truth” (p. 34). This research focussed on Within School Leaders’ and Middle Leaders’ perceptions of ‘teaching as inquiry’ and associated leadership practices. This requires participants to share their recollections and opinions. Therefore, this research cannot collect anything other than subjective data based on participants’ individual experiences. Although qualitative and quantitative methods can be seen as complementary rather than opposing (Dick, 1979), the nature of the data that was collected lends itself to a qualitative analysis. An interpretivist approach was adopted for this research, using questionnaires and focus group interviews as tools to gather data.
Interpretivism is defined as “an epistemological position that requires the social scientist to grasp the subjective meaning of social action” (Bryman, 2016, p. 692). Features of these “naturalistic, qualitative interpretive approaches” are summarised in Cohen et al. (2011) and include, among other things, an acceptance of the need to “examine situations through the eyes of participants rather than the researcher” and the need to see that “events and individuals are unique and largely non-generalisable” (p. 17). This is characterised by a “concern for the individual” by Cohen et al. (2011, p. 17). This also implies that the research will rely on an “inevitably somewhat subjective interpretation of a particular human being” where it is difficult or even impossible to separate the material that is being studied from the previous experiences that have influenced a particular individual’s world view (Taber, 2013, p. 45). Briggs, Coleman and Morrison (2012) state that “the starting point for interpretive researchers is to operate within a set of distinctive principles regarding what it means to conduct educational research with people” (p. 20) (italics in original).

**Study Location**

The Kāhui Ako involved in the study consists of a group of nine schools (one secondary, one middle and seven primary schools) that are geographically close in Hamilton, New Zealand. The primary and middle schools provide a significant proportion of the students that attend the secondary school, a decile seven, coeducational, urban state school. The Kāhui Ako was established in 2018 and there are 26 Within-School Leaders, 10 of whom are employed at the secondary school. The secondary school also has a large number of staff in middle-level leadership roles who are not employed in a Kāhui Ako role, but still are expected to lead ‘teaching as inquiry’ processes through their roles in managing the performance appraisal of staff who report to them.

For this research ‘Within-School Leaders’ included any staff member who was employed as one of the 26 Kāhui Ako Within-School Leaders. ‘Middle Leaders’ were categorised as staff (excluding the Principal, Deputy Principal or Assistant Principals) who were employed at the secondary school in a role that was allocated at least one Management Unit and also held performance appraisal responsibilities over other staff.

The research has occurred within teaching and learning organisations within which I operate as an Across-School Leader. There are advantages to this approach, identified in Cochran-Smith and Lytle (2009) who state “one of the most significant interdisciplinary contributions of the teacher research movement is the case for the epistemic status of agent inquiry” (p. 329). Aspects of this approach were also followed by Green, Joo, Dai, Hirsch, Chian and Barros David (2017) who, in their research on epistemologies for studying learning, deliberately sought out an insider’s point of view and sought to “to make visible how taking an ethnographic perspective provided a basis for triangulating the
ontological and epistemological arguments and processes” (p. 119). Teacher research “provides a potentially privileged emic vantage point from which to theorise the complexities of teaching and learning” and the location of the researcher within an institution can provide valuable insights if managed carefully (Cochran-Smith & Lytle, 2009, p. 329).

Sample Selection

In educational research, deciding on the size of the sample from which to draw your data is a key consideration, albeit not always clear-cut. Bryman (2016) recognises this, stating “the decision about sample size is not straightforward: it depends on a number of considerations and there is no one definitive answer” (p. 183). Coleman (2012) identifies issues surrounding identifying, contacting and accessing interviewees as one of the key considerations to take on board when designing research.

Bearing these considerations in minds, there were two sample groups that were part of this study. These were selected through purposive sampling. The first was selected from Middle Leaders within the secondary school who were not employed in a Kāhui Ako role. The second group consisted of Within-School Leaders within the Kāhui Ako of which the secondary school was part. In order to gain access to each cohort, I approached the principals of all of the schools within the Kāhui Ako who employed staff in Within-School Leader roles and requested permission to conduct research involving these staff in their schools. I also approached the Lead Principal of the Kāhui Ako. All principals gave permission. I approached Within-School Leaders to consider my request to participate at a Kāhui Ako meeting and later invited them by email. I invited Middle Leaders of the secondary school to consider my request at a staff meeting of the secondary school and also, later via email. All of Within-School Leaders in the Kāhui Ako were invited to be participants in this research via an online questionnaire, administered through Google Forms and initially invited via email. Teachers were able to separately indicate if they would be willing to participate in more detailed feedback, via a focus group interview. Five Within-School Leaders who indicated that they were willing to be involved in a focus group were randomly selected. The criteria for selection of Middle Leaders included staff that held a Management Unit and were involved in appraisal of other staff members. This research looks at the tensions of leading ‘teaching as inquiry.’ The reason for using these criteria for defining participants for selection was that it incorporated both a formal expectation of leadership (through their role and associated remuneration) and a link with the ‘teaching as inquiry’ process through the appraisal process. All Middle Leaders that met these criteria were invited to participate in the questionnaire. As above, from this cohort, teachers were able to indicate if they would be willing to participate in more detailed feedback, via a focus group interview. Five Middle Leaders who indicated that they were willing to be
involved in focus group were randomly selected. The sample size of five is within the ranges of interview group size reported by Bryman (2016).

**Questionnaires**

Questionnaires can be seen as desirable due to the quickness and ease of creation and administration and the large volumes of data that can be created from them (Bell & Woolner, 2012). Elliot (2004) also reports that questionnaires and surveys have advantages, in that they can generate large samples, but may also give the illusion that meaningful statistical analysis is possible and lend scientific credibility to qualitative research. Questionnaires have another advantage in that they do not require a researcher to be physically present during their administration, (Robinson & Lai, 2006). However, they are lacking in some areas in that researchers cannot prompt or probe respondents and there is the danger of including a wider range of questions that are relevant to the wider group being surveyed but not to individuals, causing respondents to lose interest (Bryman, 2016).

One of the major considerations to take into account when designing questionnaires is the appropriateness of the precise wording needed to elicit meaningful data. Common traps, identified in Bell and Woolner (2012) include words that allow for ambiguity between participants, leading questions, questions that include a presumption of pre-existing opinions or knowledge, double questions (where more than one concept is asked within one question); questions that place undue emphasis on detailed recall or questions that only allow for single responses when a respondent may be able to answer multiple options. Elliot (2004) noted that antithetical answers were possible if respondents did not fully understand the question raised which were more apparent if respondents did not have a firm grasp of the language used or the context of the questions. We are also advised by Elliot to be cognisant of “situations where certain words are negatively evaluated and therefore psychologically equivalent to negatives” (p. 139) and limit the processing demands on the respondent. Taber (2013) also raises the issue of open versus closed questions. Open ended questions can allow more in-depth answers that closely align with respondents’ views but do not have the ease of coding that closed questions provide. If closed questions are used, answers can be arranged on a Likert scale. Likert scales are used to produce numerical data to a language-based question. A forced-choice scale is desirable to reduce error (Hamson, 2014).

As well as the wording of questions, the visual layout of the form itself is important. Consistency in design, including variables such as font and colour is an advantage, together with a careful consideration of the structural layout of questions, ensuring that it does not appear too bulky or complicated for potential respondents (Bryman, 2016). Although there are several benefits of using online tools to administer questionnaires, issues such as internet access may prevent complete sample
An online questionnaire tool was found to be effective for educational research by Carnegie-Harding (2016), who stated:

The advantages of using Google forms for the researcher were the variety of question types available, the ease in sharing the survey with volunteers, the ability to keep their responses anonymous and as the surveys are mobile friendly they could be completed when and where the teachers wished (p. 33).

The questionnaire in this study involved open ended questions and closed questions measured using a four-point Likert scale. It was administered using Google Forms, emailed to participants after written permission to approach them was gained by the principal of their institute, as well as the Lead Principal of the Kāhui Ako. All teachers in the survey had access to appropriate technology (laptops, software and internet access) provided as part of their employment. The participants’ information sheet was linked as the first part of the Google Form. The form was designed so that no identifying feature of participants was collected (other than the distinction between Middle Leaders and Within School Leaders). Participation in the questionnaire was seen as tacit consent. The questionnaire is appended (see Appendix 1) as is the participants’ information form (see Appendix 2).

**Focus Group Interviews**

Interviews can be a useful tool for researchers and are common in educational research (Taber, 2013). They can provide a greater depth of understanding of concepts. This was noted by Elliot (2004) when comparing interviews with a questionnaire tool that was widely viewed as valid and appropriate at the time. He stated “it was only when I began to engage in face to face discussions with the young people that the methodological and conceptual complexities were perceived” (p. 140). Bryman (2016) identifies that once interviewees have agreed to the interview, they are usually compliant and willing to help. He states “even short interviews can be revealing” (p. 480). They can take a variety of forms, such as unstructured interviews, semi-structured interviews, life history interviews or oral history interviews (Bryman, 2016). This links with Coleman’s (2012) position, who describes interviews as a “flexible research tool” (p. 250). Decisions about what style of interview to use should include thoughts about whether the use of an interview guide would obstruct access to material from alternative world views (in which case less structure is advisable) or data from multiple case-studies are being collated (in which case, a semi-structured format may be suited) (Bryman, 2016). Although there are multiple factors that exist within an interview setting that can influence the meaning that the researcher and/or respondent attach to particular contexts, it can allow rich data sets for subjective interpretation.
A focus group interview is defined by Bryman (2016) as an interview with multiple participants where “there is emphasis in the questioning on a particular fairly tightly defined topic and the accent is upon the interaction within the group and the joint construction of meaning” (p. 501). The focus group allows people to experience others’ point of view or agree with a position that they may not have arrived at through independent thought. Also contradictory statements that may not be questioned in individual settings may be more openly challenged in focus group interviews, with issues that are important to participants emerging more freely (Bryman, 2016). If the need for there to be a social context for learning to occur is acknowledged, then developing and sharing understanding is best suited to dialogic environments.

The job of attributing meaning to the interview contents lies with the researcher. Scott (2012) states “what a face-to-face encounter does is allow the interviewer to make a judgement about how those signs are being read and thus to locate their data in the contexts in which they were collected” (p. 115). Robinson and Lai (2006) suggest putting careful thought into the construction of the interview, including grouping questions that cover similar material together and being cognizant of the location of sensitive questions as these may affect the answers provided and potentially derail the interview. It is suggested that any questions of a sensitive nature be located in a logical place, grouped with similar subject matter.

In order to construct focus groups, all Within School Leaders and Middle Leaders were invited to participate. Each participant was allocated a randomly generated number and, using this number, five participants from each group were selected. The focus group interview schedule is appended (see Appendix 2)

Data Analysis

Qualitative data analysis is not straightforward, nor are there precise rules to follow. All qualitative researchers must analyse parts of the data throughout the design and implementation of the research project (Watling, James & Briggs, 2012). There are two broad categories of qualitative data analysis, grounded theory and analytic induction (Bryman, 2016). The former involves a wide base of data and a dynamic, “emergent” flexibility to the research process (Taber, 2013, p. 78). Bush (2011) states that “grounded theory emerges by assessing a wide range of practice, and developing models which seem to help in explaining events and behaviour. An understanding of theory helps by reducing the likelihood of mistakes occurring while leadership is being acquired” (p. 26). In contrast, analytic induction is defined by Bryman (2016) as “an approach to the analysis of data in which the researcher seeks universal explanations phenomena by pursuing the collection of data until no cases that are inconsistent with a hypothetical explanation (deviant or negative cases) can be found” (p. 571). Bryman (2016) states “your findings acquire significance only when you have reflected on, interpreted,
and theorised your data. You are not there as a mere mouthpiece” (p. 584). To address this, a common method of data analysis, that is widely used and accepted in education research, is coding. Coding involves “putting tags or labels against large or small pieces of data” (Watling, James and Briggs, 2012, p. 391).

There are differences in the techniques associated with coding and with their theoretical frameworks and stages, Bryman (2016) summarises it, stating “there is a basic understanding of it involving a movement from generating codes that stay close to the data to more selective and theoretically elaborate ways of conceptualising the phenomenon of interest” (p. 575). Coding can be extended to incorporate “constant comparison” techniques where each new interview is compared against existing codes and the codes modified if necessary. This has benefits, particularly as the “codes used emerge from the data and are not imposed on the data” (Taber, 2013, p. 103). The open-ended responses and the focus group interview data were coded. The codes were derived from common themes that arose from the respondents’ data and were not predetermined.

Questionnaire responses were electronically collated then coded. The interviews were recorded electronically as an audio file and transcribed into text before coding was carried out.

Validity

Validity is define by Dimitrov (2014) as “whether an instrument (e.g. a test or questionnaire) measures what it purports to measure” (p. 41). The key distinction is made that it is not the instrument itself that can possess validity, rather the interpretation of the data and subsequent conclusions drawn. Bryman (2016) describes two aspects of validity in a qualitative study: trustworthiness and authenticity. Bush (2012) expands on this and defines internal validity as “the extent that the research findings accurately reflect the phenomenon under investigation” (p. 82). There is another view that “catalytic validity” can be used. This involves the researcher constantly looking to improve things for research participants, particularly when looking at teachers as researchers (Taber, 2013, p. 202). Regardless of the definition selected, there should be checks and measures in place with any research to check the validity of the methods selected. Butz (1981) says “any data that is lacking high validity and reliability should not be gathered” (p. 9).

For example, questionnaires, when used in isolation, can obtain information on what people are thinking or how they perceive themselves, others or a particular phenomenon. However, they do not provide information on actual behaviour nor are there guarantees of accuracy of response (Taber, 2013). Similarly, as with many aspects of educational research, we are encouraged to view interviews with a critical lens. When used in isolation, they remain a single source, awaiting validation via other techniques (Coleman, 2012). In order to address the inherent bias that can affect the validity of research, triangulation is put forward as a potential solution (Bush, 2012). Triangulation is defined by
Bryman (2016) as “the use of more than one method or source of data in the study of a social phenomenon so that findings may be cross checked” (p. 697) and allows for greater confidence in the findings provided by one method in isolation. If more than one methodological approach is used, distinctions should be made that identify whether it is the technique, the data (qualitative and quantitative) or the paradigms that are being mixed. For example, Taber (2013) distinguishes between coordinated research techniques and research methods that are simply mixed together, the former being a technique that responds to answer different aspects of a research question and also aides in validity via the process of triangulation. This research used two forms of triangulation. Firstly, the perspectives of leaders in two different roles were studied and these two perspectives were analysed together. Secondly, two methods, questionnaires and focus group interviews were employed. The data from these methods were systematically analysed and triangulated. Findings that were supported by triangulated methods were reported as consolidated multi-method findings and were summarised at the end of each section.

Sample size is also linked with research validity. The idea of “theoretical saturation” is linked with the selection of sample size selection by Bryman (2016) who defines it as “the point when emerging concepts have been explored no new theoretical insights are being generated” (p. 697). Theoretical saturation may be possible in smaller samples if the population sampled is homogenous. However, theoretical saturation is not often gained in research. Lichtman (2013) suggests that decisions around sample size take into account the amount of variation in the population being studied and the amount of sampling error that is deemed acceptable. This research involved 15 Within-School Leaders and 18 Middle Leaders in gathering questionnaire data and involved five Within-School Leaders and five Middle Leaders for each focus group interview.

As ‘teaching as inquiry’ has been identified as a mindset and ongoing process, rather than a finite activity, all teachers should be constantly involved in its implementation in some regard (Kaser & Halbert, 2009). Nevertheless, the length of time between the phenomenon being researched and the interview also needs to be considered. Butz (1981) states “quality declines as the recall period lengthens” (p.4). The timing and duration of the sampling period should also be considered when designing research so that the full temporal coverage of any particular phenomenon can be achieved (Bryman, 2016). As such, the sample was selected from leaders who held their leadership role at the time of invitation and the questions focussed on their recent experiences.

**Ethical Considerations**

Coleman (2012) states that a key consideration of researchers considering using interviews as a research method is the need to “follow ethical procedures regarding informed consent, anonymity and/or confidentiality and the consideration of issues of power within the interview” (p. 263).
Although it is not always possible to predict all potential sources of harm, every effort needs to be made to eliminate and minimise risks to participants in research. Ethical considerations in any research should be paramount as they can affect the quality of the research outcomes but also, significantly, the quality of life of the research participants. James and Busher (2011) identify the two main purposes of research ethics as “to ensure that receivers of research can be confident that the outcomes of research can be trusted” and “to ensure that society's benefit from research is not at the expense of individual participant's engagement with them” (p. 3). Bryman (2016) categorises the four main areas of ethical concern in research as minimising harm to participants, ensuring that participants have informed consent in the process; avoiding deception and avoiding any potential invasions of privacy.

**Minimising Harm**

There are obvious ethical considerations to be taken into account if a researcher is employed in the same organisation as their research subjects, particularly when there are perceived or real power imbalances involved between the researcher/interviewer and the respondents. Robinson and Lai (2006) suggest that research is reported in a way that does not identify individual schools or people. This could involve using pseudonyms and also ensure that permission is gained if specific quotations are used that may inadvertently identify them. Bryman (2016) includes a suggestion that measures are put in place to protect the both the identities and records of individuals involved in research, preventing the material from subsequently being used in inappropriate ways. The selection criteria for the focus group interviewees does not specify cultural or ethnic criteria. To minimise harm in Māori contexts, before conducting the research, I consulted with the staff member that held the Kaitakawaenga (Māori Student Mentor) role within the secondary school and with the Head of Māori. Also, I identify as Māori, have been a member of the Māori Achievement Committee at the school for over a decade, represented the school at marae and I am familiar with Māori protocols. These experiences and discussions helped to inform approaches that would accommodate participants that identified as Māori.

**Privacy**

Busher and James (2012) identify a range of groups of research topics that could potentially cause more harm to study participants than other areas of research. This includes “access to records of personal or confidential information” (p. 93). In this research, information about individual teachers’ perceptions of inquiry cycles is being sought. As ‘teaching as inquiry’ practices can be used in teachers’ performance appraisal processes, such information needs to be treated carefully. The perception of a power imbalance is partially addressed in the non-hierarchical nature of positions within the Kāhui Ako. As noted in Chapter Two, individuals involved in leading Kāhui Ako will need to
exercise leadership through the “personal characteristics or quality of ideas” rather than the “positional authority” basis outlined by the Education Review Office (2016, p. 7). As such, Across-School Leaders in the Kāhui Ako in question are not formally involved in attestation processes in their roles. Even so, the measures suggested below will be enacted to minimise the chance of harm occurring and to mitigate the effects that this may have on the validity of the research.

The data from the questionnaires were recorded in a way that preserves anonymity so that participants were unable to be identified. Although anonymity was not able to be established in focus groups due to the face-to-face nature of the interviews, expectations of confidentiality were established before the interviews commenced. When reporting the findings, specific numerical codes were attributed to each questionnaire respondent based on the order in which they completed the survey. For example, the first Middle Leader to complete the survey was given the code Middle Leader 1. The focus group participants were given an alphabetical code based on random allocation. They were coded Within-School Leader A-E and Middle Leader A-E respectively.

**Informed Consent and Deception**

Although there are “no rules to follow” when designing ethical research (Robinson & Lai, 2006, p. 71), actions can be carefully considered and carried out. Proposed actions to address deception issues included providing information letters to the Principals of schools involved, the Kāhui Ako Lead Principal and the individual leaders that contributed to the research. These letters outlined the purpose of the research, the confidentiality processes involved and the likely form of reporting the findings. Interviewees retained the right to withdraw from any individual questions during the interview or withdraw from the entire process up to two weeks after their participation. Information on the research was provided as part of the online questionnaire; however, respondents that are filling out the form are giving a version of tacit consent. Participants in the focus group gave written consent regarding their involvement and how their information would be used. The research questions stated was the drive for the research with no experiment designs established for any other purpose. The focus group schedule was adhered to. There was no deception as part of this research. The Information Sheet and the Consent Forms for the focus group interviews are appended (see Appendix 3 and Appendix 4).
CHAPTER FOUR

Research Findings

This chapter presents the findings from both the questionnaires and the focus group interviews. The results are presented in the form of numerical summaries, figures and representative quotes to align with the aims of this research, namely:

1. To identify leaders’ perceptions of the purpose of ‘teaching as inquiry.’
2. To identify leaders’ perceptions of the nature of ‘teaching as inquiry.’
3. To identify leaders’ perceptions of the nature of leading ‘teaching as inquiry’
4. To identify leaders’ perceptions of the benefits and challenges of leading ‘teaching as inquiry’

Key findings from each data collection technique are outlined at the end of each respective section.

Questionnaires

This section will present the findings from questionnaires completed by two sample groups. One group comprised Within-School Leaders across the entire Kāhui Ako; the other group involved Middle Leaders from the secondary school. The surveys were completed by 15 Within-School Leaders and 18 Middle Leaders.

Purpose of ‘Teaching as Inquiry’

‘Teaching as Inquiry’ Improves Teaching

There was almost unanimous coherence between both groups of questionnaire respondents that a purpose of ‘teaching as inquiry’ involved improving teaching. The majority of Within-School Leaders (13 of the 15 respondents) identified, in some way through their comments, that they felt that one of the purposes of ‘teaching as inquiry’ was to improve teaching. Six of these 13 respondents identified this as the only purpose. This included Within-School Leader 9 who identified the purpose of ‘teaching as inquiry’ as:

To explore and develop your own pedagogical ideals, practice and experience.

Another example came from Within-School Leader 14 who stated that it was:

To consistently grow and evolve as a professional.

Similarly, 14 of the 18 Middle Leader respondents also identified in their comments that they felt that one of the purposes of ‘teaching as inquiry’ was to improve teaching. Eight of these 14 Middle Leaders
identified that this as the only purpose. Statements that typified these responses include Middle Leader 1’s response:

*Teaching as inquiry is so that teachers can improve their pedagogical practice.*

Middle Leader 13 also identified the purpose of ‘teaching as inquiry’ as:

*A structured way to develop your teaching skills and to identify areas to strengthen.*

The nature of this improved teaching was elaborated on in further comments regarding the reflective nature of the professional learning.

**Reflective Practice and Professional Learning**

When asked to describe the link between professional learning and ‘teaching as inquiry’, both groups of respondents identified a clear connection. 12 Within-School Leaders and 11 Middle Leaders identified this link. Within-School Leader 14 saw them as unequivocally similar, summing up the link as:

*They are the same thing to me.*

Middle Leader 17 identified a similar strong link, stating:

*Teaching as inquiry is professional learning.*

When asked to describe quality ‘teaching as inquiry’ practices, the majority of respondents also identified aspects of reflective professional improvement, experienced by teachers and/or educational leaders. Nine Within-School Leaders identified aspects of reflective professional learning in their responses of quality ‘teaching as in inquiry’ practices. Examples include Within-School Leader 5 who stated that quality processes included:

*Reflection, reading, learning, changing your practice.*

Within-School Leader 10 elaborated on the idea that professional learning is the same as ‘teaching as inquiry’, stating:

*‘Teaching as inquiry’ formalises the natural reflection and wondering process that good teachers do every day to shift children. Through this process we are developing our own professional learning as we trial new approaches and upskill ourselves to do the best we can for our students.*

Fourteen Middle Leaders also identified a clear link between ‘teaching as inquiry’ and professional learning. Seven of these Middle Leaders also identified that ‘teaching as inquiry’ involved reflection as part of the process. An example of this is in Middle Leader 9’s statement that the purpose of ‘teaching as inquiry’ is to:

*Discover our thought processes, rationales and evidence on what we do and how we can do it better.*
Improving Student Learning Outcomes

There was also strong cohesion on the idea that ‘teaching as inquiry’ should improve student learning outcomes. Nine of the 15 Within-School Leaders identified, in their comments, that the purpose of ‘teaching as inquiry’ was linked with improving student learning outcomes, capacity or progress. Some respondents summed this idea up succinctly, such as Within-School Leader 11 who stated that the purpose of ‘teaching as inquiry’ was:

To improve outcomes for students.

Similarly, 15 of the 18 Middle Leaders also linked the purpose of ‘teaching as inquiry’ to improved student learning outcomes, capacity or progress. Middle Leader 12 identified improving student learning outcomes as the only purpose of ‘teaching as inquiry’, describing it as:

To ultimately benefit the learners in some way whether it be their learning environment or outcomes.

Respondents that identified more than one purpose of ‘teaching as inquiry’ linked both of the ideas of improved teaching to improved learning outcomes for students. This link was apparent in seven Within-School Leaders’ responses. These responses were typified by Within-School Leader 15, who identified the purpose of ‘teaching as inquiry’ as:

To improve teaching practice in order to raise student achievement.

14 Middle Leaders also identified a link between the purpose of ‘teaching as inquiry’ as improved teaching leading to subsequent improvement in student learning outcomes. For example, Middle Leader 1 stated that the purpose of ‘teaching as inquiry’ was:

So that teachers can improve their pedagogical practice to improve the outcomes of all learners within their class.

Middle Leader 7 also expressed a similar idea, stating:

The purpose of ‘teaching as inquiry’ is to instil the idea of evidence driven continual improvement of teaching practice. The ultimate goal of course is to improve the learning outcomes of all learners, including priority learners.

Key Findings: Purpose of ‘Teaching as Inquiry’

There was strong coherence from both groups of leaders that the purpose of ‘teaching as inquiry’ was to improve teaching and subsequently improve student learning outcomes. ‘Teaching as inquiry’ was seen to be a vehicle that allowed personalised insight into practice and promoted individual reflective professional learning. This was seen to be part of an ongoing cycle of continual pedagogical improvement.
Nature of ‘Teaching as Inquiry’

‘Teaching as Inquiry’ Follows a Cyclical, Iterative Process

Leaders were asked to identify the constituents of quality ‘teaching as inquiry’ practices. In their responses, leaders from both groups surveyed identified that continually following robust, cyclical, iterative processes was an important part of this. Seven Within-School Leaders and six Middle Leaders identified aspects of this. However, there were a variety in the responses that described the nature of these processes. For example, Within-School Leader 6 identified the cyclical nature of ‘teaching as inquiry’, identifying an indicator of quality practice as the use of:

Robust spirals - many questions, actions and outcomes, not linear, collaboration, students at the centre

Other responses also identified cyclical, iterative processes but described them differently. This contrast in the detail is typified by a Middle Leaders’ response to a question on identifying quality ‘teaching as inquiry’ practices. Middle Leader 7 stated:

The inquiry must be based on sound educational research; be focused enough to be achievable, pedagogically based, have enough pieces of valid data, sound statistical analysis; show any changes in learning outcomes and finally it must be focused on improving student learning outcomes. Taking action, get data/feedback/forward, reviewing/reflecting on it, trying it again.

As part of a cyclical, iterative process, three Within-School Leaders also expressed a view that quality ‘teaching as inquiry’ practices involved taking a long-term approach. An example of this came from Within-School Leader 1 who stated:

The process should never really end, but continue on.

Similarly, this need to invest time and energy into ‘teaching as inquiry’ was also identified by four Middle Leaders. Middle Leader 3 perceived that quality ‘teaching as inquiry’ processes were:

Not made up in the last 5 seconds before appraisal.

Further to this, Middle Leader 7 identified that ‘teaching as inquiry’ should be continually improving teaching. They stated that quality ‘teaching as inquiry’:

Must be an ongoing process where evidence drives positive change in teaching practice.

‘Teaching as Inquiry’ Allows Development of Adaptive Practice.

The nature of the professional improvement experienced through ‘teaching as inquiry’ was elaborated on by teachers from both groups. Six Within-School Leaders identified that a possible indicator of quality of ‘teaching as inquiry’ processes was the development of adaptive practice. This was
described variously as experimenting with different strategies, trialling new ideas and innovating in a classroom. For example, Within-School Leader 15 simply described quality ‘teaching as inquiry’ as:

*Experimenting with a range of strategies.*

Eight Middle Leaders also identified aspects of developing adaptive practice as an indicator of quality ‘teaching as inquiry’ processes. Middle Leader 18 provided a more elaborate answer, stating:

*Accepting that there are many ways of achieving educational goals. We must try new ideas and reflect on their outcomes and be prepared to alter our plans if they do not bring the results we had hoped for.*

The innovative, flexible approach to teaching was also extended to include students developing project-based, ‘learning as inquiry’ techniques by two respondents. This was identified by Within-School Leader 4, who stated that ‘teaching as inquiry’:

*Will vary from lesson to lesson but activities should allow students long term to independently decide how to move their own projects and thoughts forward.*

Middle Leader 5 also defined ‘teaching as inquiry’ as:

*Student driven learning, where they choose what to explore and where it leads.*

The diverse nature of ‘teaching as inquiry’ was also reflected in the range of respondents’ views regarding the practice of leading ‘teaching as inquiry’ and some of the challenges and benefits that were apparent with these practices.

**Key Findings: Nature of ‘Teaching as Inquiry’**

The nature of ‘teaching as inquiry’ was seen to follow diverse processes. There was no clear pattern to the exact steps to follow nor was there one model of ‘teaching as inquiry’ consistently identified. However, there was coherence between both groups of leaders that ‘teaching as inquiry’ follows a cyclical, iterative process that should involve teachers’ developing their adaptive practice to solve context-specific challenges. This was seen to promote independent innovation in both teaching practice and student learning.
Nature of Leading ‘Teaching as Inquiry’

Linking ‘Teaching as Inquiry’ to School Direction

Leading ‘teaching as inquiry’ involved leaders using systemic features within schools that supported their work and taking opportunities to engage with other teachers individually.

There was a link identified between leading ‘teaching as inquiry’ processes and the use of the knowledge generated from ‘teaching as inquiry’ to inform school-wide professional learning. The majority of Within-School Leaders agreed that people in their roles should use ‘teaching as inquiry’ to inform the direction of school-wide professional learning (12 of the 15 respondents ‘Agreed’ or ‘Strongly Agreed’) and also that they had been involved in this activity in the last 12 months (9 of the 15 respondents ‘Agreed’ or ‘Strongly Agreed’). In contrast to this, a majority of Middle Leaders disagreed that people in their roles should use ‘teaching as inquiry’ to inform the direction of school-wide professional learning. 10 of the 18 respondents ‘Disagreed’ or ‘Strongly Disagreed’ with this statement. A slightly larger majority of Middle Leaders stated that they had not been involved in this activity in the last 12 months (13 of the 18 respondents ‘Disagreed’ or ‘Strongly Disagreed’). Although there was not unanimous agreement between groups on the expectations and opportunities to use ‘teaching as inquiry’ within schools’ wider professional learning frameworks, there was stronger agreement that Within-School Leaders were expected to and have opportunities to do this in their role.

Eleven leaders’ responses elaborated on the link between ‘teaching as inquiry’ processes with school-wide professional learning. Two Middle Leaders and three Within-School Leaders identified that this link was effective and influential. Within-School Leader 13 elaborated on this process, stating:

*These decisions are made by Senior Management within our school structure. However, findings/feedback from the ‘teaching as inquiry’ process inform these decisions.*

Similarly, Middle Leader 9 stated:

*I have suggested/passed on patterns I have noticed/areas that need development among staff that may strengthen understanding and practice.*

Conversely, the impact that ‘teaching as inquiry’ processes had on wider school professional learning opportunities was questioned by one Within-School Leader and five Middle Leaders. Within-School Leader 7 questioned the direct impact of their input, stating:

*I don’t feel as though I had any input or change here, but I might have indirectly have done so?*

Middle Leader 2 stated that they had linked professional learning and ‘teaching as inquiry’ but questioned the limits of their impact, agreeing that ‘teaching as inquiry’ had informed the direction of school-wide professional learning but commenting that it was:

*Only within my own faculty.*
Middle Leader 7 also did not agree that there was a link, stating:

_I don’t believe as an appraiser or Head of Department that I have done either of the above._

The tension between the uses of ‘teaching as inquiry’ within wider school systems can be further explored when looking at the nature of the leadership interactions used by Within-School Leaders and Middle Leaders when leading ‘teaching as inquiry.’

**Collaboration as Leadership**

Comparatively more Within-School Leaders than Middle Leaders perceived that they an expectation to work collaboratively in their leadership approach. Respondents were asked if they agreed that their role should lead ‘teaching as inquiry’ individually and also if they felt that their role was expected to lead a collaborative inquiry group. Although the majority of both Within-School Leaders (12 of the 15 respondents) and Middle Leaders (12 of the 18 respondents) ‘Agreed’ or ‘Strongly Agreed’ that leading ‘teaching as inquiry’ with individuals, regardless of the area of their inquiry, was an important part of their roles; both groups had fewer leaders that agreed that this was something that they had actually done in the last 12 months (Within-School Leaders: 9 of the 15 respondents; Middle Leaders: 8 of the 18 respondents). There was no clear distinction between the two groups’ expectations or experiences. In contrast, there was a distinction between the groups regarding collaborative inquiry. When asked about their perceptions of leading a collaborative ‘teaching as inquiry’ group, the majority of Within-School Leaders ‘Agreed’ or ‘Strongly Agreed’ that this was both something that was expected of their role (10 of 15 respondents) and something that they had carried out in the past 12 months (11 of 15 respondents). In contrast, only a small minority of Middle Leaders (4 of the 18 respondents) ‘Agreed’ or ‘Strongly Agreed’ that they were expected to lead a collaborative inquiry group. A similarly small proportion (3 of 18 respondents) ‘Agreed’ or ‘Strongly Agreed’ with the perceptions that they had completed this in the last 12 months. There is a clear distinction between Within-School Leaders’ and Middle Leaders’ expectations and opportunities to lead a collaborative ‘teaching as inquiry’ group. This distinction is also reflected in the comments that accompanied this question. Seven comments were made by Within-School Leaders on the questions regarding leading ‘teaching as inquiry’ collaboratively and individually. All seven indicated a broad, collaborative approach that was taken to leading ‘teaching as inquiry.’ For example, Within-School Leader 8 agreed that leading a collaborative teaching as inquiry group was an expectation of their role and stated:

_There is often more to learn from differing inquiries._

Benefits were also identified by Within-School Leader 2’s comment:

_There are other ways to grow in teaching practice and learning as a professional, but inquiry is a simple way to do this across a large group of teachers._

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Middle Leaders made 11 comments on the questions regarding leading ‘teaching as inquiry’ collaboratively and individually. All 11 responses indicated that they had not led collaborative ‘teaching as inquiry.’ Representative comments include Middle Leader 5 who simply stated:

*I have not done this. I am unsure if it was a requirement I needed to meet.*

Middle Leader 7 went further and was explicit in placing the expectation of leading collaborative ‘teaching as inquiry’ on Kāhui Ako Roles. They stated:

*I have not led such a group as it is not part of my role as an Appraiser or Head of Department. I am not a Community of Learning Leader.*

**Leadership Strategies: Modelling**

Leaders were asked if they felt that their roles should use modelling, monitoring and/or professional dialogue as strategies to effectively lead ‘teaching as inquiry.’ They were also asked if they felt that they had used these strategies in the last 12 months. The responses revealed that individuals from both groups felt that all three strategies had a place in leading ‘teaching as inquiry’ although there were some limitations identified with using accountability mechanisms with these approaches.

Within-School Leaders were unanimous in agreeing that their ‘teaching as inquiry’ process should be used as a model for effective practice (15 out of 15 respondents ‘Agreed’ or ‘Strongly Agreed’). A strong majority of Middle Leaders also agreed with this idea (15 of 18 respondents ‘Agreed’ or ‘Strongly Agreed’). Furthermore, a majority of Within-School Leaders (12 of 15 respondents) ‘Agreed’ or ‘Strongly Agreed’ that they had carried out modelling of ‘teaching as inquiry’ in the previous 12 months. This majority was also evident in Middle Leaders’ responses, 15 of 18 respondents ‘Agreed’ or ‘Strongly Agreed’. Overall, the importance of modelling good processes of ‘teaching as inquiry’ is strongly asserted by both groups.

The clear belief that modelling was involved in leading ‘teaching as inquiry’ was reflected in further comments by three Within-School Leaders. For example, Within-School Leader 11 stated:

*I believe that I must model teaching as inquiry in order to strengthen it in our school. As a Within-School Leader I enjoyed the opportunity to inquire into an area deeply and to do a lot of reading and research around it.*

The nature of this modelling extended to include not just teachers’ practice but the mindset that was adopted. Within-School Leader 1 stated:

*While I do not think my own process is perfect, I think my attitude towards inquiry is good. This is same attitude I try to spread among others.*

The majority of Middle Leaders agreed that their roles should be involved in modelling effective ‘teaching as inquiry’ practice, there were a range of positions identified in the comments, which
affirmed this finding and contained more detail. An example of this was Middle Leader 2, who felt that they had:

*Continually shared my experience with my peers and asked for suggestions from the faculty to inform my inquiry.*

**Leadership Strategies: Monitoring**

The majority of both groups of leaders also felt that monitoring the ‘teaching as inquiry’ of others was an important part of their role. The majority of both Within-School Leaders (12 of 15 respondents) and Middle Leaders (13 of 18 respondents) ‘Agreed’ or ‘Strongly Agreed’ that there were expectations for their respective roles to monitor the ‘teaching as inquiry’ practices of others. Similar majorities of Within-School Leaders (11 of 15 respondents) and Middle Leaders (16 of 18 respondents) ‘Agreed’ or ‘Strongly Agreed’ that they had engaged in these kind of interactions in the previous 12 months. To “monitor” was defined as to “observe/check/review” in the questionnaire. Therefore, the responses showed that the majority of both groups of leaders felt that they were expected to observe/check/review the ‘teaching as inquiry’ practice of other teachers and that they had taken opportunities that existed for them to perform this task.

However, the comments that accompanied this question outlined a possible tension with this leadership strategy. Seven Within-School Leaders elaborated on their responses with comments. All seven concurred that there was an expectation to monitor other teachers’ ‘teaching as inquiry’ in some way. Limitations to effective leadership via monitoring was described by five of the seven comments. All of the limitations identified were linked with the tension between effectively leading ‘teaching as inquiry’ and concerns related to overstepping the boundaries of a Within-School Leader role. For example, Within-School Leader 14 identified this tension, stating:

*There is a fine line to tread between driving meaningful inquiry and being seen to be adding to staff workload.*

There was a similar limitation, linked with not being seen as overlapping other leadership roles, expressed by Within-School Leader 11 who stated:

*I think as professionals, teachers should be able to reflect and inquire independently (i.e. they are should be “experts”) without such supervision; however, unfortunately many do not do it so they likely do need to be nudged to do it, but that is, and should be, the responsibility of Senior Leadership to do that.*

Seven Middle Leaders also provided comments. All seven comments showed that there was an expectation to monitor the ‘teaching as inquiry’ processes of others in some form. Although structures were seen to exist to monitor ‘teaching as inquiry,’ Middle Leaders identified limitations in these structures, typified by Middle Leader 7’s comment:
Yes, I have, but I need to remember to do it on a continual and on-going basis, throughout the year. It is very easy to forget to check in with appraisees at regular intervals throughout the teaching year.

Leadership Strategies: Professional Dialogue

‘Teaching as inquiry’ was also led via professional dialogue by the majority both groups of leaders. The majority of both surveyed groups (Within-School Leaders: 13 of 15 respondents; Middle Leaders: 11 of 18 respondents) ‘Agreed’ or ‘Strongly Agreed’ that there was an expectation that professional discussions surrounding ‘teaching as inquiry’ were undertaken as part of their respective roles. Similar majorities of each group’s respondents ‘Agreed’ or ‘Strongly Agreed’ that they had carried out this activity in the previous 12 months (Within-School Leaders: 13 of 15 respondents; Middle Leaders: 16 of 18 respondents). This shows that most leaders feel that they have used professional dialogue as a strategy to lead ‘teaching as inquiry.’

Fourteen leaders made a comment on this question. Three Within-School Leaders and two Middle Leaders identified the informal, supportive nature of this dialogue. For example, Within-School Leader 7 stated:

Discussion of inquiry with a critical friend is particularly valuable.

Similar comments on the informal nature of leading ‘teaching as inquiry’ were made by Middle Leaders in their comments about leading ‘teaching as inquiry’ individually. Middle Leader 12 stated

It is their inquiry not mine. I am happy to have input especially when asked for it. I will chat to them about it, but more informally than formally, to see how it is going and whether I can help with anything. I am generally involved in the setting up and formulating of question stage

Other comments that accompanied the responses regarding professional dialogue also showed a tension in using this strategy to lead ‘teaching as inquiry.’ Three Within-School Leaders and Four Middle Leaders elaborated on the limitations, which were all linked with a perceived limit of time and training to develop effective professional dialogue.

Middle Leader 7’s comment is an example of the perceived limitation of training

As I am relatively new to this role I am still learning how best to give quality feedback that brings positive change.

Middle Leader 18’s comment is an example of the perceived limitation of time:

Focus is difficult to maintain with the busy nature of this profession and the ongoing torrent of new ideas, rearranged teaching programmes, extra responsibilities.

When compared to the responses to the previous questions, there was no one leadership strategy that seems to be predominantly employed. 24 of the 33 total respondents ‘Agreed’ or ‘Strongly
Agreed’ that they had used all three strategies in the previous year. Four respondents ‘Disagreed’ or ‘Strongly Disagreed’ that they had used any of the three strategies described.

**Accountability and Relational Trust**

The need to develop relational trust in leadership roles was apparent. Almost all Within-School Leaders (14 of the 15 respondents) and Middle Leaders (16 of the 18 respondents) ‘Agreed’ or ‘Strongly Agreed’ with the statement “I think that it is important that people in my leadership role develop high relational trust with teachers, to effectively lead ‘teaching as inquiry.’” A slightly smaller majority of Within-School Leaders (13 of the 15 respondents) and Middle Leaders (12 of the 18 respondents) also identified that they had taken opportunities to establish this relational trust.

There were comparatively lower numbers of leaders that agreed that there were expectations and opportunities to lead ‘teaching as inquiry’ through accountability mechanisms. For example, while a majority of Within-School Leaders (11 of the 15 respondents) ‘Agreed’ or ‘Strongly Agreed’ that people in their role should ‘hold teachers to high levels of accountability regarding ‘teaching as inquiry,’ slightly less than half of the Within-School Leaders (7 of the 15 respondents) and just over half of the Middle Leaders (10 of the 18) felt that they had taken opportunities to do this. There was an aligned perception from both groups that leaders were expected to build strong relational trust but weaker coherence from both groups that they should lead by holding others accountable for their actions.

The preference of leading ‘teaching as inquiry’ by developing relational trust, particularly by Within-School Leaders, was also reflected in the comments. There were eight comments made by Within-School Leaders on these questions. All eight expressed a preference for leading through developing relational trust as opposed to holding other teachers to strict levels of accountability. For example, Within-School Leader 15 was explicit in their desire for ‘teaching as inquiry’ to be separated from accountability-based performance appraisal frameworks. They stated:

*I do not believe it is the role of middle management to make teachers accountable for teaching as inquiry. It should not have to be part of the appraisal process.*

A long-term, egalitarian approach was advocated for by Within-School Leader 7, who stated:

*Changing mindsets takes a long time and we cannot put it all on the leaders to be fully accountable, nor can we hold up other teachers to be accountable. We should be seen as equals, not authoritative*  

Eight Middle Leaders also commented on these questions. Two responses identified a desire for accountability mechanisms to be used, within performance appraisal structures. For example, Middle Leader 12 stated:

*The appraisal system allows for this.*
Three other Middle Leaders’ responses agreed that building relational trust was essential for effective leadership. For example, Middle Leader 7 stated:

*I agree that mutual trust is important so that the mana of both parties is maintained.*

**Key Findings: Leading ‘Teaching as Inquiry’**

The majority of Within-School Leaders agreed that ‘teaching as inquiry’ should inform the direction of school-wide professional learning and a similar majority felt that they had this opportunity. This perception was not shared by the majority of Middle Leaders and there was disagreement between groups around the expectations and opportunities of their respective roles to use ‘teaching as inquiry’ on a wider scale. There were tensions identified with the scale of the impact and on the nature of the influence that was afforded to ‘teaching as inquiry’ findings.

Most Within-School Leaders saw their leadership role to involve collaboration through ‘teaching as inquiry’ processes. In contrast, most Middle Leaders did not view their roles to extend to collaborative ‘teaching as inquiry’ and instead saw their leadership based on individual interactions.

Diverse leadership strategies were employed by both groups of leaders. The majority of both groups of leaders agreed that there were expectations and opportunities to model effective practice, monitor the practice of others and use professional dialogue in their leadership of ‘teaching as inquiry.’ There was a preference described for using strategies that built relational trust as opposed to holding teachers to account and limitations identified with using some strategies that monitored the practices of others.

There were other limitations to the effectiveness of the leadership strategies employed, linked with leaders’ limited training and time and uncertainty over the clarity of role descriptions. Leaders did not want to be seen to overstep the boundaries of their role.

**Challenges of Leading ‘Teaching as Inquiry’**

**Who Leads ‘Teaching as Inquiry?’**

Leaders were asked their opinion on who held the primary responsibility to lead ‘teaching as inquiry.’ There were differing perception within each group surveyed and between the two groups. All 33 leaders from both groups surveyed responded to this question; their responses are summarised in Figure 1. Nearly all of the listed leadership roles (with the exception of SENCO roles) were identified as having the primary responsibility by at least one questionnaire respondent. There was no one clear role that all respondents identified as holding the leadership role over ‘teaching as inquiry.’ Two Middle Leaders and six Within-School Leaders identified more than one role as holding primary responsibility. The most common response of Middle Leaders identified that their own middle
leadership roles (defined as a Head of Faculty/Head of Syndicate/Head of Team) held the primary responsibility. On the other hand, the most common response from Within-School Leaders was that the primary responsibility lay with Senior Leadership roles (defined as Deputy Principals or Assistant Principals) or their own role (Kāhui Ako Within-School Leaders). In contrast to this, the majority (12 of 18) of the Middle Leaders surveyed did not identify Senior Leadership as roles that held the primary responsibility for leading ‘teaching as inquiry’. More strikingly, the majority (16 of 18) of the Middle Leaders surveyed did not identify Kāhui Ako roles as holding the primary responsibility for leading ‘teaching as inquiry,’ in contrast to the views of 8 of the 15 Within-School Leaders, who were employed in those roles.

This uncertainty over which roles held the responsibility for leading ‘teaching as inquiry’ was also apparent in the contrast between two responses to a question about whether leaders agreed that was important that their role held teachers to high levels of accountability to effectively lead ‘teaching as inquiry’.

**Figure 1:** Within-School Leaders’ and Middle Leaders’ perception of which role(s) hold the primary responsibility to lead ‘teaching as inquiry’
inquiry.’ Within-School Leader 7 located these accountability mechanisms as being held by Middle Leader roles. They stated:

*Within-School Leaders do not have the responsibility of holding teachers accountable, as it is a non-hierarchical model. This would be more appropriate for Heads of Faculty.*

In contrast, Middle Leader 7 identified that accountability mechanisms also lay within Kāhui Ako roles, stating:

*This is not my responsibility as a Head of Department but the responsibility of the Across-School Community of Learning Leaders and the Head of Faculty.*

The final statement from Middle Leader 8 also gave an example of the confusion over which role led ‘teaching as inquiry.’ In spite acknowledging Middle Leaders’ performance appraisal responsibilities, they saw the leadership of ‘teaching as inquiry’ as lying outside the realm of the Head of Faculty role. They stated that they:

*Have personally been happy for Heads’ of Faculty to not lead this too much.*

The uncertainty around which roles lead ‘teaching as inquiry’ was also evident in Middle Leader 14’s response when asked to describe any interactions they had had with leaders of ‘teaching as inquiry.’ They simply stated:

*Nil.*

**Time Limits and Competing, Complex Expectations**

The majority of Within-School Leaders (10 of 15 respondents) and Middle Leaders (11 of 18 respondents) that were surveyed ‘Agreed’ or ‘Strongly Agreed’ that time was provided to them to support the leadership of ‘teaching as inquiry.’ This initially does not appear to be a significant challenge. However, when this was expanded upon with leaders’ comments, it became apparent that there were still challenges that existed, which were linked with the provision of sufficient time to allow for effective leadership of ‘teaching as inquiry’ to occur.

Six Within-School Leaders and 11 Middle Leaders referenced time challenges in at least one written response in the questionnaire, most commonly when asked to identify the greatest barrier for strengthening ‘teaching as inquiry.’ For example, Within-School Leader 13 identified that, even though they agreed that time was provided, the leadership of ‘teaching as inquiry’ did not occur in isolation. They stated:

*Yes, although as a full-time classroom teacher this isn’t without its challenges.*

Within-School Leader 5 concurred with this idea, stating that their time allowance:

*Can be absorbed very easily with day-to day teaching.*

As well as operating in a time-poor environment, the complexities and challenges of managing competing expectations were all too apparent in the responses from both groups of leaders surveyed.
For example, the ‘teaching as inquiry’ process itself was seen to be overly complex by Within School Leader 3, who stated:

*When the concept was first introduced to us the process was made out to be very complicated. This has created a lot of negative thoughts around inquiry and anxiety.*

Middle Leaders identified that these complexities posed challenges to leading ‘teaching as inquiry,’ particularly when trying to support a large team of teachers through one-on-one meetings. These complexities were typified by the response from Middle Leader 5, who stated:

*There is never enough time and the competing forces in play are draining the energies of staff to the extent that this process is marginalised and always on the back burner, often only attended to when a deadline is approaching.*

The tension that is apparent when attempting to lead ‘teaching as inquiry’ when the process is not valued or prioritised by other staff also manifested itself in challenges with navigating complex professional relationships.

**Challenges with Professional Relationships**

Potentially linked to the complexity of the professional expectations, a clearly identified barrier to effective ‘teaching as inquiry’ was resistance that was displayed by some staff towards these processes. There were issues identified linked with a lack of understanding of the process, overwork and anxiety and teachers’ perceived limited impact of ‘teaching as inquiry’ processes on student learning. This was connected with the perceived mindset that the processes were focussed on complying with organisational expectations as opposed to other factors, such as professional development or improving student learning outcomes. Nine questionnaire comments from both groups of leaders collectively exemplified this. For example, Within-School Leader 2 simply described it as:

*Some teacher attitudes are not positive to inquiry.*

An example from Middle Leaders’ responses (Middle Leader 18) identified these complexities as affecting the wider culture of their school. It was described as:

*Demanding and intimidating staff who are too busy already to respond positively to what they are being asked to do. A new culture of “us and them” developing in the staffroom.*

Within-School Leader 9 elaborated on possible reasons for teachers’ resistance, stating ‘teaching as inquiry’ was:

*Seen as ‘compliance’ rather than growth.*

An example of this compliance mindset was provided by Middle Leader 8’s own perception of ‘teaching as inquiry.’ They stated:
I need to be convinced that teaching as inquiry actually works in enhancing students learning instead of another exercise which involves mountains of teachers’ valuable time. I believe in spending time actually teaching the students instead of collecting evidence etc. to fulfil the requirements of inquiry teaching.

There were also professional challenges identified by three Within-School Leaders and two Middle Leader, which were linked with the visibility of their own leadership roles, others’ leadership roles and the credibility that was attributed to them by other staff. An example of this lack of influence was apparent in Within-School Leader 3’s response, when they described a lack of progress with leading ‘teaching as inquiry’. They perceived that this was linked to resistance to their ideas from the Middle Leaders in their faculty. Within-School Leader 3 explained that that their leadership of ‘teaching as inquiry’ processes were:

Not supported by Head of Department or Head of Faculty who have their own agendas and views on inquiry.

An example of a leadership challenge affecting the Kāhui Ako roles was identified by a Middle Leader, linked to a perceived lack of visibility and transparency surrounding these newly established roles. Middle Leader 3 stated:

I think there needs to be more transparency from our Community of Learning Leaders, last year I lost a lot of respect for the leaders as I did not see anything really being done.

Possible reasons for this were identified by three other respondents. Logistical reasons for the perceived of visibility of the roles was also reflected in the statement by Within-School Leader 15 who identified a desire for platforms to effectively lead ‘teaching as inquiry’. They stated:

Further time for Within-School Leaders to share their inquiry practices [is] also needed -modelling of best practice. Twice a term in inquiry groups is not enough and teachers only see one leader’s inquiry.

This challenge with a perceived lack of visibility and credibility is not limited to Within-School Leaders’ roles. A Middle Leader also identified similar issues with credibility that affected their own leadership role regarding the ‘teaching as inquiry’ process. Middle Leader 5 identified challenges in exercising influence when attempting to implement some findings from their inquiry. They stated:

My former inquiry had specific recommendations around school policy which were duly ignored by management so unfortunately, I don’t have much faith in that happening as a result of my input.

There was also dissention to the idea that ‘teaching as inquiry’ and professional learning were linked. Three Within-School Leaders and three Middle Leaders identified this tension when asked to describe the link.
For example, Within-School Leader 15 identified a mismatch, stating:

_They should be interconnected. However, often professional learning is not directly related to my inquiry._

Middle Leader 10 shared this feeling, describing the link as:

_Should be fully integrated but often this is not the case._

**Limited Professional Development on Leadership**

The potential to use ‘teaching as inquiry’ to effectively influence others and the desire to use these processes to lead others was apparent in many leaders’ responses. However, there was not the same coherence expressed in the perception of training opportunities available to upskill in leadership capabilities. The majority of Within-School Leaders (9 of 15 respondents) and Middle Leaders (11 of 18 respondents) ‘Agreed’ or ‘Strongly Agreed’ that they had access to formal professional learning opportunities to support their leadership of ‘teaching as inquiry.’ Also, the majority of Within-School Leaders (10 of 15 respondents and Middle Leaders (14 of 18 respondents) surveyed ‘Agreed’ or ‘Strongly Agreed’ that they had access to professional readings that supported their leadership of ‘teaching as inquiry.’ The majority of respondents from Within-School Leaders (12 out of 15 respondents) and Middle Leaders (13 out of 18 respondents) ‘Agreed’ or ‘Strongly Agreed’ that they had access to individuals who could support their leadership of ‘teaching as inquiry.’ When the data from these three questions were collated and analysed, nearly all leaders (30 of 33 respondents) agreed that they could access at least one of the professional learning pathways listed; formalised professional learning opportunities; professional readings or support from another individual. This indicates that, generally, there are perceived support structures in place that allow leaders to develop in their leadership of ‘teaching as inquiry.’ However, the comments revealed that there was still a desire from some leaders for further development of their ability to lead ‘teaching as inquiry.’

In spite of the general consensus shown about the access to, and benefit of professional learning, ten leaders from both groups identified a desire for more universal opportunities for leadership training.

Within-School Leader 15 identified this perceived inequity, stating

_The teaching as inquiry process at my school still feel very ad hoc. There are people (Within-School Leaders) who get plenty of professional development in regards to teaching as inquiry. Others do not get the same support._

The other comments described a desire for specific areas of leadership training, namely mentoring support and support with challenging professional dialogue. The desire for specific mentoring and leadership support was summed up by Within-School Leader 7’s statement:

_You cannot be a quality leader overnight, and someone has to mentor the leaders also. Time, access to mentorship, practice and patience is required._
Middle Leader 7 linked this desire to their perceived lack of experience, stating:

I personally find it challenging to be critical and give constructive criticism to a colleague.

I would like more training on how to facilitate effective discussions with staff.

The desire to develop interpersonal leadership skills is particularly noteworthy when viewed with the main perceived benefit of ‘teaching as inquiry,’ namely the opportunities for connection and collaboration with other staff.

**Benefits of Leading ‘Teaching as Inquiry’**

**Enjoyment, Connection and Collaboration**

The beneficial connections identified by survey respondents include those between staff and the sharing of their ideas and areas of expertise. Five Middle Leaders and Seven Within-School Leaders identified positive benefits to the connections that arose from ‘teaching as inquiry’ processes. Within-School Leader 8’s response is indicative of the nature of Within-School Leaders’ comments on connecting with other staff.

Most interactions with leaders has been through my own incentive to find out answers, but the inquiry groups have provided a means for others to approach me, or to discuss/answer issues for a group of teachers, which is fantastic.

An example of Middle Leaders’ responses is provided in a comment from Middle Leader 6, who stated:

One good thing which has come of the process is hearing some fabulous summaries from people outside of your own department who are doing great things.

Leaders described connecting with other staff in more depth, describing positive opportunities for professional collaboration. The perceived value of collaborating on ‘teaching as inquiry’ was summarised by Middle Leader 12, who stated:

I am also pleased that we are working more in collaborative groups as combined numbers with similar focus will make more collective impact on our learners.

A Middle Leader also identified benefits in using ‘teaching as inquiry’ to connect with other leaders. Middle Leader 12 felt that they had accessed support from their Assistant Principal and also an external professional learning facilitator, stating that a benefit of this was:

Having someone heading it that knows what they are doing, organises and provides relevant professional learning and makes the process simple.

I wasn’t that confident in what I was doing last year but, having had the leadership of [an external professional learning leader], I am now more so.
Key Findings: Challenges and Benefits

In summarising the challenges and benefits of leading ‘teaching as inquiry,’ clear tensions emerged. An earlier section described leaders’ preference to build relational trust as opposed to using accountability mechanisms. This section identified confusion and inconsistency in leaders’ perceptions of which role had primary responsibility to lead ‘teaching as inquiry,’ making the use of accountability processes even more challenging. There were tensions in the expectations to effectively lead ‘teaching as inquiry’ and perceptions of the limited time available in which to do so. This was particularly apparent when the complex nature of the teaching profession was taken into account with the multiple, complex demands placed on leaders. This extended into tensions that emerged in working with resistant staff that adopted a compliance mindset. This was further exacerbated by a perceived lack of visibility and credibility afforded to leadership roles and ‘teaching as inquiry’ findings. There was coherence that professional development opportunities existed, such as professional readings and some formalised training, yet this was seen as insufficient especially in developing generalised leadership skills and facilitating challenging professional discussions.

The main benefit of ‘teaching as inquiry’ that emerged from the questionnaire responses was the enjoyable opportunities to connect with other staff, extending to opportunities to professionally collaborate.
Focus Group Interviews

This section will present the findings from the two focus group interviews, one conducted with a group of five teachers who were employed as Within-School Leaders within the schools of the Kāhui Ako and another conducted with five teachers that held Middle Leader roles in the secondary school.

All participants in both focus groups felt that they had been familiar with concept of ‘teaching as inquiry’ for several years. Their introduction to the concept came via a range of ways, including as part of their initial teacher training; as part of gaining subsequent educational qualifications; with the transfer to a new school or with the employment of a new Senior Leader at their school. All participants in both focus groups were able to identify links (albeit varied ones) between the expectations of their respective leadership roles and ‘teaching as inquiry’.

The focus group interviews introduced a second method for collecting data into this study, providing a means for multi-method triangulation of the data, as well as using multi-perspective triangulation using the perspectives of the two sets of leaders associated with ‘teaching as inquiry.’ As well as allowing for triangulation, the purpose of employing focus group interviews was to open up possibilities for deeper elaboration of the beliefs and experiences of leaders. The consolidated data between the two methods attempts to show this at the end of each section.

Purpose of ‘Teaching as Inquiry’

‘Teaching as Inquiry’ Improves Teaching and Student Learning Outcomes

Two of the five Within-School Leaders interviewed, identified that they perceived that a purpose of ‘teaching as inquiry’ was to improve teachers, and therefore improve teaching. This was linked to individuals’ strengthened professional knowledge that resulted from ‘teaching as inquiry.’ It was seen to be an individualised, reflective process of professional growth. For example, Within-School Leader D stated:

*I think our value is in what we are actually learning.*

Within-School Leader B linked the professional growth to reflective processes, stating:

*It’s a reflective time, so you’re growing as a person as well.*

Three Middle Leaders also identified a purpose of ‘teaching as inquiry’ was to strengthen teaching practice. This idea was summarised by Middle Leader E, who stated:

*Certainly teaching as inquiry has strengthened our practice across the board.*

Another finding that emerged from the focus groups was that ‘teaching as inquiry’ should improve student learning outcomes. Four Within-School Leaders and one Middle Leader identified this in their comments. For example, Within-School Leader B stated that ‘teaching as inquiry’ should be to:
Make a difference for the different people in your classroom.

More individualised detail was provided by Within-School Leader A. When describing an example of their ‘teaching as inquiry’ process, they stated:

*I had to deep dive into how to make animations and all of that kind of stuff and use it in the classroom and it was it was exceedingly successful for those students that were in there. All of the stuff that the research said about knowledge durability and retention and conceptualisation and all of that kind of stuff and I was: “Oh there it is there!”*

More succinctly, Middle Leader B identified that the purpose of ‘teaching as inquiry’ was simply:

*For the good of the kids.*

One Leader, Within-School Leader B, made the connection between their own professional growth and improved student learning outcomes. They stated

*Slowly, slowly, my whole teaching as inquiry process is helping me to a) explore and b) make connections and ultimately help students.*

**Consolidated Multi-method Findings: Purpose of ‘Teaching as Inquiry’**

There are distinct similarities between the key findings from the questionnaires and the findings from the focus group interviews. Firstly, there is confirmation of the similarities of perspectives of Within-School Leaders and Middle Leaders. Both groups showed strong alignment that the purpose of ‘teaching as inquiry’ was to improve teaching and subsequently improve student learning outcomes. The focus groups provided detail on the highly individualised and reflective professional learning that was occurring via ‘teaching as inquiry’ processes as well as one leader providing some examples of the diverse student learning outcomes that were observed. There are no tensions apparent in leaders’ perceptions of the purpose of ‘teaching as inquiry.’

**Nature of ‘Teaching as Inquiry’**

‘Teaching as Inquiry’ Follows a Cyclical, Iterative Process

Leaders from both focus groups identified that following a robust process was an important part of effective ‘teaching as inquiry’ practices. All five Within-School Leaders identified that the nature of ‘teaching as inquiry’ involved a cyclical, iterative process. For example, Within-School Leader E identified beginning steps stating:

*It’s got to be part of your inquiry cycle at some stage but it very much depends on whether you’re at the beginning of it because the beginning of it will be lots and lots of research and readings.*
Also, Within-School Leader B identified benefits of an external facilitator’s assistance in helping to clarify the iterative steps required for effective ‘teaching as inquiry.’ They stated:

*Narrowing things down a bit ‘cause my brain tends to go “Woah” and I have trouble trying to actually put it into steps. So by having zillions of ideas, she can sort of help you order them as into which step next.*

All five Middle Leaders also made comments that referenced the cyclical, iterative nature of ‘teaching as inquiry.’ For example, Middle Leader D stated:

*There’s that cycle of getting, checking something, researching and then going back. What questions does that generate the next line of my inquiry process?*

The knowledge of the iterations of a ‘teaching as inquiry’ process seemed to supersede three Middle Leaders’ confidence of an individual’s focus of their ‘teaching as inquiry’ processes. For example, Middle Leader A stated;

*I don’t worry about the topic as much as the process of it and taking them through it step-by-step.*

Within these cyclical, iterative steps, leaders also identified that ‘teaching as inquiry’ allows adaptive practice.

**‘Teaching as Inquiry’ allows Development of Adaptive Practice**

The improvement of teaching extended to using ‘teaching as inquiry’ as a vehicle to try new things professionally. Two Within-School Leaders identified that ‘teaching as inquiry’ allowed for them to develop autonomous, adaptive practice in their teaching and leadership. For example, Within-School Leader E identified the need to adapt existing teaching strategies and philosophies, stating that ‘teaching as inquiry’ involved:

*Being prepared to challenge the aspirations; that you’d be prepared to challenge the status quo.*

The need for individuals to retain autonomy over their ‘teaching as inquiry’ focus was also identified by Within-School Leader E who stated:

*I don’t want to be told that I need to do an inquiry on this because that doesn’t seem real to me. Contextually it feels out of kilter with what I’m passionate about. My inquiry should be about I want to find out about.*

All five Middle Leaders interviewed also identified that ‘teaching as inquiry’ allowed for autonomous, adaptive practice. For example, Middle Leader A described this adaptive process as:

*We want to have trial and error and that it’s OK to try things and reflect on why it didn’t work and then what’s the next action?*
Middle Leader C alternately saw benefit in the flexible nature of ‘teaching as inquiry,’ stating:

*What I find is you’re doing one thing and you go off on a tangent and it’s really interesting.*

Within these processes, both groups of leaders identified a range of leadership interactions that they employed to strengthen and support the ‘teaching as inquiry’ practices of other teachers.

**Consolidated Multi-method Findings: Nature of ‘Teaching as Inquiry’**

As with leaders’ perception of the purpose of ‘teaching as inquiry’ there was clear coherence between the information gathered on the nature of ‘teaching as inquiry’ from both sets of leaders and using both methods. Firstly, although the nature of the models described were diverse there was alignment in the view that ‘teaching as inquiry’ should follow a cyclical, iterative process. Secondly, there was a consolidated finding that ‘teaching as inquiry’ allowed the development of adaptive practice to address context-specific challenges. The focus group data provided greater depth on the nature of the autonomous, innovative practice possible. There were no tensions apparent in leaders’ perceptions of the nature of ‘teaching as inquiry.’

**Nature of Leading ‘Teaching as Inquiry’**

**Linking ‘Teaching as Inquiry’ to School Direction**

As part of the process of leading ‘teaching as inquiry,’ three Within-School Leaders and four Middle Leaders also commented on the value they saw in linking individuals’ ‘teaching as inquiry’ topics to broader strategies within the school such as their school’s goals or vision. For example, Within-School Leader B stated:

*I think the system that we’ve adopted this year where the goals and the inquiry groups are focussed on the school-wide goals is really useful.*

Similarly, Middle Leader E supported this, describing the link between ‘teaching as inquiry’ processes and their school goals. They elaborated on the benefits of this link with the statement:

*You can actually see where it’s going and I think having them align to the school goal and to the faculty goals just makes sense. It means that we’re all, even though we’re doing different stuff, we’re all moving in the same direction.*

Middle Leader A also identified beneficial links between wider school structures and ‘teaching as inquiry’ stating:

*I think a common vision has been what’s made it more cohesive.*

On a smaller scale, Middle Leader B perceived that ‘teaching as inquiry’ processes also informed the application of school goals into an individual faculty’s strategy, stating:

*They’ve also been part of our thinking in establishing our faculty goals as well.*
**Nature of Leadership Interactions**

Leaders from both focus groups identified diverse practices in the leadership of ‘teaching as inquiry.’ Modelling as a leadership behaviour was identified by four Within-School Leaders. Within-School Leader C described this modelling as:

> You’ve been through the cycle a few times but every time it gets just that little bit clearer and that little bit more... having someone to bounce your ideas off so wanting to model that with my own group.

Within-School Leader A also discussed modelling successful practice from their ‘teaching as inquiry’ processes with other staff, albeit on an informal level. They stated that they would tell other teachers:

> Well this is what I’ve done in my class and it’s saved me time... from then it’s almost inquiry by stealth.

One member of the Middle Leader focus group also identified modelling behaviour as a component of leading ‘teaching as inquiry’. Middle Leader C described some professional learning that they had experienced as part of ‘teaching as inquiry’ stating:

> That has been really good learning for me that I have then been able to take back to my faculty and model.

Some leaders also described monitoring behaviour in their leadership of ‘teaching as inquiry’. One Within-School Leader identified that they engaged in monitoring behaviour when discussing the nature of their role. Within-School Leader B discussed their involvement in classroom observations, which were linked to subsequent discussions with the observed teacher about pedagogy and potential links to the individuals’ ‘teaching as inquiry’ practices. Importantly, this only involved teachers that opted into this initiative. Within-School Leader B stated:

> When we’re looking at going into other peoples classrooms and doing the observations and things, I mean, that was sort of structured. I think, when that started, you were very focussed on it; it was just going to be people who were keen to get involved. By doing that, then it sort of rolled out with a bit more acceptance.

Three Middle Leaders also gave examples of leading ‘teaching as inquiry’ through monitoring behaviour, such as checking or reviewing progress. For example, Middle Leader A used monitoring behaviour as a technique to lead ‘teaching as inquiry.’ They described an aspect of a recent interaction that they had with a teacher regarding ‘teaching as inquiry’, stating:

> What are you going to work on in the next four or five weeks? Have a deadline. OK lets work towards that as an idea and we’ll come back and we’ll meet again so that we can see if action has been made so they’re empowered and on the same wavelength.
Five leaders, (two Within-School Leaders and three Middle Leaders) identified leadership practices linked with ‘teaching as inquiry’ that involved aspects of professional dialogue. The nature of these interactions were diverse and included initiating and engaging in conversations around others’ ‘teaching as inquiry’ processes. The value of these types of interactions was reflected in a comment by Within-School Leader E who stated that their leadership of ‘teaching as inquiry’ involved them

_Trying to get those honest conversations. I think that’s working really well with us._

Similarly, Within-School Leader C also identified that their leadership of ‘teaching as inquiry’ included professional dialogue, stating:

_Coming alongside people one on one and saying: “Hey, how’s your inquiry coming along?”_

As an example of Middle Leaders’ responses, Middle Leader E reflected that professional dialogue was effective in leading ‘teaching as inquiry’ processes. They stated:

_The professional discussion that is happening between teachers is really good._

**Accountability and Relational Trust**

Three Within-School Leaders identified that it was important to positively build relational trust when leading ‘teaching as inquiry.’ The idea that a leader comes alongside another teacher and delicately, yet strategically, engages them in an interaction was reflected in comments by another Within-School Leader. Within-School Leader C stated:

_I think my current responsibility at the moment is both with my own inquiry but also coming alongside others (trying to) without making them feel watched._

Similarly, Within-School Leader D described their leadership of other teachers’ ‘teaching as inquiry’ as more mutually beneficial, stating:

_Trying to help them and guide them, counsel them or vice versa often._

Three Middle Leaders’ comments also reflected the value that was seen in building relational trust via leading ‘teaching as inquiry. For example Middle Leader C’s comment reflected the need to build relational trust. They stated:

_I would sit down with them side by side and work it through with them and say OK you’ve done this, this is great, but we need to do this now. And I keep using the word we so it’s: “We’re doing this.”_

Three Middle Leaders made links between leading ‘teaching as inquiry’ and appraisal processes. For example, addressing a question regarding their experiences of leading ‘teaching as inquiry’, Middle Leader C stated:

_As Head of Faculty I’m responsible for the appraisal in my faculty._

This was similar to the response of Middle Leader E:
I’m responsible to lead our Heads of Departments that then lead their appraisers in the ‘teaching as inquiry’ practice.

Within-School Leaders did not identify performance appraisal processes when discussing the nature of leading ‘teaching as inquiry.’ Within-School Leader C identified that they had attempted to monitor the ‘teaching as inquiry’ practices of others and hold them to account without success. They stated:

*I do try and chase them up every now and again and then I get...

[laughter from focus group]...

I get into trouble for that. No not really get into trouble. I just go: “OK, you’re pushing a bit hard, so I back off again.

The lack of success in using accountability mechanisms to lead ‘teaching as inquiry’ was also identified by Within School Leader D, who stated:

*I personally think we would be of more value if we could talk about, and share our, what we’ve learnt with other people in school, rather than just crack the whip.

Consolidated Multi-Method Findings: Leading ‘Teaching as Inquiry’

There was coherence between both methods used and both groups of leaders that school-wide direction could inform individuals’ ‘teaching as inquiry’ processes. There was not the same level of cohesion that the converse could apply; ‘teaching as inquiry’ could inform school-wide direction.

There was agreement that there were diverse leadership interactions employed to effectively support others’ ‘teaching as inquiry’ processes. Aspects of modelling effective practice, monitoring the practice of others and engaging others in professional dialogue were all described in a leadership context by both groups of leaders in both data collection methods. There was a clear preference described, by both groups of leaders, using both data collection methods, for using strategies that built relational trust as opposed to holding teachers to account, aligning with the findings from both groups’ questionnaire responses. A tension was identified in leaders maintaining this relational trust while still holding others to account, particularly when leaders do not want to be seen to overstep role boundaries. The responses from focus groups allowed greater initial depth on the nature of challenges of leading ‘teaching as inquiry.’ These will be discussed in the consolidated findings of the next section.

Challenges of Leading ‘Teaching as Inquiry’

The challenges of leading ‘teaching as inquiry’ were linked to the resourcing and structures that supported leaders. Namely, there were perceived challenges with: limited time; working ‘teaching as inquiry’ into the complex and competing expectations put on teachers; dealing with compliance mindsets and the perceived need for professional learning opportunities focussing on leadership.
Time Limits and Competing, Complex Expectations

Two Middle Leaders acknowledged that there had been time provided in which to work on ‘teaching as inquiry’ processes. Although there was a recognition that time allowances had been made, all 10 focus group participants identified time limitations as being barriers to enabling effective leadership of ‘teaching as inquiry.’ For example, Within-School Leader E stated:

*The time that we get given just seems to melt away every term because we’re so busy with everything else and then there’s no relievers for release.*

Likewise, this was linked to difficulties leading ‘teaching as inquiry’ by Middle Leader E who identified a ‘teaching as inquiry’ leadership challenge as:

*If I had time set aside where I can meet all of my appraisees, once a term, I reckon we would get really good inquiries happening. Because it's so sporadic, I think it ebbs and flows, and we don't get that consistency*

The perception that leaders had limited time to complete tasks was linked with another finding of the focus groups. The competition between leading other teachers in effective ‘teaching as inquiry’ processes and the other complex, multi-variable demands of teaching was apparent in two Within-School Leaders’ and two Middle Leaders’ responses. Within-School Leader E stated:

*I mean it’s time consuming. That for me is the hardest part, enough time to do all the stuff that I want to do. My fear is that sometimes I arrive in class and I’m so busy, I’ve just come from a meeting talking about something else, and I’m like: “Oh, switch back, back to teaching.” That to me is the hardest; that is the challenge of teaching as inquiry. There are so many things going on.*

Two Middle Leaders identified the challenges of dealing with competing expectations in teaching; but described it more from the expectations that they felt in their own leadership roles. Middle Leader E stated:

*Not only were we the meat in the sandwich effectively because we had resistance from below, plus we’re trying to put a process together that was so complicated and then there was expectations coming above.*

The pressure that was created from the complex and competing demands on teachers seemed to be expressed, at least partly, by resistance from staff to engage in effective ‘teaching as inquiry’ processes.

Challenges with Professional Relationships

There were challenges, identified by three Within-School Leaders and one Middle Leader linked to the resistant mindsets surrounding ‘teaching as inquiry’ demonstrated by some teachers. This was identified both as general challenge that existed when leading a group of teachers with a similar topic
of inquiry and with resistance from individuals. Leaders went on to identify that one of the possible reasons for teachers’ resistance surrounding ‘teaching as inquiry’ could be the focus on the compliance aspects of the process. This compliance focus was summarised by Within-School Leader D, as:

_We must tick this box, tick that box, tick this box twice and often it’s started every time they pull us together it’s all about almost the punitive side._

Middle Leader E also identified the challenges of working constructively with staff that perceive ‘teaching as inquiry’ to be compliance focussed. They elaborated on possible reasons for the reluctance of some staff to meaningfully engage with the ‘teaching as inquiry’ process, stating:

_They feel that it’s a requirement for appraisal rather than professional learning. And it’s really hard to change that mindset. I think that the majority of the teachers actually see value in it but there are still some who grit their teeth and say: “Nah, nah, I’m just not really interested in it.”_

There were also challenges identified by four Within-School Leaders regarding the professional dynamic that existed between Within-School Leaders and other teachers and leaders within a school. There was a perceived lack of credibility and visibility in the roles. This was identified by Within-School Leader C, who went on to clearly define this uncertainty, stating:

_I guess for me there’s not clarity about what should I be doing, and should I not be doing._

Within-School Leader D repeated this sentiment in a later part of the focus group interview. They identified visibility issues with the Within-School Leader roles, stating

_It’s like we don’t exist_

Further to these sentiments, three Within-School Leaders identified perceived conflict between how they perform their roles and the expectations and perceptions of other teachers and leaders. Within-School Leader D summed this up, stating:

_That’s in the back of minds that we get paid a lot. What are you actually doing for your money? That’s the impression I get._

A delicate approach was obviously needed to establish credibility with others and influence positive change.

In contrast to this clear finding that emerged from the Within-School Leaders’ focus group, the Middle Leaders’ focus group did not identify challenges of leading ‘teaching as inquiry’ that were linked with the professional dynamic that existed between their positions and other staff.
Limited Professional Development on Leadership

Although the tensions of leading ‘teaching as inquiry’ were all too apparent in some areas, there were also challenges that were identified by leaders from both focus groups regarding their perceptions of the limited nature of professional learning that they experienced, particularly around leadership. Four Within-School Leaders and three Middle Leaders identified a challenge of limited professional development opportunities in their initiation into leading ‘teaching as inquiry.’ For example Within-School Leader C stated:

*The leading of ‘teaching as inquiry,’ I didn’t feel, is really well established. There was no training to be a mentor or to be a leader. I bumbled my way into the whole thing. I didn’t feel there was nearly enough mentoring development*

There were also perceived improvements to be made in training to effectively manage challenging conversations. When discussing strategies to influence teachers that were highly resistant to meaningfully engaging in ‘teaching as inquiry’ activities Within-School Leader D identified this perceived lack of abilities, stating:

*I actually don’t have the skills to, well, to do it in a nice tactful way*

Three Middle Leaders also identified the challenges that were linked with limited professional learning. For example, Middle Leader E linked this to the ineffective implementation of ‘teaching as inquiry’ historically at their school, stating:

*There was a lot of why isn’t it working; why isn’t it happening within faculties and it was because, I felt, I wasn’t equipped to do it.*

Middle Leader A agreed with the sentiment that there was, initially, limited support and professional development in their leadership role. They also provided more depth to their perception that the limited opportunities for professional learning were not solely linked with leading ‘teaching as inquiry.’ However, when they were available, there were of significant value. They stated:

*I think a lot of people in management positions within school haven’t actually had any training in how to be a leader and how to be a manager so we’re all just learning as we go and from experience. I think that this has been solid evidence that with support everybody can flourish and you can share that wisdom on and the experience and the ideas. As opposed to: “You’re next in line because someone’s leaving so you get that job” and we don’t actually get the support.*
Benefits of Leading ‘Teaching as Inquiry’
In contrast to the challenges, there were also clear benefits to leading ‘teaching as inquiry’ that were identified by focus group participants. These were linked to the opportunity to connect with other professionals and the development of collaborative cultures. These factors may have combined to contribute to the phenomenon identified by some leaders that ‘teaching is inquiry’ allowed them to maintain their interest in teaching and motivated them to remain in the teaching profession.

Enjoyment, Connection and Collaboration
All five Within-School Leaders and all five Middle Leaders identified positive benefits of using ‘teaching as inquiry’ processes to connect with other professionals and collaborate as a result of these opportunities. Within-School Leader B identified a benefit of using ‘teaching as inquiry’ to:

*Build some connections across faculties.*

Similarly, Within-School Leader E identified benefits of less structured opportunities to collaborate stating:

*I enjoy the Kāhui Ako meetings were we get to just sit and talk to other people, not when we’re doing the team based conversations actually the side conversations.*

There was similar agreement between all five Middle Leaders that there were benefits from ‘teaching as inquiry’ processes, in that they allowed for more effective professional collaboration. For example, this was elaborated on by Middle Leader D, who stated:

*One thing that I think’s been good for me is looking at inquiries and learning stuff from someone sharing their inquiry or sparking ideas about something that you could be looking at. You actually have something in common with someone’s passion.*

When describing the places where the impact of a leader’s influence may be apparent, the power of having the opportunity to connect with, and have support from, staff in traditional leadership roles was also identified by three Within-School Leaders and three Middle Leaders. For example, Within-School Leader E described the benefit of support for their ‘teaching as inquiry’ processes from their Principal and Deputy Principal, saying:

*I’ll do my work knowing that they’ll come in to chat and that’s when a lot of our best conversations, about what we want to do, happen.*

Middle Leader E also identified benefits of support and guidance regarding ‘teaching as inquiry’ from other school leaders. When discussing spending time with an Assistant Principal, Middle Leader E stated:

*We were just bouncing ideas off each other and I had the opportunity to talk to her, ‘cause she was quite up on the play, far more experienced than I was, and that really helped.*
Three Within-School Leaders also identified benefits of having access to an external professional learning facilitator that supported their ‘teaching as inquiry’ processes and leadership development. Within-School Leader D typified benefits of this support their own thinking, stating:

*It’s amazing like she just cuts through the fog.*

Three Middle Leaders also described the value of meeting with an external professional development facilitator. Middle Leader C’s statement is representative of these perceptions:

*That external support; somebody outside of school who’s not within the school, I think was really important. She can see things without being sort of tied up in the school, the culture, which I’ve found really, really helpful.*

**Motivation and Retention of Leaders in the Teaching Profession**

Finally, the factors identified above may have contributed to one Middle Leader and four Within-School Leaders identifying a benefit of ‘teaching as inquiry’ as increasing enjoyment in their job, which led one Within-School Leader to indicate an increased desire to stay in the profession. When explaining their increased enjoyment, Within-School Leader D stated:

*It’s so interesting and if you’re doing it you can’t actually stand still. It makes your job so much more enjoyable, this continual source of trying to improve.*

Middle Leader B also agreed, stating:

*Other people’s inquiry topics; they were so fascinating*

Within-School Leader C identified a similar benefit, albeit with a more powerful outcome. They stated:

*It keeps me in teaching to be frank. That really got me, the momentum, going and the enthusiasm going again. Oh let me see if this works, or let me try that, what about this you know and that. For me, [it] has really turned my teaching around and made it something I actually still want to do.*

*I’m here because of inquiry. I wouldn’t be here otherwise, I’d be gone, find some other job because teaching was being, becoming very boring for me.*

**Consolidation of Multi-method Findings: Challenges/Benefits of Leading ‘Teaching as Inquiry’**

There were clear tensions identified from these data, supported with triangulated data from both collection methods and from perspectives from both groups of leaders. These tensions included challenges experienced in trying to effectively lead ‘teaching as inquiry’ with limited available time and with the complex and conflicting expectations placed on educational leaders. Tensions were also apparent when working with staff that had adopted a compliance mindset towards ‘teaching as inquiry.’ As with questionnaire findings, this tension was exacerbated when coupled with a perception
that leaders needed further leadership training, particularly involving challenge conversations, and mentoring support. There were also consolidated findings regarding the visibility and credibility afforded to Within-School Leader roles and the perceived limited impact of school-wide implications of their ‘teaching as inquiry’ processes. This was also linked with findings from both methods that there was uncertainty and confusion regarding the delineation of responsibilities regarding leading ‘teaching as inquiry.’

On the other hand, there were benefits identified to ‘teaching as inquiry’ including the positive opportunities to connect and collaborate with other staff. The depth provided by focus group responses allowed this to be elaborated as extending to higher motivation, enjoyment and retention of leaders in the teaching profession.

**Key Consolidated Multi-method Findings**

The significant findings, triangulated using both data collection methods, using the perspectives of two groups of leaders include the following.

The purpose of ‘teaching as inquiry’ was seen as improving teaching, via individualised, autonomous, reflective practice and therefore improving student learning outcomes. The nature of ‘teaching as inquiry’ processes follow diverse models but all involved cyclical, iterative processes that allow the development of adaptive teaching practice. The nature of leading ‘teaching as inquiry’ involved diverse strategies, including modelling effective practice, monitoring the practice of others’ and engaging professional dialogue to strengthen ‘teaching as inquiry.’ There was a preference expressed for using relational trust to lead as opposed to holding teachers to account using formalised performance appraisal mechanisms. The challenges of leading ‘teaching as inquiry’ involve the tensions between a desire to effectively lead and the limited time available to leaders. This was exacerbated by the complex, conflicting demands placed on teachers and the perceived limited leadership training opportunities. The benefits identified were the connections with other professionals and collaborative opportunities that were possible through ‘teaching as inquiry’ processes and leaders’ increased motivation, interest and, ultimately, retention in the teaching profession.

These findings will be discussed, with reference to the existing literature-base, in Chapter Five.
CHAPTER FIVE

Discussion, Conclusions and Recommendations

The purpose of this research was to investigate the perceived tensions that exist in the leadership of ‘teaching as inquiry’ in a school and its Kāhui Ako. Using the consolidated key findings, gathered through a questionnaire and focus-group interviews, this chapter will discuss the main findings of the research with reference to the existing research-base on each section.

The key findings are discussed under the following headings:

1. The purpose of ‘teaching as inquiry’
2. The nature of ‘teaching as inquiry’
3. Leadership of ‘teaching as inquiry’
4. Challenges and benefits of ‘teaching as inquiry’

Conclusions are drawn and recommendations are made to enable effective leadership of ‘teaching as inquiry’ processes.

Purpose of ‘Teaching as Inquiry’

In this research, ‘teaching as inquiry’ was seen as a vehicle that could improve teaching via reflective professional learning and improve student learning outcomes. 29 questionnaire respondents and six focus group participants identified at least one of these purposes in their responses. This aligns with the findings of the Teacher Professional Learning and Development, Best Evidence Synthesis Iteration (Timperley et al., 2007) which identifies the steps of ‘teaching as inquiry’ as inherent to teachers’ effective, individualised professional learning. ‘Teaching as inquiry’ is part of a teacher’s professional identify, not just limited to professional learning. Timperley (2011) states “engaging in ‘teaching as inquiry’ and knowledge building cycles at all levels of the organization is seen as core to their professionalism” (p. 113).

As well as being a tool for professional development, this research showed that leaders viewed that another of the main purposes of ‘teaching as inquiry’ was to improve the learning outcomes of students. This was identified by 20 questionnaire respondents and five leaders covering both focus groups. This aligns with Hord (1997) who identifies, in her summary of Professional Learning Communities that use inquiry processes, that these, when successfully established, can improve student learning outcomes. Factors that enabled this were communities that had visions for intellectually challenging, authentic learning, equitable approaches to pedagogy, together with building the organisational capacity of schools and gaining support from external sources. Similarly,
Love, et al. (2008) stated “the true power of collaborative inquiry is its potential to improve student learning” (p. 26).

From the responses summarised above, 14 questionnaire respondents made a link between ‘teaching as inquiry’ improving teaching practice and also improving student learning outcomes. This link has been described in other literature. For example, Sinnema and Aitken (2011) describe ‘teaching as inquiry’ as a “bridge between the statements of valued learning and the kinds of approaches that increase the likelihood of that learning being achieved, for individual students and the system as a whole” (p. 31). The use of ‘teaching as inquiry’ to improve both teaching and student learning outcomes can also be viewed in light of the fact that the schools in this research are part of a wider Kāhui Ako. ‘Teaching as inquiry’ processes are closely linked with improved teaching via Kāhui Ako collaboration. The Ministry of Education’s (2016) position is that “in a Community of Learning/Kāhui Ako, the focus of collaboration is on improving outcomes for students through changes in instructional practice” (p. 15).

The Nature of ‘Teaching as Inquiry’

‘Teaching as Inquiry’ Follows a Cyclical, Iterative Process

This research found that teachers perceive quality ‘teaching as inquiry’ practices follow a cyclical, iterative process, regardless of the particular model used. 16 leaders’ questionnaire responses and nine focus group participants identified aspects of these processes. These responses covered the ongoing, cyclical nature of ‘teaching as inquiry’ as well as referencing specific steps. Although one Within-School Leader used the term “robust spirals” of ‘teaching as inquiry’ in their questionnaire response and another Within-School Leader made reference to leading “appreciative inquiry” during the focus group interviews, there was no singular model of ‘teaching as inquiry’ that was consistently identified by participants. There are a range of cyclical ‘teaching as inquiry’ models that exist in the literature. For example, the ‘spiral of inquiry’ model is outlined in Timperley, Kaser, & Halbert (2014). Likewise, there is a wider appreciative inquiry movement (Whitney & Trosten-Bloom, 2010), which has applications in schools (Kadi-Hanifi, Dagman, Peters, Snell, Tutton and Wright, 2014) and in a range of other disciplines (Meyer & Geldenhuys, 2017). There is no precise fit of the ‘teaching as inquiry’ processes outlined in the New Zealand Curriculum to any one model (Sinnema & Aitken, 2011). The inconsistency of the model used for ‘teaching as inquiry’ processes in this research also aligns with the findings of Cardno et al. (2017). They found that very different ‘teaching as inquiry’ models were used in two similar secondary schools, yet also pointed out that this was not necessarily a barrier to its effective implementation, stating “provided that the process focuses on student learning in specific,
individual teaching contexts and requires critical reflection on practice, any on-going cycle of activity is relevant” (p. 22). Orland-Barak (2009) goes further and states that teacher practitioner inquiry is “by nature a practice of variety” and the practices can be viewed as an overarching paradigm for change rather than a rigorous adherence to any particular model (p. 118). Nevertheless, although the models of ‘teaching as inquiry’ described in this research varied, there were clear steps articulated by most respondents that were more in-depth than simple reflective practice. This aligns with the work by Fichtman Dana and Yendol-Hoppey (2009) that ‘teaching as inquiry’ differs from straightforward teacher reflection in that ‘teaching as inquiry’ follows an intentional process and that ‘teaching as inquiry’ processes are more visible to other teachers.

‘Teaching as Inquiry’ allows Adaptive Practice
Linked with the perception that ‘teaching as inquiry’ improves teaching practice, 14 questionnaire respondents and eight focus group participants identified that ‘teaching as inquiry’ allowed for flexibility and experimentation in their teaching approaches linked to their ability to autonomously respond to individual learners. This concept of adaptive practice is summarised in Hattie (2009) and includes teachers developing practices that “have high levels of flexibility that allow them to innovate when routines are not enough” (p. 246). The nature of ‘teaching as inquiry’ identified in this research aligns with the original intentions of the ‘teaching as inquiry’ model, namely that it would promote attitudes of “open-mindedness, fallibility and persistence” (Aitken & Sinnema, 2008, p. 53).

The benefits of taking a responsive, adaptive approach to pedagogy are well documented in the literature. For example, this is strongly advocated for in order to address inequity in student achievement (Sinnema & Aitken, 2011; Bishop, Ladwig & Berryman, 2014; Bishop, 2019; Grundnoff et al., 2019). Similarly, Lee, Smith and Croninger (1995) found that teachers that collaboratively “think, invent and reflect on their work” contribute to higher student achievement in maths and science (p. 5). A one-size-fits-all approach to teaching and learning is not seen as being effective in improving student learning outcomes (Hattie, 2009) particularly as the very idea that an ‘average’ student exists has been brought into question by Rose (2015).

The need to promote adaptive practice is also apparent in Professional Learning Communities. Sustainable Professional Learning Communities promote “pedagogical diversity” both within a school and between the schools who collaborate (Hargreaves, 2011, p. 190). Complicating this, assessment data is not always comparable between schools. Within each Kāhui Ako, individual schools use different assessment tools and also carry them out in different ways (The Ministry of Education, 2017). As such, the adaptive practices linked with ‘teaching as inquiry’ identified by the participants in this research aligns with wider research on effective practice.
The Nature of Leading ‘Teaching as Inquiry’

Nature of Leadership Interactions

This research identified diverse practices regarding the nature of leading ‘teaching as inquiry.’ The nature of respondents’ perceptions of leading ‘teaching as inquiry’ aligned with Southworth’s (2004) broad categories of leadership; namely modelling, monitoring and professional dialogue. The questionnaire responses revealed that all 15 Within-School Leaders and 15 of the 18 Middle Leaders felt that modelling their own practice was a leadership strategy that applied to ‘teaching as inquiry.’

Five focus group participants, covering both groups, also mentioned leading ‘teaching as inquiry’ through modelling their practice. Treasurer (2009) found that modelling effective behaviour, particularly if it involves moving into areas of uncertainty or “leadership by jumping first” can be effective in influencing others. He goes on to note that “leaders must be willing to be the first to initiate movement toward where they want others to follow” (p. 15). Also, as ‘teaching as inquiry’ is seen as an effective vehicle for professional development (Timperley et al., 2007), there are clear advantages of leaders modelling their own professional learning journey through ‘teaching as inquiry’ when attempting to impact student learning outcomes. Leaders involving themselves in professional learning processes has been identified as the most significant leadership factor in improving student learning outcomes (Robinson et al., 2009).

This research found that the monitoring of other’s ‘teaching as inquiry’ processes was also seen as part of both leadership roles. 25 questionnaire respondents agreed with this statement and monitoring behaviour was described by four focus group participants, covering both groups. However, there was a reluctance expressed in questionnaire responses by five Within-School Leaders for these roles to take on a hierarchical overly compliance-based focus. This aligns with Southworth’s (2007) description of leaders’ monitoring behaviour, where “the goal is not to be inspectorial, but to make these processes as educative and developmental as possible for all concerned, including the leaders” (p. 76).

Leaders also saw value in using professional dialogue as a tool to lead ‘teaching as inquiry.’ 25 respondents agreed in questionnaire responses that they used this as a leadership strategy, as did five leaders covering both focus groups. Effective professional dialogue has the potential to improve teaching via “profound professional learning” (Southworth, 2007, p. 77) and improve teachers’ understanding and, by implication, student learning outcomes (Nelson et al., 2010). However, there was also uncertainty expressed by some leaders about their efficacy and experience in using these methods to lead ‘teaching as inquiry.’ The lack of confidence and experience of Middle Leaders in having challenging conversations is also reflected in Cardno et al. (2018). Also, Southworth (2012)
recognises that although there is an abundance of opportunities to converse within a school, there are not always opportunities to focus this dialogue on teaching and learning.

**Accountability and Relational Trust**

Resistance of leaders to using ‘teaching as inquiry’ as a compliance-based activity, solely within formal performance appraisal processes was evident in this research. Seven Within-School Leaders and four Middle Leaders, in questionnaire responses, identified this as an issue. Six of the focus group respondents also expressed a preference for developing relational trust in order to lead ‘teaching as inquiry’ as opposed to using formal accountability mechanisms.

This pattern of resistance and inconsistency surrounding accountability mechanisms and appraisal is well-documented. For example, Piggot-Irvine (2000) noted that “tightening of accountability in appraisal resulted in several areas of inconsistent adoption of appraisal and a mixed reception to some aspects of the process” (p. 345). If ‘teaching as inquiry’ is to be successful in addressing issues of equity in New Zealand education, low-trust accountability approaches are not seen as effective. Conner (2015) states that, to achieve more equitable student learning outcomes, leaders should be putting more energy into empowering those around them, rather than focussing on performance management.

Within the wider context of collaborative inquiry models, accountability processes are also not seen as being universally successful (Ainscow et al., 2016). Similarly, Mulford (2007) describes a “system preoccupation with a limited number of academic performance outcomes” as one of the main challenges to establishing social capital in professional learning communities, and therefore experiencing the associated benefits, which include improved: student engagement; student agency; and long-term student learning outcomes (p. 175). Middlewood and Cardno (2001) commented on teacher performance and appraisal and, although the need for accountability was not dismissed, there was an acknowledgement that an appraisal system that focuses on narrow, specific, yet measurable outcomes is overly simplistic and inadequate. There was a values tension identified, between the need for accountability and the need for professional development. A more holistic approach to assessing teacher quality has been advocated for, including an acknowledgement of the central location of relationships in the profession. Bishop, Ladwig and Berryman (2014) have explicated the link between effective pedagogy and strong relationships, and there is a recognition that this also applies to professional learning (Bishop et al., 2010).

In contrast, developing relational trust is seen as an essential part of effective educational leadership. Trust is described as “critical in contexts where the success of one person’s efforts is dependent on the contribution of others.” The determinants of relational trust are outlined as “interpersonal respect; personal regard for others; competence in role and personal integrity” (Robinson et al., 2009, p. 183-184). The very notion of educational leadership is predicated on trust (Cardno, 2012). In Kāhui
Ako, the need for trust is also apparent. The Educational Council (2015) identifies a need for Kāhui Ako leaders to develop the capabilities to “apply leadership knowledge, to address complex school-based problems and build and sustain strong and trusting relationships with staff, parents and students” (p. 2).

**Challenges of Leading ‘Teaching as Inquiry’**
The main challenges of leading ‘teaching as inquiry’ that were identified via the consolidated multimethod findings were associated with uncertainty around which roles led ‘teaching as inquiry,’ leaders’ managing time while incorporating the complex demands of their roles and others,’ managing resistance from staff, working within limited professional learning backgrounds and, for some Within-School Leaders, managing the visibility and credibility afforded to their role. This is similar to the main challenges of ‘teaching as inquiry’ identified in Driver (2011), who found that they could be categorised as managing change, time, staff attitude and limited teacher knowledge.

**Who Leads ‘Teaching as Inquiry’?**
When looking at the leadership of ‘teaching as inquiry’ this research found uncertainty regarding which roles should formally lead these processes. Middle Leaders, Senior Leaders and Within-School Leaders were the most commonly identified roles in all responses, yet there was no one clear role that was seen to hold the primary responsibility. Nine of the 33 questionnaire respondents identified multiple roles as having the primary responsibility to lead ‘teaching as inquiry.’ A perceived lack of clarity regarding leadership of ‘teaching as inquiry’ was also reflected in Within-School Leaders’ focus group interview responses when describing the need to delicately navigate role boundaries. This is not surprising, as the responsibilities to lead ‘teaching as inquiry’ overlap between roles that hold performance appraisal responsibilities and the newly established Kāhui Ako roles. One of the two purposes of a Within-School Leader’s role is “strengthening the use of effective inquiry approaches to teaching and learning within a school to achieve the shared achievement objectives” (The Ministry of Education, 2016b). Overlapping this, the opportunity to lead ‘teaching as inquiry’ also exists via performance appraisal processes, which are regularly delegated to middle leaders within a school (Bassett, 2016). The mixed perceptions about the leadership of ‘teaching as inquiry’ aligns with the findings of PPTA (2017) who, in their summary of a national survey of Kāhui Ako implementation, found a perception that “there is little evidence of schools attempting to integrate the new roles with existing roles that have overlapping responsibilities” (p. 8). Furthermore, staff who were awarded Within-School Leader positions were found to have typically not given up any other Middle Leader roles that they may have held, blurring the line between individuals’ responsibilities further.
Exacerbating this, the roles of Within-School Leaders do not seem to be well understood. In a national survey, when asked about their perceptions about how well Within-School Leaders were performing their roles, the majority of responses (>50% in all survey questions) either didn’t know or felt it was too early to make a judgement.

**Time Limits and Competing, Complex Expectations**

Another key consolidated finding from this research was that leading ‘teaching as inquiry’ was seen to add a layer of complexity to what is already seen as a multi-faceted leadership role in a time-poor environment. 17 questionnaire respondents and all 10 focus group participants identified challenges linked with carrying out ‘teaching as inquiry’ processes in a time-poor environment. This manifested itself in a perception that there was limited time to satisfactorily carry out a complex variety of professional expectations, including, but not limited to, ‘teaching as inquiry.’ The “never-enough-time problem” that can occur in educational settings has been identified, even when more time is allocated to teachers. This is partly due to the “sheer complexity of considering the intersection between the scope and sequence of content, assessment and student learning and instructional strategies” (Kruse & Seashore Louis, 2007, p. 115). Educational leadership has been described as something that is “complex and confounded with confusion” in general (Cardno, 2012, p. 15); however, the complexity and challenge of educational leaders’ roles is increasing. Robinson (2011) states “the expectations for today’s school leaders have never been more ambitious” (p.2). Middle Leaders’ roles in particular have been described as more “complex, intense and challenging” than similar roles in the past (Dinham, 2007, p. 63). The finding that time limitations affected Middle Leaders’ capacity to meet professional expectations is similar to the findings of Bassett (2016) and Bassett and Robson (2017) who found that a lack of time was one of the most significant challenges to Middle Leaders carrying out their role. Similarly Robson (2012) identified that allocating sufficient time was the most common suggestion that middle leaders came up with to improve their appraisal experiences and Collier, Dinham, Brennan, Deece and Mulford (2002) identified a lack of time as a significant negative aspect of many middle leaders’ roles. The complex and challenging expectations experienced by school leaders are well-documented as are the time constraints in leadership roles. This leads on to another finding, related to challenges that leaders perceived when dealing with other staff.

**Challenges with Professional Relationships**

One of the key consolidated findings of this research was that leaders perceived challenges in their professional relationships with other staff involving ‘teaching as inquiry’. Tensions were identified linked with leading ‘teaching as inquiry’ with resistant staff that demonstrated a ‘compliance mindset.'
Tension also existed with a perceived lack of credibility or visibility in the leadership roles. The challenges identified in this research are also reflected in the wider literature.

The compliance mindset described by some respondents aligns closely with the overly compliance-focused nature that typified the general approach of some schools, inhibiting the work of middle leaders (PPTA, 2015). This approach also reflects teacher evaluation and performance appraisal in New Zealand, which is seen to look at accountability mechanisms at the expense of focussing on student learning outcomes (Sinnema & Robinson, 2007). Lillijord, Elstad and Kavli (2018) contend that teacher evaluation often reverts to “bureaucratic routines and technical procedures” partly as a result of trying to meet the expectation that performance appraisal fulfil the requirements of both quality assurance and professional development (p. 14). The compliance mindset identified in this research can also be linked with Fitzgerald’s (2001) prediction that the obligation of teachers to engage in professional development in order to show that they are meeting the basic levels of professional standards would mean that some teachers would comply by engaging in these opportunities at a minimal level. This seems to be the case with the perceptions of the leaders studied.

There were also issues with how Kāhui Ako roles were seen to be perceived by other staff. Five participants, covering both questionnaire groups and three Within-School Leader responses from focus group interviews described how Kāhui Ako roles were perceived to lack credibility and visibility. This has also been shown nationally. A nationwide survey (PPTA, 2017) has shown that teachers’ perceptions of Kāhui Ako are varied and the structures associated with them are poorly understood. For example, it showed that an awareness of key Kāhui Ako documents was low among principals and even among Kāhui Ako leaders themselves. Furthermore, teachers with experience in a Kāhui Ako, but without a formal role, were more likely to report negative perceptions of Kāhui Ako (35%) than positive ones (25%). In contrast leaders who did hold Kāhui Ako roles reported significantly more positive experiences (60%) that negative ones (8%). Some of this negative perception was linked with resentment regarding the remuneration in relation to the expectations of the role; the lack of integration of the roles within wider school structures; the time allowances provided and, in some cases, the lack of transparency in the appointment processes. There was a similar level of dissatisfaction found by the Education Review Office (2019) when they looked at some individual Kāhui Ako. They reported that the Northcote Kāhui Ako had surveyed its teachers and found “over half responded with either ‘not well’ or ‘not at all well’ to questions about their perceived value of participating in the Kāhui Ako and/or how well the Kāhui Ako was supporting their capacity for inquiry” (p.27).

The issues with teacher satisfaction and leader visibility and credibility may be linked to a variety of issues. There may be dissention from within an organisation as leadership, and its implied power
structures, gets distributed. When using ‘teaching as inquiry’ as a vehicle to increase distributed leadership, Copland (2003) noted that “efforts to engender a shift toward leadership of this kind may create cognitive dissonance for individuals” (p. 378). Furthermore, there is research that shows there are roles and processes within education that may be seen as more professionally attractive and visible than others. McLaughlin and Talbert (2006) observe that “teacher learning communities are neither flashy nor sexy as a priority for district change compared to such high-visibility reform measures as new curriculum adoption” (p. 114). As such, establishing effective and sustainable collaborative opportunities is a long-term process. Kruse and Seashore Louis (2007) give a case study of a Professional Learning Community where extended time was critical to the success of the community. They found that “helping teachers beyond comfortable positions in ‘fragmented communities’ is a long-term proposition” (p. 115). McLaughlin and Talbert (2006) found that “building and sustaining high-functioning teacher learning communities in schools entails slow, steady effort” (p. 114).

**Limited Professional Learning**

The critical importance that the role of middle leadership has long been recognised, at a departmental level (Brown & Rutherford, 1999; Bassett, 2016) and within wider school structures (The Ministry of Education, 2012). Middle leaders hold the mantle of direct instructional leadership, focussed on the improvement of teaching and learning (Bendikson, Robinson & Hattie, 2012) yet their roles can be poorly defined and there is a long history of limited professional development to support leaders’ growth (Brown & Rutherford, 1999; Brown, Rutherford & Boyle, 2000; Bennet, Woods, Wise & Newton, 2007; Bassett & Robson, 2017) This research found that leaders felt that they were lacking in some areas that would allow them to lead ‘teaching as inquiry’ more effectively. This included leaders who expressed a desire to learn more around having difficult conversations; a desire for mentoring and for leadership skill development in general. The historical perception of middle leaders that needed more formalised professional development (e.g. they learnt their role “through trial and error” (Bassett, 2016, p. 104) or via “a process of osmosis” (Brown, Rutherford & Boyle, 2000, p. 239)) was still apparent in this research. Cardno (2012) notes a limited research base on the “skilful use of collaborative practice” in education (p. 125) and it was apparent that there is the potential to offer leaders more development in these areas. The uncertainty surrounding leaders’ perceptions of their ability to engage in meaningful dialogue identified in this research has been previously reported in the literature (Cardno et al., 2018, p. 43).
Benefits of Leading ‘Teaching as Inquiry’

Enjoyment, Connection and Collaboration

A key finding of this research was the benefit that participants identified regarding the opportunity to genuinely connect and collaborate with other professionals. The value of collaboration, particularly using ‘teaching as inquiry’ as the vehicle for is well-documented (Cardno, 2006; Ainscow, Dyson, Goldrick & West, 2016). Indeed, the use of cycles of inquiry can, themselves, be essential to effectively collaborate during periods of change (Love et al., 2008). Robinson (2018) concurs, stating that “collective inquiry is needed throughout the change process in order to learn” (p. 4). Collaboration is described as “the norm in most educational settings” (Cardno, 2012, p. 126). This is particularly apparent in Kāhui Ako, although the focus remains on teachers’ actions, rather than unpacking the implications on student achievement. Timperley et al. (2007) found that “nearly every core study that described school-based professional communities reported greater collaboration among teachers and more collective responsibility for students. The focus on promoting student learning was, however, sometimes more implicit than explicit” (p. 205). Collegial cultures have the potential to positively influence teachers’ professional impact by growing a genuine learning community. This impact is particularly apparent in collaborative inquiry groups, where the benefits are seen of moving past “polite, congenial conversations” that simply focus on sharing practice towards genuine collaboration (Nelson et al., 2010). In effective professional learning communities this involves members that “collectively accept responsibility and accountability for student achievement and well-being” (Robinson et al., 2009, p. 123). The Ministry of Education (2017) found that there are “strong foundations for collective impact and collaboration” in place in Kāhui Ako as these learning communities become more established (p. 24). Furthermore, it was reported that Kāhui Ako members surveyed felt that there were few challenges that prevented them from working together. The Education Review Office (2019) found that Kāhui Ako were providing platforms for collaboration and relationship building that had previously not existed. However, the PPTA (2017) showed that a minority of teachers (33%) felt that Within-School Leaders were achieving “modelling and supporting collaborative practice” to any extent.

Motivation and Retention of Leaders in the Teaching Profession

This research found that the processes of ‘teaching as inquiry’ are not just effective as a tool or mindset that helped with student achievement. Responses from 12 leaders in the questionnaires identified positive experiences with leading ‘teaching as inquiry. This was elaborated on by four Within-School Leaders and one Middle Leader in their focus group interviews. They indicated that
‘teaching as inquiry’ was seen as something that increased motivation and contributed to the retention of these leaders in the teaching profession.

As described earlier in this chapter, ‘teaching as inquiry’ was seen as something that allowed the development of autonomous, adaptive practice. This, in turn, was described as increasing motivation and enjoyment by four Within-School Leaders in their focus group interview. Not only does this align with descriptions of effective professional learning using ‘teaching as inquiry’ (King, 2002), it also allows teachers to adapt their work to more closely match their values and beliefs (Deppeler and Ainscow, 2016). There is a need for organisations themselves to build adaptive capacity, in order to successfully respond to a volatile, unpredictable environment (Staber & Sydow, 2002) and schools are no exception. In schools, developing adaptive capacity involves “leaders and teachers becoming deeply knowledgeable about both the content of what is taught and how to teach it and create the organizational structures, situations and routines to develop it further” (Timperley, 2011, p. 112).

There is a growing national shortage of skilled trained teachers, with recent reports showing schools using teachers outside their specialist fields, having access to fewer relief teachers and having lower retention rates of teachers at previously unprecedented levels (PPTA, 2018). The process of “taking initiatives and risks” when supported with professional development within a learning community is a key part of building “social capital and social professional learning communities” put forward by Mulford (2007, p. 176). Not only can this improve student learning outcomes, it can contribute to teacher retention in the profession. Somech (2002) found that increasing the agency of teachers in decision-making, through consultative practices, can be perceived to improve the quality of decisions made and increase teachers’ motivation, confidence and commitment. This was particularly apparent in decisions regarding teaching and learning, as opposed to strategic administrative decisions. ‘Teaching as inquiry’ is a model that would meet these teaching and learning criteria, particularly as its ability to promote autonomous, adaptive practice has been identified in this research.

Professional Learning Communities have also been found to enhance staff morale and job satisfaction. Stoll (2011) states that a “Professional Learning Community can act as a buffer against the kind of issues that are causing teachers to leave the profession” (p. 167). Hargreaves (2011) describes the benefits of Professional Learning Communities as “enlivening the work lives of those who experience it” (p. 191). This also matches a point made in Lassonde and Israel (2010), who argue that collaborative learning communities that use ‘teaching as inquiry’ can “inspire and energise” teachers, even in time-poor environments (p. 3). Although the recruitment and retention of appropriate staff is undeniably a challenge in many contexts, a strong professional learning community can provide a “rudder in turbulent times” if staff turnover is high. Furthermore, staff turnover during new initiatives is not
always a negative phenomenon, particularly if it results in the departure of staff that resist change (McLaughlin & Talbert, 2007, p. 163).

Conclusions
This research has collated existing literature on the purpose, nature and leadership of ‘teaching as inquiry’ in Professional Learning Communities, particularly in New Zealand’s Kāhui Ako. It has synthesised and analysed perceptions of two groups of leaders using two separate methods to triangulate data and identify tensions in the leadership of ‘teaching as inquiry’ in a secondary school and its Kāhui Ako.

This research has established an absence of tension around the perceived purpose of ‘teaching as inquiry.’ It was perceived that these processes should improve teaching and, therefore, improve student learning outcomes, aligning with the stated purposes in the literature. There was also cohesion identified in the nature of ‘teaching as inquiry.’ Although there were diverse practices identified, and different models used, there was an absence of tension identified in leaders’ responses. ‘Teaching as inquiry’ was seen as a cyclical, iterative process that allowed the development of adaptive practice and operated as a paradigm for experimenting with pedagogical change, once again, aligning with the literature base.

There were clear tensions identified in the implementation of leading ‘teaching as inquiry.’ Although there were diverse leadership practices identified, with a preference for establishing and building relational trust, aligning with existing literature, there were tensions identified. These were connected with: uncertainty about which role led ‘teaching as inquiry’; the limited time available to effectively lead these processes when operating within an environment of complex and competing professional expectations; the challenges of dealing with teachers’ compliance mindsets and a perceived lack of leadership training to address such challenges. The benefits of ‘teaching as inquiry’ were primarily identified as providing opportunities for enjoyable connection and collaboration with other professionals leading to increased motivation and retention of staff. Leaders did not specify clear, measurable benefits that ‘teaching as inquiry’ had on student learning outcomes in their responses, a phenomenon that has been reported in other initial Kāhui Ako analyses.

The findings presented in this research have complemented the existing knowledge on leadership, ‘teaching as inquiry’ and Kāhui Ako. This research allows the perspectives of both Within-School Leaders and Middle Leaders to inform schools and their Kāhui Ako about potential strategies to strengthen distributed leadership models using ‘teaching as inquiry.’ This involves empowering leaders to increase the visibility and credibility of their roles. This could enable individuals and groups to exert meaningful influence from their ‘teaching as inquiry’ processes and strengthen the evaluative capacity of an institute so that there can be meaningful measurement of changes in practice.
Recommendations that stem from these conclusions will be expanded on in the final section of this thesis.

**Recommendations**

This section will make recommendations that may inform future strategies regarding the leadership of ‘teaching as inquiry’ in schools and their Kāhui Ako. Although this research does not identify a particular model of ‘teaching as inquiry’ as preferable, it is suggested that collaborative ‘teaching as inquiry’ processes are strengthened as opposed to disparate individual, processes. The benefits of connection and collaboration were apparent in this study and this is supported by other research. For example, Weinbaum et al. (2004) suggest that collaborative inquiry groups are one of the only ways that modern professional development needs can be met. Love et al. (2008) also promote collaborative inquiry as the way that schools can improve results. Collaborative inquiry practices, when the principles are followed carefully, can be central to changing schools’ practice to improve equity (Grundnoff et al., 2019). However, this is not without its challenges. As David (2009) notes, collaborative inquiry is among the most promising strategies for strengthening teaching and learning. At the same time, it may be one of the most difficult to implement. The biggest risk in moving to establish collaborative inquiry is to do so without providing the necessary leadership and support.

Bonne and Wylie (2017) note that further support is needed to embed collective inquiry in New Zealand schools. The recommendations of this research centre on strengthening collaborative ‘teaching as inquiry’ processes at a national level; at a school leadership level and on equipping individuals to deal with the associated changes that strengthened collaborative inquiry entails.

**Strengthen Collaborative Inquiry Structures Nationally**

Although it has been recognised that it is usually the powerful members of society that drive policy formation and change, effective policies are best developed at the level where the need is identified (Ryan, 1994). A finding of the research presented in this thesis is that there is value perceived by leaders in collaborative ‘teaching as in inquiry’ processes. Therefore a recommendation from this research is that educational leaders strengthen structures to enable collaborative ‘teaching as inquiry’ processes at a policy level. This could be via the creation of a statutory body such as a Kāhui Ako Board, as advocated for by the PPTA (2018b). Providing such an entity with resourcing, such as staffing responsibilities, finances and professional learning mandates would empower the significant change that the PPTA identified as necessary in order for collaborative models to sustainably exist within New Zealand education. However, the Tomorrow’s Schools Independent Taskforce (2018) found “while the current Kāhui Ako model of school collaboration is beginning to show evidence of success in some places, it is too inflexible and can restrict local innovation” (p. 17). Therefore, there may be wider
political barriers in place regarding extensions to the existing Kāhui Ako model. Instead, the “coherent, connected and interdependent system based on collaboration, support and improvement” (p. 11) that is described, namely Education Hubs, may fit the educational landscape more appropriately. This would have the potential to strengthen collaborative inquiry in similar ways to the Networked Learning Communities described in Jackson and Temperley (2007). This research supports using these wider structures to strengthen collaborative inquiry.

**Strengthen Collaborative Inquiry Structures Locally**

At a local level, this research supports the retention of collaborative ‘teaching as inquiry’ as a model for improving teaching and student learning outcomes in schools. This research identified perceived impacts on teachers’ professional growth and an increase in motivation and retention of teachers in the profession linked to their ‘teaching as inquiry’ practices. Strengthening ‘teaching as inquiry’ locally should include increasing the focus on measuring its impact on student learning outcomes. This research found that the purpose of ‘teaching as inquiry’ was clearly perceived to be to improve teaching and subsequently improve student learning outcomes. Although the definition of what constitutes a desirable student outcome can vary widely (Timperley et al., 2007), with the exception of one Within-School Leader in the focus group interviews, no other participant in this research described a specific improvement in student learning outcomes as a result of ‘teaching as inquiry.’ This would clearly have been a significant finding if it had been identified; however, the fact that this remained largely unmentioned in the data collected indicates that evaluation may not be embedded in ‘teaching as inquiry’ practice. This is similar to the findings of Timperley et al. (2007) who stated “in reviews and evaluations of professional development, changes in teacher practice are typically the focus and considered sufficient” (p. 19). Similarly, a review on professional learning, Cordingley, Bell, Evans and Firth (2005) stated “there was very little evidence about teacher perceptions of the impact of continuing professional development on pupil learning apart from a few passing references in some studies to ways in which the teachers were encouraged by perceived student responses to new ways of doing things” (p. 63). Timperley et al. (2007) identified that effective Professional Learning Communities not only challenged existing beliefs, they also had a clear focus on “analysing the impact of teaching on student learning” (p. xxvii). However, the Ministry of Education (2017) reported that Kāhui Ako are still developing their evaluative capacity. Building this evaluative capability within cycles of ‘teaching as inquiry’ has clear benefits. Effective analysis of evidence can allow meaningful professional growth and strengthen an inquiry habit of mind (Robinson, 2011).

Care must be exercised in choosing what is to be measured to indicate an improvement (or regression) in student learning outcomes. Ainscow (2016) argues that “within education systems, what gets measured gets done” (p. 148). Focussing teaching and learning on narrow measures of achievement...
can be counter-productive to improving student achievement. Although there are assessment tools available, there must be caution exercised when using standardised testing as the sole measure of effective teaching and learning (Shields & Sayani, 2005). Although achievement is “among what is crucially desirable” there are also other important educational outcomes including “affective outcomes, persistence and engagement, physical outcomes, and social normative behaviours and skills” (Hattie, 2009, p. 254). This research supports strengthening collaborative inquiry within schools, focussing on building their evaluative capability.

**Strategically Resource Leadership Development**

As part of strengthening collaborative inquiry, Senior Leadership teams and Lead Principals are advised to strategically resource leadership development within their schools and Kāhui Ako. This resourcing should involve simple tasks such as clarifying the leadership roles surrounding ‘teaching as inquiry and providing time allowances, formalised platforms from which to lead and specific, ongoing professional development in leadership.

This research identified uncertainty and overlap between different leaders’ roles. This contributed to some of the challenges of credibility and visibility with professional relationships experienced by leaders. This was particularly apparent for the relatively newly established Kāhui Ako roles when compared to traditional Middle Leaders. Senior Leaders need to provide specific, clearly delineated role descriptions regarding the leadership of ‘teaching as inquiry’ that should be widely publicised.

This research also found tensions regarding the visibility and credibility of some roles. School leadership teams should also provide structures to empower Middle Leaders and Kāhui Ako Within-School Leaders to exert meaningful influence linked with their ‘teaching as inquiry’ processes. These structures should include well-resourced opportunities to lead others, empowerment from leaders with traditional hierarchical roles and ongoing professional leadership development. Achieving increased levels of excellence and equity in education involves more than simply manipulating existing accountability systems. Increasing accountability should be coordinated with improved structures and processes that build professional capacity (Robinson, 2011). This capacity is not developed by simply offering isolated professional development (Timperley et al., 2007), rather by intentionally developing leaders from with learning communities.

McLaughlin and Talbet (2006) state “strong learning communities develop when principals learn to relinquish a measure of control and help others participate in building leadership throughout the school (p. 81). Addressing this also may require a change of leadership mindset. LeChasseur, Mayar, Welton and Donaldson (2016) found that in order to effectively support ‘teaching as inquiry,’ school leaders need to “relax their allegiance to a top-down hierarchical model of leadership” (p. 270). Successful distributed leadership models include leaders’ feeling that their input helps to influence
the wider school direction, even if traditional leadership roles, such as the principal, still wield the ultimate decision-making power (Hammersley-Fletcher & Kirkham, 2007). There is desire of leaders, clearly identified in this research, for further professional learning, focussing on leadership. Bassett and Robson (2017) advocate for using collaborative ‘teaching as inquiry’ to improve middle leadership practice, suggesting the use of an easily accessible, online development programme to assist with this. The findings of the research outlined in this thesis supports these suggestions. Leaders in this research expressed a preference for building relational trust in their leadership as opposed to using strict accountability mechanisms. This approach could, in turn, build the “professional capital” that can be used as an alternate accountability mechanism in education (Fullan, et al., 2015, p. 1).

A possible strategy that could meet these criteria is setting up formalised coaching and mentoring for Middle Leaders and Within-School Leaders. Not only would this meet the stated need for ongoing mentoring support identified by participants in this research, it would build the professional capacity described by Robinson (2018). This may include an ability to engage in metacognition and strengthen reflective inquiry processes (Kaser & Halbert, 2009) and can be beneficial to all participants in a coaching conversations (Hawk & Hill, 2003). Ongoing coaching and mentoring may also strengthen individuals’ resilience in the face of pervasive changes in education. This can be built on through individual actions.

**Strengthen Individuals’ Capacity for Leading Collaborative Inquiry**

This research identified complex, competing demands on leaders’ time, limited professional development and resistant, compliance mindsets that were a challenge to effective ‘teaching as inquiry’ practices. As well as making recommendations at a policy and senior leadership level, it is recommended that individuals take opportunities to build their professional resilience and strengthen their capacity to deal with change. Orland-Barak (2009) identifies that inquiry cycles are inherently linked with change. Aguilar (2018) identifies that schools can be dynamic and stressful and that stress can affect teachers’ ability to perform at their potential. On top of this, changes such as those proposed by the Tomorrow’s Schools Independent Taskforce (2018) promise to introduce other significant, as yet uncertain, changes to the education profession. Keegan and Laskow-Lahey (2009) identify that change, linked with feelings of defencelessness, can create significant anxiety. As such, the need for individuals to build emotional and professional resilience is recommended, in order to strengthen individuals’ capacity to lead collaborative inquiry. Nace (2015) sees fostering systematic mindsets as essential to facilitating change. This involves focussing on individuals’ place in any given system and their contribution to a greater good. An
acceptance of uncertainty and unpredictability associated with new concepts is essential to enabling change. Earl, Timperley and Stewart (2008) recognise this and identify that conceptual change means “learning to live with the ambiguity and the feeling of dissonance when tacit knowledge and evidence are incompatible and recognizing that this kind of psychological discomfort is necessary to new understanding” (p. 11). However, strategically limiting the scope of new initiatives within Kāhui Ako can also be essential to their success (Education Council, 2015). It is recommended that Middle Leaders and Within-School Leaders collaborate on a specific focus for improvement, leading initiatives within their respective spheres of influence and regularly measuring progress towards improved equity and excellence in student learning outcomes.

Individuals’ approaches such as adopting a growth mindset, which embraces opportunities to investigate assumptions and improve through intentional practice (Dweck, 2016), can be successful in schools (Brock & Hundy, 2016). This approach can lead to optimistic self-talk and, ultimately, perseverance over adversity (Duckworth, 2017). Aguilar (2018) clearly articulates some of the stressors in schools and promotes a variety of strategies to address the symptoms and build resilient educators. Reviews of ‘teaching as inquiry’ processes in Kāhui Ako have identified that “change can only come about by unpacking and adjusting existing beliefs and theories held by teachers, parents, and students” (Education Review Office, 2019, p. 27). Ensuring that teachers and leaders are equipped to deal with the change is an essential part of its success.

Further Research

Finally, there are recommendations for further research. This study involved Within-School Leaders from eight schools and Middle Leaders from one school within one Kāhui Ako. There is the clear potential to extend this research to see if the findings reported in this thesis are comparable in Kāhui Ako across the country or in a wider range of roles in education such as: teachers; Across-School Leaders; Senior Leadership teams or Boards of Trustees. There is also the potential to investigate Kahui Ako that have been established for a longer time, seeking to isolate benefits and challenges from more established structures and personnel. Furthermore, as any changes resulting from the Tomorrow’s Schools Taskforce are enacted, there will be opportunities to investigate any potential impact on leadership tensions and/or ‘teaching as inquiry.’
REFERENCES


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Robertson, J. (2008). The 3 Rs for coaching learning relationships. Policy and Practice. PDT.


APPENDICES

Appendix One: Questionnaire
Leadership of Teaching as Inquiry

Thank you for participating in this research looking at the nature of leading teaching as inquiry practices. This questionnaire will assist with a thesis towards a Master of Educational Leadership and Management at Unitec. Neither you nor your organisation will be identified in this survey, the thesis or any subsequent work. Your contribution will be collated with others and a summary of findings will be provided in the published work. Your contribution is hugely appreciated. The information sheet for participants is linked below. The UREC number for Ethics Approval of this research is 018-1064 Bryant.

1. In your school, which role(s) do you think hold the primary responsibility to lead 'teaching as inquiry'? 
   Check all that apply.
   ○ Principal
   ○ Senior Leadership (Deputy Principal/Assistant Principal)
   ○ Head of Faculty/Head of Syndicate/Head of Team
   ○ SENCO
   ○ Pastoral Leaders
   ○ Kāhui Ako Within School Leaders
   ○ Kāhui Ako Across-School Leaders
   ○ Specialist Classroom Teacher
   ○ Other:

2. What do you see as the underlying purpose(s) of 'teaching as inquiry'?

3. In your opinion, what constitutes quality 'teaching as inquiry' practices?

4. Describe any interactions you have had with staff that are involved in leading ‘teaching as inquiry’ in your school?

5. How would you describe the relationship between teaching as inquiry and professional learning?

6. I think that it is an important part of my leadership role to use my own ‘teaching as inquiry’ process as a model of effective practice
   Mark only one oval.

   1  2  3  4
   Strongly Disagree  ○  ○  ○  ○  Strongly Agree

7. In the last 12 months, I have used my own ‘teaching as inquiry’ process as a model of effective practice
   Mark only one oval.

   1  2  3  4
   Strongly Disagree  ○  ○  ○  ○  Strongly Agree
8. Comment

9. I think that it is an important part of my leadership role to monitor (observe/check/review) the ‘teaching as inquiry’ practices of other teachers

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10. In the last 12 months I have monitored (observed/checked/reviewed) the ‘teaching as inquiry’ practices of other teachers

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11. Comment

12. I think it is an important part of my leadership role to have professional discussions with teachers about their ‘teaching as inquiry’ practice

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13. In the last 12 months, I have had professional discussions with teachers about their ‘teaching as inquiry’ practice

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14. Comment

15. I think it is an important part of my leadership role to lead teachers’ ‘teaching as inquiry’ practices individually, regardless of the focus area of teachers’ inquiry

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16. In the last 12 months, I have led teachers’ ‘teaching as inquiry’ practices individually, regardless of the focus area of teachers’ inquiry

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Strongly Disagree   Strongly Agree

17. Comment

18. I think it is an important part of my leadership role to lead a collaborative ‘teaching as inquiry’ group, linking teachers who are following inquiry practices on similar topics

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Strongly Disagree   Strongly Agree

19. In the last 12 months, I have led a collaborative ‘teaching as inquiry’ group, linking teachers who are following inquiry practices on similar topics

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Strongly Disagree   Strongly Agree

20. Comment

21. I think it is an important part of my leadership role to use ‘teaching as inquiry’ to help to inform the direction of school-wide professional learning

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Strongly Disagree   Strongly Agree

22. In the last 12 months, I have used ‘teaching as inquiry’ to help to inform the direction of school-wide professional learning

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Strongly Disagree   Strongly Agree

23. Comment
24. I think that it is important that people in my leadership role develop high relational trust with teachers, to effectively lead ‘teaching as inquiry’

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25. There are opportunities for people in my leadership role to develop high relational trust with teachers, regarding ‘teaching as inquiry’

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26. Comment

27. I think it is important that people in my leadership role hold teachers to high levels of accountability to effectively lead ‘teaching as inquiry’

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28. There are opportunities for people in my leadership role to hold teachers to high levels of accountability regarding ‘teaching as inquiry’

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29. Comment

30. I have access to individuals that will support my leadership of ‘teaching as inquiry’ practices

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31. I have access to professional readings to support my leadership of ‘teaching as inquiry’ practices

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32. I have had access to formal professional learning opportunities to support my leadership of ‘teaching as inquiry’ practices

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33. I have time allocated to allow me to lead ‘teaching as inquiry’ practices in my school

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34. Comment

35. What do you see as the greatest barrier(s) for strengthening the quality of leadership of ‘teaching as inquiry’ practices

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36. Is there anything else you would like to add?
Appendix Two: Focus Group Interview Schedule

(To be used twice, once for Within-School Leaders and once for Middle Leaders)

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**Introductory questions**

Could each of you briefly talk about your current responsibility with the ‘teaching as inquiry’ process?

How long have you been familiar with the concept of ‘teaching as inquiry’?

**Main questions**

1. Tell me about your experiences with your own ‘teaching as inquiry’ practices?
2. Tell me about your experiences of leading ‘teaching as inquiry’ with other teachers?
3. What opportunities have you had to develop your leadership of ‘teaching as inquiry’?
4. What do you think is working well with ‘teaching as inquiry’ and why?
5. What do you see as challenges of ‘teaching as inquiry’ and why?
6. What do you think could be done to strengthen ‘teaching as inquiry’ practices and why?

**Concluding questions**

Is there anything else that you think would be useful to comment on?
Appendix Three: Information Sheet

INFORMATION SHEET FOR QUESTIONNAIRE PARTICIPANTS

Title of Thesis: Exploring tensions within the practice of leading Teaching as Inquiry in a New Zealand secondary school and its Kāhui Ako

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

The aims of my project are:

1. To examine leaders’ perceptions of the nature of teaching as inquiry within an individual school and its Kāhui Ako.

2. To investigate school middle leaders’ and Kāhui Ako Within-School Leaders’ perceptions of the purposes of teaching as inquiry.

3. To explore school middle leaders’ and Kāhui Ako Within-School Leaders’ perceptions of the practice of leading teaching as inquiry.

4. To explore school middle leaders’ and Kāhui Ako Within-School Leaders’ perceptions of the benefits and challenges of leading teaching as inquiry.

I request your participation in the following way. I will be collecting data using a questionnaire (in which case this document becomes the first page of the questionnaire). This questionnaire will be administered using Google forms. Neither you nor your organisation will be identified in the thesis. Data will be stored securely via password protection on my computer and with a nominated person at the Unitec Research Bank for 5 years. I do hope that you will agree to take part and that you will find this participation of interest. If you have any queries about the project, you may contact my supervisor at Unitec Institute of Technology.

My supervisor is Carol Cardno and may be contacted by email or phone.

Phone: (09) 815 4321 ext 8406          Email:   ccardno@unitec.ac.nz

Yours sincerely

Nicholas Bryant

UREC REGISTRATION NUMBER: 018-1064 Bryant

This study has been approved by the Unitec Research Ethics Committee from (23/11/2018) to (23/11/2019). If you have any complaints or reservations about the ethical conduct of this research, you may contact the Committee through the UREC Secretary (ph: 09 815-4321 ext 8551). Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.
**INFORMATION SHEET FOR FOCUS GROUP PARTICIPANTS**

**Title of Thesis:** Exploring tensions within the practice of leading Teaching as Inquiry in a New Zealand secondary school and its Kāhui Ako

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

The aims of my project are:

5. To examine leaders’ perceptions of the nature of teaching as inquiry within an individual school and its Kāhui Ako.

6. To investigate school middle leaders’ and Kāhui Ako Within-School Leaders’ perceptions of the purposes of teaching as inquiry.

7. To explore school middle leaders’ and Kāhui Ako Within-School Leaders’ perceptions of the practice of leading teaching as inquiry.

8. To explore school middle leaders’ and Kāhui Ako Within-School Leaders’ perceptions of the benefits and challenges of leading teaching as inquiry.

I request your participation in the following way. I will be conducting focus group interviews and would appreciate your contribution as a member of the group. I will also be asking you to sign a consent form regarding this event. The focus group interview venue will be ______________(location). The duration of the focus group interview will be approximately 1 hour. This will occur at ______________(date).

Neither you nor your organisation will be identified in the thesis. Data will be stored securely via password protection on my computer and with a nominated person at the Unitec Research Bank for 5 years. I do hope that you will agree to take part and that you will find this participation of interest.

If you have any queries about the project, you may contact my supervisor at Unitec Institute of Technology.

My supervisor is Carol Cardno and may be contacted by email or phone.

Phone: (09) 815 4321 ext 8406 Email: ccardno@unitec.ac.nz

Yours sincerely

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Appendix Four: Consent Form

THESIS TITLE: Exploring tensions within the practice of leading Teaching as Inquiry in a New Zealand secondary school and its Kāhui Ako

RESEARCHER: Nicholas Bryant

Participant’s Consent

I have been given and have understood an explanation of this research and I have had an opportunity to ask questions and have had them answered. I understand that neither my name nor the name of my organisation will be used in any public reports.

Focus Group Interviews

If randomly selected for a focus group, I agree to the recording of this group interview. I understand that I may withdraw myself or any information that has been provided for this project up to two weeks after the focus group interview event. It is not possible to return a transcript for verification. I agree to respect the confidentiality of the identity of participants and all discussion that occurs in the context of this group interview.

I agree to take part in this project.

Signed: _________________________________

Name: _________________________________

Date: _________________________________

UREC REGISTRATION NUMBER: 018-1064 Bryant

This study has been approved by the Unitec Research Ethics Committee from (23/11/2018) to (23/11/2019). If you have any complaints or reservations about the ethical conduct of this research, you may contact the Committee through the UREC Secretary (ph: 09 815-4321 ext 8551). Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.
Full name of author: Nicholas Bryant

ORCID number (Optional): 

Full title of thesis/dissertation/research project (‘the work’):
Exploring tensions within the practice of leading ‘Teaching as Inquiry’ in a New Zealand secondary school and its Kāhui Ako

School: Education

Degree: Masters of Educational Leadership and Management.

Year of presentation: 2019

Principal Supervisor: Joanne Robson

Associate Supervisor: Carol Cardno

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AND

Copyright Compliance:
I confirm that I either used no substantial portions of third party copyright material, including charts, diagrams, graphs, photographs or maps in my thesis/work or I have obtained permission for such material to be made accessible worldwide via the Internet.

Signature of author: 

Date: 30/10/19