Aro Mai Aro Atu:

Raising Māori-medium Students' Academic Oral Language Proficiency

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Rosina Mary Shandley

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Abstract

From the early 1860s, colonial governments worked systematically to eradicate the language and culture of the indigenous people of Aotearoa / New Zealand, and, by the late 1960s, the death of the Māori language was being predicted by leading linguists. Māori leaders responded in the 1980s with language regeneration initiatives that included the birth of Māori-medium education. Today, this uniquely indigenous education system is a significant site of language learning for new generations of Māori children. In Māori-medium education, children are nurtured, educated, and loved *as Māori*, and they are more likely to attain educational qualifications than their Māori peers who attend English-medium schools.

The success of Māori-medium education is achieved in the face of a raft of ongoing challenges that teachers and students confront on a daily basis. Years of language marginalisation, including the disruption to intergenerational transfer, mean Māori-medium students are required to learn the curriculum through their second and less-developed language. They have limited opportunities to hear or use the Māori language outside of the school, and this places huge pressure on teachers who are often their most significant language models. The challenge is compounded by the limited education that has been made available to teachers in relation to second-language pedagogies specifically designed for Māori-medium classrooms. The resulting situation is that Māori-medium teachers are often left struggling to find ways that they can develop students' Māori language proficiency at the same time as their curriculum achievement so that one is not sacrificed for the other.

This study designed and trialled pedagogies to support Māori-medium students to develop their academic oral language proficiency at the same time as their curriculum achievement. It was a mixed methods study grounded in a kaupapa Māori approach, and involved three teachers and 24 students across three separate Māori-medium schools. An Anga Putanga Ako (Curriculum Outcomes Matrix) was developed to support the students to understand what they needed to learn to progress through the writing curriculum. Teachers then learnt to share explicit learning outcomes from the Anga Putanga Ako with students before lessons and to allow them time to discuss their achievement of those outcomes in pairs at the conclusion of those lessons. Linguistic scaffolds were developed to support students' learning conversations,

including the self and peer assessment of the learning outcomes, and decisions about their curriculum achievement levels and next learning steps.

The quantitative and qualitative results of the study revealed that the confluence of the self and peer assessment practices, supported by the Anga Putanga Ako and linguistic scaffolds, improved the students' academic oral language and accelerated their reading and writing achievement significantly beyond what is usually expected in a Māori-medium classroom in 14 weeks. The study also found that, through implementing the self and peer assessment pedagogies, teachers were able to identify ways they could develop their students' academic language and curriculum achievement simultaneously and how these approaches could be applied across the curriculum.

It was clear from the research results that pedagogies that support second-language development and curriculum learning, such as the self and peer assessment pedagogies demonstrated in this study, need to be explicitly taught with consistency across initial and in-service teacher education programmes. This development is necessary to help ensure Māori-medium students are supported with the thinking and linguistic skills needed to contribute to the creation of new knowledge, to support or challenge the current social order as they see fit, and to continue to transfer the Māori language to new generations of mokopuna.

Dedication

He tohu maumahara tēnei ki ōku mātua a Hine Kino Haua (Ngāti Porou) rāua ko John Shandley (Ngāti Airihi). Nā rāua te kākano i whakatō i roto i a mātou ko aku tuākana-tēina kia eke panuku, eke tangaroa, eke hōhora.

For Reiha

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Ehara taku toa i te toa takitahi, engari he toa takitini

(My achievements come not from myself alone but from the contribution of many)

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Glossary

Airani	Ireland
Airihi	Irish
Ākonga	Student
Aotearoa	Original indigenous name for New Zealand
Aroha	Love, understanding, empathy, caring, sympathy
Hapū	Sub-tribe
Iwi	Tribe
Kaiako	Teacher
Kaupapa	Theme, initiative, idea
Kaupapa Māori	Māori world view
Kaupapa tuku iho	Ideas/initiatives handed down from past generations
Kōhanga reo	Māori language centres for children from birth to 6 years and their families
Kura	School (usually refers to Māori-medium school)
Kura kaupapa Māori	Māori-medium schools underpinned by Te Ahu Matua (Philosophy for Kura Kaupapa Māori)
Paearu angitū	Success criteria
Pānui	Reading

Mana	Prestige, authority, power, influence, status, spiritual power, charisma (All people are considered to have mana)
Mokopuna	Grandchildren and all generations of children after them
Whāinga	Learning intention
Whānau	Extended family
Whanaungatanga	Kinship / relationships / connectedness through bloodlines
Wharekura	High school classes in Māori-medium schools. Whole Māori-medium schools sometimes call themselves wharekura also
Whare wānanga	Place of higher learning
Te Marautanga o Aotearoa	The curriculum for Māori-medium classrooms, designed by the. Ministry of Education
Te reo Māori	The Māori language
Tuhituhi	Writing

Chapter 1: Introduction

This thesis concerns the regeneration of the Māori language, the native language of the indigenous Māori people of Aotearoa / New Zealand. In particular, the study introduced the pedagogical practice of self and peer assessment into three Māori-medium classrooms to test its effectiveness for improving students' Māori language and literacy achievement.

The Māori language was the predominant language spoken by Māori tribes in Aotearoa for some 500 years prior to the 1800s. However, in the 1860s the health of the language took a turn for the worse after the British Crown forcibly colonised the country. Having exhausted the funds available to annihilate the Māori people from Aotearoa / New Zealand through warfare, the new settler Government turned its efforts to systematically assimilating them to the ways of the white man as speedily as possible. These efforts included designing an education system that targeted the Māori language and culture for eradication (Simon & Smith, 2001; Walker, 2016).

My own mother experienced the traumatic treatment meted out to students who spoke Māori on the school grounds during her schooling in the 1940s and 50s. She was Hine Kino Haua, daughter of Moetu Haua of the Ngāti Porou tribe and Hinemoa Jensen who also descended from Ngāti Porou, as well as the Ngāpuhi tribe in the Far North, and Denmark. Neither of my mothers' parents were very proficient in the English language, so the entire whānau (extended family), including over 20 siblings and cousins, spoke only the Māori language in their home. However, upon entering school my mother and her siblings were expected to speak only English on the state school grounds, and this expectation was strictly enforced with teachers administering corporal punishment to any student heard speaking the Māori language anywhere at school. Whakaiti (public shaming) was also used to enforce the uptake of English with students being left to urinate in their clothing if they could not ask to be excused in English. In what must have been a confusing quandary, my mother and her siblings were in turn not permitted to speak English at home.

My mother, like many from her generation (Benton, 1979; Spolsky, 2003; Stephens, 2014; Wigglesworth & Keegan, 2013), later made the decision not to teach her own

children her native tongue in order to protect us from the trauma she had experienced in the state education system and to ensure we would be successful in school. While she used some Māori language on occasion, she communicated with my siblings and me mainly in English.

Despite her efforts to prepare my siblings and me to cope linguistically in the Pākeha dominated education system, our schooling life was marked by shame and alienation. The values and practices manifested in the schools we attended were very different to the values of kinship and aroha (love) that were the norm in our home and those of our wider Māori whānau (extended family). Any representation of our culture in the curriculum was limited to a few token practices that Pākehā (New Zealanders of European descent) found novel such as stick games and hāngi (Māori cooking methods). Beyond that, Māori were portrayed in curriculum texts as 'warring natives' and 'cannibalistic savages' with limited intellectual knowledge of any value worth mentioning. Our 'mother tongue' was completely absent from school curricula (Spolsky, 2003; Walker, 2016) and this hegemonic curriculum undermined our beliefs that Māori were the highly intelligent, entrepreneurial, loving, close-knit, family-oriented people we actually were and are. Consequently, we became part of the first generation in our whānau unable to speak our indigenous tongue, a lost generation who were not fully connected to either our ancestral culture or the newly-imposed Pākehā one (Durie, 2006; Walker, 2016).

By the 1970s, the Māori language was on the brink of death and its extinction was being predicted by leading linguists (Benton, 1979, 1983). However, Māori began to fight back on the political stage to reclaim their language and culture (Walker, 1990, 2016). In the 1980s, part of that fight involved the development of schooling options in the Māori language. These options started with education centres known as kōhanga reo (Māori language nests) where children were immersed in the Māori language from birth to 6 years old (Smith, 1992; Tawhiwhirangi, 2014; Te Kohanga Reo National Trust, 2021). The uptake of kōhanga reo was rapid with new centres opening across the country in quick succession.

The success of kōhanga reo led Māori to develop Māori-medium primary schooling options where students could continue to be taught through the Māori language across their compulsory schooling years. The first of these schools opened in 1985, and the

demand was immediate across the country as whānau sought language and cultural continuity for their children beyond kōhanga reo (Jones et al., 1995; Ka'ai, 1991)

Today, Māori-medium education refers to school programmes where students are educated through the Māori language for between 51% and 100% of the time (see 2.3). As at 1 July 2021, there were 23,161 students being educated in Māori-medium classrooms across the country, and 96.3% of these students identified as Māori-representing close to 11% of the total number of Māori students in compulsory education (Education Counts, 2022).

Māori-medium classrooms are amongst our most significant sites of language regeneration, and Māori students in Māori-medium education achieve better secondary school qualifications than Māori students in English-medium schools (Education Counts, 2021). However, Māori-medium teachers and students continue to face unique challenges. As a result of years of language marginalisation, including the interruption to intergenerational language transfer, Māori-medium students are likely to be second-language speakers of the Māori language with varying degrees of language proficiency (May & Hill, 2005; Murphy et al., 2008). Māori-medium teachers are also likely to have a range of competencies in the language with no national language competency standards for Māori-medium teacher graduates developed before 2015 (Haemata, 2015). Compounding this, the rapid growth of Māori-medium education has outstripped the evolution of Māori-medium initial teacher education programmes and in-service mentoring programmes for new teacher graduates. The resulting situation is that Māori-medium teachers are unlikely to have received adequate education in the specialised second-language pedagogies needed to progress their students' curriculum achievement through a language in which neither they or their students may yet be very proficient (Hohepa et al., 2014; May et al., 2004; Murphy et al., 2008; Skerrett, 2011).

I experienced this challenge personally as a teacher in a Māori-medium classroom in the early 2000s. I had begun my involvement in Māori-medium education as a parent in kōhanga reo. I then trained as a primary school teacher to be able to support the kaupapa (initiative / purpose / vision / aspiration) at primary school level. However, I had to train in an English-medium initial teacher education programme because Māori-medium programmes were still being developed and not yet available where I

lived with my young family in the South Island. In 2005, I took up a teaching position in a Year 4 to 6 (8 to 10-year-old students) Māori language immersion Level 1 class in an English-medium school. Level 1 immersion meant my students had to be taught the curriculum through the Māori language for a minimum of 81% of the time. To ensure their English literacy skills also developed, the decision had been made to split the students' learning into four days of learning the curriculum 100% of the time through the Māori language with me as their teacher, and one day a week learning through the English language with another teacher. Part of that was also dedicated to Māori language activities to ensure the 81% Māori language criterion was met.

My students were all second-language speakers of the Māori language, and most came from homes and communities where there was seldom any Māori language spoken or heard. The Māori language was also *my* second and less proficient language. Compounding this difficulty, having been trained as an English-medium teacher, I had not had any education in the specialist second-language teaching approaches required for such a linguistically challenging situation.

As a result, while I was able to use basic instructional Māori language in the classroom and my students understood it, I did not know how to develop their ability to communicate in the Māori language beyond answering simple recall questions and asking basic questions like seeking permission to go to the toilet. My students were mainly passive recipients of my instructions, unable to discuss the abstract ideas of the curriculum through the Māori language and therefore develop the higher-order thinking that I knew they would be capable of if they had better Māori language proficiency.

Interestingly, my students had achieved better than their mainstream counterparts in English literacy assessments by the end of Year 6, but the fact that they were not reaching their linguistic potential in terms of Māori language proficiency remained a concern. To address the issue, in 2007 I travelled across the country to observe how other Māori-medium teachers approached the challenge. I visited six Māori-medium classrooms in the North Island, and I found that the issue with students' limited ability to discuss their curriculum learning in any depth was widespread.

Between 2009-2010 I began to theorise a potential approach to addressing my Māori-medium students' language and curriculum development as I was learning about the work of Black and Wiliam (1998b) in relation to formative assessment. These researchers had conducted a meta-analysis of studies into effective teaching practices from around the world. The numerous studies they analysed spanned several countries and school subjects and included learners from 5 years old to university undergraduates. The researchers found that "innovations which include strengthening the practice of formative assessment produce significant, and often substantial, learning gains" (Black & Wiliam, 1998b, p. 3). To define formative assessment they advise that assessment of students' learning "becomes 'formative assessment' when the evidence gained is actually used to adapt the teaching work to meet the identified needs" of those students (Black & Wiliam, 1998b, p. 2).

Black and Wiliam (1998b) listed a number of teaching and learning approaches that can strengthen formative assessment practices and amongst them is the practice of self and peer assessment, where students assess their own and their peers' work against a set of specific criteria. When considering this component of formative assessment in particular, I theorised that, if supported with appropriate scaffolds, self and peer assessment practices could encourage and support my Māori-medium students to discuss their curriculum progress, achievement, and next steps and thereby develop their rangatiratanga (agency) over their own learning. I believed this development would accelerate my students' academic oral language proficiency and their curriculum achievement simultaneously.

I tested my theory in a Master's study in 2011 (Shandley, 2014). The study was conducted in my own Māori-medium Level 1 immersion classroom, which was situated in the same English-medium school at which I had begun my Māori-medium teaching in 2005. The study involved teaching eight Year 5 to 6 students (aged 9 to 10 years old) to assess their own and each other's progress and achievement in their tuhituhi (writing) programme. To begin, I developed a matrix of levelled tuhituhi outcomes called an Anga Putanga Ako (Curriculum Outcomes Matrix). I taught the students to use the Anga Putanga Ako to assess their own and each other's writing levels. This involved teaching them to use Kāri Matapaki (Discussion Cards) that I had developed to scaffold their self and peer assessment discussions. During those

conversations, one student had a question card and one had an answer card. The cards gave the students sentence starters and patterns they needed to begin and continue their conversational exchanges. The sentences on the cards also had strategically placed gaps that required the students to refer to and use the language and ideas of the Anga Putanga Ako as well as their own writing artifacts to logically discuss their writing achievement and progress.

The results of the study were positive. A paired-samples t-test found that, as a result of the 20-week intervention, students significantly increased the number of words they used to describe their literacy learning over the 20-week period of the study. Qualitative analysis of interview transcripts found that they discussed more ideas about their language programme and learning, and they also increased their use of curriculum-specific vocabulary. The study also found that the practice of self and peer assessment improved students' writing achievement over the 20 weeks of the study significantly beyond Ministry of Education expected progress norms (Ministry of Education, 2009).

My Master's study was amongst the first to investigate pedagogies for raising Māori-medium students' language and literacy achievement at the higher end of primary school. However, given it was conducted in a single Māori-medium classroom in which I was teaching and situated within an English-medium school, I was motivated in the current study to establish the effectiveness of self and peer assessment practices across Māori-medium contexts more widely. In so doing, this PhD study introduced a similar programme of self and peer assessment across three Māori-medium classrooms in three separate kura kaupapa Māori in the North Island. The study involved 24 Year 6 student participants (aged 10 to 11 years old) and three teachers. The aim was to measure the effectiveness of the pedagogies for improving students' ability to discuss their learning as well as their literacy achievement, and for developing teachers' pedagogical knowledge and practice. Mixed methods data collection included semi-structured participant interviews, summative pānui (reading) and tuhituhi (writing) assessments, and teacher semi-structured interviews and reflection journals. The study sought to answer the following three questions:

1. What is the effect of self and peer assessment on students' academic oral language development in Māori-medium literacy programmes?

2. What is the effect of self and peer assessment on students' literacy achievement in Māori-medium literacy programmes?

3. How does implementing self and peer assessment practices in Māori-medium classrooms impact on teachers' pedagogical knowledge and teaching practice in relation to language and literacy?

This thesis is laid out as follows:

In chapter 2, I review the literature related to the study themes. I begin by exploring a brief history of Māori language loss from the early 1800s, and the subsequent genesis of Māori-medium education as a cultural and language regeneration movement. Next, Māori-medium education is contextualised within the range of typologies of bi-lingual education that exist across the globe so that the reader is informed about how situational factors impact the efficacy of pedagogical approaches for any given context. I then discuss the specific challenges Māori-medium teachers face trying to develop students' language and literacy capabilities in a language not yet normalised in wider society. The resulting impact on Māori-medium students' language achievement is then outlined. After this I discuss the pedagogies that I trialled to address students' language needs including the pedagogical theories that underpinned them. The chapter concludes with my rationale for applying the pedagogies in the context of the students tuhituhi (writing) learning in particular.

Chapter 3 contains an outline of the study methodology and methods. The chapter begins with an explanation of the kaupapa Māori (Māori principles / ideology) approach to the study. I then describe the school contexts in which the study was conducted, as well as participant demographics. Next, I outline the mixed methods used to measure shifts in students' language use and literacy achievement, as well as shifts in teachers' knowledge and practice. In the chapter's concluding section, I describe how the self and peer assessment intervention unfolded across the 14-week duration of the study in each of the three classrooms.

In chapter 4, I present the study results. First, qualitative evidence of students' improved academic oral language ability is provided through their improved ability to discuss their learning with curriculum-related specificity. The reader is then presented with quantitative evidence of the significant improvement the self and peer assessment practices made to students' reading and writing achievement. Finally, I

provide evidence of the shift in teachers' knowledge and practice as a result of their participation in the intervention.

In chapter 5, I discuss the results with regards to related literature, along with their implications for Māori-medium education as well as bi-lingual education more widely. A number of important issues are highlighted including: the need for the development of oral language tools for Māori-medium contexts; the need to strengthen Māori-medium pre- and in-service education programmes; and the need for further research into Māori-medium pedagogies.

The thesis is concluded in chapter 6 where I summarise the Māori-medium education context and associated challenges, as well as the study findings. Finally, I identify the overall implications for Māori-medium stakeholders.

Chapter 2: Literature Review

2.1 Introduction

This chapter reviews the literature related to Māori-medium education. It begins by outlining a brief history of colonial efforts to eradicate the Māori language through schooling from the early 1800s. The chapter then discusses the genesis of Māori-medium education in the 1970s as a Māori-led response to regenerate our threatened language and culture. Next, the chapter describes and contextualises Māori-medium education in its current forms, and positions it within the range of bi-lingual typologies that have been identified across the globe. A discussion on the challenges experienced across bi-lingual education contexts follows, with a narrowing focus on those challenges relevant to the Māori-medium context that formed the impetus for this study. In particular, I examine the challenge of raising students' academic oral language achievement and their curriculum achievement simultaneously. My approach to meeting that challenge in this study is then discussed with a focus on the literature related to the self and peer assessment pedagogical approaches I employed in the study to improve Māori-medium students' academic oral language development at the same time as their writing achievement. The chapter concludes with an explanation of the links between the approaches I tested in this study and Ako (Māori pedagogical beliefs and practices).

2.2 Māori Language Eradication Through Colonial Education

Prior to European contact, Māori tribes in Aotearoa valued education and maintained a range of systems for the preservation and dissemination of knowledge considered crucial to the survival and prosperity of iwi (tribes) and hapū (subtribes) (Hemara, 2000; Pere, 1994, 1997). Learning began before children were born, for example, with mothers chanting oriori (lullabies) to them while they were in the womb. After birth, learning continued in real life contexts through practical experience and observation. Children learnt skills such as weaving, cultivation, preparing food, carving, and warfare. Children also learnt through waiata (songs), kōrero tāwhito (history lessons), whakatauki (proverbs), whakapapa (genealogy), and pūrākau (stories). The whole whānau (extended family) played important roles in disseminating knowledge and skills to children and their learning took place at any time and in any place (Pere,

1994).

Male children of high rank and those who were identified as having leadership potential also attended higher learning institutions known by the interchangeable terms of whare wānanga and whare kura (Hemara, 2000; Pere, 1994). Whare wānanga had a long history reaching back to the time that knowledge was held in the twelve heavens known as Ngā Rangi Tūhāhā. Māori oral tradition talks of the first whare wānanga on earth being situated on the Polynesian island of Rangiātea which is thought to be the current Ra'ātea Island in the Society Islands. For generations selected learners from all across the Pacific regularly travelled to the whare wānanga at Rangiātea to gain higher learning in the areas of in-depth tribal whakapapa (genealogy), astronomy, navigation, agriculture, karakia (matters of metaphysics and spirituality) and the arts of war and peace (Hemara, 2000; Walker, 2016). Eventually, tribal groups in Aotearoa began to erect their own whare wānanga which were usually sacred houses built outside of the main tribal villages to protect their sacredness. Knowledge in the whare wānanga was disseminated by tohunga (learned and sacred spiritual leaders) and alumni of the whare wānanga.

The face of education began to change for Māori after Anglican missionaries arrived in Aotearoa and opened the first mission schools in the early 1800s. Their mission, predicated on cultural superiority, was to develop the Māori from "barbarism to civilisation" (Walker, 2016, p. 20). The schools were open to men, women and boys initially, and the curriculum was controlled by the missionaries. It was confined to the scriptures, and literacy was taught solely in the Māori language in an effort to protect Māori from non-Christian influences (Jones & Jenkins, 2011).

Māori were eager to incorporate new knowledge and technologies from around the western world, and, in contrast to the desire of missionaries, to become literate in English. They were particularly interested in the types of knowledge that produced large ships, weapons, and a wide range of other goods. From the early 1830s, Māori were flocking to the mission schools en masse. Within a decade, Māori in most settlements across Aotearoa had learnt to read and write, and they were communicating via letters delivered on horseback throughout the country. Such was the uptake of literacy that by the time the Rev. Williams arrived in Poverty Bay in 1840 to open a mission school there, he found that Māori could already read and write

in the Māori language. The Government also recognised the developing literacy capabilities of Māori and produced the first Māori language newspaper, Ko Te Karere o Nui Tireni, in 1842. Many more Māori language newspapers were published by Māori and church groups over the next three decades (Walker, 2016).

However, attitudes towards the Māori language were about to change, with its eradication becoming an explicit aim of education. In 1840, the Treaty of Waitangi was signed between Māori tribal leaders and Crown officials (Belich, 1996; Durie, 1998; Kawharu, 1989; Orange, 2004). Māori had signed the Treaty on the understanding that it guaranteed their continued tino rangatiratanga (right to sovereignty or self-determination), including the protection of their language and culture. However, Crown officials quickly made plans to take control of all affairs in order to colonise the country. This included influencing mission schools to become a tool to help the Government assimilate Māori to the ways of the 'white man' and prepare them for a future as a labouring underclass. To this end, Governor Grey's 1847 Education Ordinance funded mission schools on the condition that the curriculum was limited to industrial training and instruction was in English. The schools were also expected to develop amongst Māori the ideals of individual ownership of land, displacing communal ownership, to make it easier for the Crown's agents to purchase property (Simon & Smith, 1998, 2001). The ordinance also provided for the subsidising of church boarding schools so that Māori children could be removed from the "demoralising influence" of their villages and assimilated more speedily (Walker, 2016, p. 32).

Settler influence on education accelerated from the end of the 1850s. The settlers were becoming increasingly frustrated with the influence of the Crown's representative, Governor Grey, over their efforts to acquire land and power. They pressured the Crown to replace the governor with a more independent New Zealand Government. The resulting New Zealand Constitution Act 1852 provided for the formation of the new General Assembly, which began to make and enforce laws across the country (Belich, 1996; Durie, 1998; Kawharu, 1989; Orange, 2004; Simon, 1990). Only men who owned property or occupied a house of a certain value were eligible to vote in elections to the Assembly. This criterion excluded Māori as they were tribal people and did not have a system of individual ownership of land.

The Assembly soon targeted education to speed up the assimilation of Māori. The Native Schools Act 1858 reinforced the mission school system, providing the equivalent of $7,000 to boarding schools teaching in English. However, progress with teaching English was slow as Māori had already become disillusioned with the school curricula that had been limiting their learning to the bible and Māori language, and their interest in schooling had begun to wane.

The settler Assembly was soon to gain absolute control of the education system and ramp up efforts to assimilate Māori including targeting their language for eradication. In the1860s, the Government, with the support of the Crown, waged full military war against Māori who were resisting Pākehā domination and land theft. The wars raged across the entire country. They resulted in large-scale land confiscations and complete Government domination over all matters concerning the country including Māori affairs. Having gained complete control, the Government designed the Native Schools Act 1867 to establish a system of secular village primary schools under the control of the Department of Native Affairs. While debating the Bill, school inspector Hugh Carleton echoed the frustration of state officials that Māori were not assimilating to the ways of the European as planned and suggested options for a pathway forward: "…things have now come to pass that it was necessary either to exterminate the natives or to civilize them" (New Zealand Parliament, 1867, p. 863). However, Carleton noted that another war against Māori could cripple the colony financially, so extermination was not a viable option. Instead, he advocated that the Māori Schools Bill be adopted for its ability to provide an education framework that could morally influence Māori and prepare them for manual labour. He supported the following advice which school inspector Henry Taylor had given to Parliament in a report in 1862:

> I do not advocate for the Natives under present circumstances a refined education or high mental culture; it would be inconsistent if we take account of the position they are likely to hold for many years to come in the social scale, and inappropriate if we remember that they are better calculated by nature to get their living by manual than by mental labour. (Taylor, 1862, p. 38)

Carleton further advised the Parliament that civilising Māori "through the medium of

a language that was imperfect as a medium of thought" (New Zealand Parliament, 1867, p. 863), was not possible. Accordingly, the Māori language needed to be discouraged in schools and replaced with English, the more "perfect language" (New Zealand Parliament, 1867, p. 863).

The Bill was adopted and the resulting Native Schools Act 1867 marked the official beginning of state-controlled education for Māori (Berryman, 2008; Jenkins & Morris Mathews, 1999; Simon & Smith, 1998; Walker, 2016). The Education Act 1877 then created the national system of secular primary schools, and schooling was made compulsory for all New Zealand Pākehā children. Native schools were transferred to the Department of Education, and the 1880 Native School Code required that the Māori language only be used in junior classrooms to transition new entrants into school routines. After that, it was to be replaced with English. Teachers were instructed to discourage Māori language in the playground, and this prohibition was enforced with corporal punishment. The prevalence of this type of abuse of Māori children in the state education system has been well documented (Berryman, 2008; Bishop & Glynn, 1999; Spolsky, 2003; Walker, 1990, 2016). Primary school education became compulsory for Māori in 1894.

Despite the Government's colonising efforts, by the 1920s most Māori still spoke Māori as their first language. According to a 1930 survey of children attending Native Schools, 96.6% still spoke only te reo Māori at home (Benton, 1979, 1983).

The health of the Māori language took a turn for the worse, however, after the conclusion of the Second World War. Māori soldiers who returned from the war sometimes found their land had been given to Pākehā returned soldiers as part of the land ballot (the gift of land given to returned soldiers for their war efforts). Māori, however, were not eligible for the land ballot on the basis that they had interests in tribal lands. They were also not entitled to the same financial assistance to develop their land that Pākehā were and, facing limited opportunities for work and places to live, Māori migrated en masse to urban areas in search of employment.

Although they had not been eligible for state housing in the towns prior to the war, for fear that they would 'lower the tone' of state housing communities, post-war housing was made available via the Government's 'pepper potting' policy. Māori were

‘pepper potted’ into Pākehā neighbourhoods to encourage their assimilation into Pākehā society. They were isolated from one another, and English became the everyday language of communication in their city lives (Manatū Taonga/Ministry for Culture and Heritage, 2021).

Māori began to question the relevance of their native tongue in a Pākehā-dominated world, and many internalised the negative messages about their language and culture (Hohepa, 2015). They stopped speaking their language to younger generations in favour of English so that they would be better prepared to succeed in Pākehā society.

Before the Second World War, when 75% of Māori lived in rural, tribal areas, the Māori language was the everyday language of use. Twenty years later, 60% of Māori lived in towns and the Māori language was declining. By the mid-1970s, only 26% of Māori reported they could hold an everyday conversation in the Māori language (Benton, 1979, 1983). For Māori school children the figure was less than 5%. The language was not being transmitted to younger generations and its death was being predicted by leading linguists (Benton, 1979, 1983).

Māori began to address the decline of their language from the 1970s. Influenced by the American Black Civil Rights Movement, groups such as Ngā Tama Toa and Te Reo Māori Society began to assert Māori Treaty rights, including the right to learn and maintain their indigenous language.

In 1979, elders representing tribes and sub-tribes from across the country gathered at a national hui, Hui Whakatauira, in Wellington to discuss solutions to retain the Māori language for the next generations. At the follow-up hui in Ngāruawāhia the next year, it was decided that tamariki from birth to 6 years old needed to be targeted for language regeneration. As a result, the Department of Māori Affairs agreed to pilot a kōhanga reo (Māori language nest) for preschool children (Te Kohanga Reo National Trust, 2021).

The first kōhanga reo opened in Wainuiomata in 1982. Kaumātua (elders) provided guiding principles that ensured the kōhanga reo model was uniquely Māori. Proficient speakers of the Māori language and kaumātua transmitted the language and knowledge of the Māori world, and the whole whānau was expected to support

operations and participate in learning (Ka'ai, 1991; Morehu, 2009; Smith, 1992; Tawhiwhirangi, 2014).

The growth of kōhanga reo was rapid. Fifty centres opened within the first year, and, by December 1983, there were 170 kōhanga reo across the country. Although there was little financial support from the Government until 1990, the proliferation continued and peaked in 1993 with 819 kōhanga reo across the country educating over 14,000 children in the Māori language (Jones et al., 1995; May, 2005). Since then, a number of issues, including funding, the variability in programmes, staffing, and support, have seen a steady decline in kōhanga reo numbers.

In 2020 there were 444 kōhanga reo in Aotearoa / New Zealand. These centres were educating 17% of all Māori children attending an Early Childhood Education Centre, a total of 8,605 children (Education Counts, 2021). There were also 13 puna reo (Māori-medium early childhood centres) and a number of puna kōhungahunga (parent and whānau led play groups) offering various levels of Māori language learning for pre-school children.

The success of kōhanga reo triggered the fight by Māori to establish Māori-medium schooling provisions for its graduates. The first Māori-medium school, now called Te Kura Kaupapa Māori o Hoani Waititi Marae, was established by Māori whānau outside of the mainstream system (now referred to as English-medium) in 1985 at Hoani Waititi Marae in West Auckland. Despite the Government's initial resistance, Māori remained steadfast, and the growth of Māori-medium schooling mimicked that of kōhanga reo.

2.3 Māori-medium School Programmes

Māori-medium programmes are those that deliver the curriculum through the Māori language for at least 51% of the time. They are also known as Māori language immersion programmes which are split into two levels. Level 1 immersion programmes deliver the curriculum through the Māori language between 81% and 100% of the time. Level 2 immersion programmes deliver the curriculum through the Māori language between 51% and 80% of the time. While there are also English - medium programmes that include Māori language learning for lesser amounts of time, research suggests that Māori-medium are the programmes most likely to lead to bi-

lingualism (Baker, 2011; Hill & May, 2013; May et al., 2004). As at the 1 July 2021, there were 23,161 students (2.8% of the total school population) being educated in Māori-medium programmes across Aotearoa. Of these Māori-medium students, 93.3% identified as Māori, representing 11% of the total number of Māori in schools (Education Counts, 2021). Today, Māori-medium classrooms are amongst the few important sites where Māori language regeneration and maintenance is occurring (Fishman, 2001; Higgins et al., 2014; Hill, 2020; Lewis & Simons, 2009; May & Hill, 2005; Ministry of Education, 2007, 2013a; Obiero, 2010; Romaine, 2006; Te Puni Kokiri, 2014), and the sector is set to grow further. In 2021 the Minister of Education announced his intention to introduce legislation in 2023 to provide a regulatory framework to grow Māori-medium education. The aim will be to target 30% of Māori learners participating in Māori-medium education by 2040 (The New Zealand Government, 2022).

Table 1 shows that numbers in Māori-medium education continue to rise, with an increase of 4,691 students between 2016 and 2021 (Education Counts, 2021).

Table 1: *Number of Students in Māori-medium Education by Māori Language Immersion Level, 2016-2021* (Education Counts, 2021)

Māori Language Immersion Level	2016	2017	2018	2019	2020	2021	Change 2020-21
Level 1: 81-100%	13,499	14,373	15,043	16,020	16,746	17,313	567
Level 2: 51-80%	4,971	5,065	5,468	5,469	5,645	5,848	203
Māori Medium Total	**18,470**	**19,438**	**20,511**	**21,489**	**22,391**	**23,161**	**770**

Levels 3 to 5 Māori language programmes are called Māori Language in English-medium programmes. These programmes involve English-medium students learning the Māori language as a subject or learning the curriculum in the Māori language up to 50% of the time. While these programmes do not necessarily aim to produce bi-lingualism, they do contribute to the regeneration and normalisation of the Māori language across society more widely.

Table 2*: Number of Students in Māori Language in English-medium Education by Māori Language Immersion Level, 2016-2021* (Education Counts, 2021)

Māori Language Immersion Level	2016	2017	2018	2019	2020	2021	Change 2020-21
Level 3: 31-50%	6,885	6,695	7,111	8,442	9,685	10,200	515
Level 4(a): up to 30%	6,229	6,539	6,901	7,897	10,585	14,491	3906
Level 4(b): At least 3 hours	20,236	23,423	25,866	30,042	35,441	44,776	9335
Level 5: Less than 3 Hours	128,031	128,944	130,695	133,429	132,337	139,418	7081
Māori Language in English Medium Total	**161,381**	**165,601**	**170,573**	**179,810**	**188,048**	**208,885**	**20,837**

2.4 Māori-medium Settings and Successes

Māori-medium education is delivered in a range of settings across the education system (Education Counts, 2015; Education Review Office, 2021; Hohepa, 2010; Ministry of Education, 2013b). These include kura kaupapa Māori, which are schools underpinned by a fully Māori ethos as outlined in the kura kaupapa Māori founding document Te Aho Matua (New Zealand Gazette, 2008). Kura kaupapa Māori can be primary schools to Year 6 or 8 and they can also include wharekura, or high school classes. However, some kura kaupapa Māori that include all compulsory years call the whole kura a wharekura. Māori-medium education is also provided in kura-ā-iwi (tribal schools) which operate within a framework of their own tribal identity, language and culture. Some English-medium schools also include Māori-medium classrooms (Hill, 2020).

As at 1 July 2021, there were 305 schools providing Māori-medium education at immersion Level 1 or 2. Of these schools, 117 were fully designated Māori-medium schools such as kura kaupapa Māori or kura-ā-iwi. The remainder were English-medium schools with one or more Māori-medium classrooms included (Education Counts, 2022). The Māori-medium schools were mostly situated in the North Island, with the Bay of Plenty, Waikato, Auckland and Northland having the largest numbers. The number of Māori-medium schools in the South Island totalled only eight. English-medium schools with Māori-medium classrooms were mainly situated in the North Island also.

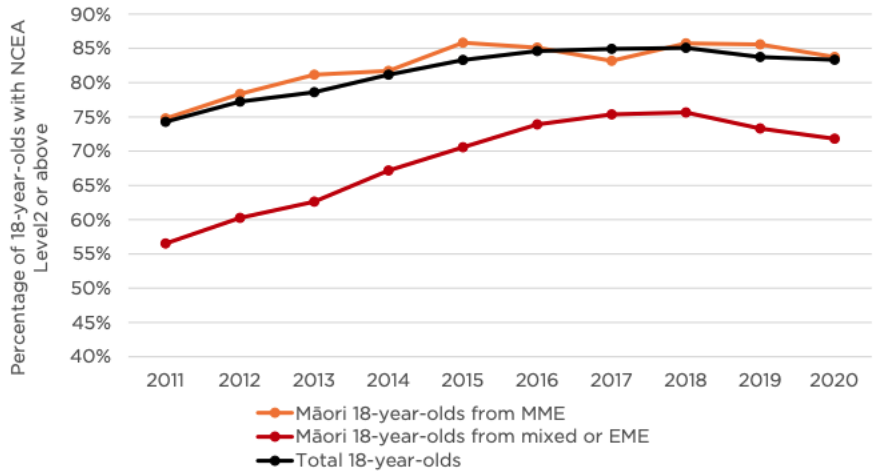
The success of Māori-medium education was highlighted in a report provided to the Government by the Education Review Office in 2021 (Education Review Office, 2021). The report found that in Māori-medium schools across the country, teachers

and support staff create close relationships with students and whānau and the principle of whanaungatanga (the connectedness of people) creates safe and nurturing environments where students feel a strong sense of belonging. They also found that Māori-medium schools consistently give "…absolute attention to the wider focus on the emotional, physical, spiritual and intellectual wellbeing" of students (Education Review Office, 2021, p. 28). Overall, they found that:

> Ultimately, Te Kōhanga Reo, Kura Kaupapa Māori and Ngā Kura ā Iwi provide models of excellence for Māori education, and offer exemplars for supporting Māori learners to enjoy and achieve education success as Māori, in Māori-medium settings … The influence of the Māori world view is paramount and remains at the core of successful Māori-medium provision. There are philosophical differences which portray nuances across the Māori-medium paradigm, but nevertheless a constant remains steady across the sector: expressing and prioritising te ao Māori, te reo Māori, tikanga Māori and Mātauranga Māori. (2021, p. 12)

In terms of formal schooling qualifications, Māori-medium students do better than Māori students in English-medium schooling. The National Certificate of Educational Achievement (NCEA) is the main national qualification for secondary school students in New Zealand. There are three levels of NCEA certificate. Generally, students work through Levels 1 to 3 in their 11th, 12th and 13th years of schooling. Māori-medium students who remain in Māori-medium education to secondary school level are more likely to achieve NCEA qualifications than Māori students in English-medium settings, who, in turn, achieve well below the total number of non-Māori student groups combined. For example, in 2020, 83.7% of Māori 18-year-olds from Māori-medium education attained NCEA Level 2 or above. This was 11.9% higher than attainment by Māori 18-year-olds learning in other media and 0.4% higher than attainment of all 18-year-olds (83.3% of all 18-year-olds attained NCEA Level 2 or above) (Education Counts, 2022). Currently it is not easy, however, to ascertain what subjects Māori-medium students are achieving NCEA in.

Figure 1*: Māori 18-year-olds in Māori-medium Education Attainment of NCEA Level 2 or Above* (Education Counts, 2022)



2.5 Māori-medium Challenges

Māori children can now grow up learning their indigenous language in school, and Māori-medium schooling has helped to bring the Māori language back from the brink of death as it was in the 1970s. Statistics gathered in 2018 (Statistics New Zealand, 2020) showed that just under half of Māori people described themselves as having some Māori language ability. Those aged between 15 to 24 years and over 55 years were most likely to indicate they could speak the Māori language at least fairly well, although, as Keegan (Keegan, 2003) cautions, these types of self-assessment judgements are problematic as they are not based on consistent or explicit measures. While those over 55 years of age will include the last of the generation who grew up speaking the Māori language in their homes, the high proportion of younger people who are able to speak te reo Māori reflects the emergence of Māori-medium education over the past four decades.

Māori-medium education is helping to regenerate the Māori language. However, it still faces challenges and is yet to reach its full potential. Māori-medium students are expected to learn the curriculum through their second or less-developed language. While a number of children begin their schooling having had some early learning experiences in the Māori language during pre-school years, English is often their more proficient language (Berryman et al., 2001; Hohepa, 2008; Rau, 2005). Compounding this, outside school there remain few opportunities to hear or speak the language, as it is not highly valued in society more widely (Higgins & Poia, 2014; Higgins et al., 2014).

Māori-medium teachers are also predominantly second-language users of te reo Māori (Hohepa, 2008; Kane, 2005; May et al., 2004; Murphy et al., 2008) and have not always received adequate pre- or in-service education in bi-lingual or second-language pedagogies (Education Review Office, 2000; Hohepa et al., 2014; Kane, 2005; May & Hill, 2005; Murphy et al., 2008; Skerrett, 2011). Therefore, they are charged with developing their students' language and curriculum achievement at the same time, without knowledge of the specialist approaches or the language proficiency required to meet this challenge. Limited research into effective Māori-medium pedagogies compounds this problem further.

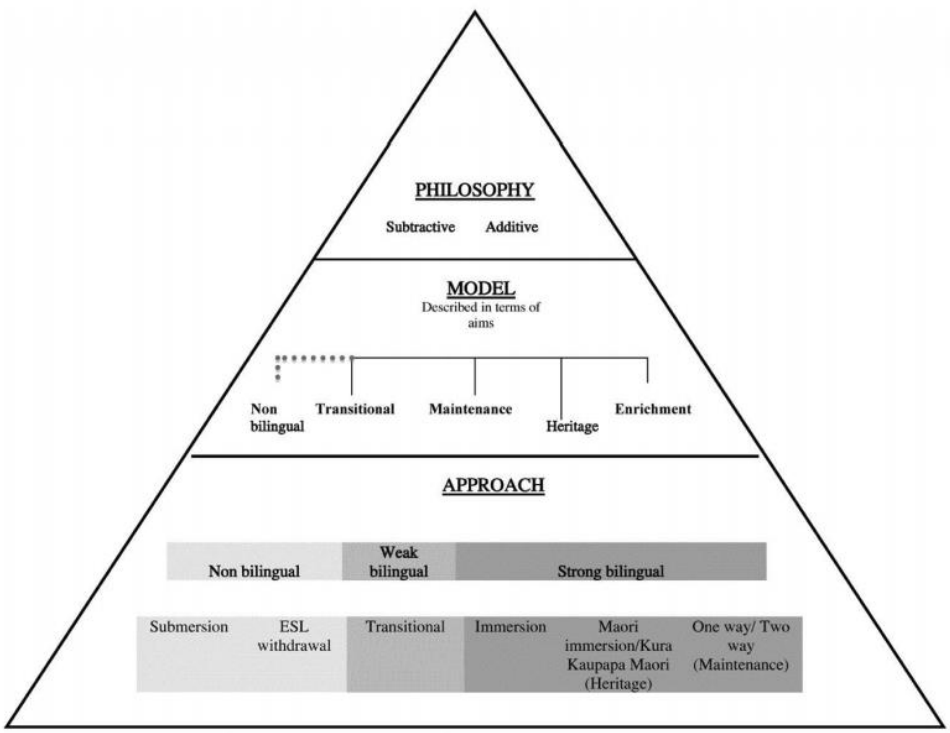
The challenges and implications associated with Māori-medium students' language and curriculum achievement are discussed in more depth later in this chapter as they underpin the aims of this research. However, it is useful to first understand how Māori-medium education fits with bi-lingual education programmes across the world in order to understand contextual differences and how these impact pedagogical approaches to language and curriculum acquisition. These contextual differences account for why particular pedagogical approaches may be effective in one bi-lingual education context and not another, and why Māori-medium educators, must develop and test our own approaches for our own unique context.

2.6 Bi-lingual Education Typologies

Over the years, a range of typologies have been devised to map the varying aims and characteristics of bi-lingual education programmes and aid in programme planning (Baker, 2006; Cummins, 2003; Fishman & Lovas, 1970). Some typologies, such as those of Skutnabb-Kangas (1981, 2000), and Baker and Wright (2017), highlight three major demarcations: strong (those that maintain the home language and lead to bi-lingualism); weak (those that use the minority language only enough to transition students to mono-lingualism; and non-bi-lingual programmes (those that exclude the home language altogether in favour of the dominant one). Mackey's (1970) multi-cell typology goes further and breaks these types of high-level demarcations down further with 90 distinctions in terms of language use in the school, home, community, and country. Hornberger's (1991) two-level typology divides bi-lingual education into three main models: transitional, maintenance, and enrichment. This is the typology that May and Hill (Hill, 2010; May, 2010, 2017) modified to reflect the Aotearoa /

New Zealand situation as it relates to wider international trends. In particular, they added the heritage model to specify the increasingly observable situation that marginalised indigenous groups find themselves in with regard to language and cultural loss. May and Hill's Pyramid Model (May, 2017) is shown in Figure 2.

Figure 2: *The May and Hill Typology* (May, 2017)



The pyramid diagram includes three levels pertaining to philosophy, the model, and the approach. Each are explained below.

2.7 Philosophy

At the top level is the subtractive and additive demarcation depending on the overall philosophical perceptions towards the student and their languages within the school and wider community. In subtractive programmes, English language is the central focus. The students' native languages are not considered to have high value. If they are included in curriculum instruction at all, it is only to the extent they are needed to support the students' transition to full English instruction. Subtractive programmes do not lead to bi-lingualism, in fact they often lead to students losing their native language (Cummins, 2010). As well as language loss, students in these programmes

rarely attain the levels of academic language proficiency in the dominant language required to access the higher levels of the curriculum and reach their full academic potential (Baker & Wright, 2017; Cummins, 1979, 2000a, 2008; Thomas & Collier, 1997, 2002).

Additive bi-lingual education programmes, on the other hand, are driven by a philosophy that values the students' home or native language. Additive programmes aim to develop or maintain students' competency in two languages (or more), and they are more effective than subtractive ones for developing bi-lingualism as well as students' academic achievement (Baker & Wright, 2017; Flores & Beardsmore, 2015; Hornberger, 1991; May, 2017; Mwaniki et al., 2017).

2.8 Models

The second level of the May and Hill typology describes particular models. This level is concerned with programme aims. Importantly, at this level consideration is given to the language characteristics of the students and the community. At one end of the continuum are the programmes that offer little or no support for the home or native language. These programmes aim to transition minority language students to mono-lingualism in the majority language and, as such, are considered weak or non-bi-lingual programmes.

Maintenance models, by contrast, are designed to maintain and develop a student's minority language, usually to academic proficiency, while also developing competency in the majority language over time. Maintenance models also aim to "strengthen the student's sense of cultural and linguistic identity, and affirm their individual and collective ethnolinguistic rights" (May, 2017, p. 85).

Enrichment models are associated with teaching a minority, high-status target language to students whose first language is the majority language. The aim is to maintain the target language because it is valued in the wider society. The resulting bi-lingualism confers a particular social status to the student. Amongst the first enrichment programmes, and perhaps the best known, are the French immersion models in Canada (Baker & Wright, 2017; J. Clark, 2012; Fishman, 1976; Hermanto et al., 2012), where many of the students come from English-speaking, middle-class homes. Other examples are the Welsh-medium models, which also include many

middle-class students whose first language is English.

Some Welsh-medium models may also be classified as heritage models, according to May and Hills definition (Hill, 2010; May & Hill, 2005). Heritage models are designed for indigenous students who are often learning their heritage language as a second language. This is usually the result of language and cultural marginalisation experienced through the process of colonisation (May, 2017). This is where Māori-medium programmes sit. Other examples include: Gaelscoileanna (Irish-medium schools outside of the Gaeltacht areas of Ireland) (McAdory & Janmaat, 2015); Navajo (Holm & Holm, 1995) and Hualapai (Watahomigie & McCarty, 1994) in the USA; Inuit in Nunavut, Canada (Tulloch et al., 2016); Quechua/Quichua language education programmes in Bolivia, Ecuador, and Peru; and Sámi language education in Norway (Baker, 2011; Hinton & Hale, 2001; Hornberger, 2008; May, 2017; May & Hill, 2005).

2.9 Approach

The third level of the May and Hill typology concerns pedagogical approaches of programmes, including the treatment of languages. At this level, Skutnabb-Kangas' (1981, 2000) three-level demarcation is seen. Strong bi-lingual programmes, such as immersion, and one-way and two-way, include at least 50% target language instruction. Language instruction is apportioned on a 50:50 or 90:10 basis or anywhere in between. The 50:50 programmes will typically divide instruction equally across the two languages with 50% in the minority and 50% in the majority language. The 90:10 programmes will initially weight instruction toward the target language, using high immersion, followed by a gradual introduction of the majority language until both languages are equally divided.

Māori-medium Level 1 programmes use the immersion principle for at least the first four to eight years, typically providing 100% instruction in the Māori language at first (immersion Level 1 programmes). Some programmes, not all, may then introduce around four hours per week of English lessons (Hill, 2010, 2011, 2016, 2020).

English and Māori languages have traditionally been strictly separated by time and place in Māori-medium programmes, with many programmes insisting only the Māori language be spoken by students and staff on the school grounds. This policy has

grown out of a fear that, without strict language separation, students would default at will to their first language (English), undermining their acquisition of the Māori language. However, this policy of strict language separation is beginning to be questioned (Hill, 2010, 2011, 2016, 2020; Hill & May, 2013) as evidence is emerging that immersion students' bi-lingual and bi-literacy achievement can be supported through language mixing approaches, with well-known evidence coming from Welsh immersion settings (Williams, 2002). Although Māori-medium students have also been shown to benefit from language mixing (Lowman et al., 2007; Tamati, 2016) these approaches are not currently widely accepted in Māori-medium classrooms.

Overall, immersion programmes have proven to be a successful approach for developing students' bi-lingualism and their academic achievement simultaneously (Cummins, 2010; Swain & Lapkin, 2013; Tardif, 1985; Tedick & Fortune, 2013). However, this is not always the case as students sometimes fail to develop the types of language they require to progress through the higher levels of the school curriculum, as has been found in some French immersion classrooms for example (Bourgoin & Le Bouthillier, 2021).

Students' under-developed language proficiency has been seen in Māori-medium classrooms too (Edmonds et al., 2013; Keegan, 2003; McNaughton et al., 1987). It is this challenge that the current study sought to address. To explain the situation more fully, the following section discusses the different types of language that bi-lingual students must learn in order to succeed at school. I then explain what is known about Māori-medium students' language acquisition, including the particular aspects of language that need more support. Following that, I discuss the approach I took in this study to address those language needs.

2.10 Conversational Language and Academic Language

Cummins (2008) highlights the difference between conversational and academic language knowledge to draw our attention to the nuances inherent in children's development of bi-lingualism. He refers to conversational language (also known as social language) as Basic Interpersonal Communication Skills (BICS). BICS is the simplest language register to acquire. It relates to language associated with themes, objects and happenings in the immediate environment. The topics of conversation are

embedded in the context, and communication is aided by visual cues, gestures, facial expressions, and shared knowledge of the topic. As such, the language register required to convey meaning can involve less complex grammatical, syntactical, and lexical (vocabulary) forms than the formal language required for learning at school. For second-language learners in many contexts, social language acquisition often takes between one to two years to develop (Cummins, 2000b). This is also the case in the Māori-medium context where students' communicative language has been seen to develop rapidly in the first three years of schooling (Edmonds et al., 2013).

On the other hand, academic language, also known as Cognitive Academic Language Proficiency (CALP) (Cummins, 2000a), refers to school-related registers that include subject-specific language and ideas related to the curriculum (Cummins, 2000a; Gibbons, 2002, 2009; Gottlieb & Gisela, 2014). This is the type of language students need to access the curriculum and succeed academically. As the ideas and content associated with the curriculum become increasingly more sophisticated, academic language moves from face-to-face oral interactions in junior classrooms to increasingly more complex and abstract oral and written language further up the schooling levels (Gottlieb & Gisela, 2014). At the higher curriculum levels, students must learn to use explicit written and spoken language for a range of functions including to report, analyse, generalise, synthesise, elaborate, infer, persuade, and explain to audiences who do not necessarily have shared understandings of the context or content (Cummins, 1979; Gibbons, 2009). They need advanced language abilities to be able to contribute to the evolution of knowledge by: synthesising what is learnt and shared; challenging theories, ideas and current practices; and developing new ways of using language in increasingly advanced literacy contexts across a range of curriculum subjects. Importantly, "developing new ways of using language also leads to new ways of thinking and new forms of consciousness in students. Constructing new contexts through advanced literacy tasks, using language in new ways, means seeing the world in new ways" (Schleppegrell & Colombi, 2002, p. 10).

Researchers have found it takes between eight and ten years to develop academic language proficiency in a second language (Baker & Wright, 2017), and there is evidence that those who have academic proficiency in two or more languages have particular cognitive advantages over mono-linguals (Bialystok, 2001; Cummins,

2000a; Mohanty, 1994). For example bi-linguals with high levels of language proficiency in both languages have been found to "reach a deeper level of information processing which leads to a greater metalinguistic awareness and a greater degree of verbal creativity" (Hamers & Blanc, 2000).

However, bi-linguals do not always reach the levels of bi-lingualism required to gain cognitive advantages, and they can even be cognitively disadvantaged depending on their levels of bi-lingualism. This idea is explained by Cummins' (1976) Threshold Hypothesis. The Hypothesis describes children's bi-lingual development and related cognitive consequences in terms of a three-storey house. Each floor, or threshold, represents the child's level of proficiency in each language.

At level one, the first floor, the child is regarded as semi-lingual. Neither of their languages are sufficiently developed to age-appropriate competency. If an individual remains semi-lingual they will experience negative cognitive effects.

At the second level, the middle floor, the child's first language is developed to an age-appropriate level while their second language is less developed. If the child is able to operate competently in the classroom and access the curriculum in their more developed language, there are no associated negative cognitive effects for the child.

At the third level, the top floor, are the children who are termed 'balanced bi-linguals'. At this level they have academic proficiency in both languages, so they are able to cope with curriculum learning in either. It is at this level that individuals can experience the cognitive advantages of bi-lingualism described earlier.

The Threshold Hypothesis highlights important implications for Māori-medium students. These students are often learning the curriculum through their least-developed language, and there is no valid and reliable national data collected on their language or curriculum achievement at any level of primary schooling. This means we cannot say with certainty which threshold level they are achieving at. However, there is evidence that they are not reaching the levels of academic language proficiency they need to fully engage with the higher levels of the Māori-medium curriculum or to develop the types of higher-level thinking skills discussed above. The following section discusses what is known about Māori-medium students'

academic language acquisition, before I discuss the implications and outline my approach in this study to addressing the related challenges.

2.11 Māori-medium Student's Māori Language Acquisition

A Māori child growing up in Aotearoa / New Zealand and attending a Māori-medium programme is likely to be learning the curriculum through Māori as their second language. While there may be some whānau (family) at home who speak varying degrees of Māori, the teacher will often be the most significant Māori language model in the child's life.

This means children may enter school with a range of language abilities: from those who are strong in both Māori and English; to those who have limited control over either language (Berryman et al., 2001; McNaughton et al., 2006). Addressing this patchwork of language competencies and needs at school requires a lot of input and specialised skill by teachers. However, the rapid growth of Māori-medium schooling has outstripped related pedagogical research, and the development of teacher education programmes needed to support it lags behind. As a result, teachers have not always had access to educational or professional development in second-language pedagogies, which is needed to meet the challenge of developing students' language and curriculum achievement at the same time (Hohepa et al., 2014; Murphy et al., 2008; Skerrett, 2011). Instead, they often rely on the students learning the language by osmosis, based on the assumption that the first language is learnt predominantly through exposure rather than explicit instruction.

However, this naturalistic approach to language teaching and learning is proving problematic, with a number of researchers having identified that, as second-language learners, many Māori-medium students "rapidly reach a stage where the amount of Māori language they are hearing and using is insufficient to continue expanding their vocabulary knowledge and fluency" (Glynn, Berryman, & Weiss, 2005, p. 4). Edmonds et al. (2013) developed Kaiaka Reo, the first norm-referenced assessment and proficiency scale to measure Māori-medium students' communicative language proficiency. (This is still awaiting further development by the Ministry of Education for use in schools). The researchers tested the reliability and validity of the proficiency scale by analysing language samples from 270 Year 1 to 8 students from

15 Māori-medium classrooms. They found that, while students' language had developed rapidly in the first three years of Māori-medium schooling, it slowed thereafter. The researchers noted that students' overall low language performance was a "major concern to the research team" (Edmonds et al., 2013, p. 117).

As well as students' general communicative ability, students' academic language ability related to the curriculum more specifically has also been raised as a concern (McNaughton et al., 2006) (Glynn, Berryman, & Weiss, 2005; Keegan, 2003; McNaughton et al., 2006). For example, Keegan (2003) studied the Māori vocabulary knowledge of 109 Year 6 students in Māori-medium classrooms from 12 schools across the North Island. Students were required to complete communicative and academic activities in the classroom, including measures of vocabulary size, reading comprehension, listening comprehension, and writing and mathematical knowledge. Keegan (2003) found that:

> Although there were problems in defining what represented an adequate vocabulary knowledge in the context of Māori-medium education, it was found that most of the students had sufficient knowledge to complete the tasks. However, it appeared that some students had difficulty with contemporary or technical terms, many of which are not yet established in the lexicon. (2003, p. ii)

In particular, Keegan (2003) found that in students' mathematics discourse there were many examples of calquing (literal translation), and that the presence of English terms in their writing suggested that they sometimes had difficulty with technical or contemporary words required for curriculum learning. He highlighted the need for further expansion and standardisation of the Māori lexicon in relation to the curriculum to "ensure schools have a long-term impact on both the revitalisation of the language and enhanced education achievement by Māori students" (Keegan, 2003).

In their Tuhi Mai Tuhi Atu study (Glynn et al., 2000), researchers successfully trialled responsive written feedback pedagogies with 24 students from two Māori-medium classrooms to raise their writing achievement. In the study, able writers (seven boys and five girls) aged from 8 to 11 years old were paired with less able writers (six boys

and six girls) aged from 7 to 9 years old. The able writers were trained to support the less able writers with responsive written feedback, which they provided over 12 weeks. As a result of the study both able and less able groups improved the rate and quality of their writing. Both groups also improved their ratings for audience impact and Māori-language quality.

McNaughton et al. (2006) studied five Māori-medium teachers' instructional approaches to literacy in Year 0 to 1 classrooms. The Māori-medium sites chosen for the study were known to reflect current best practice in literacy teaching (although the basis on which this judgement was made is unclear). The researchers found that there were generally low rates of extended or elaborated teacher talk across the literacy activities, and this was a potential limiting factor in the development of students' complex language forms. They cautioned that "While language components including words may be being learnt very well, and new words are being acquired, complex language forms may be lagging behind (McNaughton et al., 2006, p. 51).

Although limited in number, the above studies show that there are barriers to Māori-medium students reaching the levels of academic oral language competency they need to progress through the curriculum and develop their higher-order thinking skills at the higher levels of primary schooling. However, it is not possible to be any more specific about Māori-medium students' oral language achievement across their schooling as, to date, no oral language assessment tools or progressions have been developed to measure or support students' oral language achievement, and the Ministry of Education is, therefore, not able to collect related data.

The issue of students' under-developed oral language ability reflects where we are at in Māori-medium education, as a colonised country trying to rebuild our indigenous language and culture. As well as the intergenerational disruption to language transmission, the Māori language is seldom required for communication in mainstream society. We therefore have a situation where it is particularly challenging trying to develop students' motivation to learn the language when they seldom experience a need to learn and use it outside of the classroom. As researchers have found (Holec, 1981, 2009), language learning happens best when the learners are motivated to take ownership and drive their own language learning through a real life need to use it, for example making friends, and having basic needs met.

To meet the challenge of facilitating students' language and curriculum achievement in these extraordinary circumstances teachers require specialised pedagogical knowledge and skills. However, Māori-medium education has developed more rapidly than initial and in-service Māori-medium teacher education programmes (Murphy et al., 2008; Skerrett, 2011) or the research needed to inform them, and, as discussed above, we still await oral language assessment tools and progression guides to measure and guide language teaching and learning.

This study is a response to the academic language needs of Māori-medium students. The research was designed to help inform pedagogical approaches that can address students' academic oral language and their literacy learning at the higher end of primary school. The following section explains why I chose writing as the particular curriculum area in which to trial pedagogies for improving students' academic language and literacy acquisition.

2.12 The of Role of Writing in Academic Language Development

Written language is particularly important for Māori-medium students whose only language models are often their teachers and peers, many of whom are often still developing their own language proficiency. Written language and oral language are mutually-facilitative (Baker, 2001; Fishman, 1991; Glynn, Berryman, & Weiss, 2005; Harklau, 2002; Hohepa, 1999, 2008; Lee, 2017; McNaughton et al., 2006). This relationship is explicitly recognised in Te Reo Matatini (the many faces of language), the Māori-medium view of literacy that encompasses many forms of language including, but not limited to, both written and oral forms (Ministry of Education, 2007, 2008a, 2008c, 2011).Written texts can provide rich sources of language input and limitless opportunities for output (Glynn, Berryman, & Weiss, 2005; Hohepa, 2008; Smith, 1995; Tangere, 1997; Williams, 2011), both of which are requisites for second-language development (Ellis & Shintani, 2014; Ellis & Wells, 1980; Krashen, 1994; Perrot, 1988; Shehadeh, 1999). Written language also promotes extended opportunities for students to practise and revise their second-language production and to demonstrate their understanding of curriculum content (Harklau, 2002; Ortega, 2012; Williams, 2012).

While it appears literacy skills are being supported and learnt effectively in the early primary years of Māori-medium schooling (Berryman, 2012; Berryman & Rau, 2003; McNaughton et al., 2006; Rau, 1998, 2005), very little is known about students' literacy achievement at the higher end of primary schooling (McNaughton et al., 2006). This situation is related to the absence of standardised literacy assessments that have been tested for reliability and validity beyond the early years of Māori-medium schooling, as well as Māori-medium teachers' reluctance to engage with Ministry assessment tools that may not be seen as conducive to the Māori-medium kaupapa (aims).

There have been limited research studies designed to support the development of literacy after early reading and writing skills have been learnt. Amongst the small number designed to support literacy in middle to late primary years were: the Whakawhānui te Hinengaro study, which focused on the development of teacher practice to improve students' reading comprehension (Hohepa, 2008; Williams, 2011); and the Tatari Tautoko Tauawhi study (Glynn et al., 1993), which involved teaching students who were able readers peer tutoring techniques so that they could support less able students to develop their reading accuracy. However, writing has received even less attention in Māori-medium research with the Tuhi Atu Tuhi Mai research project discussed earlier being one of the few recorded (Glynn et al., 2000).

My own previous Master's study (Shandley, 2014), discussed earlier, also focused on raising students' academic language proficiency and writing achievement at the higher end of primary school. It was amongst the first to test self and peer assessment strategies for raising Māori-medium students' academic language and tuhituhi (writing) achievement simultaneously. The study revealed that, when Māori-medium students participated in self and peer assessment practices in their writing programme, their academic oral language improved, and their writing achievement accelerated significantly beyond what was normally expected in a Māori-medium programme in 20 weeks.

This PhD study builds on my Master's study by introducing self and peer assessment pedagogies into students' writing programmes in three separate kura kaupapa Māori. The following section discusses the self and peer assessment approaches trialled in this study and their theoretical underpinnings for language and literacy development.

2.13 The Role of Self and Peer Assessment in Language and Literacy Achievement

In this study I wanted to test ways to develop Māori-medium students' academic oral language and their literacy achievement at the higher end of primary school. I believed that, if students were supported to engage in self and peer assessment practices in the context of their writing learning in particular, they would develop their academic oral language and their writing achievement simultaneously. The following section begins by defining self and peer assessment practices, and summarising what is known about their effectiveness for accelerating students' curriculum learning across numerous schooling contexts including second-language students' writing learning specifically. Next, I discuss the theoretical underpinnings of self and peer assessment pedagogies as an effective approach for second-language students' oral language development and explain why I believed those practices could improve students' writing achievement and their academic oral language development at the same time. Finally, I explain how self and peer assessment aligns with Māori perspectives on teaching and learning, and why this is an important requisite for any intervention in Māori-medium education contexts.

Self and peer assessment refers to the practice of students evaluating their own and each other's progress and achievement against specified goals and criteria (Black & Wiliam, 1998b; Luoma, 2013; Topping, 2009; Wong & Mak, 2019). In self and peer assessment activities, students have to: understand the criteria or standards that will be used to assess their learning; question and make judgements about their own and their peers' work in relation to the criteria; explain their judgements to their peers; and use feedback from each other to work out their next learning steps. These skills are related to the development of metacognition.

Put simply, metacognition involves thinking about one's thinking (Flavel, 1979; Haukas, 2018). It refers to the cognitive processes used to plan, monitor, and assess one's understandings. For example, if a student can explain their strengths and gaps in language learning, academic writing, or any other academic tasks, then they are metacognitively aware. The improvement in students' metacognition that results from self and peer assessment practices has been shown to improve their ownership of their learning (student agency) and motivation to continue learning, both of which are

known to improve achievement (Black & Wiliam, 1998a, 1998b, 2009; Deakin-Crick et al., 2005; Fontana & Fernandes, 1994; Holec, 1981, 2009; Lee, 2017; Liu & Hansen, 2013).

Black and Wiliam (1998a, 1998b, 2009) highlighted the positive effects of self and peer assessment on students' metacognitive skills and learning in their meta-analysis of numerous studies on effective teaching practices. The analysis included studies from across the globe. It involved learning contexts from elementary to tertiary levels and spanned a range of curriculum subjects. The study highlighted a number of practices that improve learning, and employed together these are known as Formative Assessment practices or Assessment for Learning practices. Amongst these practices the study found that, when students assess their own work, they understand their learning better, become owners of their own learning, and their achievement improves. They also found that, when students assess their peers' work, the peers' work improves, and, as the assessor better internalises the criteria he/she is assessing against, this, in turn, improves their own work.

While much of the literature I was able to access focuses on learning in English medium contexts, there is evidence of the effectiveness of self and peer assessment practices across other languages. For example, Fontana and Fernandes' (1994) study involved training 25 Portuguese teachers in self-assessment methods, which they put into practice with 246 students, aged 8 to 14, in their mathematics programmes. They found that the students involved in the self and peer assessment practices had a mean gain in their mathematics achievement that was twice that of students in the control group who were not involved in self-assessment.

In second-language classrooms, self-assessment in the second-language writing context has been relatively unexplored (Wong & Mak, 2019). However, peer assessment practices have been studied widely and have been shown to promote English as a second language (ESL) students' second-language acquisition as well as their writing ability (de Guerrero & Villamil, 2000; Foster & Synder Ohta, 2005; Lee, 2017; Liu & Hansen, 2013; Spielman Davidson, 2000). Further, ESL students who have participated in peer assessment activities in second-language writing programmes have been shown to make better gains in their capacity to conduct self-assessment, as well as their writing and metacognitive development, when compared

to students who have not participated in peer response activities in the same programmes (Lee, 2017; Liu & Hansen, 2013). Through peer assessment or feedback, writers have also been shown to build audience awareness and develop understanding of readers' expectations of good writing including content, language, organisation, and genre (Lee, 2017).

The effectiveness of self and peer assessment for learning is underpinned by Sociocultural Theory (Vygotsky, 1978). Vygotsky's Theory posits that learning takes place when an expert interacts with a novice to enable the novice to perform a task that they would be incapable of performing independently. Vygotsky termed the gap between the novice's actual development level and their potential development level (with assistance from an expert or other scaffold) as the Zone of Proximal Development (ZPD). He concluded that learning takes place in social interactions where novices are scaffolded to acquire new skills within their ZPD. Lee (2017) advises, within the ZPD, second-language students can benefit from peer feedback as it develops their capacity to be more reflective and to assess their own work, which supports them to become self-regulated learners.

Based on what is known about self and peer assessment for the development of learning, as discussed above, I theorised in this study that the practice of self and peer assessment could raise Māori-medium students' literacy achievement if applied in their writing programme. I also theorised that the practice would provide the conditions necessary for Māori-medium students' academic oral language development at the same time. I believed this would be the case because self and peer assessment practices reflect the Task Based Language Teaching (TBLT) approach that is advocated for second-language acquisition in the classroom (and beyond). Self and peer assessment as a TBLT approach is discussed briefly below.

2.14 Self and Peer Assessment: A Task Based Language Teaching Approach

Self and peer assessment pedagogies reflect Task Based Language Teaching (TBLT) approaches that are advocated for teaching a second language (Ellis, 2000, 2009; Ellis & Shintani, 2014; Gibbons, 2002, 2009). TBLT is a version of the communicative instructional approaches that emerged in the 1970s, emanating from social theories of human development and learning that emphasise the importance of social interactions

for learning (Ellis & Shintani, 2014; Gibbons, 2002, 2006, 2009). Prominent amongst these was Vygotsky's Sociocultural Theory discussed earlier, that includes the notion of ZPD. The ZPD Theory was reformulated for second-language learning by Ohta (1995, 2001) to include "the distance between the actual developmental level as determined by individual's linguistic production, and the level of potential development as determined through language produced collaboratively with a teacher or peer" (Ohta, 2001, p. 9). Flowing from Sociocultural Theory is the Interaction Theory associated with second-language acquisition in particular (Ellis, 2008, 2009; Krashen, 1988; Long, 1996, 2015; Swain, 1997; Swain et al., 2002). The Interaction Theory posits that learners acquire the target language through communicative interactions with others. During conversational interactions, learners hear more input and produce more output than is possible when they passively listen to teachers speaking, for example.

Accordingly, Task Based Language Learning originally related to the learning of a second language through engaging in meaningful communicative tasks in real life situations (Ellis, 2000, 2009; Long, 2015; Long & Crookes, 1991; Nunan, 2004; Prabhu, 1987). Communicative tasks designed specifically for the classroom soon followed and became known as pedagogical tasks (Nunan, 2004). Well-planned pedagogical tasks motivate students to focus more on using the target language communicatively to produce the task outcomes than on the language forms themselves, as in traditional grammatical exercises, for example.

There are a range of TBLT methods that can be designed to develop students' language and curriculum achievement, depending on the desired outcomes (Ellis & Shintani, 2014; Gibbons, 2002, 2006, 2009). According to Ellis & Shintani (2014) TBLT activities need to meet four criteria: there must be a primary focus on *meaning*; there needs to be a problem or *gap* that students are required to work out; students must be able to *rely largely on their own linguistic and non-linguistic (knowledge of the context) resources;* and the task must have *a clearly-defined outcome.* On the basis of these criteria, I theorised that self and peer assessment activities share the core characteristics of TBLT required for second-language learning. In the subsections below I share examples of the links I have identified between the TBLT criteria and self and peer assessment pedagogies.

2.14.1 Meaning

TBLT involves engaging learners in tasks where they are focused on creating pragmatic meaning. This increases intrinsic motivation and supports learners to view language as a tool for communicating and themselves as communicators of the target language, rather than learners of it (Ellis & Shintani, 2014; Long, 1996; Prabhu, 1987). Accordingly, self and peer assessment activities concern students with the meaningful purpose of assessing their own and each other's learning. This is a particularly meaningful purpose for students as it relates directly to their own progress and achievement, and, as discussed earlier, the practice has already been shown to increase students' motivation to drive their own learning (Liu & Lee, 2015; Liu & Hansen, 2013; Oxford, 2016).

2.14.2 Creating a Gap

TBLT activities must also include some kind of gap that creates a need to convey information, express opinion, or infer meanings. When self and peer assessing their work according to predetermined criteria, students are required to exchange opinions, problem solve when they do not agree, and negotiate to make decisions about current achievement and next learning steps. This need to synthesise information and deduce and communicate new facts provides the type of gap Prabhu (1987) defines as a reasoning-gap. He argues that reasoning-gap tasks are more likely to result in sustained engagement with meaning than opinion gaps (such as sharing opinions about where to place desks in a classroom), or informational gaps (for example, battle ships or spot the difference tasks) (Gibbons, 2002, 2006).

2.14.3 Students' Linguistic and Non-linguistic Resources

The third criteria for TBLT is that learners should be able to rely largely on their own linguistic and non-linguistic (knowledge of the context) resources in order to complete the task (Ellis & Shintani, 2014). They need to be able to complete the task without getting stuck in the absence of the teacher. In the case of self and peer assessment activities, students own learning artifacts provide a familiar context for their conversations. In my previous study (Shandley, 2014), students were able to engage in self and peer assessment conversations about their writing achievement without the need for constant support from the teacher, through the support of written

language scaffolds (Anga Putanga Ako and Kāri Matapaki). I theorised that these scaffolds would also support students to complete the self and peer assessment tasks independently of the teacher in the current study.

2.14.4 Clearly Defined Outcomes

The final requisite for TBLT is that there must be a clearly defined outcome apart from the language use itself, so that students are less concerned with using the language correctly than they are with achieving the goal of the task (Ellis & Shintani, 2014). In self and peer assessment activities, students have a clear goal of deciding where they are achieving in relation to the relevant curriculum levels and specific outcomes and related criteria, and what their next learning goals are. The outcome, in this case, is particularly motivating for students as they strive to improve their achievement.

This section has discussed the pedagogies I chose to test in order to raise Māori-medium students' language and literacy achievement in the current study. I believed that self and peer assessment pedagogies would increase students' metacognitive knowledge, particularly their knowledge of what they needed to learn to improve their writing achievement. As a result, I believed that their motivation to achieve would improve and that they would become drivers of their own learning, resulting in improved achievement outcomes. I further theorised that students' self and peer assessment conversations, supported with Anga Putanga Ako and Kāri Matapaki, would provide the conditions necessary to improve their academic oral language development. While my theorising was underpinned by my knowledge of the curriculum and second-language learning theories, discussed above, I also understood that the self and peer assessment approach is conducive to Māori philosophies and approaches to teaching and learning, which are discussed below.

2.15 Ako: Self and Peer Assessment as a Māori Pedagogical Approach

At the forefront of my theorising in this study was the knowledge that the self and peer assessment pedagogies I wanted to trial are conducive to Māori perspectives on teaching and learning. This is an important consideration for any intervention in Māori-medium classrooms if the approaches being introduced are to be trusted and adopted by teachers and students. As researchers advise, "it is critical that educators

value and employ the appropriate tikanga (cultural practices) for the language being learnt, because of the interdependence of language learning and cultural learning*"* (Glynn, Berryman, Loader, et al., 2005, p. 435).

Māori perspectives on teaching and learning are encompassed by the concept of Ako (Ministry of Education, 2014; Pere, 1997; Pihama et al., 2004). Like Sociocultural Theory, Ako is underpinned by the belief that knowledge and meaning are socially constructed, and it acknowledges that all people, including whānau (family), students, and teachers, bring knowledge to learning and interactions from which all are able to learn. Learning is grounded in the principle of reciprocity where everyone is empowered to learn with and from each other (Keown et al., 2005), thus, Ako is inextricably relational.

2.15.1.1 Mana Mokopuna

An overarching principle of Ako is the principle of mana mokopuna (the sacred potential of all children) that expounds:

> when learning is tailored for and with mokopuna, based on who they are, their interests, and their needs, they can participate more fully in learning. In addition, education that values who they are, also values their natural talents and inclinations, and does not just see them as empty vessels to be filled up. The principle of Mana Mokopuna should be evident in all aspects of the kura, including the physical, emotional, cognitive and social domains. (Ministry of Education, 2014, p. 23)

Part of supporting mana mokopuna involves: making learning explicit to ākonga (learners); ensuring there is a focus on deep learning and understanding; ākonga being actively involved in their learning; and ākonga developing rangatiratanga (increased autonomy) over their learning. I have theorised that all of these aims are supported through self and peer assessment practices.

2.15.2 Aromatawai

The principle of mana mokopuna flows into Māori beliefs around assessment encompassed by the term aromatawai. Aromatawai is made up of two words: aro, 'to take notice of'; and matawai, 'to examine'. Aromatawai approaches to assessment

highlight the importance of teachers, students, and whānau using information from a wide range of sources to understand how well a student is learning and what further scaffolding they may require. An important part of aromatawai is students assessing and evaluating their own progress and achievement so that they are empowered to make decisions about their own next steps, thus reinforcing their own mana mokopuna.

Māori-medium experts agree that approaches to aromatawai in Māori-medium are still developing (Ministry of Education, 2014). I hoped in this study to inform that development by testing self and peer assessment as an assessment approach that can affirm and build mana mokopuna, by building on already established Māori-medium pedagogies known as tuākana-tēina approaches to support students to understand and drive their own learning.

2.15.2.1 Tuākana-tēina

Tuākana-tēina is a term co-opted from traditional Māori society to refer to particular teaching and learning approaches in Māori-medium classrooms where students help each other to learn. The term tuākana has been traditionally used in Māori society to refer to older siblings or relations, and people from older bloodlines. Tuākana are respected for their experience and knowledge, and Māori protocol deems it important that they have decision making authority over tēina (younger siblings or generations) in many matters, although this does not preclude the consultation and collaboration that underpins Māori consensus decision-making. Tuākana also have the responsibility to help nurture and support tēina (Ka'ai-Oldman, 2004).

In the classroom context, tuākana-tēina refers to more experienced learners (tuākana) supporting less experienced learners (tēina) with their learning (Pere, 1994). A student may be a tuākana or a tēina in one situation and reverse roles in another. The tuākana-tēina approach to teaching and learning recognises that, in such engagements, both parties learn. The practice ensures tuākana-tēina values are reinforced in the classroom, as they are in wider Māori society.

The tuākana-tēina approach underpinned the Tuhi Mai Tuhi Atu study (Glynn et al., 2000), discussed earlier, in which tuākana (more able writers) were trained to provide responsive written feedback to tēina (less able writers). As discussed, the tuākana,

aged from 8 to 11 years, were paired with tēina (six boys and six girls) aged from 7 to 9 years. Tuākana supported their tēina with responsive written feedback in their writing over 12 weeks. As a result of the study, both tuākana and tēina groups improved the rate and quality of their writing, and both groups also improved their ratings for audience impact and Māori language quality.

The tuākana-tēina approach also underpinned the Tatari Tautoko Tauawhi (TTT) study, discussed earlier, that was concerned with improving Māori immersion students' reading capabilities (Glynn et al., 1993). Seven tuākana (more able readers) from Maungatapu Primary School immersion classrooms were given three 20-minute training sessions where they learnt the Pause, Prompt, Praise reading support strategies previously found to be effective for supporting struggling readers in English-medium schools. Tuākana were then paired with seven tēina (less able readers) and the pairs were given two to three 10 to 15-minute sessions together per week for 10 weeks, during which tuākana tutored their tēina. Results from the study showed that, over the 10 weeks of the trial, tēina had increased their correct reading rate and slightly decreased their incorrect reading rate. They were also more able to self-correct their errors. Tuākana had also reduced their own incorrect reading rate.

In this study I theorised that students would alternate between tuākana and tēina roles during their self and peer assessment activities in their writing programme. They would give each other feedback on their achievement and progress and, thereby, grow their understanding of, and ownership for, their own learning, supporting and reinforcing their mana mokopuna.

2.16 Summary and Research Questions

By the 1960s, colonial efforts to eradicate the Māori language in Aotearoa had brought it to the brink of extinction. From the 1980s, Māori responded with the development of a distinctly indigenous Māori model of education provision that aimed to regenerate the Māori language and culture. The provision included a Māori-medium pathway through kōhanga reo, kura, and wharekura (Education Review Office, 2021). Today Māori-medium classrooms are amongst the most significant sites of language regeneration across Aotearoa.

Māori-medium education is providing culturally-safe learning environments for children across the country, and Māori-medium students are achieving academic success through Māori-medium pathways at much higher rates than Māori students in English-medium schooling. However, years of language marginalisation have resulted in significant challenges for Māori-medium teachers and students. Teachers are expected to navigate the patchwork of language proficiencies students present with on entry to school, and to educate those students in a language that is not normalised or valorised in mainstream society. They are expected to meet this challenge while, often, still developing their own language proficiency, and without always having had the education in second-language pedagogies required to meet the demands of immersion teaching. Further, no valid and reliable oral language assessment tools have been developed to inform Māori-medium teaching and learning or to measure students' language achievement. As a result, Māori-medium students are not always reaching the levels of Māori language proficiency they need to achieve across the curriculum at the higher ends of their primary schooling, or to develop their higher-order thinking.

This study sought to address that need. The study is built on the premise that the practice of self and peer assessment, which aligns with Māori pedagogical beliefs and second-language acquisition theories, can improve Māori-medium students' language and writing achievement simultaneously.

On this basis, my study involved the introduction of self and peer assessment practices into students' writing programmes across three different Māori-medium classrooms to answer the following questions:

1. What is the effect of self and peer assessment on students' academic oral language development in Māori-medium literacy programmes?
2. What is the effect of self and peer assessment on students' literacy achievement in Māori-medium literacy programmes?
3. How does implementing self and peer assessment practices in Māori-medium classrooms impact on teachers' pedagogical knowledge and teaching practice in relation to language and literacy?

The methodological approach I took in this study was grounded in kaupapa Māori theory. The study involved 24 students aged between 10 to 11 years old and three

teachers and was spread across three separate kura kaupapa Māori in the North Island. All three classrooms were Level 1 Māori-language immersion programmes. Mixed methods were employed to gather data including semi-structured interviews and summative reading and writing assessments. The following chapter outlines the methodology and methods in further detail.

Chapter 3: Methodology: Introduction

This chapter describes the research methodology and mixed methods employed in my study. Firstly, I discuss the Kaupapa Māori Research theory and principles that underpinned the research approach. Next, I discuss the study's design, beginning with an explanation of the mixed methods and why they were beneficial for this study. I then outline those methods more specifically including: the quantitative methods, which included standardised pānui and tuhituhi assessments; and the quantitative data methods, which included semi-structured interviews, journals, and classroom observations. Next, the three kura kaupapa Māori study sites are described, followed by the participants including 24 students and three teachers. The chapter ends with a detailed description of each phase of the study implementation.

3.1 Kaupapa Māori Research

This research study employed a Kaupapa Māori Research (KMR) approach. Kaupapa Māori is "the philosophy and practice of 'being Māori'. It assumes the taken-for-granted social, political, historical, intellectual and cultural legitimacy of Māori people" (Smith, 1992, p. 2). KMR is an indigenous approach to research that challenges the dominance of traditional approaches to researching Māori by placing Māori world views at the centre (Bishop, 2011; Irwin, 1994; Mead, 1997; Smith, 2005, 2012). KMR offers an alternative to traditional, positivist research methodologies that have positioned Māori as passive participants, with the researcher typically being from outside the Māori communities being studied. Historically, those approaches have been concerned with advancing the interests of the dominant culture and its imperialist agenda; they have positioned non-Māori as the experts in Māori matters, undervaluing, belittling, and misrepresenting Māori knowledge and lived experiences (Bishop, 2005; Pihama, 2010; Smith, 2012).

KMR, on the other hand, involves "a particular approach that sets out to make a positive difference for Māori, that incorporates a model of social change or transformation, that privileges Māori knowledge and ways of being …" (Smith, 2005, p. 90). Like Māori education, KMR aims fundamentally to support Māori tino rangatiratanga (Māori self-determination).

Some Māori researchers argue that KMR should only be conducted by Māori because insiders are better able than outsiders to conduct research that is sensitive and responsive to kaupapa Māori (Cleave, 1997; Smith, 2012). However, other researchers (Bishop, 2005, 2011; Hill, 2010; Smith, 2012) warn that it should not be assumed that Māori researchers are considered to be insiders by the communities in which they are researching, or that they will automatically conduct research in a culturally appropriate manner when researching those communities. Bishop (2011) further warns that insiders may be too close to ask critical questions, and that assuming homogeneity amongst Māori researchers is problematic given the diverse and complex characteristics of indigenous people's lives. Regardless of whether researchers are insiders or not, Bishop and Glynn (Bishop, 2005; Bishop & Glynn, 1999) suggest five principles to guide KMR: initiation, benefits, representation, legitimisation, and accountability. These principles support researchers and the participants to reflect on the locus of power throughout the research in order to promote the self-determination of the participants.

3.1.1 Initiation

The principle of initiation is fundamentally concerned with whose interests, concerns, and agendas have given rise to the work. It is concerned with ensuring research is generated from within Māori communities, rather than being imposed by the researcher. In KMR, both the researcher and research participants need to critically reflect on the research questions and the goals of the study, including who sets them and who constructs the approach.

Prior to this study, I already had strong relational trust with the three participating schools. I was an insider in two respects. I had whakapapa (genealogy) ties to the schools' communities, and I had previously supported the schools in my capacity as senior advisor for the Ministry of Education. This was an important requisite because, as Smith (2005) advises, ethical considerations in Kaupapa Māori Research, and indigenous research more generally, include the importance of relationships and relational trust. One of the participant teachers confirmed this importance partway through the study when he made the following entry in his reflection journal: "I believe that the open nature of our relationship was a blessing, as you were open to come and model the teaching approach…" (Komene).

Through my relationships in these schools, I had previously been involved in discussions with senior leaders about their desires to develop their students' Māori language capabilities. They had expressed an interest in my previous study of the same theme (Shandley, 2014) as a means to develop their students' literacy achievement with a particular emphasis on reo-ā-waha (oral language) development. These schools' interest in literacy development for their students as well as our already established relationship, prompted my decision to offer the research to them in particular. To begin, I approached the three participating schools (see 3.4.4), their principals, teachers, students, and whānau, and offered it as a koha (a gift) to meet their self-identified needs. I then stepped away and gave them time to consider before returning to hear their formal responses and decisions. As Bishop (2005) explains, the practice of offering research as a gift reflects Māori cultural processes of engagement and reciprocity:

> Kaupapa Māori research is conducted within the discursive practices of Māori culture. Figuratively, laying down a koha as a mean of initiating research…challenges notions of empowerment…the laying down of a koha and stepping away for the others to consider your gift, means that your mana is intact, as is theirs, and you are acknowledging their power of self-determination. (p. 18)

3.1.2 Benefits

The question of benefits relates to who will directly gain from the research, and whether anyone will be disadvantaged in the process. Bishop and Glynn (1999) suggest researchers consider specifically what differences the study will make for Māori, and how it will support Māori culture and language aspirations.

This study answered these questions positively because it aimed to strengthen pedagogical approaches available to raise the Māori language and academic achievement of Māori-medium students. The study phases were co-constructed with participants to ensure they were not disadvantaged in any way, and changes were made along the way to support their evolving needs (see 3.5).

3.1.3 Representation

The principle of representation is concerned with who defines the lived realities of the people involved; whose voices are heard. Kaupapa Māori researchers are encouraged to consider: whose interests the text represents; how the goals and questions of the study are established; how the tasks are allocated; what agency individuals or groups have; and who will do the work (Bishop, 2005; Bishop & Glynn, 1999).

As outlined above, the study phases were discussed with the participants prior to the study, and they were able to make suggestions that worked better for them. To ensure the final research text was representative of the perspectives and realities of the participants, I included qualitative data collection methods (see 3.2.2) in the form of teacher journals and semi-structured individual and focus-group interviews to ensure participants had an opportunity to express their perspectives and ideas. Teachers reviewed their interview transcripts and journal entries prior to the end of the interventions with the understanding that much of the data could be included in the thesis.

In the case of students, teachers were also invited to sit in on student interviews to ensure my questioning involved language students were familiar with. The teachers were invited to reword questions prior to the interviews or recast questions into more familiar language during interviews if they thought it appropriate. I also read students' interview answers back to them after the interviews were completed to see if they wanted to add to or amend them. All participants were also invited to review the thesis before submission and to suggest any changes they felt appropriate to ensure their perspectives were represented credibly.

3.1.4 Legitimation

Legitimation considers who has the authority to produce research texts, and who defines what is true and accurate within them. The principal question relating to legitimation is who analyses and theorises the data.

To ensure legitimation of interview data analysis, thesis drafts were made available to teachers to review and suggest amendments as appropriate. Drafts were also made

available to participating kura before submission, and they were asked to make them available to any interested student participants and their whānau.

The participants in this study accepted my research as a koha or gift. By accepting the gift, they acknowledged that they trusted me to represent them and the kaupapa respectfully. They trusted me to include them in the analysis and theorising of data. They trusted that I would honour my commitment to their reviewing the final text of the thesis to ensure it was accurate from their points of view.

3.1.5 Accountability

The principle of accountability considers to whom the researcher is accountable and the protocols for that accountability. It concerns who will have access to the findings and for what purpose. It also asks who will have control over the dissemination of the findings, and what systems of controls are in place to protect research participants.

Being an insider, I was connected and accountable to the participants through whakapapa (genealogical connections); we belonged to the same iwi (tribe). We were also connected more broadly through our belief and work in Māori-medium education and kaupapa Māori education. From the beginning of the study, we developed relationships and patterns of organisation reflective of traditional Māori whānau (extended family), as is usually the case when Māori come together for a particular kaupapa. This type of whānau grouping, in kaupapa Māori research specifically, has been termed a 'whānau of interest' (Bishop et al., 2001; Smith, 1995). The whānau of interest operates according to Māori values and practices. It employs collaborative Māori decision-making and participatory processes.

In kaupapa Māori terms, there was an implicit expectation that whatever I did was for the benefit of the kaupapa of Māori-medium education, as well as of the respective kura involved, including the teachers and students. Through my cultural knowledge, I understood the underlying expectations from the time the koha was accepted. These expectations of kaupapa Māori researchers' behaviours have been summarised by Smith (2012) as an ethical guide:

- Aroha ki te tangata (have respect for people)
- Kanohi kitea (present yourself to people face-to-face)

- Titiro, whakarongo … korero (look, listen … speak)
- Manaaki ki te tangata (share and host people, be generous)
- Kia tūpato (be cautious)
- Kaua e takahia te mana o te tangata (do not trample on the mana of people)
- Kaua e māhaki (do not flaunt your knowledge). (p. 124)

While these concepts will mean different things to different people, for me, they meant approaching the research with:

- Humility – understanding that all the participants have mana and knowledge, and that I have a lot to learn from them;
- Appreciation – being truly grateful that these people have allowed me to be part of their work and lives, and that they are prepared to support the study; and
- A preparedness to listen, learn, and serve.

I was accountable to the participants from the time they accepted the koha. We were all accountable to the kaupapa, our forebears who worked hard to initiate and advance Māori-medium education, our mokopuna (next generations), and our collective language regeneration efforts. From the outset, the participants understood that the research would be publicly available once accepted by the University. This was something we all agreed might benefit Māori-medium education more widely. Participants also agreed, in their consent forms, that data, including videos of the study, could be included in public presentations in the future.

Being an insider meant my accountability to this community of participants extended beyond just this study. I understood that their agreement to participate was predicated on their trust in me to make decisions about the use of the data in the future that would not be detrimental to participants, their schools or communities, or the kaupapa of Māori-medium education and Māori language regeneration in any way.

3.1.6 Kaupapa Māori Summary

In this study, the principles of initiation, accountability, legitimisation, benefits and representation were addressed by me, as the researcher, and the research participants collectively. Throughout this study, the participants helped shape the direction. Firstly, they identified that the study aimed to meet their needs as a kura, and accepted it as a koha (gift) to support their aims, as well as the aims of Māori-medium education more broadly. They then helped shape the way the intervention would unfold by regularly sharing their reflections and ideas for forward planning. I made changes to the study timeframes according to the needs of the teachers and students as we progressed. Finally, the participant teachers reviewed the final transcripts to ensure they represented their perspectives accurately.

3.1.7 Research Design

While the types of kaupapa Māori principles discussed above can frame most Kaupapa Māori Research, each study requires a particular design determined by the research questions, the researchers' values, and the aspirations of the participants. In section 3.2 below, I describe the design of this study including methods, research sites, the participants, and the phases of the intervention. Firstly, though, I outline below ethical considerations that were pertinent to this particular study.

3.1.7.1 Ethics

In this study I gave consideration to Kaupapa Māori Research ethical considerations as discussed in section 3.1. I also gained consent from the University ethics committee (see Appendix A). While this included standard ethical considerations for educational research, there were some considerations in my application that were particularly pertinent to this study context. For example, I had to ensure students understood what they were consenting to. Being second-language learners, I could not assume to what extent they could read or write English or Māori. Therefore, I explained the study to them in English and gave them information and consent letters that were written in both English and Māori. I ensured that their caregivers understood and consented to their participation (see 3.4.4) and that they understood there would be no negative consequences if they declined involvement. Another consideration was ensuring students and teachers understood they could withdraw

from the study at any time, and that they could have any data related to them withdrawn up until the time the data was analysed. Participants and their caregivers were also informed that, while every effort would be made to ensure anonymity, because Māori-medium is a small community, this could not be guaranteed. However, this was a precautionary notice and no such issues arose in the study: no data in this thesis can be attributed to any particular student by anyone but me.

3.2 Methods of Data Collection

This study employed a mixed-methods approach to data collection (Coates, 2021; Crawford & Tan, 2019). Mixed methods involves the collection and analysis of both qualitative (Braun et al., 2022; Mackey & Gass, 2016) and quantitative data (Mackey & Gass, 2016). Quantitative data provides numerical evidence such as weight, length, distance, curriculum scores, and so on. Qualitative methods, on the other hand, are less concerned with numerical data and more interested in gaining a fuller understanding by providing rich contextual and emic data elicited, for example, from diaries, descriptions, case studies, interviews, and so on. The use of mixed methods is growing in second-language research as it enables researchers to investigate research questions from a variety of perspectives (Coates, 2021; Crawford & Tan, 2019; Eunjeong et al., 2021; Mackey & Gass, 2005). Weick (1969) notes ‘‘we typically need multiple methods, or techniques which are imperfect in different ways. When multiple methods are applied, the imperfections in each method tend to cancel one another’’ (p. 21).

In this study, quantitative data in the form of curriculum pānui (reading) and tuhituhi (writing) scores allowed me to measure any shift in students’ curriculum achievement levels as a result of the study intervention. Qualitative data, such as semi-structured interviews with students and classroom observations, helped me to understand the factors that may have accounted for that shift, for example, any increased knowledge of curriculum expectations, learning levels, or next steps, as well as changes in their academic oral language ability. Qualitative methods also included teacher interviews and journals, as well as classroom observations, which allowed me to understand how teachers’ knowledge and practice changed over the course of the study, including their perspectives on the pedagogies they observed and trialled. A more detailed explanation of the methods employed in this study is provided below.

3.2.1 Quantitative Data

Quantitative research is traditionally underpinned by the supposition that there is a single reality, and the function of the research is to uncover it. Quantitative (numerical) data can help to make apparent why researchers have drawn particular inferences by providing concrete evidence of patterns or outcomes (Burns, 2010; Cohen et al., 2007; Mackey & Gass, 2005). For example, second-language researchers might investigate the effect of feedback, peer response, or use of exemplars on students writing by comparing the writing scores of groups of students who received those treatments and those who did not. They may then draw conclusions about the effect of those treatments on students' progress and achievement (Roever & Phakiti, 2017).

Quantitative data was collected in this study to help answer the question 'what is the effect of self and peer assessment on students' literacy achievement in Māori-medium classrooms?' Data were elicited from the Ministry of Education norm-referenced pānui and tuhituhi tools referred to as *e-asTTle* (Hattie et al., 2004; Te Kete Ipurangi, 2015). E-asTTle is the first bi-lingual (English and te reo Māori) curriculum assessment tool to be developed in New Zealand. It has been tested for reliability and validity, and norm-referenced across Māori-medium populations. The tool was administered pre- and post-intervention to ascertain the degree of pānui and tuhituhi achievement shift in relation to Te Marautanga o Aotearoa (the Ministry of Education's curriculum for Māori-medium schools) as a result of the study intervention, particularly in terms of expected progress in Māori-medium classroom contexts.

The pānui assessments involved students completing a 40-minute assessment in the online tool. This required them to answer mostly multiple choice questions about a range of short texts. The tool scored students across three reading strands: finding information, knowledge, and understanding. The raw scores were then turned into overall curriculum levels by the tool's automated algorithm. Overall curriculum scores were compared from students' assessments pre- and post-intervention to gauge progress over the study duration, and to determine how that progress related to Ministry of Education progress expectations.

For tuhituhi, students wrote for 40 minutes on a topic of interest. Their writing samples were then assessed by me, and a Resource Teacher of Māori as the moderator (see 3.4.4), against the e-asTTle writing assessment rubric, which provided a range of scores and related exemplars in the areas of structure, language resources, grammar, spelling, punctuation, purposes, and audience. Once the rubric judgements for each of these strands were entered into the tool, its algorithm produced a raw score for each strand as well as an overall curriculum level. Like the pānui assessment, curriculum levels were compared from students' assessments pre- and post-intervention to gauge any progress over the study duration, and how that progress related to Ministry of Education progress expectations for Māori-medium students.

3.2.2 Qualitative Methods

Qualitative research is "research that is based on descriptive data that does not make (regular) use of statistical procedures" (Mackey & Gass, 2005, p. 162). Qualitative research paradigms are underpinned by the belief that there are multiple perspectives on reality, and the aim of research is to uncover and document this inter-mixture. Therefore, qualitative research involves rich and detailed descriptions, including emic data, that reflect the lived realities of the participants from their own perspectives. Inclusion of this type of data avoids privileging the researchers' perspective, which may be laden with any number of biases or misinterpretations (Friedman, 2011; Liamputtong, 2013; Mackey & Gass, 2005, 2016).

Qualitative data methods were employed in this study to provide rich descriptions of teachers' teaching practice, and their developing beliefs and ideas about second-language teaching. These methods included pre-and post-intervention semi-structured teacher interviews (see Appendix B), teacher journals, and classroom observations.

For students, qualitative methods were employed to capture developing knowledge of their curriculum-related learning, as well as detailed descriptions of the nature of their language progress. The methods included pre-and post-intervention semi-structured interviews (see Appendix C), one focus-group, semi-structured interview post-intervention (see Appendix C), and classroom observations. Each of the qualitative methods I employed in the study is discussed further below.

3.2.2.1 Semi-structured Interviews

Semi-structured interviews are guided by a flexible set of open-ended questions. They are useful for investigating students' and teachers' perceptions that are not directly observable (Liamputtong, 2013; Mackey & Gass, 2005). As opposed to structured interviews, where questions are fixed, semi-structured interviews can be adapted to participant responses and flow. The semi-structured interviews in this study were designed to support the students and teachers to open up and "express themselves in their own terms and at their own speed" (Mackey & Gass, 2005, p. 173).

A particular challenge in second-language contexts is participants' potentially-limited ability to express themselves fully in their second language. As the participating kura in this study did not allow for students to use English on the school grounds, I addressed the challenge, as far as was possible, by inviting teachers to reword interview questions before the interviews, and to recast them during the interviews where they thought more familiar language could be used.

Semi-structured pre- and post-intervention interviews were conducted in this study to gather data related to all three of the study questions, and interviews were videotaped (see 3.2.2.5) for transcription. In relation to the question: 'what is the effect of self-and-peer assessment on students' literacy achievement in Māori-medium classrooms?', semi-structured pre-and post-intervention interviews were conducted with students to gain a deeper understanding of what factors might have contributed to any shift in their curriculum pānui and tuhituhi achievement, for example, any increased knowledge of their learning foci and next learning steps. The same set of questions was used to guide both the pre- and post-intervention interviews (see Appendix C). These interviews also allowed me to analyse any development in students' oral language ability over the course of the study to help answer the second study question: 'what is the effect of self and peer assessment on students' academic oral language development in Māori-medium literacy programmes?' I also conducted pre- and post-intervention semi-structured interviews with teachers to help answer the third study question: 'how does implementing self and peer assessment practices in Māori-medium classrooms impact on teachers' pedagogical knowledge and teaching practice in relation to second-language pedagogies?' Again, the same questions guided both the pre- and post-intervention interviews (see Appendix B).

When conducting and analysing semi-structured interviews, researchers need to be cognisant of their own subjectivity, their own feelings, opinions, and preferences, and how these may influence their perceptions or interpretation of data. As a means of addressing researcher subjectivity, Mackey and Gass (2016) suggest interviewing participants multiple times or interviewing multiple participants, to capture any reoccurring themes from the perspectives of the participants. In this study there were multiple participants, both within and across the three schools, who were interviewed multiple times. The 24 student participants were interviewed individually pre- and post-intervention. They also participated in one focus-group, semi-structured interview at the conclusion of the study (see 3.2.2.3). The three teachers were also interviewed pre- and post-intervention, and they were given the opportunity to review their responses, and to amend their answers to ensure they reflected their perspectives accurately.

3.2.2.1.1 Pre-intervention Interviews

All pre-intervention interviews with students and teachers were conducted in the Māori language and transcribed verbatim for analysis. Sections of the interviews have been translated into English for inclusion in the thesis.

The themes covered in the student interviews (see Appendix C) were ideas about their literacy programmes including: what levels the students thought they were; what they were currently learning in their literacy programmes specifically; what their next steps were to progress and how they knew; and what resources they used to help themselves learn.

It was important to make the students comfortable and relaxed during the interviews, and, for this reason, they were held in familiar school surroundings, for example, students' own classrooms. Another way I relaxed them was by beginning with a chat about familiar topics of personal interest to them. This is particularly important in Māori-medium settings, where everyday topics can be less linguistically demanding than abstract academic topics, given students may be conversing in their second language. Therefore, I began student interviews by asking students about their ages, families, and favourite pastimes before introducing the study questions. To further mitigate any effects nervousness might have had on the interviewees' responses, I

sometimes mirrored student participants' responses back to them. By repeating answers neutrally and pausing, participants had an opportunity to reflect on their answers and provide further input where needed. The interview durations were, on average, close to four minutes.

Teachers' pre-intervention interviews also took place in their classrooms and through the Māori language. They were asked to discuss: their teaching experience; their ideas about Māori-medium teaching and how it compared to English-medium teaching; how they supported students to develop their language and literacy; their approaches to literacy assessment; and what their challenges were teaching students through the Māori-language (see Appendix B). Teachers' interviews were around 10 to 15 minutes duration.

3.2.2.2 Post-intervention Interviews

The teachers and students were interviewed again at the end of the 14-week intervention. The interviews were conducted, once again, in the students' and teachers' classrooms and typically lasted around five minutes longer than the pre-intervention interviews as participants had more to share by this time. The same set of pre-intervention questions were used to guide the interviews, however, as the participants had more ideas to share by this time, I was guided more by their responses in terms of what follow-up questions I asked and the order that I asked them in.

3.2.2.3 Focus-group Interviews

At the end of the study, the students from one kura asked me if they could be interviewed as a group as they felt less nervous talking together. I agreed and made the decision to conduct one semi-structured focus-group interview with all student participants from within each respective kura prior to their individual interviews.

Focus-group interviews are interviews with groups of participants that support them to offer a wider range and more in-depth information that can supplement other methods such as the individual interview data that was collected in this study (Fontana, 2000; Liamputtong, 2013). Interaction between members of the focus group can encourage participants to make connections to various concepts through the discussions, which may not occur during individual interviews. Focus-group

interviews can also capture data around group interaction and non-verbal communication. By interviewing participants with their peers in this study, I hoped to create a more relaxed atmosphere, and to provide them with opportunities to scaffold ideas off each other that they may not have thought of in their one-on-one interview situation.

In a focus-group interview, the researcher's role is less the controller and more a participant, which fitted appropriately with the Kaupapa Māori Research approach in this study, allowing participants to control the discussion themes that were important for them to share. When interviewing students, the focus-group approach also allowed me to address the power imbalance that can occur when adults interview individual students (Eder & Fingerson, 2002; Liamputtong, 2013).

The focus groups in this study were asked the same questions as the pre-intervention interviews, however, as in the post-intervention interviews, I was guided more by the students' responses, in terms of follow-up questions and the order of questions, as they were now able to share more ideas. The interviews took place during school hours in the students' classrooms and lasted around 10 to 15 minutes. Like all other interviews, the focus-group interviews were also videotaped (see 3.2.2.5) for transcription.

3.2.2.4 Classroom Observations

Prior to the intervention beginning, I arranged days and times with the teachers to observe them teaching three writing lessons as a baseline indication of their current writing teaching practice. Apart from telling them I wanted to observe a typical writing lesson, I did not specify any other foci for the lessons. Each observation lasted around one hour. I also arranged with teachers to observe them teach three writing lessons during the intervention, after I had modelled the self and peer assessment intervention practices in phase 2 (see 3.5.3).

I had pre-determined themes that were the focus of my observations including: the sharing of whāinga (learning intentions) and paearu angitū (success criteria), small group work; use of language scaffolds, and classroom discourse patterns. During the observations, I made notes under each of these themes in a journal. I did not share the

themes with the teachers prior to the observations as I did not want the observation foci to influence their teaching approaches.

During the intervention, I also conducted classroom observations focused on students' participation in the self and peer assessment programme. I used video recordings (see 3.2.2.5) to capture three self and peer assessment interactions, throughout the intervention, in each classroom: one at the beginning of the intervention, one midway through, and one at the end. In each of the conversations, the students were discussing their learning in pairs, using the linguistic scaffolds developed for this study (Anga Putanga Ako and Kāri Matapaki). Each conversation lasted approximately 5 to 10 minutes. I transcribed the conversations, and translated them into English for inclusion in the thesis. From the video recordings, I was able to identify the degree to which students relied on written scaffolds to support their learning discussions, and how that reliance changed over time. The transcripts and video recordings provided further information about students' developing language use, in addition to the interview data.

3.2.2.5 Video Recording

All student and teacher interviews and classroom observations of student conversations in this study were recorded on video. In second-language research, video recording can provide researchers with the opportunity to record participants' oral language at the same time as their use of non-verbal cues, such as pointing or shrugging shoulders when unsure, to support communication (Gass & MacKey, 2007). In this study, video recordings allowed me to analyse changes in oral language and non-verbal communication over the course of the study.

Careful consideration was given to the most effective video recording equipment including quality microphones. With the developments in technology, I found that my iPhone 5S provided adequate video and sound quality, and had the added advantage of applications that were able to instantly save the data to the cloud for safe, backed-up storage.

3.2.2.6 Teacher Journals

Journals, also known as diaries (Mackey & Gass, 2016), were utilised in this study to gain insight into the effects of self and peer assessment intervention from the

perspectives of the teachers. Teachers entered observation notes into the journals when they observed me demonstrating the self and peer assessment implementation on two occasions at the start of the intervention. They also entered reflections on their implementation of the intervention prior to my scheduled visits. I did not provide prompts to guide teachers' responses as I wanted them to comment from their own perspectives in terms of what stood out for them.

Keeping journals requires a commitment on the behalf of participants, and one weakness of the method is that competing priorities can mean they sometimes do not make entries as frequently as planned (Mackey & Gass, 2016). Therefore, I reminded teachers in this study to update their reflections prior to my visits. I gained some very descriptive teacher perspectives from these journal entries.

3.3 Mixed Methods Data Collection: Summary

In this study, I employed both quantitative and qualitative data collection methods. Quantitative methods included e-asTTle curriculum assessment tools that provided numerical tuhituhi and pānui achievement scores in relation to the curriculum levels. This data provided evidence of any shift in students' curriculum writing levels over the course of the study intervention. Qualitative data was elicited, through semi-structured, pre- and post-intervention interviews and focus-group student interviews, to reveal the extent to which students developed their knowledge of their learning, to test my theory that such development could impact literacy achievement.

Qualitative data was also elicited in the form of semi-structured and focus-group interviews, as well as classroom observations, to gain an understanding of the nature of any development in students' oral language ability as well as teachers' beliefs and ideas about second-language pedagogies. Classroom observations were also conducted to provided evidence of any developments in teachers' approaches to literacy teaching. A summary of the mixed data collection methods is provided in Table 3.

Table 3: *Data Collection Methods*

Research Question	Participants	Data Collection Method	Evidence

What is the effect of self and peer assessment on students' oral language development in Māori-medium literacy programmes?	24 x 9 to12-year-old Māori-medium students	Semi-structured Interviews & Focus-group Interviews	Evidence of students' developing oral language ability & Evidence of students' developing knowledge of their learning foci, next steps, achievement levels, and resources to support their learning
		Classroom Observations	Evidence of students' developing oral language ability
2. What is the effect of self and peer assessment on students' literacy achievement in Māori-medium literacy programmes?		E-asTTle Pānui tool & E-asTTle Tuhituhi tool	Quantitative measure of pānui curriculum level achievement and progress & Quantitative measure of tuhituhi curriculum level achievement and progress
3. How does implementing self and peer assessment practices in Māori-medium classrooms impact teachers' pedagogical knowledge and teaching practice in relation to language and literacy?	3 x Māori-medium teachers	Semi-structured Interviews & Teacher Journals	Changes in teachers' perspectives of second-language pedagogies
		Classroom Observations	Qualitative evidence of impact of intervention on teaching practice

3.3.1 Qualitative Data Analysis

As discussed above, all student and teacher interviews, as well as student classroom conversations, were transcribed and translated into English for inclusion in this thesis. Teacher journal entries were also translated into English for the thesis. To analyse the transcript and journal data and classroom observation notes, I used a form of thematic analysis (Braun & Clarke, 2021; Mackey & Gass, 2016). Thematic analysis is a flexible approach for identifying, organising, describing, and reporting themes within data sets (Braun & Clarke, 2021; Nowell et al., 2017). This is usually done through generating codes. Coding involves researchers revisiting the data and identifying small units of interest. Labels are attached to these important sections and they are indexed as they fit with emerging or pre-existing themes (Braun & Clarke, 2021;

Nowell et al., 2017). Coding that generates emerging themes is known as inductive thematic analysis. Coding against previously identified themes or theories is a form of deductive thematic analysis (Braun & Clarke, 2021; Nowell et al., 2017). My thematic analysis of the data was both inductive and deductive.

The deductive analysis involved a set of pre-determined themes associated with my research questions. For example, to answer the question of 'what is the effect of self and peer assessment on students' literacy achievement?', I had already constructed the interview questions around the theme of 'students' metacognitive knowledge'. Under this theme, I created codes such as: 'can name curriculum-related current learning foci'; 'can name next learning steps'; and 'knows current curriculum achievement level'. I assigned each theme and code a colour, and highlighted relevant text extracts in those colours. Some text extracts were highlighted in multiple colours as they exemplified numerous codes or themes (see Table 4).

Inductive analysis happened concurrently while interviewing students and when I analysed the transcripts. One unplanned theme that emerged very quickly was 'students under-developed language proficiency'. To this theme I attached codes such as 'shrugs shoulders', 'incorrect grammar', 'unrelated answer'. Unplanned codes were also developed inductively. For example, under the theme of 'teachers' employment of second-language pedagogies', an unplanned code that emerged was 'no classroom reading programme'. Table 4 shows the main pre-determined themes and codes developed for my analysis of the data, as well as some of those that emerged inductively. An example of a coded transcript follows in Figure 3.

Table 4*: Thematic Data Analysis System*

Study Question	**Themes**	**Codes**
What is the effect of self and peer assessment on students' academic oral language development in Māori-medium literacy programmes?	Students' ability to discuss their learning **(Emerging theme)**	• Can use subject specific vocabulary • Cannot use subject specific vocabulary • Heavy reliance on scaffolds • Less reliance on scaffolds • Shrugs shoulders

	• Under-developed language	• Answers not related to questions • Incorrect grammar
What is the effect of self and peer assessment on students' literacy achievement in Māori-medium literacy programmes? *(To help further explain the quantitative pānui and tuhituhi assessment results)*	Students' metacognitive knowledge	• Can discuss curriculum achievement level • Cannot discuss curriculum achievement level • Able to specify current learning foci **(Emerging code)** Can discuss learning foci • Unable to specify current curriculum-related learning foci • Can explain next learning steps • Cannot explain next learning steps • Can discuss resources to support learning • Can discuss learning intentions and success criteria
How does implementing self and peer assessment practices in Māori-medium classrooms impact on teachers' pedagogical knowledge and teaching practice in relation to language and literacy?	Employment of second-language pedagogies Knowledge of second-language pedagogies	• Presence of student-to-student conversations • No student-to-student conversations • Provision of linguistic scaffolds • Shares whāinga • Does not share whāinga **(Emerging codes)** • No reading programme • No oral language programme • Discusses specific L2 pedagogies • Does not discuss specific L2 pedagogies

Figure 3 is an example of a coded transcript from my analysis of student interviews.

Figure 3: *Qualitative Data Analysis Example*

After transcripts were coded, I kept them in files and attached coloured tabs to pages that matched any coloured codes those pages contained. I kept an overview of themes and codes in a book and tracked any emerging changes or additions.

As my student numbers were relatively small, I was able to tack all of the coded transcripts onto my office wall for an overview of themes and codes. I referred to the overview when collating results for the thesis. For some codes, I noted the number of times they appeared in the data, by individual student or across students, for example, 'shrugging shoulders', or 'inability to name curriculum level'. For other codes the coloured highlights revealed broad patterns across the participants, and examples were easily accessible from the wall display.

3.3.1.1 Reflexivity

Reflexivity in research involves self-conscious awareness on the part of the researcher of the effects they have on the research (Braun & Clarke, 2021; Cohen et al., 2007). Cohen et al. (2007) explain the importance of reflexivity for researchers to examine how their feelings, values, attitudes, actions, perceptions, and so on, feed into the situation being studied. Kaupapa Māori researchers Hutchings et al. (2012) advise that when considering reflexivity in kaupapa Māori

> Being critical about what theories and ideas are used to frame issues in Te Ao Māori is vital… We must continually ask ourselves whether our assumptions, processes, projects and practices uphold the integrity of multiple kaupapa tuku iho, are they congruent with our visions for social and cultural justice, and do our research processes and outcomes positively contribute to the wellbeing of diverse Māori communities. *(p. 3)*

For the purpose of reflexivity in this study, I kept a self-reflection diary throughout the research. Diaries can be kept by researchers for a variety of purposes such as: letting off steam; reflecting on their biases or passing thoughts and insights; and recording hopes or anxieties, and even confessions (Burns, 2010). I recorded my reflections and thoughts in my dairy after each visit to the schools and regularly during the data analysis. I also addressed reflexivity in the introduction chapter by outlining my, and my family's, experience in education, and my beliefs about Māori-medium education including what I believe the current challenges and next steps are.

3.3.1.2 Trustworthiness

Quantitative tools need to be tested for validity and reliability. Validity refers to the accuracy of a measure, and reliability is related to the consistency of a measure. The quantitative tool used to measure tuhituhi and pānui curriculum levels in this study was the e-asTTle tool. This tool was developed by the Ministry of Education and has been tested for reliability and validity (Te Kete Ipurangi, 2022).

In qualitative research, there are four aspects of trustworthiness that researchers must establish: credibility, transferability, confirmability, and dependability. Each aspect is discussed below.

The principle of *credibility* is, perhaps, the most important aspect in establishing trustworthiness in qualitative research. Second-language researchers Mackey and Gass (2016) suggest that, as opposed to positivist research that seeks to confirm generalisable truths, it may be more important in qualitative research for researchers to show that their findings are credible to their particular research population. That is certainly the case in Kaupapa Māori Research where researchers are accountable to the whānau of interest and, in the case of this study, the wider kauapapa of Māori-medium education development. In this study, I employed two techniques commonly employed for establishing credibility in mixed methods research. These techniques were triangulation (Turner et al., 2017) and member checking (Mackey & Gass, 2016).

Triangulation in mixed methods research involves using "multiple, different approaches to generate better understanding of a given theory or phenomenon" (Turner et al., 2017, p. 243). The design of the triangulation methods a researcher employs depends on the research purpose, for example, theory testing or theory development. In this study, one question I wished to pursue was how students' knowledge of what they needed to learn to progress could improve their curriculum writing achievement. Therefore, I employed two data collection methods. The first was quantitative measurement of writing results pre- and post-intervention using the e-asTTle tool. The second was students' pre-and post-intervention interviews, which were analysed to see if there was evidence of improved knowledge of their curriculum learning that could be related to the intervention and any shifts in their writing

achievement. Quantitative writing data, alone, would not have given me enough data to be able to respond to the question.

The multiple methods I employed to triangulate oral language findings (students' ability to discuss their learning) were semi-structured interviews, focus-group interviews, and video recordings of students' pair conversations. Through this mix of methods, I was able to collect richer data on students' language use rather than make assumptions about their ability from one method.

Another triangulation method I employed in this study was triangulation of sources (Mackey & Gass, 2016; Turner et al., 2017). This involves using the same method or methods across different populations to provide insight into any contextual influences that may influence the findings, or to highlight patterns in findings across those populations thus allowing for some generalisability. Accordingly, I conducted the study in three separate classrooms across three separate schools to enable me to look for patterns.

Member checking (Motulsky, 2021) is a technique in which the data, interpretations, and conclusions of a study are shared with the participants for their feedback. In line with Kaupapa Māori Research principles, it provides participants with opportunities to clarify what their intentions were, correct any errors, and provide additional information where required. As discussed in the Kaupapa Māori Research description earlier in this chapter, in this study, participants were given multiple opportunities to discuss and review their data, my interpretations of it, and the conclusions I made. For teachers, I shared the interview transcripts with them in online documents. They were invited to add to or amend their answers at any stage prior to the completion of the intervention. I also shared the conclusions I had drawn from their answers and which I intended to include in the thesis. Once again, these were shared in online documents, soon after the intervention ended, that they could add comments to. For students, I shared their transcripts with them in follow-up meetings after their interviews, and asked them if they wanted to change or add any information.

Transferability refers to the extent that the research findings are applicable from one context to another. Transferability was an important aim in this study, as my intention was that the research findings could, potentially, inform pedagogical developments

across interested Māori-medium kura throughout the country. While qualitative researchers cannot prove that a study's findings will be applicable in other contexts, they can provide evidence that it could be applicable. Transferability is improved when robust descriptions are provided of the context and participants. This type of rich data is referred to as 'thick descriptions' (Davis, 1995; Denzin, 1989; Liamputtong, 2013). Thick description includes explicit connections to the cultural, physical, and social contexts surrounding the data collection. It allows outside researchers and readers to make judgements for themselves about transferability to their particular context, populations, and time.

To increase the potential for transferability in this study, I provided detailed descriptions of the research's physical, social and cultural contexts. I also collected multiple perspectives across multiple kura including participants' "interpretations of their actions and speakers' interpretations of their speech" (Mackey & Gass, 2016, p. 232). Having teachers and students review and reflect on data analyses was also relevant for this aspect of the research.

Confirmability is akin to the concept of validity in quantitative research. It relates to the extent that another researcher is able to examine the data and modify, confirm, or reject any interpretations (Liamputtong, 2013). To ensure confirmability of results, I have made available full descriptions of all data, and, as above, the study context on which I based my findings and claims.

Dependability (Guest et al., 2012) relates to the extent to which inferences made from the data are reliable. To promote dependability, researchers seek to make sure that if other researchers were to look over the data, they would arrive at similar findings, interpretations, and conclusions. Dependability has been tested in this research through the iterative process of examination and discussion of data analysis and findings with participants and my supervisors.

3.4 Study Sites

Three North Island kura (schools) were involved in this study. All three participating kura are situated within close-knit, rural communities, within the same tribal area. In each community, most people identify as Māori. English language is prevalent in these communities, however, te reo Māori is also often used in communication by

those who are able. In each community, marae events are common, where te reo Māori is the main language of communication during formalities and is mixed with English at other times depending on people's Māori language proficiency. Adults from each of the communities who are able also often communicate in te reo Māori with kura students when they see them outside of the kura in an effort to support the language regeneration.

Two of the kura were small kura kaupapa Māori (between 30 and 80 students) that educated students from Years 1 to 8 (approximate ages 5 to 12 years). The other kura was a full wharekura which educated students from Years 1 to 13 (approximate ages 5 to 18 years). Te Aho Matua (see 2.4) underpinned the philosophy and guiding principles of all three kura. The kura are referred to throughout the rest of this thesis as Kura 1, Kura 2, and Kura 3.

3.4.1 Kura 1

Kura 1 was a wharekura. It was situated in a small, isolated town approximately three hours from the nearest city. At the time of the study, Kura 1 educated approximately 130 students from Year 1 to 13 (students were 5 to 18 years old). There was a kōhanga reo on site educating students through the Māori language from birth to 5 years old before they transitioned into the kura. The kōhanga students regularly joined the kura students for particular activities such as sports, kapa haka, and assemblies. Kura 1 was well supported by an engaged whānau and by kaumātua who were native speakers of the Māori language. One of the kaumātua was employed to support the development of the Māori language in the junior classrooms. Her job was to speak Māori to the students and staff, providing them with native-like models of the language. Although all the staff in this kura were proficient speakers of the Māori language, there were many instances when I heard teachers checking with the kaumātua about language, such as the meaning of particular utterances they had read or heard or ways to express particular ideas.

Kura 1 had a strict and explicit expectation that only te reo Māori was to be spoken or written in all communications between staff and students and between students. I rarely heard English being spoken by teachers when interacting with students in this kura. Teachers often explicitly reminded students not to speak English and to speak

only Māori at all times. Students often reminded each other of this expectation as well.

At the time of the study Kura 1 was developing literacy learning benchmarks. A senior leader had already begun to develop explicit kōrero-ā-waha (oral language) outcomes and progress and achievement expectations, and this work was ongoing. Leaders saw this research project as an opportunity to advance that work.

The current practice for teaching reading, writing, and oral language was that the staff would jointly decide a topic, and teachers then create their own specific learning intentions and content for their own students.

3.4.2 Kura 2

Like Kura 1, Kura 2 was situated in a small, isolated town approximately one hour from the nearest city. There was also a small English-medium primary school in the town. The kura educated approximately 30 students from Years 1 to 8 (students were 5 to 12 years old). Students from this kura usually continued on to the wharekura at the town 30 minutes away, or went to English-medium high schools in the city further away.

Although Kura 2 had an expectation that te reo Māori was to be the main language of the school, teachers would sometimes explain complex ideas or language structures in English before they discussed them further in Māori. Students were, however, expected to converse in Māori in the classroom and playground as much as possible.

At the time of the study, Kura 2 had begun to develop a local curriculum based on traditional Māori chants that told the history of the area. Teachers decided kaupapa (topics for study) connected to the chants prior to each term. They then used their own discretion as to what specific reading, writing, and oral language outcomes they would teach related to that topic. They used current Ministry of Education resources, such as Manu Tuhituhi[1], to guide their decisions about appropriate teaching and

[1] He Manu Tuhithui is a resource developed by the Ministry of Education to support the teaching of writing in Māori-medium classrooms.

learning outcomes, and to identify progress and achievement expectations for their students.

Similarly to Kura 1, senior leaders were beginning to think about developing explicit schoolwide progress and achievement expectations for pānui (reading), tuhituhi (writing) and reo-ā-waha (oral language). They too saw this research project as way to advance that goal.

3.4.3 Kura 3

Kura 3 was situated in a small town 30 minutes from the nearest city. At the time of the study, there were approximately 80 students from Years 1 to 8 (students were 5 to 12 years old) enrolled at the kura. Graduates usually continued on to another local school for their secondary schooling, or they went to other high schools in the city.

Like Kura 1, Kura 3 had strict expectations for te reo Māori use. During my time in the kura, I rarely heard teachers or students speak English. Similarly to the other two kura, the Kura 3 teachers decided their kaupapa (topics) for study each term, and then teachers made their own decisions about specific literacy outcomes and content. Work on the school's local curriculum was in its infancy, and, like the other two kura, schoolwide expectations for achievement and progress in literacy were under development.

3.4.4 Recruitment of Participants

To begin the study, I visited the principals of three kura kaupapa Māori to discuss the study and their potential interest. All three principals indicated interest. After ethical approval was gained, I arranged a visit with them to explain the research more formally. I gave them information letters (see Appendix D) and consent letters (see Appendix E) which they signed. They then arranged a time for me to come back and explain the study to teachers and to seek a volunteer amongst them.

I returned to each kura respectively on the pre-arranged days and gave a presentation to the Year 5 to 8 teachers to explain the research and seek their support. The information I shared included video clips of students participating in self and peer assessment activities from my Master's study in 2011 and achievement results from

that same study. At each meeting, a teacher volunteered to participate, and I gave them more detailed information including an information letter (see Appendix F), and asked them to sign consent forms (see Appendix G).

I then asked the teachers to choose eight to ten mixed-ability students to participate in the study, excluding any students who were well below expectation, as I considered they would need a differentiated programme, a lesson I learnt from my Master's study. I asked that the gender makeup of the group be reflective of the gender makeup of the class.

Once the students were chosen, the teachers invited their caregivers to a hui (meeting) at their respective kura. At the hui, I explained the purpose of the research, including, once again, the video clips and data from my Master's study. I gave out information letters (see Appendix H) and answered any questions. Whānau were notably excited by the research proposal. At each hui, they all agreed for their children to participate in the study and signed consent forms (see Appendix I). Soon after each hui, I visited the respective classrooms and explained the study to the student participants and sought their agreement to participate in the study. I gave them all information letters (see Appendix J), and they all signed consent forms (see Appendix K).

Before I commenced the study in the first kura, Kura 1, I approached two resource teachers of Māori (RTMs) to enlist their support to assess and moderate anonymous student writing samples pre- and post-intervention. RTMs are employed by the Ministry of Education to support bi-lingual classroom teachers deliver their programmes. They usually specialise in Māori language learning approaches and resources. They prioritise their support to Level 1 and 2 immersion classrooms, but can support other bi-lingual classrooms as well. RTMs usually service a number of bi-lingual classrooms in a particular region. Both RTMs I approached were experienced Māori-medium teachers and had been in their RTM roles for between four and five years.

I gave both RTMs information letters (see Appendix L). They agreed to support the study, and both signed confidentiality forms (see Appendix M). However, one of the RTMs later resigned her position and withdrew from the study for personal reasons.

As no other local RTMs were available to support the study, I made the decision that one would suffice for assessment and moderation of students' writing samples.

3.4.5 Students

There were three teacher participants and 24 student participants in this study. An overview of student participant demographics is provided in Table 6.

Table 5: *Student Participants*

Kura	Males	Females	Age Range	School Year Level	Years in Māori-medium Education
Kura 1	4	4	9 to 10 years	4 x Year 5 4 x Year 6	All students had a total of between 6 to 8 years in Māori-medium education, beginning in kōhanga reo
Kura 2	5	3	8 to 11years	1 x Year 5 5 x Year 6 1 x Year 7 1 x Year 8	Most students had a total of between 6 to 8 years in Māori-medium education, beginning in kōhanga reo Two had been in Māori-medium for 2 years
Kura 3	5	3	9 to 12 years	5 xYear 6 3 x Year 7	All students had a total of between 6 to8 years in Māori-medium education, beginning in kōhanga reo

In Kura 1, all the students in the participating class were included in the study intervention at the request of their teacher as he thought they would all benefit. As self and peer assessment is a legitimate pedagogical approach conducted regularly in New Zealand classrooms, I agreed to their inclusion. However, only the eight students for whom consent had been obtained had their assessment data collected and analysed for the study. Five of the participant students came from homes where basic te reo Māori was spoken sometimes, however, English was the dominant language. In one of those homes lived a grandmother who was a native Māori speaker and who spoke Māori often in the home. The other three participant students came from homes where Māori language was seldom heard.

Kura 2 had a small number of multi-level classrooms. The eight participants were the eight oldest students from the senior class, spanning Years 5 to 8. As the teacher already taught a differentiated programme, the younger students continued with their regular literacy programme while the participating students took part in the new self and peer assessment programme as part of a classroom rotation. The eight participant students all attended kōhanga reo prior to kura. However, two had attended English-medium primary schools after kōhanga reo and had only transitioned to kura kaupapa Māori two years before. Of the eight student participants in this kura, two came from homes where te reo Māori was the dominant language of communication. The other six came from homes where Māori words were often used, as well as some simple instructions, but English was the main language of communication.

In Kura 3 there were eight students in total in the senior class, aged between 9 and 12 years. All eight students participated in the study. They had all attended kōhanga reo before entering kura kaupapa Māori. This meant each of these students had been educated in Māori medium for at least eight years. One of the students had parents who were fluent in te reo Māori and spoke mainly Māori at home. The other seven students came from homes where there was limited use of the Māori language beyond simple sentences and instructions.

3.4.6 Teachers

Three teachers participated in this study, one from each kura. They have been given pseudonyms in this thesis to protect their anonymity. All three taught in Māori-medium kura because they believed that it was necessary for Māori students to speak their indigenous language in order to maximise their spiritual wellbeing and to gain the cultural identity they needed to reach their full potential as global citizens. They also believed Māori-medium education was the most effective way to regenerate the Māori language. Each of the teachers had strong connections to Māori culture when growing up, including having had whānau members who spoke te reo Māori in their homes.

Peta was the participant teacher in Kura 1. He was aged between 30 and 40 years and had been raised with his grandmother who spoke te reo Māori to him from birth. Māori was his first language. Peta learnt English from his parents and in the wider

community at the same time as he learnt Māori. He had been educated in Māori-medium classrooms from kōhanga reo through to wharekura. Peta had graduated from a Māori-medium teacher education programme five years prior to the study. He had initially taught for two years at another North Island kura kaupapa Māori before returning to his hometown, three years prior to this study, and taking up the teaching position in Kura 1.

Komene, the teacher from Kura 2, was also aged between 30 and 40 years. Like Peta, Māori was his first language as he had been raised in a home where te reo Māori was spoken to him from birth. He had attended kōhanga reo as an infant followed by kura kaupapa Māori for his primary and secondary schooling. Komene had also been immersed in English in his wider community from birth. He had recently graduated from a Māori-medium initial teacher education programme in the North Island and had been teaching less than five years.

Tamara, the participant teacher from Kura 3, was aged between 40 and 50 years. Unlike the other participant teachers, Tamara had learnt to speak Māori in secondary school and university. She had been teaching for between 20 and 25 years. All of her teaching had been in Māori-medium classrooms in the North Island. She was highly proficient in te reo Māori and spoke only Māori to students and other staff.

3.5 Study Implementation

Once the participants were recruited, the study was introduced in each kura in five distinct phases. The phases were staggered across the three kura, with one starting the first phase two to three weeks after the other. The study was introduced across the schools in this manner to enable me to be present to manage the modelling phases in each kura one after the other. Kura 1 entered the study first, then Kura 2, and lastly Kura 3.

The Phases were:

1. Pre-intervention Data Collection: collection of interview data related to teachers' and students' ideas about literacy as well as students' base-line literacy achievement data.
2. Resource Development: development of resources for the study intervention.

3. Modelling: I modelled the self and peer assessment pedagogies for the intervention.
4. Teacher Implementation: the teachers implemented the new pedagogies.
5. Post-intervention Data Collection: collection of interview data related to teachers' and students' ideas about literacy as well as students' post-intervention literacy achievement data.

Table 6 shows the staggered entry of each school over a total of 23 weeks.

Table 6*: Study Phases*

Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	30
Kura 1																									
Kura 2																									
Kura 3																									

Key: Study Phases	**Phase 1:** Pre-intervention Data Collection	**Phase 2:** Resource Development	**Phase 3:** Modeling of Self and Peer Assessment Pedagogies	**Phase 4:** Teacher Implementation	**Phase 5:** Post-Intervention Data Collection

3.5.1 Phase 1: Pre-intervention Data Collection

In the first phase, the teacher participants were interviewed to gather their ideas about literacy teaching and learning in Māori-medium classrooms. Teachers were given access to their interview transcripts via shared google docs so that they could review the data and make any changes to their answers up to the beginning of phase 2.

I then carried out individual semi-structured interviews with the student participants, of up to five minutes duration. Interviews focused on students' ideas about their literacy programmes and how they learn (see Appendix C). Students were given access to their interview transcripts following the interviews to make any adjustments they felt necessary.

After the interviews, I administered e-asTTle tuhituhi and pānui assessments. The pānui assessments required students to read short texts and answer a mix of recall, comprehension, and inferencing questions. The tuhituhi assessments required students to write a recount about a past family or school trip. The teachers were present during the assessments to provide a familiar presence in the classroom for students, and to help monitor the conditions, such as ensuring students did not discuss answers. In the first kura, Kura 1, it became apparent that the students were unfamiliar with the e-asTTle pānui assessments and they complained about not liking the duration or requirements. Therefore, I made the decision to administer a new e-asTTle pānui assessment two days later, treating the first as a practice. I made this decision because I wanted a fair indication of students' reading ability that was not undermined by their unfamiliarity with the test expectations and conditions. I repeated this process with the following two kura.

3.5.2 Phase 2: Resource Development

Kura 1 was the first to enter the study phases. After phase one, the initial data collection, I met with the participant teacher, Peta, to develop the Anga Putanga Ako (Curriculum Outcomes Matrix) that would be used in the self and peer assessment programme with the students (see Appendix N). To develop the matrix we used the writing progressions produced for Māori-medium classrooms~~,~~ He Ara Ako i te Reo Matatini (Ministry of Education, 2011), and the Māori-medium writing resource He Manu Tuhi (Ministry of Education, 2008b). These resources had lists of tuhituhi whāinga (writing outcomes), which indicated what might be expected of a writer at each year level of Māori-medium schooling from Years 1 to 10. We wanted to limit the lists of whāinga to a one-page document that would be easy for students to use when discussing their learning. To guide our choices from the lists available, we used the students' writing samples from their writing books and exemplars in the Ministry resources. This hepled to identify any gaps students had as well as whāinga that would take them to more advanced writing levels. We used the Ministry resources and our own teaching experience to guide our judgement of what an appropriate range of whāinga would be to cover over the 20 weeks of the study. Our choices were aspirational.

We decided to frame the Anga Putanga Ako in terms of the Māori language strands used in Te Marautanga o Aotearoa, the curriculum document developed by the Ministry of Education for Māori-medium classrooms (Ministry of Education, 2008c). The three strands the whāinga were listed under were: Āheinga Reo (purposes for language), Puna Reo (language features), and Rautaki Reo (writing strategies). The whāinga in He Ara Ako i te Reo Matatini were already listed under these strands. However, the whāinga in He Manu Tuhi resource were listed under different categories, so we had to decide where they best fitted.

Developing the Anga Putanga Ako took Peta and me two days. After this, I showed him a set of discussion cards, Kāri Matapaki (see Appendix O), that I planned to use to support students to discuss their learning. Peta liked the cards and did not wish to make any changes.

When I later began the resource development phase with Komene and Tamara for their respective classes, they each viewed the Anga Putanga Ako developed by Peta and me as well as the Kāri Matapaki, and decided they were suitable for their programmes as well. They did not wish to make any changes, so we used the same Anga Putanga Ako and Kāri Matapaki across all three kura. Peta agreed to this arrangement.

3.5.3 Phase 3: Modelling Phase

Following the initial data collection and resource development, students participated in the self and peer assessment programme, which I taught for two weeks during their regular literacy time, while the participant teacher observed. I began the intervention programme by introducing students to the Anga Putanga Ako. I gave them each a copy and explained that, by the end of Year 6, students should be at Taumata 3 (Level 3) and, by the end of Year 8, they should be at Taumata 4 (Level 4). The students discussed, in pairs, what level they thought they were. Most thought they were Level 3 or beyond. I then explained that we were now going to see what level they actually were by assessing their recently completed e-asTTle writing sample, of which I had earlier made copies for use in the classroom activities.

We looked at one specific outcome to begin with. The outcome was related to the use of full stops and capital letters. I chose this outcome to introduce the Anga Putanga

Ako because full stops and capitals were an easy and low-level outcome for students to understand, and because they all needed to accomplish it consistently to be working at Level 3 of the curriculum. Each student pair analysed each other's writing and discussed if they were Level 1, 2 or 3 for that particular whāinga. Almost all students were Level 1 because they were using full stops and capital letters correctly some of the time. To be a Level 2 or 3, students needed to be using them correctly all of the time.

I then taught a lesson on full stops and capital letters, beginning by highlighting the whāinga at the beginning of the lesson: 'we are learning to write full stops and capital letters correctly all of the time'. I also listed the paearu angitū (success criteria): 'we will have corrected all the full stops and capital letters in this example'. I then asked students to talk about when full stops and capitals were used and to share their ideas back to the group. Next, I demonstrated some examples on the whiteboard. I then wrote a small passage on the white board with errors related to full stops and capitals. Students were asked to rewrite the passage and to correct the errors. We marked the passage together and counted the mistakes. After the lesson I asked student pairs to assess each other's work to see if they had met the success criteria and corrected all the mistakes correctly. I then introduced the Kāri Matapaki (see Appendix O). The teacher and I modelled how to use the cards to support a conversation about what we had been learning. The students then used the cards to support their own pair discussions about their learning.

Over the next two weeks, I supported students to choose new whāinga from the Anga Putanga Ako that they wanted to achieve in order to progress through the levels. I then taught lessons around those whāinga, as above. I showed students examples of the particular whāinga on the whiteboard and supported them to identify the whāinga in written texts that I provided for them. I also asked students to assess anonymous samples of student writing from other classes and published books, according to whether the focus whāinga was present and at what level on the Anga Putanga Ako. To learn whāinga related to such things as learning the structure of a recount or other writing genre, the students deconstructed and reconstructed texts. All the while, I put particular emphasis on pair discussions throughout all activities. I modelled how they should discuss their learning, including having them repeat questions and answers

after me, and having them use the Kāri Matapaki in pairs after every lesson. During this phase, I videotaped the students participating in the activities on one occasion.

Throughout the process, I regularly drew the teachers' attention to the discourse patterns in the lessons, in particular, the move away from teacher-to-student-to-teacher or Initiate Respond Feedback (IRF) patterns to student-to-student and student-to-group-to-group patterns elicited in the small group activities. The teachers kept observation notes in journals as I taught.

At the end of the two-week modelling phase, I met with each teacher to plan the next phase where he/she would continue the programme for a further 18 weeks. The plan involved making decisions around the following:

- How would students be paired going forward, that is, were there any issues with the current pairings?
- What would be the teacher and researcher roles when implementing the programme?
- How would the teachers' writing instruction programme support the next steps that students would identify as part of the self and peer assessment programme?
- What support did the teacher require?
- How would the researcher provide ongoing support to the teacher, for example. video calls, online discussions, face to face meetings?
- What would be the frequency of researcher support?

3.5.4 Phase 4: Teacher Implementation

After the plan was developed, the teachers taught the self and peer assessment programme, as part of their daily literacy programme, up to four days a week. I also supported each teacher during this phase by modelling up to four literacy lessons across the phase duration, and I videotaped the students participating in the study activities on two occasions.

During phase 4, the teachers met with me once a fortnight to evaluate and plan the ongoing programme. Notes were kept from all meetings I had with the teachers for

inclusion in the thesis. Teachers had an opportunity to review any notes up until data analysis. Although we initially agreed that this phase would last 20 weeks, we all agreed to end it after 14 weeks when I noticed teachers struggling to maintain the impetus due to competing demands in their schools.

3.5.5 Phase 5: Post-intervention Data Collection

After the 1-week teacher-implementation phase, teachers participated in one 10 to 15-minute, individual, semi-structured interview to reflect on the programme and student language learning. Interviews were then transcribed for teachers to review the information before it was included. Students were also interviewed to gauge their ideas about their literacy learning, and, once again, they had an opportunity to review their interview transcripts. I then administered another e-asTTle tuhituhi and pānui assessment to all students. The pānui assessments were similar to the pre-intervention assessments in that students were required to read short texts and answer a mix of recall, comprehension, and inferencing questions. However, the texts were different to the first assessment texts. The tuhituhi assessments, once again, required students to write a recount about a past family or school trip. One year after the conclusion of the study, I presented the study results to the three kura, and the participants and their respective whānau for review.

3.6 Concluding Summary

This study was framed by a Kaupapa Māori Research approach, designed to ensure it benefited Māori and Māori-medium education. I used a mix of data collection methods to measure the impact of the intervention on students' language and literacy development and to understand factors that may have contributed to that development. The mixed methods also allowed me to understand the impact the study had on teachers' developing ideas and practice and their own perspectives around that development. To strengthen the trustworthiness of the study, multiple methods were employed for each study question as well as multiple sources, including implementing the intervention across three separate kura cohorts. Thematic analysis of the qualitative data included coding of pre-determined and emerging themes, and teachers and students were given opportunities to review their interview transcripts and journal entries where applicable. Teachers were also given opportunities to review

conclusions I made from the study. The following chapter presents the results of the study. Amongst other findings, they reveal that the implementation of self and peer assessment practices had a positive impact on students' literacy and language achievement, as well as teachers' pedagogical knowledge and practice.

Chapter 4: Results

4.1 Introduction

This doctoral research involved introducing a programme of self and peer assessment into three Māori-medium classrooms, across three separate kura kaupapa Māori. The study posited that, if the practice of self and peer assessment, supported by language and curriculum scaffolds, was introduced in their literacy programmes, the student participants' ability to discuss their learning would be improved, resulting in accelerated reading, writing, and academic oral language achievement. As a secondary focus, the project also aimed to measure any impact of the programme on teachers' pedagogical knowledge and practice.

The study sought to answer the following three specific questions:

1. What is the effect of self and peer assessment on students' academic oral language development in Māori-medium literacy programmes?
2. What is the effect of self and peer assessment on students' literacy achievement in Māori-medium literacy programmes?
3. How does implementing self and peer assessment practices in Māori-medium classrooms impact on teachers' pedagogical knowledge and teaching practice in relation to language and literacy?

The results of this study showed that, prior to the study intervention, the participant students were not able to discuss their learning with any depth or specificity related to the curriculum. As a result of the self and peer assessment intervention they significantly improved their ability to discuss their literacy learning with curriculum-specific language and ideas. They were more able to talk about what levels they were achieving at in writing, what specific curriculum outcomes they had achieved, what they needed to learn next to progress through the levels, and what resources they could use to help them progress.

In this chapter the results of the study are presented as they relate to each study question. First, I outline the findings relating to the student participants' ability to discuss their learning in their literacy programmes prior to the study intervention. I then present findings from post-intervention data to demonstrate the extent to which the students' ability to discuss their learning improved as a result of the intervention.

Next, I address the effect of the study intervention on students' literacy, specifically their reading and writing achievement. The chapter concludes with a presentation of the results related to the impact the self and peer assessment intervention had on teachers' pedagogical knowledge and teaching practice.

4.2 Pre-intervention: Students' Abilities to Discuss Their Learning

This section presents the study findings related to students' abilities to discuss their learning prior to the study intervention. I begin by describing the oral language discourse patterns across the three participant classrooms. I then present an analysis of the pre-intervention student interview data that shows a pattern of students' limited abilities to discuss their learning across the three classrooms.

4.2.1 Classroom Discourse Patterns

Prior to the intervention, classroom observations indicated that the main discourse pattern in the three participant classrooms was Initiation Response Feedback (IRF) (Gibbons, 2002), which meant teachers, typically, explained what they wanted students to do, asked students if they understood the instruction, and students replied usually with 'Āe' (yes) before moving on to complete activities. As is typical with an IRF classroom discourse pattern, students seldom discussed their learning with each other or the teacher in relation to the curriculum. There was no student-to-student discussion of explicit learning intentions, success criteria, achievement levels, or next steps. Scaffolds were rarely used to support student-to-student conversations about their learning.

As a result of limited classroom learning discussions, pre-intervention interviews and classroom observations revealed that most students' ability to discuss their learning was limited in relation to five main themes including their: current learning intentions, current learning levels, next learning steps, and strategies and resources they used to support their learning. Results showed that most students could not answer any of the questions with any specificity related to the curriculum or curriculum resources. Many struggled to find the words to explain their thinking and used grammatically incorrect language. They sometimes did not understand the questions, even when reworded. Students' abilities to answer specific interview questions are discussed in the following sections.

4.2.2 Students' Ability to Discuss Their Current Learning Foci

When asked 'He aha tōu whāinga i roto i tou hōtaka tuhituhi?' (What is your learning intention in your writing programme?), most students did not understand what was meant by 'hōtaka' (programme) or 'whāinga' (learning intention). On advice from the teachers, the question was reworded to 'I roto i te mahi tuhituhi, kei te ako koe ki te aha i tēnei wā?*'* (When you are doing writing, what are you learning to do at the moment?).

Most students' answers showed that they were unable to discuss specific learning intentions or objectives related to the curriculum. Across the three kura, six students answered in a way that indicated they either didn't understand the question or didn't have the language ability to answer it. The four answers below are typical of those six.

Table 7*: Student Interview Extract 1*

Interviewer	*I roto i te mahi tuhituhi, kei te ako koe ki te aha i tēnei wā?* (When you are doing writing, what are you learning to do at the moment?)
Student 4	*Tuhi kōrero, he pai.* (To write, it's good.)
Student 5	*Ki ōku tuhituhi kia pai ake* (incorrect language structure) (To my writing, make it better.)
Student 21	*I te pirangi au ki te pānui tōtika me kia pai ake au ki te kura.* (I wanted to read correctly and get better at school.)
Student 22	*Ka ako au ki te mahi pukapuka … i mahi mātou e pā ana ki te* Whale Rider. (I learn to do books…we are doing stuff about *Whale Rider*.)

Seven of the 24 students across the three kura were able to give a little more information in answer to this question. However, their answers were limited to generalisations unrelated to the curriculum, such as getting better or writing neatly. The three students' answers below exemplify those seven students' answers.

Table 8*: Student Interview Extract 2*

Interviewer	*I roto i te mahi tuhituhi, kei te ako koe ki te aha i tēnei wā?* (When you are doing writing what are you learning to do at the moment?)
Student 1	*Kia pai ake, kia mahi wahangū.* (To get better and work quietly.)
Student 12	*Kia pai ōku tuhinga, kia whakanui, kia iti.* (To make my writing good, bigger, shorter.)
Student 24	*Kia tutuki i ngā mahi.* (To finish the work.)

Five of 24 students talked about what they were writing about, as opposed to what they were learning to do. Their answers were still unrelated to the writing curriculum, and their language was still generally limited. The three students' answers below are typical of these five students' answers.

Table 9*: Student Interview Extract 3*

Interviewer	*I roto i te mahi tuhituhi, kei te ako koe ki te aha i tēnei wā?* (When you are doing writing, what are you learning to do at the moment?)
Student 9	*I ngā hararei.*

	(In the holidays.)
Student 15	*Te mihi.* (Introductions.)
Student 20	*Kei te ako mātou i Te Aho Mātua.* (We are learning The Aho Matua.)

The final six of the 24 students were able to discuss more specific learning foci related to the curriculum, although their language was generally still limited. Most of the students came from Kura 2, where their teacher often referred to specific learning intentions at the start of writing lessons. The four students' answers below are typical of this group.

Table 10*: Student Interview Extract 4*

Interviewer	*I roto i te mahi tuhituhi, kei te ako koe ki te aha i tēnei wā?* (When you are doing writing what are you learning to do?)
Student 7	*Te whakaraupapatanga o te whakamahere.* (The order of the plan.)
Student 10	*Te tuhi taki, te whakamaramatanga, te whakaahua, whakarāpoto.* (Writing recounts, the introduction, the description, the conclusion.)
Student 13	*Mahi ngā kupu āhua me ngā kupu mahi.* (Write adjectives and verbs.)
Student 17	*Whakatika i tōku tuhinga, ira kati, pū matua, pū iti, tīmatanga.* (Correct my writing, the full stops, capital letters, small letters, beginning.)

The other two students from this last group were able to use notably more language than most. These students shared more ideas about what they did in their writing programmes than the other students. However, their answers below show that they were still not aware of specific learning intentions related to the writing curriculum. Student 6 used incorrect grammar, so the translation of her answer is an approximation. Interestingly, Student 23 did not use the Māori word for sentence.

Table 11*: Student Interview Extract 5*

Interviewer	*I roto i te mahi tuhituhi, kei te ako koe ki te aha i tēnei wā?* (When you are doing writing what are you learning to do?)
Student 6	*Kei te ako mātau ki te āhua tuhi i tō mātau rā i te kura. Ka … ētahi wā ka mahi mātau i te tuhi kōrero hoki. Te whakamahere … He pērā ki te pānui, i te pānui pukapuka ēngari ka whakautu pātai mō tō rā, ko wai i haere … He pērā ki te pānui, i te pānui pukapuka ēngari ka whakautu pātai mō tō rā, ko wai i haere.* (We are learning about, kind of writing about our day at school. Sometimes we write stories also. The planning … It's like the reading activities but you address questions about your day and who went.)
Student 23	*Ka tuhi a Kōka he nui ngā kōrero ki runga rā, kātahi ka tuhi mātau … e pā ana ki Te Aho Mātua. Ētahi wā ka tuhi a Kōka he kupu ka tuhi mātau ki roto i tētahi sentence … Kei te ako ki te tuhi kia pai ake kia roa ake.* (Kōka writes lots of things on the board and we copy it … about) the Aho Matua. Sometimes Kōka will write a word and we will use it in a sentence … We learn to write it well and make it longer.)

4.2.3 Students' Ability to Discuss Current Achievement Levels and Next Learning Steps

In pre-intervention interviews, students were also asked what curriculum level they thought they were achieving at and what they thought they needed to do to progress through the higher levels. When asked 'He aha tōu taumata ako mō te tuhituhi?' (What level are you in writing?), 17 students answered 'aua' (I don't know) and seven were silent or shrugged their shoulders.

When asked 'Pēhea koe e mōhio ai he aha tāu whāinga ako mō te whakapakari i tāu mahi tuhituhi?' (How do you know what you need to learn to do to improve your writing?), seven students were unable to answer. They either replied with 'aua' (I don't know) or shrugged their shoulders. Two students answered in a way that indicated they did not understand the question even when it was repeated or reworded.

Table 12*: Student Interview Extract 6*

Interviewer	*Pēhea koe e mōhio ai he aha tāu whāinga ako mō te whakapakari i tāu mahi tuhituhi?* (How do you know what you need to learn to do to improve your writing?)
Student 18	*Nā te mea kāore e pai ōku tuhinga i mua.* (Because my writing wasn't good before.)
Student 21	*Tōku whāinga kia tarai au ki te haere ki te hai kura kia pai ake au.* (I want to try and go to high school and I want to be better.)

Twelve students answered with general ideas that were not linked to the curriculum. The examples below include those who had the least and the most ideas.

Table 13*:* *Student Interview Extract 7*

Interviewer	*Pēhea koe e mōhio ai he aha tāu whāinga ako mō te whakapakari i tāu mahi tuhituhi?* (How do you know what you need to learn to do to improve your writing?)
Student 2	*Parakatihi.* (Practise).
Student 4	*Kia pai ake ōku tuhinga.* (To make my writing better.)
Student 8	*Tuhi tika. Pānui anō mēnā ka tuhi tika.* (Write correctly. Read it again to see if it's written correctly.)
Student 20	*Te aro i te kaiako, te whakarongo.* (To pay attention to the teacher and listen.)

Two students were able to answer with more specificity related to the curriculum than the others. Student 2 talked about sounding words out when practising at home, something she may have remembered from junior classes. Student 14, who had not previously answered the question about what he was learning with any specificity, now listed learning intentions with precise curriculum language.

Table 14*:* *Student Interview Extract 8*

Interviewer	*Pēhea koe e mōhio ai he aha tāu whāinga ako mō te whakapakari i tāu mahi tuhituhi?* (How do you know what you need to learn to do to improve your writing?)

Student 5	*I te kāinga i parakatihi ahau i ōku tuhituhi … pēhea ki te whakatangi i ngā kupu kia mōhio ahau me pēhea te tuhi.* (At home I practice my writing … how to sound out the words so I know how to write.)
Student 14	*Kei te ako ahau ki te mahi kōrero taki … tētahi kaupapa mō te tuhinga o ngā wāhanga … ko te tapanga te raupapatanga me te whakakapinga.* (I am learning how to write a recount … it is a subject for writing about, in sections … the heading, the order of the events and the conclusion of the story.)

Student 14 came from Kura 2 where, as discussed above, the teacher regularly shared learning intentions before lessons. He also came from a home where Māori was the language spoken most often.

4.2.4 Students' Ability to Discuss Writing Strategies and Supporting Resources

Another question students were asked, to gauge their agency over their learning was 'He aha ētahi o āu rautaki hei whakapakari i tāu mahi tuhituhi?' (What strategies do you use to write well?). Fourteen students either shrugged their shoulders or said, 'aua' (I don't know). One student said 'Kaore au mohio ki te explain' (I don't know how to explain). She did not know the Māori word for explain.

Two students said they asked their teacher, and five students had general responses such as, working more or practising at home. These five answers are exemplified below, including those with the least and most ideas.

Table 15*: Student Interview Extract 9*

Interviewer	*He aha ētahi o āu rautaki hei whakapakari i tāu mahi tuhituhi?*

	(What strategies do you use to write well?)
Student 1	*Kia mahi i ngā wā katoa.* (To do it all the time.)
Student 2	*Mahi kāinga.* (Homework.)
Student 3	*Ka mātaki ahau i ētahi mea ka tarai ki te kape.* (I look at things and try to copy them.)
Student 17	*Tuhi ki te kāinga. Whakaaro ētahi mea i taku hinengaro kātahi ka tuhi i te kāinga. I te wā ka tae ki te kura ka tuhi tino pai.* (I write at home. I use my mind to think of things and write them at home so when I get to school I write well.)

One student (Student 6) was able to describe a more specific strategy and, once again, Student 14 had the most ideas, some of which were related to strategies he used for planning his writing.

Table 16*: Student Interview Extract 10*

Interviewer	*He aha ētahi o āu rautaki hei whakapakari i tāu mahi tuhituhi?* (What strategies do you use to write well?)
Student 6	*Ka titiro au ki tētahi pukapuka kimi kupu. Tērā pea te pukapuka Pirihimana.* (I look at books to find words, like the Policeman book.)
Student 14	*Kaua e aro ki aku hoa, kia whakapoturi i tōku mahi.*

	Kia whakarongo i te wā e tika ana ... Te whakamahere, ko tētahi kapua ko tētahi tapanga ki waenganui, purua o whakaaro i runga i te pepa ā ka tīmata ki te mahi. (Not to let my friends distract me and to always listen when I need to … make a plan, a cloud with a heading in the middle, write down all of your thoughts on the paper and then begin to work.)

When asked what resources they used to support learning in writing, students' answers were, once again, limited. In answer to the question 'He aha ngā rauemi e mahia e koe hei whakapakari i tāu mahi tuhituhi?' (What are the resources that you use to help you improve your writing?), 18 students either shrugged their shoulders or said 'aua' (I don't know). Six students listed things like pencils, paper, or their mind. Student 24 had an answer that was typical of those six students: 'Pene rakau, hinengaro, me aku whatu' (Pencil, my brain and my eyes). Student 14, who had the most ideas when answering previous questions, also had limited ideas related to this question 'Ukui, matua, ētahi wā oku hoa' (Eraser, teacher and sometimes my friends).

4.3 Reading

Pre-intervention interviews revealed that students in Kura 1 and 3 were not able to discuss any aspects of their reading learning. When asked about their reading programmes, the first three students in each of those classes struggled to discuss any ideas about what they were learning to do to get better at reading, beyond answers like 'kia wahangū' (to read quietly) and 'ki te pānui tika' (to read correctly). Most students just shrugged their shoulders. They then explained that they did not receive formal reading instruction, and their teachers also confirmed that this was the case. Therefore, I abandoned the line of questioning related to reading in those classrooms as it appeared to be making students uncomfortable as they struggled to think of answers to my questions. However, Student 3 did share an idea about his reading. It indicated that he was unhappy with this reading ability: "Pirangi ahau kia pānui ahau tika me te pai. I te wā ka pakeke ahau, kāore pirangi au i ōku pēpi kia haere pērā ki ahau" (I want to read correctly and well. When I am older, I don't want my children to perform like me).

In the Kura 2 class there was a formal reading programme where students read and deconstructed texts with the teacher to learn new words and gain meaning. However, when asked about what they were learning to do to get better at reading, most students simply shrugged their shoulders in response, even when prompted to think about their reading activities by their teacher. However, Student 12 was able to share one idea about what he was learning to do, and Student 14, once again, shared the most ideas and engaged in a lengthier exchange. Their responses are provided below.

Table 17*: Student Interview Extract 11*

Interviewer	*Tēnā, whakamārama mai, i roto i te mahi pānui, kei te ako koe ki te aha i tēnei wā?* (What can you tell me about what you are learning in reading at the moment?)
Student 12	*Kia rere pai taku reo.* (To make my language flow nicely.)
Student 14	*Ka pānui au ētahi … i ngā pukapuka kaitā.* (I read some ... big books.)
Teacher	*Kōrero mō ngā nekehanga.* (Talk about the rotations.)
Student 14	*Ka mahi mātau e whā ngā nekehanga. Ko te nekehanga tuatahi ko te pouako. Nekehanga rua ko te rorohiko, ka haere mātau ki te language nut, kātahi ka mahi kēmu pānui, kātahi ka paipai pukupuka.* (We do four rotations. First, we are with the teacher. Second we are at the computer using language nut. Then we do reading games and then paipai pukapuka.)
Interviewer	*He aha te paipai pukapuka?* (What is paipai pukapuka?)

Student 14	*Ka pānui mātau i ngā pukapuka kei roto i tō mātau pouaka.* (We read the books that are in our boxes.)
Interviewer	*He aha te nekehanga pai ki a koe?* (What is your favourite rotation?)
Student 14	*Rorohiko, te mahi language nut, māmā noiho. Ētahi wā pai ngā nama mai ngā mano ki ngā miriona.* (Computers, using language nut, its easy. Sometimes I like numbers from the thousands to millions.)
Interviewer	*He aha ētahi o ōu mahi ki te taha o matua i te wā o ngā nekehanga?* (What do you work on when you are with your teacher during the rotations?)
Student 14	*Ki te mahi i te korero mahi taki. I tēra tau i ako matau i etahi reo, reo a waha, reo pānui.* (We work on recounts. Last year language we learnt some language, oral language, reading language.)

4.4 Overall Academic Language Ability

Overall, 21 students could not discuss many ideas, even when prompted by their teacher. They did not seek further clarification when they did not understand questions, and they did not elaborate on short one-word answers. Four students were able to discuss slightly more ideas, although their responses were general and lacked academic language related to the curriculum.

Student 13 below exemplifies what was a typical interview exchange across the majority of students (20 students). He had long pauses before he answered questions, which indicated he either did not understand the questions or he couldn't find the language or ideas to reply. He sometimes misunderstood the questions and gave

unrelated answers, and he did not seek clarification when he needed more information.

Table 18: *Student Interview Extract - Student 13*

	Key	Interviewer	Student
Interview Transcript	English Translation		
Kōrero mai mō te hōtaka reo matatini i roto i tāu akomanga. He aha ētahi o ngā ngohe? Pēhea te hōtaka tuhituhi/pānui/kōrero rānei?	Tell me about the literacy programme in your classroom. What are some of the activities? What are the writing, reading, or oral language programmes like?		
(Shrugged shoulders.)	(Shrugged shoulders.)		
Tēnā, whakamārama mai, i roto i te mahi tuhituhi, kei te ako koe ki te aha i tēnei wā?	Tell me what you are learning to do in your writing programme?		
Mahi nga kupu āhua me nga kupu mahi.	To use adjectives and verbs.		
Pēhea koe e mōhio ai he aha tāu whāinga ako mō te whakapakari i tāu mahi tuhituhi?	How do you know what your learning intention is to get better at writing?		
(Shakes head.)	(Shakes heads.)		
Pēhea koe e mōhio ai kua oti pai tāu mahi tuhituhi, kua tae pai ki te whāinga ako rānei?	How do you know if you have completed your writing correctly, or if you have achieved the learning intention?		
Kao.	No.		
He aha ētahi o āu rautaki hei whakapakari i tāu mahi tuhituhi?	What are some of your strategies to make your writing better?		
Ka kite i ngā mea.	I look at things.		
Nga mea o te akomanga?	The things in the classroom?		
Āe.	Yes.		

Mōhio koe he aha tōu taumata tuhi? Kāo.	Do you know what writing level you are? No.

The example of Student 6 below is typical of the four students who were able to share more ideas than the previous 20. The example shows that, while she could share more ideas than most others, she did not know what was meant by a reading or writing programme. She could not describe specific learning intentions related to the literacy curriculum. There were long pauses before she answered questions, and she thought back to previous years to answer questions about what she was learning now.

Table 19*: Pre-intervention Interview Extract – Student 6*

	Key	Interviewer	Student
Interview Transcript	English Translation		
Kōrero mai mō te hōtaka reo matatini i roto i tāu akomanga. He aha ētahi o ngā ngohe? Pēhea te hōtaka tuhituhi/pānui/kōrero rānei? Ētahi wā i te pānui, ka tango mātau i te pukapuka a he pātai, he aha te īngoa o te pukapuka, nā wai i tuhi i te pukapuka ā ka whakautu mātau i te pātai. Mō te tuhituhi ka tuhi mātau mō tō mātau rā i te kura.	Tell me about the literacy programme in your classroom. What are some of the activities? What are the writing, reading, or oral language programmes like? Sometimes during reading we take out a book and there are questions, what is the name of the book, who wrote it, and we answer the questions. For writing we write about our day at school.		
Tēnā, whakamārama mai, i roto i te mahi tuhituhi, kei te ako koe ki te aha i tēnei wā? Kei te ako mātau ki te āhua tuhi i tō mātau rā i te kura. Ka, ētahi wā ka mahi mātau i te tuhi kōrero hoki. Te whakamahere.	Tell me what you are learning to do in your writing programme? We are learning about, kind of writing about our day at school. Sometimes we write stories. The planning.		
He aha te whakamahere?	What is the planning?		

He pērā ki te pānui, i te pānui pukapuka ēngari ka whakautu pātai mō tō rā, ko wai i haere.	It's like the reading activities but you address questions about your day and who went.
Pēhea koe e mōhio ai he aha tāu whāinga ako mō te whakapakari i tāu mahi tuhituhi? Aua.	How do you know what your learning intention is to get better at writing? I don't know.
Pēhea koe e mōhio ai kua oti pai tāu mahi tuhituhi, kua tae pai ki te whāinga ako rānei? Ka titiro au ki ngā ira kati ngā tohu tō me ērā mea.	How do you know if you have completed your writing correctly, or if you have achieved the learning intention? I look for full stops and macrons and things like that.
He aha ētahi o āu rautaki hei whakapakari i tāu mahi tuhituhi? Ka titiro au ki tētahi pukapuka kimi kupu. Tērā pea te pukapuka Pirihimana.	What are some of your strategies to make your writing better? I look at the dictionary and maybe the book about the policemen.
Mōhio koe he aha tōu taumata tuhi? Kāo.	Do you know what writing level you are? No.
Nā wai koe i ako ki te tuhi tika i ngā tohu tō me ngā ira kati? Nā taku kaiako i tērā atu tau.	Who taught you to write macrons and full stops. My teacher in the junior class.

4.5 Pre-intervention Summary

Overall, most students' abilities to discuss their learning prior to the study intervention were limited. From my formal observations of classroom practices and discussions with teachers, it was evident that they did not usually discuss their learning with each other and they did not have linguistic scaffolds to support any learning conversations. Similarly, they did not discuss their literacy learning in any depth during pre-intervention interviews. While four students were able to share more

ideas about their general learning activities than the other students, those ideas still lacked specific language related to the literacy curriculum.

As a result of the study intervention, the students' ability to discuss their learning improved markedly. The following section presents an analysis of the findings related to the shift in language abilities over the course of the intervention.

4.6 Post-intervention: Students' Improved Ability to Discuss Their Learning

As discussed above, the participant students in this study improved their ability to discuss their learning following the study's intervention. The improvements are outlined in the following section. To start, I present findings related to early shifts in students' abilities to discuss their learning with each other as the study intervention unfolded. The section then moves to the overall results the intervention had on students' abilities to discuss their learning, as demonstrated in post-intervention interviews.

4.6.1 Student-to-student Discussions

The first evidence of improvement in students' ability to discuss their literacy learning emerged early in the intervention as they engaged with the Anga Putanga Ako and Kāri Matapaki to discuss their learning with each other. Initially, as expected, they relied heavily on the scaffolds to discuss their learning, reading them word for word while not always sure of what they were saying. This was reflected, for example, in needing my direction to know what information to insert into the gaps when answering the questions on the cards.

Over the course of the intervention, my classroom observations and teacher feedback revealed that students became more familiar with the questions in the Kāri Matapaki and how to answer them. They needed less direction from me and their teacher to fill in the gaps in the cards. They also became more familiar with the outcomes on the Anga Putanga Ako and how they related to their own achievement levels. Midway through the intervention, Komene, a teacher participant, commented on the positive effect the scaffolds were having on students' ability to discuss their learning with each other.

Komene: I te rā nei i whakamahi anō i ngā ara whakaako mā te anga putanga ako me ngā kāri matapaki, i tēnei rā i tuku au i ngā rōpū ako ki te mahi i tēnei whai muri i te wā ako a teihana (work group/station). Ā i whakarongo au ki o rātau matapakinga, e rongo ana ahau i te matatau o ngā pakeke ki tēnei ārā nga tau 7-8 o te rōpū 1. He pai te rongo i ngā ākonga e kōrerorero ana mō ngā whāinga me ngā taumata ako. He kaha hoki ngā tau ono o te rōpū rua ki te whakamahi i tēnei tukanga, ā i tere whakatika rātau i a rātau anō kia whai i ngā pātai me ngā whakautu.

Translation: Today we used the anga putanga ako and kāri matapaki to support our learning again. I sent the students to use them after their reading rotations. I listened to their discussions, I heard how well the years 7-8 group were able to use them. It was great to hear them discussing their learning intentions and levels. The year sixes in the second group were also good at using them. They were quick to correct themselves if they made a mistake so they could follow the questions and answers correctly.

Two weeks later, Komene observed that the students were less reliant on the cards to direct their conversations.

Komene: I tēnei rā i whakamahi au i ngā kāri matapaki hei ārahi i te wā matapaki i waenga i ngā ākonga. I whakamahi mō ngā akoranga ako ki te pānui, me te whai māramatanga ki ngā āhuatanga reo o ngā tuhinga takenga pūtaiao. Ki tōku kitenga i whai angitu te wā ako nā te tāpiri atu i te wāhanga kāri matapaki. I tēnei wā ako i tīmata ētahi ki te whakarerea atu i ngā kāri me te whakaaro ake i o rātau ake whakautu. Hei tāpiri atu kua whakatau au kia whakamahi i ētahi o ngā tūāhua o te tukanga kāri matapaki ki ērā atu marau pērā i te pāngarau, te pānui (pērā ki ngā mahi o tēnei rā) tae atu ki te pūtaiao hoki.

Translation: Today I used the discussion cards to support the students' discussions. I used them in the reading lessons and to support students to understand scientific report writing. I noticed the learning was more accelerated because of the discussion cards. During this time I noticed the students relied less on the cards and found their own answers. I am also

thinking about the advantages of using discussion cards in other curriculum areas such as the Mathematics, Reading (like today), and Science programmes.

The improvement in students' ability to discuss their learning with each other by the end of the intervention is exemplified in comparisons between the Week 1 and Week 14 conversations between Student 1 and Student 2 below. In the Week 1 conversations, the students were reading the cards word for word. Student 2 was unsure of what some of the questions meant or how to answer them, and needed me to guide him and prompt his answers. However, in the Week 14 conversation, Student 2 was now able to answer questions about his learning unaided, using specific academic language and referring to specific curriculum outcomes. He was also able to go beyond the questions and add extra information, such as what level his current learning intentions were, without being asked, making it more like a conversation than the previous question and answer session.

Table 20*: Learning Conversations - Student 1 and Student 2*

Learning Conversation Week 1 (Scaffolded with Kāri Matapaki)	Learning Conversation Week 14 (No use of Kāri Matapaki)
ST:1 "Kia ora e hoa." **ST:2** "Kia ora e hoa." **ST1:** "He aha tōu whāinga i tēnei rā?" **ST2:** "Ko taku whāinga i tēnei rā … umm (researcher pointed to the white board where the whāinga was written) … ko te tuhi tika i ngā ira kati me ngā pūmatua." **ST1**. "Kua tutuki pai tōu whāinga?" **ST2:** "Āe kua tutuki pai taku whāinga."	**ST:1** "Kia ora e hoa." **ST:2** "Kia ora e hoa." **ST1:** "He aha tōu whāinga mō te tuhituhi i tēnei rā?" **ST2:** "Kei te ako au ki te raupapa tika i aku whakaaro ki te kōwae." **ST1**. "Kua tutuki pai tōu whāinga?" **ST2:** "Āe (pointing to her writing) anei aku kōwae ... me tēnei . titiro (pointing to

ST1: “Pehea koe e mōhio ai kua tutuki pai tōu whāinga, whakaatuhia mai?”

ST 2: “Ummm …” (researcher points to student’s writing book) “anei” (pointing to her book work).

ST1: “He aha ngā rauemi i tautoko ai i a koe kia whakatutuki pai te whāinga?”

ST 2: “Ko nga rauemi i tautoko i ahau ko te … ummm … taku pene rākau me taku hinengaro?”

ST1: “He aha tētahi atu whāinga māhau ināianei?”

ST2: “Ko taku whāinga ināianei ko te … umm … (Researcher pointed to the Anga Putanga Ako and said ‘me kōwhiri tētahi o wēnei’) … ummm … te tuhi tika i ngā tohu kōrero?”

ST1: “Pēhea koe e ako tōu whāinga hou?”

ST2: “Ummm …”

Researcher: “Ka pātai atu koe ki tōu kaiako, ka rapu akoranga i roto ētahi puka pea?”

ST2: “Āe ka pātai ki taku Kaiako.”

ST1: “He aha ngā rauemi hei tautoko i a koe?”

ST2: “Ko te kaiako.”

ST1: “Ka pai tōu mahi e hoa.”

writing) ... kua tuhi tika hoki i ngā ira kati me ngā pūmatua koinā ētahi atu o aku whāinga. Kua tutuki pai te taumata rua ināianei, kei taumata toru au.”

ST1: “He aha ngā rauemi i tautoko ai i a koe kia whakatutuki pai te whāinga?”

ST 2: “Ummm … i titiro au ki te tuhinga o matariki me ngā kōwae … me te mahere hamupeka ... i ruapapa au i aku whakairo ki te mahere mua i taku tuhinga.”

ST1: “He aha tētahi atu whāinga māhau ināianei?”

ST2: “Pirangi au ki te tuhi kupu hei whakaahua i ngā mahi me ngā wāhi … kia hopu i te kai pānui. He taumata toru tēnā.

ST1: “Pēhea koe e ako tōu whāinga hou?”

ST2: “Ā ka patae ahau ki a matua pea.”

ST1: “He aha ngā rauemi hei tautoko i a koe?”

ST2: “Te kaiako me ngā pukapuka rā (pointing to the shelf of writing resources).”

ST1: “Ka pai tōu mahi e hoa.”

ST2: “Kia ora mo tōu tautoko e hoa.

ST2: "Kia ora mō tōu tautoko e hoa.	

Table 21*: Learning Conversations (English Translation) - Student 1 and Student 2*

Learning Conversation Week 1 (Scaffolded with Kāri Matapaki)	Learning Conversation Week 14 (No use of Kāri Matapaki)
ST:1 "Hello friend." **ST:2** "Hello friend." **ST1:** "What is your learning intention today?" **ST2:** "My learning intention today is … Ummm (researcher pointed to the white board where the learning intention was written) … is to write full stops and capital letters correctly." **ST1**. "Did you achieve the learning intention?" **ST2:** "Yes I achieved the learning intention." **ST1**: "How do you know you achieved the learning intention, can you show me?" **ST2**: "Ummm …" (researcher points to student's writing book) "here" (pointing to her book work).	**ST:1** "Hello friend." **ST:2** "Hello friend." **ST1:** "What is your learning intention for writing today?" **ST2:** "I'm learning to sequence my ideas logically in paragraphs." **ST1**. "Did you achieve the learning intention?" **ST2:** "Yes … look (pointing to writing) … here are my paragraphs … and this … look (pointing to writing). I wrote the full stops and capital letters correctly too, those are my learning intentions also. That means I'm finished level 2 now. That's a level 3." **ST1**: "What were the resources you used to help you achieve the learning intention?" **ST2:** "I looked at the matariki story and the paragraphs … and the hamburger planner … I sequenced my ideas on the planner before I wrote."

ST1: "What were the resources you used to help you achieve the learning intention?" **ST2:** "The resources I used were … ummm … my pencil and my mind?" **ST1: "**What is the next learning intention for you now?" **ST2**: "My learning intention now is … ummm … (Researcher pointed to the Anga Putanga Ako and said 'maybe choose one from here') … to write speech marks correctly." **ST1:** "How will you learn your new learning intention?" **ST2:** "Ummm ..." **Researcher**: "Maybe you will ask your teacher or look for information in books?" **ST2**: "Yes, I will ask my teacher". **ST1:** "What are the resources that can help you?" **ST2:** "The teacher." **ST1**: "Great work my friend." **ST2**: "Thank you for your support my friend."	**ST1: "**What is the next learning intention for you now?" **ST2**: "I want to write words that describe what people are doing and places, to engage the readers. That's Level 4 that learning intention." **ST1:** "How will you learn your new learning intention?" **ST2:** "ummm I'll ask the teacher maybe." **ST1:** "What are the resources that can help you?" **ST2:** "The teacher and those books (pointing to the shelf of writing resources)." **ST1**: "Great work my friend." **ST2**: "Thank you for your support my friend."

4.6.2 Improved Language Use

As a result of improved discussions with each other during the intervention, students were better able to discuss their learning in post-intervention interviews. compared to

pre-intervention interviews. They were better able to discuss specific curriculum indicators they were currently learning, as well as those they had already achieved, or still needed to achieve. They all used more curriculum-specific vocabulary than prior to the intervention, and there were fewer incidents of students simply shrugging their shoulders in response to questions.

While the pre-intervention interviews were short question and answers sessions, with students sharing limited ideas in response to each question, the students' improved ability to discuss their learning meant that the post-intervention interviews became more like conversations. Student 1's pre- and post-intervention transcripts below are an example of the shift made by even the students who had the least ideas and language in the pre-intervention interviews. (Other examples are presented in Appendix 3.) In his pre-intervention interview, Student 1 was able to offer only limited ideas and used no curriculum-specific vocabulary. In the post-intervention interview he talks about his specific learning intentions related to the curriculum and gives examples. He also talks about his next learning steps and uses specific curriculum language. He knows what level he is and how the Anga Putanga Ako helps him understand what he has to learn to progress.

Table 22*: Pre- and Post-intervention Interview Extract - Student 1*

	Key	Interviewer	Student
Student 1: Pre-intervention Interview		Student 1: Post-intervention Interview	
Tēnā, whakamārama mai, i roto i te mahi tuhituhi, kei te ako koe ki te aha i tēnei wā? Kia pai ake, kia mahi wahangū. Pēhea koe e mōhio ai he aha tāu whāinga ako mō te whakapakari i tāu mahi tuhituhi? Kia mahi i ngā wā katoa kia pai ake ia wā.		Tēnā, whakamārama mai, i roto i te mahi tuhituhi, kei te ako koe ki te aha i tēnei wā? Te ako pēhea te tuhi ngā ira kati me ngā pūmatua i ngā wā katoa. He whāinga anō? Te whakamahi i ngā kīwaha me ngā kupu whakarite i roto i tōku tuhinga taki.	

He aha te āhua o te tuhi pai? Kore hapa me te ira kati i ngā wāhi tika. Pēhea koe e mōhio ai kua oti pai tāu mahi tuhituhi, kua tae pai ki te whāinga ako rānei? Mēnā ka mārama koe, kua oti ō mahi. He aha ētahi o āu rautaki hei whakapakari i tāu mahi tuhituhi? Kia mahi i ngā wā katoa. He aha ngā rauemi e mahia e koe hei whakapakari i tāu mahi tuhituhi? (Student shrugged shoulders.) Tēnā, whakamārama mai, i roto i te mahi pānui, kei te ako koe ki te aha i tēnei wā? Te pānui tika i ngā rerenga kōrero. He aha ngā rauemi e mahia e koe hei tautoko i tāu ako pānui? Ngā pene me ngā pepa. He aha tau taumata tuhi? (Shrugged shoulders.)	Pēhea koe e mōhio ai he aha tō whāinga i a koe e tuhi ana? Nā te mea kua mahi i nui ngā wā. Kua mahi e maha ngā wā ia mātou e mahi ana. Pēhea koe e mōhio ai he aha tō whāinga, nō whea ngā whāinga? Nō te Anga putanga ako. He aha te Anga putanga ako? He rauemi mō nga whāinga kia mōhio koe he aha te taumata me te whāinga o to whenu. He aha ngā whenu o te Anga Putanga Ako? Te puna reo te āheingā reo me te rautaki reo. Ko tēhea taumata koe? Taumata toru. Pēhea e mōhio ai ko tērā tō taumata? Nō te mea kua mahi mātou ētahi mahi, kua tuhia ētahi ō mātau hoa te taumata ki ō rātau whakaaro. He aha ētahi o ngā whāinga o te taumata toru? Pēhea te tuhi tika i ngā ira kati me ngā pūmatua me ngā tohu tō i ngā wā tika. Ētahi atu? Te whakamahi kupu kīwaha me ngā kupu whakarite i ngā wā tika. Mōhio koe ki te mahi kīwaha me te kupu ōrite? Āe.

	He aha ētahi o rātau? Te ketuketu te wānanga. He aha ngā rauemi e mahia e koe hei whakapakari i tāu mahi tuhituhi? Te Anga Putanga Ako me ngā Kāri Matapaki. He aha ngā Kāri Matapaki? Kia āwhina i a koe te whakamārama i tō taumata me tō whenu me tō whāinga. He aha ētahi o ngā pātai kei runga i ngā Kāri Matapaki? He aha tō whāinga ināianei he aha tētahi whāinga hou. Pai ki a koe te mahi tuhi? Āe. He aha ngā mahi pai ki a koe? Te tuhi i tētahi kaupapa hīkaka kua mahi kē. He rerekē tō hōtaka tuhi i tēnei tau? Ki ōku nei whakaaro kua nuku taumata au, me te ako whāinga hou. He kōrero anō? Kāo.

Table 23: *Pre- and Post-intervention Interview Extract - Student 1 (English Translation)*

	Key	Interviewer	Student

Student 1: Pre-intervention Interview	Student 1: Post-intervention Interview
Tell me what you are learning to do in your writing programme. To get better and work quietly. How do you know what your learning intention is to get better at writing? To work all the time to get better each time. What does good writing look like? No mistakes and full stops in the correct place. How do you know of you have completed your writing correctly, or if you have achieved the learning intention? If you understand it, it's finished. What are some of your strategies to make your writing better? To work all the time. What are some of the resources you use to make your writing better? (Student shrugged shoulders.) What are you learning to do in reading? To read the sentences correctly.	Tell me what you are learning to do in your writing programme. How to write full stops and capitals correctly all the time. Any other learning intentions? To write colloquialisms and metaphors in my recount writing. How do you know what your learning intention is when you are writing? Because we do them all the time when we are writing. How do you know what your learning intentions are, where are the learning intentions? On the Anga Putanga Ako. What is the Anga Putanga Ako? A resource for the learning intentions so you know what level and strand the learning intention is. What are the strands of the Anga Putanga Ako? Purposes for writing, strategies for writing, and writing knowledge. What level are you? Level 3. How do you know what level you are? Because we do some activities, our learning buddy writes what level they think we are.

What are the resources you use to help you with reading? Pens and paper What is your writing level? (Shrugged shoulders.)	What are some of the learning intentions from Level 3? How to write full stops and capital letters correctly all the time, and the macrons. Any others? To write colloquialisms and similes at the appropriate times. Do you know what colloquialism and similes are? Yes. What are some? Te ketuketu te wānanga. What are some of the resources you use to help you make your writing better? Te Anga Putanga Ako and the Kāri Matapaki. What are the Kāri Matapaki? They help you understand the strand and the level of your learning intention. What are some of the questions on the Kāri Matapaki? What is your learning intention now, what is your next learning intention. Do you like writing? Yes. What are the things you like? To write about an exciting topic that has happened. Is your writing programme different this year?

	I think I've gone up a level and learnt new outcomes. Do you have anything else to say? No.

While all students improved their ability to answer the interview questions, some students shared even more ideas than the example above. For example, Student 15's pre- and post-intervention interviews below show how he moved from limited ideas, to being able to discuss what level he is by describing a range of outcomes he had achieved from the previous level. He described the use of success criteria to indicate successful completion of learning intentions, and he discussed how he decided what he needed to learn next to progress to higher levels of the curriculum.

Table 24*: Pre- and Post-intervention Interview Extract - Student 15*

	Key	Interviewer	Student 15
Student 15: Pre-intervention Interview		Student 15: Post-intervention Interview	
Tēnā, whakamārama mai, i roto i te mahi tuhituhi, kei te ako koe ki te aha i tēnei wā? Te whaka-ataahua i tōku tuhinga kia pai ake ōku kupu. Pēhea te pai ake i ō kupu?.(Student shakes shoulders) … Kei te ako ahau ki te mahi kōrero taki. He aha te tuhi taki? Tētahi kaupapa mō te tuhinga o ngā wāhanga. He aha ngā wāhanga o te tuhi taki?			Tēnā, whakamārama mai, i roto i te mahi tuhituhi, kei te ako koe ki te aha i tēnei wā? Ko tetahi whāinga kua tutuki ahau ko te tuhi i tētahi tapanga e hangai ana ki tō kaupapa hei hopu i te kai pānui. Kei te mōhio au kua tutuki i tēra whāinga nō te mea kua tuhi au i tētahi tapanga e hāngai ana ki tōku kaupapa, Te Retireti. He tauira anō tāu? Mēnā ko tō kōrero 'E haere ana koe ki te tiki parengo mō tō kuia' me whakamahi koe i tētahi tapanga e hangai ana ki tō kōrero.

Ko te tapanga te raupapatanga me te whakakapinga. Mōhio koe ki te tuhi wērā wāhanga o te tuhi taki? Āe. Pēhea koe e mōhio ai mēnā kua tutuki pai tō whāinga? Mēnā kei te mahi i ngā tohu tō te nuinga o te wā, me te whakamahi i ngā ira kati i ngā wā katoa. Pēhea koe e mōhio ai kua oti pai tāu mahi tuhituhi, kua tae pai ki te whāinga ako rānei? Mēna kei te mahi i ngā tohu tō te nuinga o te wa, me te whakamahi i nga ira kati i ngā wā katoa.	Hōmai tētahi tauira mō tētahi tapanga e hangai ana mō tērā kōrero. Ko tētahi tapanga mō tērā kōrero “Ka haere au ki te tiki Parengo”. Pēhea koe e mōhio ai he aha tōu whāinga hei whakapakari i tōu mahi tuhi? Ka tirohia ki tōku mahi, mēnā kei kōrā tētahi whāinga mō ahau kia tutuki. Kei whea aua whāinga? Kei roto i te Anga Putanga Ako. He aha tērā? Ko te Anga Putanga Ako ko ētahi whāinga kia piki i te taumata mēnā kua tutuki i ērā whāinga. He aha tō taumata? Taumata whā. Pēhea koe mohio ai he taumata whā koe? Nō te mea kua tutuki au ōku whāinga katoa i roto i te taumata toru. He aha ētahi o ngā whāinga i roto i te taumata toru? Ko tētahi, ko te whakamahere mō ttahi momo tuhinga. Mōhio au kua tutuki i tārā whāinga nō te mea kua whakamahere au mō tōku tuhinga taki me tōku tuhinga take putaiao.

	He aha ētahi atu whāinga o te taumata toru i tutuki pai i a koe? Te whakamahi tika i ngā ira kati me ngā pūmatua i ngā wā katoa. Ka mōhio au kua tutuki pai tērā nō te mea, i roto i ōku kōrero, i ngā wā katoa, i muri i te ira kati ka whakamahi au i te pūmatua. I te mutunga o taku rerenga ka whakamahi ira kati. Ētahi atu whāinga? Ka whakamahi au hoki, i ngā tohu pātae me ngā tohu hamama i ngā wā e tika ana i roto i taku kōrero. Ka whakamahi au i ngā kōwae. He aha ngā kōwae? Ko te tuatahi o ngā mea katoa ko te tapanga, kātahi ko te whakamārama, kātahi ko te raupapatanga kātahi ko te whakakapi. He whāinga anō? Kua wareware ētahi mea. Pēhea koe e mōhio ai kua oti pai tāu mahi tuhituhi, kua tae pai ki te whāinga ako rānei? Mēnā kua tutuki pai taku whāinga ka hangai au i te paiareangitu. Mēnā kua tutaki koe i t whāinga kei kōrā te paiaruangitu kia tautoko i a koe kia whiwhi i tō whāinga hei tutuki pai.

Table 25*: Pre- and Post-intervention Interview Extract - Student 15 (English Translation)*

	Key	Interviewer	Student 15
Student 15: Pre-intervention Interview	Student 15: Post-intervention Interview		
Can you tell me what you are learning to do in your writing programme? To make my hand-writing beautiful so my words look better. How do you make your words better? (Shrugged shoulders.) … I'm learning to write recounts. What's a recount? A topic about writing in sections. What are the sections of a recount? The title, the list, and the conclusion. Do you know how to write those sections of a recount? Yes. How do you know if you have achieved the learning intention? If I write the macrons correctly most of the time, and the full stops all the time.	Tell me about what you are learning to do in your writing programme. One of the outcomes I am learning is how to write a title that relates to the topic and grabs the reader's attention. I know I achieved that outcome because I wrote a title that relates to my topic, The Skate Board. Do you have another example? If your story is about going to get seaweed for your grandmother then you have to write a title about that. Tell me the title that would be for that story? The title for that story would be "Going to Collect Seaweed". How do you know what you need to learn to make your writing better? I look at my work, to see if there is any other outcomes I need to learn. Where are those outcomes? In the Anga Putanga Ako. What's that? The Anga Putanga Ako is some outcomes, if you achieve those outcomes you go up levels.		

	What level are you? Level 4. How do you know what level you are? Because I've achieved all the outcomes from Level 3. What are some of the outcomes from Level 3? One is to plan my writing. I know I've achieved that outcome because I have written plans for my recounts and my scientific report. What are some of the other outcomes you have achieved from Level 3? Writing full stops and capital letters correctly all the time. I know I've achieved that because I write them in my writing all the time, after the full stop I write a capital letter. At the end of my sentence I put a full stop. Any other outcomes? I also put speech marks and exclamation marks in my writing when it's appropriate. I do paragraphs. What are paragraphs? First is the title, then the introduction, then the things that happened, then the conclusion. Any other outcomes? I've forgotten some. How do you know if you have completed your writing well, if you have achieved the learning intention? I have achieved the learning intention if I have met the success criteria. If you have achieved the learning

	intention you will have the success criteria there, they help you achieve the learning intention.

4.6.3 Summary

Overall, all participant students in this study improved their ability to discuss their learning as a result of the study intervention. Prior to the intervention, they often did not understand questions about their learning or did not have the language or ideas to respond appropriately and simply responded by shrugging their shoulders. When they did answer questions, they did not use curriculum-specific language and their ideas were limited and general. By the end of the intervention, all students understood the questions they were asked, and they were all able to answer questions and supply information about their learning with curriculum-specific language and ideas.

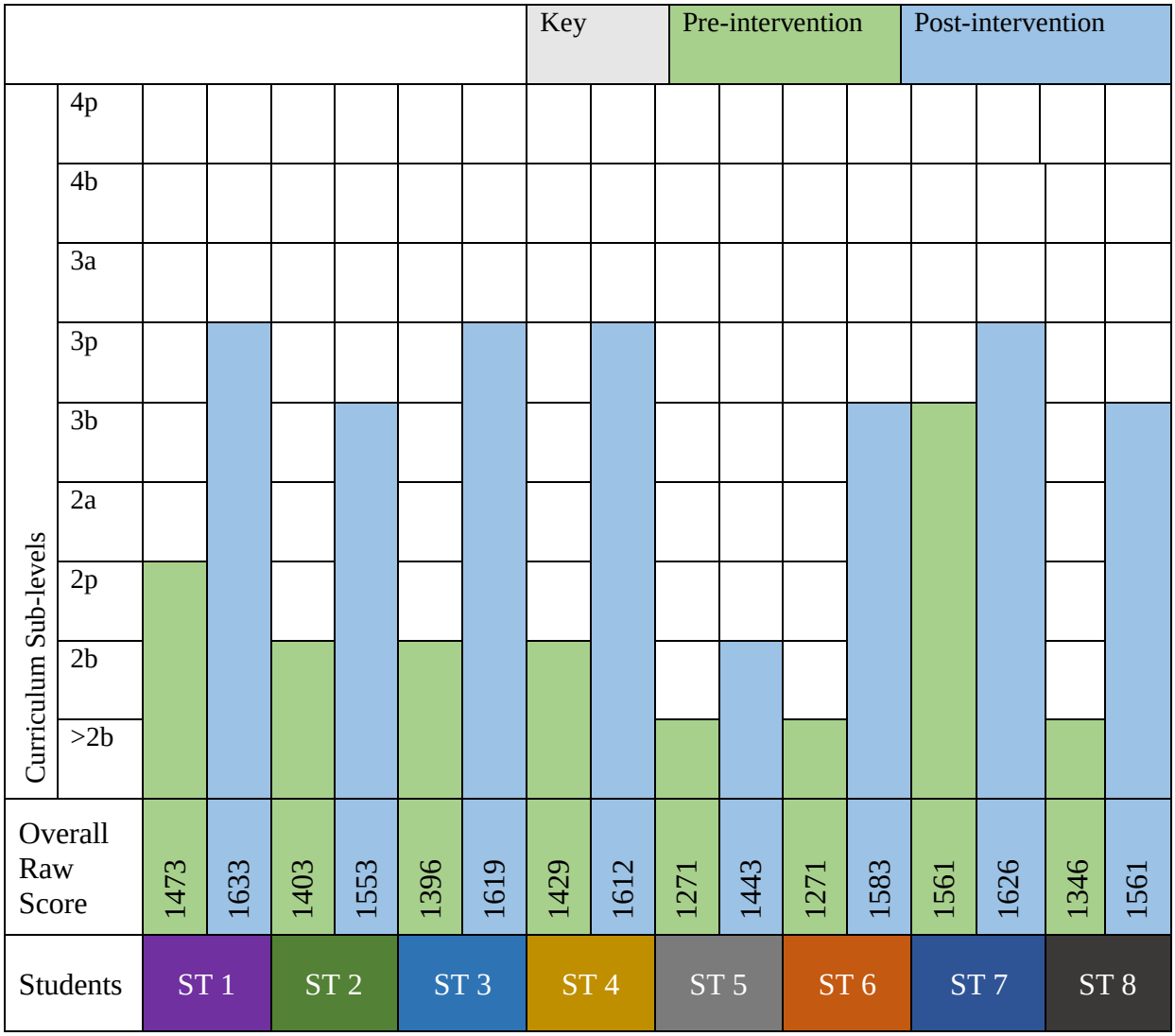
As well as, and perhaps because of, students' increased ability to discuss their learning with specificity related to their literacy learning, the students also accelerated their reading and writing achievement over the course of the study. The findings related to this improvement are in the next section.

4.7 The Effect of Self and Peer Assessment on Students' Literacy Achievement

The participant students in this study made accelerated literacy progress over the 14 weeks of the study according to e-asTTle expectations. Although the intervention was applied in students' writing programmes, they also made accelerated progress in reading. The results related to students' writing and reading in each kura are presented in the section that follows.

4.7.1 Kura 1: Tuhituhi

Table 26: *Students' Tuhituhi Results - Kura 1*



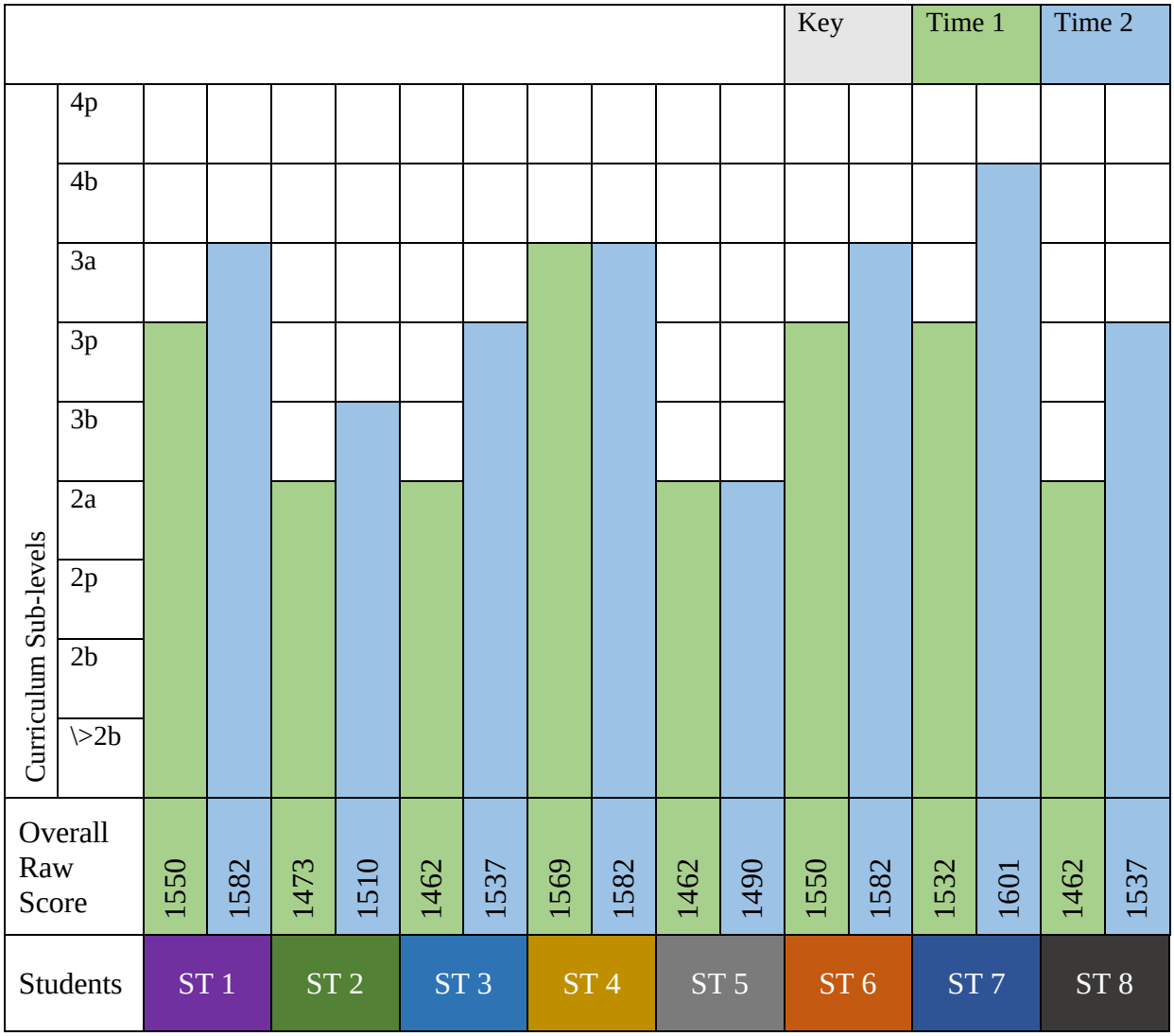
The average curriculum level for students' writing achievement in Test 1 was 2b. In Test 2, the average curriculum level had risen to 3b. This is an average rise of three curriculum sub-levels in 14 weeks, which is the expected progress for students over two years (Te Kete Ipurangi, 2022).

A Wilcoxon signed-rank test was performed on pre- and post-test scores. This showed a significant difference across these two time points, with scores increasing across the

14-week period: z = -2.52, p = .012 (Pre-test M = 1393.75, SD = 98.56; Post-test M = 1578.75, SD = 62.48). The effect size was 0.63.

4.7.2 Kura 1: Pānui

Table 27*: Students' Pānui Results - Kura 1*



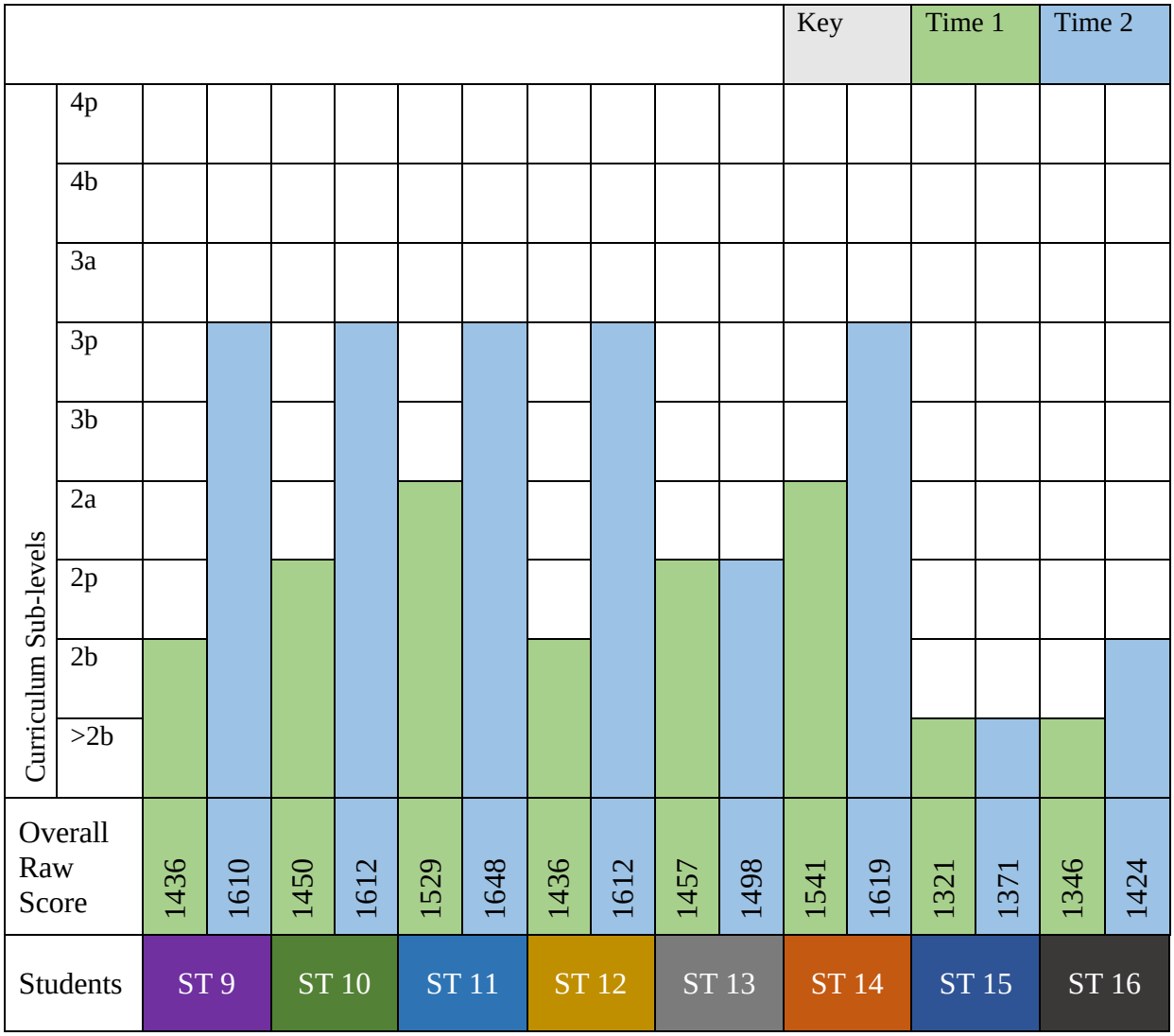
The average curriculum level for students' reading achievement in test one was 3b. In Test 2, the average curriculum level had risen to 3p. Although pānui had not been a focus of the intervention, this was an average rise of one curriculum sub-level over 14 weeks, which is the expected progress for students over approximately 27 weeks.

A Wilcoxon signed-rank test was performed on pre- and post-test scores. This showed a significant difference across these two time points, with scores increasing across the

14-week period: z = -2.38, p = .017 (Pre-test M = 1507.50, SD = 46.90; Post-test M = 1542.63, SD = 52.45). The effect size was 0.60.

4.7.3 Kura 2: Tuhituhi

Table 28: *Students' Tuhituhi Results - Kura 2*



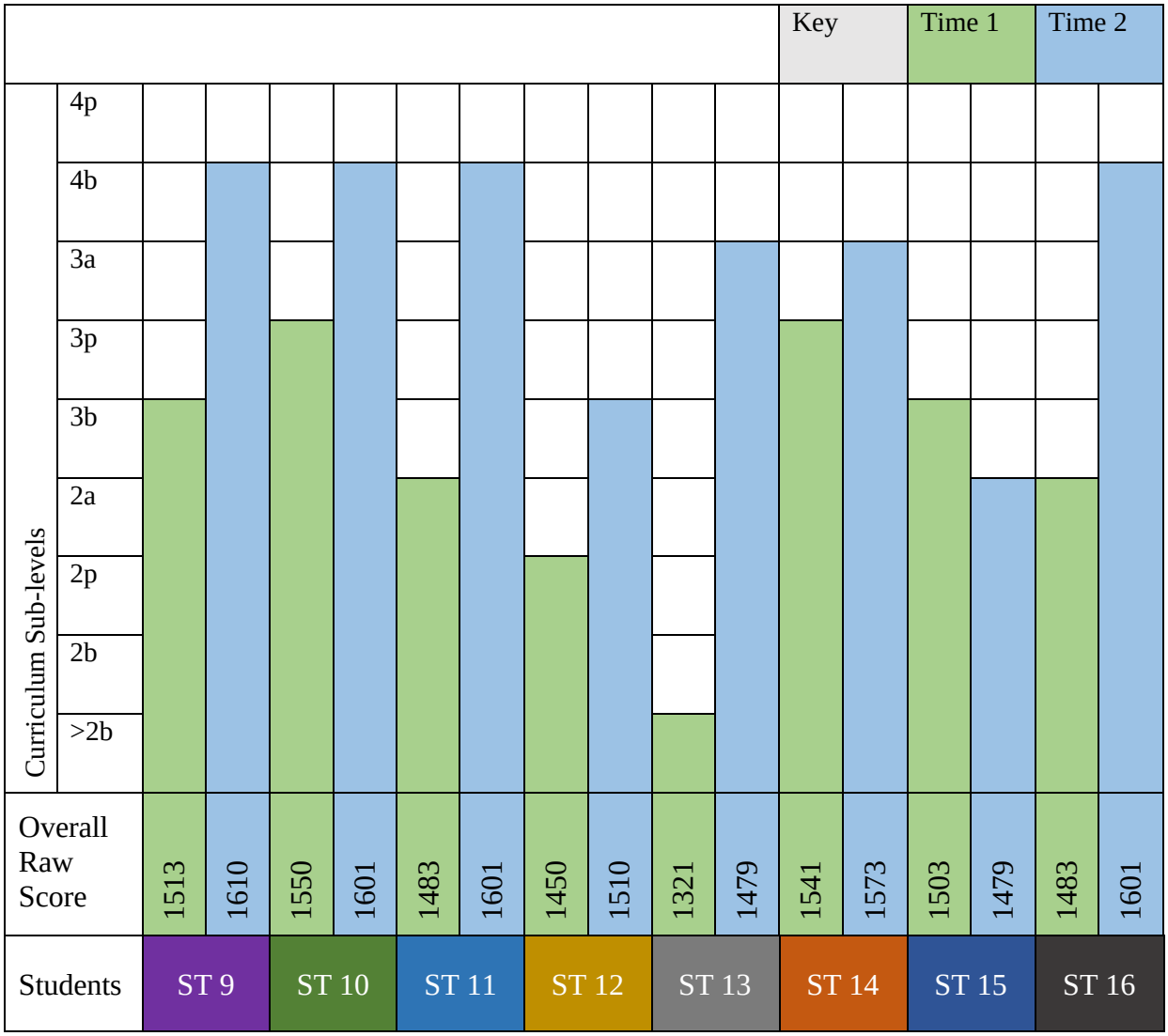
The average curriculum level for students' writing achievement in Test 1 was 2b. In Test 2, the average curriculum level had risen to 3b. This is an average rise of three curriculum sub-levels in 14 weeks, which is the expected progress for students over two years.

A Wilcoxon signed-rank test was performed on pre- and post-test scores. This showed a significant difference across these two time points, with scores increasing across the

14-week period: z = -2.52, p = .012 (Pre-test M = 1439.50, SD = 77.03; Post-test M = 1549.25, SD = 104.38). The effect size was 0.63.

4.7.4 Kura 2: Pānui

Table 29*: Students' Pānui Results - Kura 2*



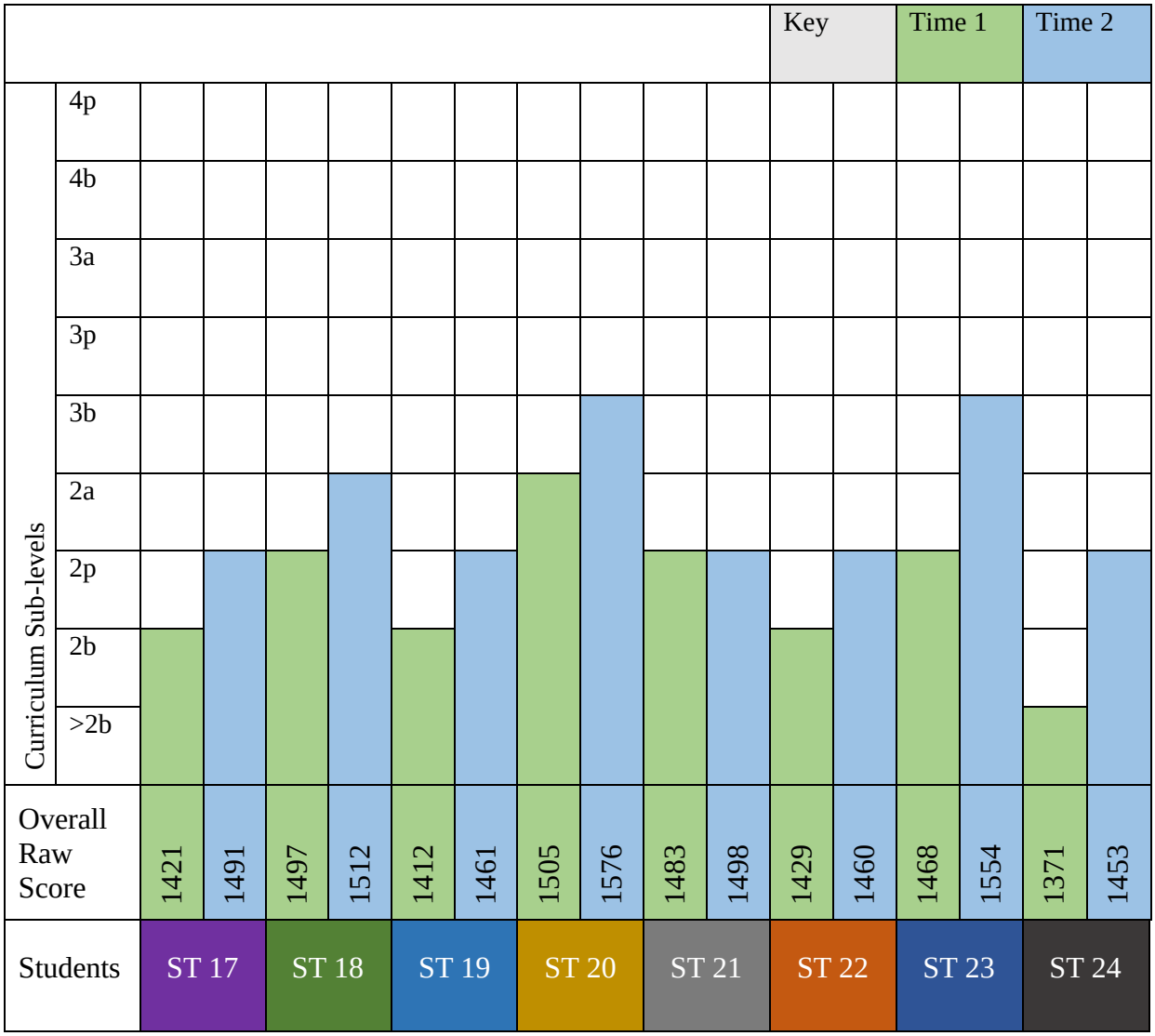
The average curriculum level for students' reading achievement in Test 1 was 3b. In Test 2, the average curriculum level had risen to 3a. This is an average rise of two curriculum sub-levels in 14 weeks, which is the expected progress for students over approximately 50 weeks of schooling.

A Wilcoxon signed-rank test was performed on pre- and post-test scores. This showed a significant difference across these two time points, with scores increasing across the

14-week period, z = -2.38, p = .017 (Pre-test M = 1480.50, SD = 72.15; Post-test M = 1556.75, SD = 57.63). The effect size was 0.60.

4.7.5 Kura 3: Tuhituhi

Table 30: *Students' Tuhituhi Results - Kura 3*



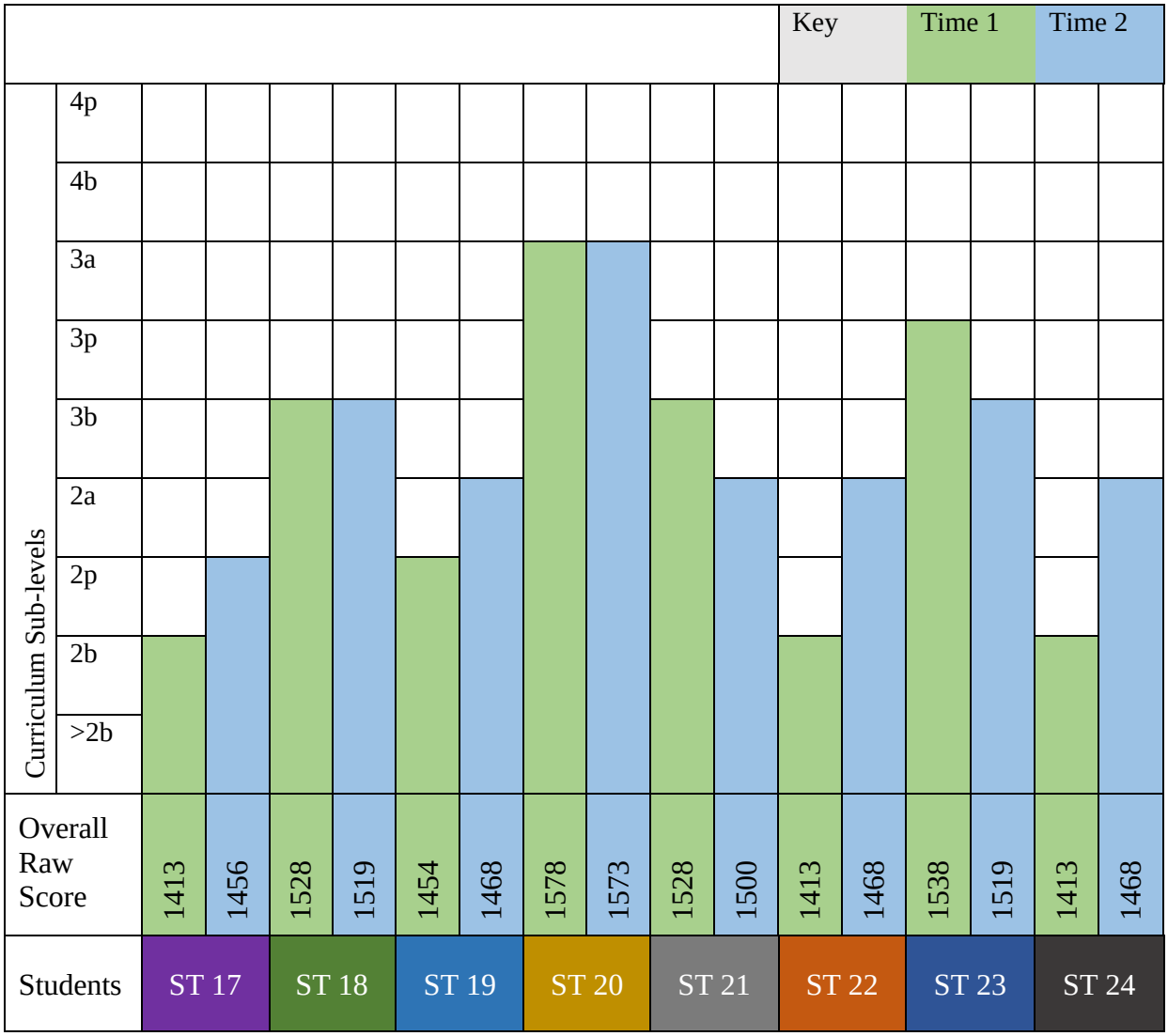
Over the course of the study, seven students progressed between one and two sub-levels in tuhituhi, and one student stayed at the same level.

The average curriculum level for students' tuhituhi achievement in Test 1 was 2b. In Test 2, students' average achievement had risen by one curriculum sub-level to 2p. This is an average rise of one curriculum sub-level in 14 weeks, which is the expected progress for students over approximately 27 weeks of schooling.

A Wilcoxon signed-rank test was performed on pre- and post-test scores. This showed a significant difference across these two time points, with scores increasing across the 14-week period: z = -2.52, p = .012 (Pre-test M = 1448.25, SD = 47.19; Post-test M = 1500.62, SD = 45.12). The effect size was 0.63.

4.7.6 Kura 3: Pānui

Table 31: *Students' Pānui Results - Kura 3*



Over the course of the study, four students progressed between one and two curriculum sub-levels, two stayed the same, and two slipped back one sub-level. The average curriculum level for students' reading achievement in Test 1 was 2a. In Test 2 the average curriculum level had risen to 3b. This is an average rise of one curriculum

sub-level in 14 weeks, which is the expected progress for students over approximately 27 weeks of schooling.

A Wilcoxon signed-rank test was performed on pre- and post-test scores. This showed there was not a significant difference across these two time points, with scores increasing across the 14-week period: z = -.701, p = .483 (Pre-test M = 1483.13, SD = 67.23; Post-test M = 1495.50, SD = 39.06). The effect size was 0.18.

The improvement in reading was less than Kura 1 and 2. This may be reflective of the fact that there were many competing priorities for the teacher and students in Kura 3. As a result, they did not spend as much time implementing the intervention as the other two kura. However, even with less intensive, focused intervention, the rate of improvement is still almost twice as much progress than might be expected according to Ministry of Education expectations.

4.8 The Impact of the Self and Peer Assessment Practices on Teachers' Knowledge and Practice

As a result of the self and peer assessment intervention, the participant teachers improved their knowledge about effective literacy teaching in their Māori-medium classrooms. In particular, they developed an understanding of the benefits of constructing schoolwide curriculum achievement progressions, specifying learning intentions and success criteria before and during lessons, and using scaffolds to support students' ability to discuss their learning.

4.8.1 The Benefits of Schoolwide Achievement Expectations

Prior to the intervention, none of the three teachers had chosen specific benchmarks upon which to base their expectations for students' progress and achievement or what they should be teaching at any given time. Early in the intervention, all three participant teachers acknowledged the benefits of constructing schoolwide learning progressions, such as those on the Anga Putanga Ako:

> **Peta:** "*Even though it made my head sore going through all the writing curriculum outcomes and choosing the ones for the Anga Putanga Ako, it was really beneficial to see what the students should be learning. It's good to have*

the whole school understand what the students should be learning so we all know what to teach at each level."

Such was their new belief in the benefits of schoolwide progressions that, early after the intervention started, Peta and his principal initiated the development of Anga Putanga Ako for use in literacy programmes across all classes from Years 1 to 8. All Year 1 to 8 teachers participated in the construction of the Anga Putanga Ako and there was an expectation that they all used it as a basis for their teaching and to track progress and achievement.

4.8.2 Learning Intentions and Success Criteria

Prior to the study intervention, Peta and Tamara seldom shared specific learning intentions or success criteria related to the curriculum with the students before they taught writing. Evidence of their developing understanding of the importance of making learning intentions explicit came during the modelling phase of the study, when they made the following comments:

> **Tamara:** *"Yes … I haven't really been doing this. I haven't been telling them what the Learning Intention is. It helps them to focus on the important parts of the lesson, especially when they go back and assess themselves and each other."*

> **Peta:** "*I noticed the researcher really breaking down and explaining the Learning Intention so the students could understand what they were learning, I need to do that more."*

Prior to the intervention, Komene did share learning intentions and success criteria with students at the start of lessons. As a result of the intervention, he understood that rather than just tell students what they were learning, having them actually discuss those intentions was a way to accelerate learning. He commented early in the modelling phase of the study that:

> **Komene:** *"This is the bit I wasn't doing … before I was just used to giving them the learning intention and no discussion … yes I can see it now, they need to talk about it to understand it … at the faculty of education, teachers*

training programme… we were shown that having "whāinga ako" up on the whiteboard would aid student understanding, however, I don't recall being made aware of the advantages of specific discussion around whāinga, and taumata, as seen in the "Anga Putanga Ako" and the accompanying "Kāri Matapaki"."

By the end of the study, Komene had continued to display the learning intentions and success criteria before lessons and increased the amount of discussion students had between each other to ensure they could explain what they were learning and what they had achieved. Peta had begun to share specific learning intentions from the Anga Putanga Ako to guide his teaching and was sharing those learning intentions more regularly with his students. While Tamara had identified the need to share learning intentions and support students to discuss their learning, the extent to which her teaching actually changed is unclear.

4.8.3 Scaffolding Learning Conversations

Classroom observations conducted prior to the study intervention revealed that the usual discourse patterns in all three classrooms were IRF. Teachers explained what was to be done and asked students if they understood, and students usually replied with simple answers such as 'Ae' (yes). Sometimes students were also asked simple, closed-recall questions. There was no use of linguistic scaffolds to support students to discuss their learning with each other or to extend their language.

As a result of the study intervention, all three participant teachers developed their understanding of the importance of scaffolding students' ability to discuss their learning. In pre-intervention interviews, teachers explained that students had difficulty discussing their learning because of the limited Māori language transmission in their homes. When asked how they supported oral language development in the classroom, the teachers all advised that they did not have formal oral language programmes beyond teaching vocabulary:

Tamara: *"Over the years I have tried lots of things to improve students' language proficiency; modelling and building on reo, new words, then in what context to use those words, then revisiting those words."*

Komene: *"The students play lots of word games to extend their vocabulary …"*

Peta: *"I don't' really have an oral language programme as such. I don't measure their oral language but they're only allowed to speak Māori so they have to."*

Evidence of their developing awareness of the effectiveness of scaffolds for developing students' ability to discuss their learning came during the intervention when teachers made the following comments:

Komene: *"It was amazing to see, how the Kari Matapaki were used, supporting the students to talk, to bring out their thoughts about the learning intentions and the success criteria … today I used the Kari Matapaki to support the students' discussions. I used them in the reading lessons and to support students to understand scientific report writing. I noticed the learning was more accelerated because of the discussion cards. During this time I noticed the students relied less on the cards and found their own answers. I am also thinking about the advantages of using Discussion Cards in other curriculum areas such as the Mathematics and Science programmes."*

Peta: *"Today I observed the activity was for students to discuss their levels, with the Kari Matapaki. The students were unfamiliar with their levels. This was good for the students, to discuss what levels they were, then they are able to progress through higher levels."*

Tamara: *"That was good, the Kari Matapaki made them think and talk more, they don't usually talk about their learning like that".*

Komene summed up his main learnings from the study about the need for students to discuss their learning with this entry in his journal at the end of the intervention:

Komene: *"The main advantages of this programme for the students was that, it initiated quality conversation around the learning, specifically the whāinga, the achievement of whāinga through paearu angitu, and the whāinga for the following lessons. With this in mind the students were tracking their learning,*

and foreseeing their learning. Overall, empowering the students with the knowledge of where they are at, and where they need to go to achieve their taumata."

4.9 Summary

Prior to the study intervention, students struggled to discuss their learning with any curriculum-related specificity. They often shrugged their shoulders in response to simple questions about their learning, and, when they did answer, they sometimes used grammatically incorrect language that did not make sense. The students were supported with learning tools (Anga Putanga Ako) to help them understand the outcomes they needed to achieve to progress through the writing curriculum levels. Their teachers were supported to share outcomes from the Anga Putanga Ako before lesson, as well as related success criteria, so that students were clear about what the lesson focus was and what they needed to be able to do to achieve it. They were then supported by the Kāri Matapaki to discuss their achievement of the lesson outcomes as well as their curriculum levels and next steps in pairs. The self and peer activities repeated over a period of 14 weeks.

As a result of this study there was marked improvement in students' abilities to discuss their learning with specificity in relation to the writing curriculum. They were more able to use specific curriculum language to discuss their learning foci, curriculum achievement levels, and next learning steps. The study also resulted in students' accelerated achievement in writing and reading, as defined by Ministry of Education curriculum progress expectations (Te Kete Ipurangi, 2022). In writing, students made an average of between 27 weeks and two years progress in 14 weeks, and in reading they made an average of between 27 and 50 weeks progress. The teachers also benefited from the study as they developed their knowledge of second-language acquisition pedagogies. In particular, they understood the need to: use an explicit set of learning outcomes to guide their teaching; share explicit learning intentions and success criteria prior to lessons with more consistency; and to provide opportunities for students to discuss their learning with linguistic scaffolds. The implications of these results, as they relate to bi-lingual, and Māori-medium education more specifically, are discussed in the following chapter.

Chapter 5: Discussion

5.1 Introduction

The present study was concerned with raising Māori-medium students' academic language and literacy achievement. Māori-medium education refers to school programmes that deliver the curriculum through the Māori language for at least 51% of the time. They are also known as Māori language immersion programmes and are split into two levels. Level 1 immersion programmes deliver the curriculum through the Māori language between 81% and 100% of the time. Level 2 immersion programmes deliver the curriculum through the Māori language between 51% and 80% of the time. Māori-medium education is delivered in a range of settings across the education system (Education Counts, 2015; Education Review Office, 2021; Hohepa, 2010; Ministry of Education, 2013b). These include kura kaupapa Māori, which are schools underpinned by a fully Māori ethos outlined in the kura kaupapa Māori founding document, Te Aho Matua (New Zealand Gazette, 2008). Kura kaupapa Māori can be primary schools to Year 6 or 8, and they can also include wharekura, or high school classes. Māori-medium education is also provided in kura-ā-iwi (tribal schools), which operate within a framework of their own tribal identity, language, and culture. Kura-ā-iwi can also be primary schools to Year 6 or 8 and may include high school provision. Some English-medium schools also include Māori-medium classrooms alongside the English-medium classrooms (Hill, 2020).

This research study was conducted in three separate Level 1 immersion classrooms in three separate kura kaupapa Māori. The study sought to answer the following questions:

1. What is the effect of self and peer assessment on students' academic oral language development in Māori-medium literacy programmes?
2. What is the effect of self and peer assessment on students' literacy achievement in Māori-medium literacy programmes?
3. How does implementing self and peer assessment practices in Māori-medium classrooms impact on teachers' pedagogical knowledge and teaching practice?

The participants in the study were 24 Year 6 students and three teachers. The study intervention involved students being tasked with assessing their own and each other's curriculum writing achievement and progress over 14 weeks. They were provided with rubrics (Anga Putanga Ako) that taught them the expected outcomes for each level of the writing curriculum. Over the 14 weeks they were then taught specific writing outcomes from the rubric. As they were taught those specific outcomes in their writing lessons, they used the Kāri Matapaki (Discussion Cards) to support their self and peer assessment discussions related to those outcomes. The Kāri Matapaki also supported students to discuss what curriculum levels they were achieving at according to the overall outcomes of the Anga Putanga Ako that they had achieved, and what outcomes they still needed to learn to progress through the levels.

Pre- and post-intervention data were collected through semi-structured interviews to measure shifts in students' academic language abilities in relation to their literacy learning. Pre- and post-intervention data were also collected to measure shifts in students' literacy achievement. Data from semi-structured interviews and observations was also collected to measure shifts in the teachers' pedagogical knowledge and practice.

The results of the study found that the practice of self and peer assessment, supported by newly designed language and curriculum knowledge scaffolds, significantly improved students' academic oral language ability as well as their literacy achievement. In particular, they improved their ability to discuss their learning with specific academic language and ideas related to the curriculum. As well as improving their oral language ability, the students' metacognitive knowledge related to their writing learning improved markedly resulting in accelerated writing achievement. Increased exposure to, and focus on, written texts during the intervention also significantly accelerated students' reading achievement.

Teachers' pedagogical knowledge and practice was also shown to improve as a result of the study. Findings showed that through the intervention they were able to identify ways to improve their teaching practice to accelerate their students' language and literacy achievement at the same time. The findings related to each of the research questions are discussed in more detail below.

5.2 Students' Academic Oral Language Development

Academic language refers to language registers that students need to learn effectively in schools. They contain more formal grammar than everyday social language, as well as subject specific vocabulary that supports students to discuss the increasingly more abstract and complex ideas of the curriculum. At the higher curriculum levels, students must learn to use explicit written and spoken academic language for a range of functions, including to report, analyse, generalise, synthesise, elaborate, infer, persuade, and explain to audiences who do not necessarily have shared understandings of the context or content (Cummins, 1979; Gibbons, 2009). They need to develop new ways of using academic language in increasingly advanced literacy contexts across a range of curriculum subjects (Schleppegrell & Colombi, 2002).

This study found that, prior to the intervention, the participant students' academic oral language was under-developed. The analysis of the students' pre-intervention interview transcripts revealed that the issue had its roots in the under-development of their general communicative language that underpins academic language development. Both of these aspects of the students' pre-intervention language proficiency are discussed respectively below, before I discuss the impact the study had on their academic language development in particular.

5.2.1 Students' Communicative Language Ability

Pre-intervention interviews revealed that most students struggled to answer even simple questions about their learning activities. They often answered questions by shrugging their shoulders rather than seeking further information, and some students responded to questions with fragmented and incomplete sentences or sentences that were grammatically incorrect. The students' initial responses to the question of what they were learning to do in their writing programmes exemplify this:

> **Student 4:** *"Tuhi kōrero, he pai."* (Write stories, it's good.)
>
> **Student 5:** *"Ki ōku tuhituhi kia pai ake."* (To my writing, make better.)
>
> **Student 22**: *"Pirangi au kia pai ki te tuhituhi kia mōhio te pākehā kia tuhi."*
>
> (I want to good at writing to know English to write)

Even open questions, which provided opportunities for a wide range of response options, proved difficult for some students to answer. For example, when asked ‘Kōrero mai mō te hōtaka reo matatini i roto i tōu akomanga. He aha ētahi o ngā ngohe? Pēhea te hōtaka tuhituhi/pānui/kōrero rānei?’ (Tell me about the literacy programme in your classroom. What are some of the activities? What are the writing, reading, or oral language programmes like?), Student 13 simply shrugged her shoulders. She also appeared to have difficulty understanding simple questions about her learning, like ‘Pēhea koe e mōhio ai he aha tāu whāinga ako mō te whakapakari i tāu mahi tuhituhi?’ (How do you know if you have completed your writing correctly, or if you have achieved the learning intention?), to which she replied, ‘Kao’ (No). Student 13 was not alone in this limited communicative ability (see 4.2).

This finding accords with those of other researchers who have also found that Māori-medium students’ general language abilities are sometimes under-developed in Māori-medium classrooms (Edmonds et al., 2013; Education Review Office, 2002). Edmonds et al. (2013), for example, developed an oral language assessment scale to measure Māori-medium students’ communicative language abilities. During their testing of the assessment scale, the researchers assessed the language proficiency of 270 Māori-medium students. Their study found that after eight years of primary schooling most students scored a rating of Year 8 Progression 2-Basic according to their newly developed scale. Indicators of Year 8 Progression 2-Basic rating included: difficulty asking simple questions, such as the equivalent of ‘What shall we buy?’; incorrect use of the word ‘me’ (and) as a conjunction; incorrect use of sequence markers such as ‘ka’ for introducing a new action; and omission of ‘e’ after passives to indicate the subject of the sentence. The researchers made particular mention of their concerns about students’ overall low language abilities by the end of primary school and noted that some mistakes made in Year 1 continued through to Year 8. Unfortunately, the Ministry of Education is yet to develop the proficiency scale for use in schools, and no data has been collected on Māori-medium students’ language proficiency since the Kaiaka Reo study (Edmonds et al., 2013).

Despite a lack of current data on Māori-medium students’ oral language abilities, the current study shows that the situation described by the researchers above has not improved across the three kura in this study. Most students had limited abilities to

discuss their everyday learning activities by the end of their primary schooling. While it is not unexpected that Māori-medium students may arrive at school with limited Māori language abilities, given that many may have had little exposure to the Māori language in their homes (Berryman et al., 2001; McNaughton et al., 2006), it is concerning to know that many students were unable to express basic everyday ideas about their learning activities after having been in Māori-medium immersion education for eight years. Amongst the concerns is that students did not have enough of the basic language structures upon which to develop the more complex academic language associated with their curriculum learning. Students' academic language, pre-intervention, is discussed below.

5.2.2 Academic Language Pre-intervention

Prior to the study intervention, the students' academic language proficiency was limited. They were unable to discuss with any specificity what they were learning to do in relation to their writing curriculum, what curriculum levels they were currently achieving at, or what their next steps were to progress. For example, when asked what they were learning to do in their writing programmes, typical pre-intervention responses included:

> **Student 1:** *"Kia pai ake, kia mahi wahangū."* (To get better and work quietly).
>
> **Student 12:** *Kia pai ōku tuhinga, kia whakanui, kia iti."* (To make my writing good, bigger, shorter.)
>
> **Student 24:** *Kia tutuki i ngā mahi."* (To finish the work.)

This finding reflects previous research that has highlighted Māori-medium students' under-developed academic language. For example, in their respective studies Keegan (2003), Glynn, Berryman, & Weiss (2005), and McNaughton, MacDonald, Barber, Farry, & Woodard (2006) all made mention of issues with the development of the complex language registers students needed to be able to engage with their curriculum learning (see 2.11).

This study found that the concerns raised in the studies above are ongoing for some Māori-medium students. Pre-intervention, the students in this study lacked the ability

to use complex language forms they needed to discuss their curriculum learning. The factors that impacted this ability are discussed below.

5.2.3 Language Acquisition: The Causes

This section discusses the factors that impacted the development of students' language proficiency in their classrooms prior to the intervention, including the teachers' pedagogical approaches to second-language acquisition and the non-existence of oral language assessment tools and progressions. Firstly, however, I discuss a potential factor that was able to be ruled out: the language proficiency of the teachers.

5.2.3.1 Teachers' Language Proficiency

In the past, many Māori-medium teachers have themselves been second-language learners of the Māori language with varying levels of Māori language proficiency, and researchers' have cautioned that this may limit the language development of students (Hohepa, 2008; Kane, 2005; May et al., 2004; Murphy et al., 2008). However, in this study, teachers' language proficiency was able to be ruled out as a factor in the students' language development. The three participant teachers were all proficient users of the Māori language. Two had been raised in homes where they had been immersed in the Māori language with native speakers from birth, and they had also been educated in Māori-medium schooling for their entire pre-school and compulsory schooling journeys. The third teacher had learnt the language through her involvement in Māori-medium schooling when her children attended kōhanga reo and then kura kaupapa Māori. She had continued to develop her proficiency through various courses and as a Māori-medium teacher over the past 20 years.

The fact that all three teachers in this study were proficient users of the Māori language indicates that previous concerns about teacher language proficiency in Māori-medium education (May & Hill, 2005; May et al., 2004) may be improving. Although there were only three teachers in this study, the current finding suggests that the Māori-medium movement may be beginning to positively impact the numbers of teachers who have adequate Māori language proficiency to teach in Māori-medium classrooms. However, no data is currently collected on Māori-medium teacher language proficiency and the national picture is unknown.

While all three teachers were proficient Māori language users, interviews did reveal an ongoing issue related to initial teacher education and Māori-medium teachers' language proficiency. Neither of the two teachers who trained in Māori-medium initial education programmes recalled in-depth Māori language learning as part of their pre-service education. To their knowledge their Māori language proficiency was not assessed on entry to their respective programmes. While they conceded this could have been done during their initial interviews for the programmes, no feedback was given to them in this regard. They had not been made aware of the levels of language required for successful completion of the course or successful Māori-medium teaching, and there was no obvious tracking of their language development against any explicit language outcomes required for successful Māori-medium teaching. They had not been made aware of the distinction between academic and social language and no formal assessment of their academic language proficiency was administered or discussed before, during or after their education programmes. This is an important finding because, as Keegan (2003) notes, academic language related to the Māori-medium curriculum is very different to the language of the home. It involves a wide range of new lexicon that has been developed in recent years specifically in relation to the curriculum, as well as discourse features related to the structuring of texts.

This finding accords with the finding of Murphy, McKinley and Bright (2008) who evaluated the issues and influences that affect the Māori-language competence of graduates from Māori-medium initial teacher education programmes. The researchers identified a "lack of consistent procedures to monitor the language development of the ITE students and graduates" (p. 37), and highlighted "the need for closer links between the expectations of schools, the language demands of teaching and the language outcomes of ITE programmes" (p. 38). Skerrett's report (2011) on Māori-medium initial training programmes followed, and reiterated the language issues. She warned that:

> the Māori language background of many of the teachers in Māori-medium programmes, along with their students, is of considerable concern, since language fluency is a central prerequisite for successful bi-lingual programmes. Good models of the language are essential, particularly when the target language is an L2 for students. It is argued that given the significant

> dearth of fluent Māori-speaking teachers/kaiako, serious and urgent consideration needs to be given to developing pre- and in-service programmes that combine the specific development of Māori language proficiency with the specific requirements of teaching in bi-lingual/immersion contexts. (Skerrett, 2011, p. 85)

Skerrett's report led to the release of Tātai Reo in 2015 by the Education Council of New Zealand (Haemata, 2015). Tātai Reo is a set of language proficiency indicators for Māori-medium Initial Teacher Education graduates. The Tatai Reo framework outlines language capabilities that Māori-medium teacher graduates need in order to support students' language and curriculum learning. The extent to which these indicators are being implemented across Initial Teacher Education programmes is, to date, unknown. However, the teachers in this study were educated in Māori-medium education programmes prior to the release of the Tatai Reo indicators. They all learnt the Māori language via Māori-medium schooling, either as students, kaiako, or whānau members, which, as discussed above, points to the impact the Māori-medium movement is having on producing new pools of language speakers. However, given two of the teachers were also raised in homes where the Māori language was transmitted to them by native speakers from birth, the issue is now to determine to what extent the Tātai Reo indicators are being used to ensure all Māori-medium teacher graduates, regardless of their language levels on entry to initial teacher education programmes, are becoming proficient enough in the Māori language to support Māori-medium students' language development.

With teachers' language proficiency ruled out as a contributing factor in students' under-developed language abilities, I turn now to the factors that did impact their language development. These included the pedagogical approaches to language development in each of the study classrooms, and the availability of oral language assessment tools and progressions. These elements are discussed respectively in the following sections.

5.2.3.2 Pedagogical Approaches to Language Acquisition

One of the factors that impacted the develop of students' communicative and academic language in this study was the limited consideration that was given to second-language pedagogies in the planning and implementation of oral language

programmes in each of the classrooms. By their own admission, the teachers in this study did not explicitly plan oral language programmes apart from teaching students new vocabulary from time to time. In the main, it appeared that they expected students to pick the language up by osmosis, through hearing and being expected to use it exclusively on the school grounds, much the same as they learn a first language. This expectation was evident when teachers were asked to tell me about their oral language programmes prior to the intervention:

> **Peta:** *"I don't' really have an oral language programme as such. I don't measure their oral language but they're only allowed to speak Māori so they have to."*
>
> **Tamara:** *"Over the years I have tried lots of things to improve students' language proficiency; modelling and building on reo, new words, then in what context to use those words, then revisiting those words."*
>
> **Komene:** *"The students play lots of word games to extend their vocabulary…".*

While increased vocabulary is important for second-language development, it is not enough. There are other fundamental requisites for second-language learning that were missing across the three classrooms as a result of the teachers' reliance on naturalistic language acquisition. For example, classroom discourse patterns were not designed to maximise opportunities for language input and output that are considered crucial for second-language acquisition (Ellis & Shintani, 2014; Ellis & Wells, 1980; Gibbons, 2002; Krashen, 1981, 1994; Perrot, 1988; Shehadeh, 1999). I noticed early in my observation of classroom lessons that the typical discourse patterns in lessons across each of the three classrooms was the 'teacher-initiate, student-respond, teacher-feedback' (IRF) pattern (Gibbons, 2002), also known as the 'teacher-**i**nitiate, student-**r**espond, teacher-**e**valuate' (IRE) pattern (Spolsky & Hult, 2010). These patterns limited the language input students received to that of the teacher, who was often talking to the whole class, and meant their output was also limited to answering questions when called upon. This finding accords with that of McNaughton et al. (2006) who noted that the IRE discourse pattern was typical in the Māori-medium

classrooms they observed, and this pattern has been the norm in most Māori-medium classrooms I have observed over the past 25 years.

The IRF discourse pattern is an issue because, when language acquisition is a major objective of the teaching programme, as in Māori-medium classrooms, opportunities for language input and output need to be maximised. To provide such opportunities teachers need to employ classroom discourse patterns such as peer-to-peer-to-peer patterns (Gibbons, 2002; Perrot, 1988; Seedhouse, 2004; Shehadeh, 1999; Spolsky & Hult, 2010) elicited in well-planned small group activities:

> When group work is set up effectively ... learners hear more language, a greater variety of language, and have more language directed towards them: group work situations increase input to the learner ... learners interact more with other speakers, and therefore their output is also increased. They tend to take more turns, and in the absence of the teacher, have more responsibility for clarifying their own meaning (Gibbons, 2002, p. 17)

Language development can be further supported in small group activities with the provision of linguistic scaffolds to help students extend their conversational abilities. However, small group activities, where students communicated with each other about their learning, were almost non-existent in the three study classrooms, and there was no provision of linguistic scaffolds to aid student conversations.

The teachers' reliance on a naturalistic approach to language development is consistent with previous study findings that indicate the situation has been prevalent for at least two decades. For example, in 2000, an Education Review Report into the performance of Māori-medium programmes found that oral language programmes were not always adequately planned and, instead, tended to occur incidentally (Education Review Office, 2002).

This situation is not limited to Māori-medium immersion programmes. For example, in the Canadian French immersion context (Cammarata & Haley, 2018; Tardif, 1985; Tedick & Fortune, 2013) researchers have found that, when teachers believe language and literacy will be learnt by osmosis in naturalistic classroom settings, students oral language proficiency and grammatical accuracy are under-developed. Cammarata and Hayley (2018) reported the consistently-low language development of the students in

the French immersion schools in one particular school district in Canada. The results of Provincial Achievement Tests show that students in Grades 6 to 9, and particularly those transitioning from primary to secondary schooling, consistently achieved below the provincial average across subjects, including French language capacity. The researchers attributed this low language achievement in French immersion programmes to limited teacher preparation and development. Without such preparation, teachers lack the knowledge to create and implement programmes where content and language instruction are planned for and targeted simultaneously (Cammarata & Tedick, 2012; Fortune et al., 2008).

The problem with the naturalistic approach to language learning in the second-language classroom is best explained by Lyster (2007). Lyster advises that to be effective, immersion teachers need to be *reactive* as well as *proactive.* Being *reactive* involves mastering crucial instructional strategies to support students with comprehensible input (Krashen, 1994) and maximised output (Swain et al., 2002) during instruction. Being *proactive* involves the strategic design of curricula to include concurrent teaching of language and content so that neither is left to chance (Cammarata, 2016).

Māori-medium researchers concur and advise that, in order for Māori-medium students to reach their full academic and linguistic potential, Māori-medium ITE graduates must have a thorough understanding of second-language acquisition theory and pedagogy, and they need the skills to apply that knowledge in practical teaching situations in their Māori-medium classrooms (May & Hill, 2005; May et al., 2004; McNaughton et al., 2006; Murphy et al., 2008). However, as demonstrated in this study, such strategic approaches to language and curriculum planning are not being consistently applied in Māori-medium classrooms and, as in the French immersion example above, this gap has been attributed to the inadequacy of pre- and in-service Māori-medium teacher education (Education Review Office, 2000, 2002; Murphy et al., 2008; Skerrett, 2011) as well as a lack of oral language benchmark tools (Keegan, 2003; May & Hill, 2005).

The issue of inadequate pre- and in-service Māori-medium teacher education and development was a factor for teachers in the current study also. It is discussed later in this chapter as it relates to findings related to all three study questions (see 5.4). I turn

now to the second factor raised by the researchers above, and still affecting Māori-medium students' oral language development today: the absence of oral language progressions and assessment tools.

5.2.4 Assessment Tools

To date there are no standardised assessment tools or progressions with which to measure Māori-medium students oral language proficiency or to guide oral language teaching programmes. With no oral language benchmark tools to inform their teaching, none of the teachers in this study, or their school leaders, formally planned for or measured students' oral language achievement or progress. They had no formal information about what specific oral language abilities or needs their students had, including what topics they could discuss or needed to learn to discuss, or which grammatical structures they had mastered and which they needed to master next to progress their communicative abilities.

This finding shows that there has been little improvement in the area of Māori-medium assessment tools since the issue was first highlighted by researchers from the early 1990s (Hollings et al., 1992; Jacques, 1991). In one of the earliest Māori-medium evaluations, Jacques (1991) evaluated six South Island bi-lingual classrooms over an 18-month period between 1989 and 1990. While the study found many strengths of the programmes, Māori language proficiency was not measured. One of the reasons for this was that there were, at that time, no tools for measuring Māori-medium students' oral language abilities. The issue was raised again by Hollings et al (1992). The researchers collected interview and questionnaire data from 73 teachers across 47 Māori-medium programmes. They concluded from their study that classroom language assessment was largely anecdotal and intuitive, and that this was mainly due to the lack of appropriate oral language assessment tools. The Education Review Office raised the issue again in 2002 (Education Review Office, 2002), and in their study Edmonds et al. (2013) also reiterated the lack of oral language tools as a potential limiting factor in students' oral language development.

However, 31 years on from Jacques' (1991) original study, the Ministry of Education is yet to provide the oral language benchmark tools required to optimise Māori-medium outcomes. Instead, Māori-medium practitioners have only written language

assessment tools with which to measure students' language ability. This a problem because, as researchers have noted, curriculum writing achievement does not reflect oral language proficiency (Edmonds et al., 2013; Keegan, 2003).

As a possible guide to the development of language assessment and progression tools, it may be useful to look to those developed for use in other bi-lingual educational contexts. For example, the Common European Framework of Reference was designed to provide a "transparent, coherent and comprehensive basis for the elaboration of language syllabuses and curriculum guidelines, the design of teaching and learning materials, and the assessment of foreign language proficiency" (Council of Europe, 2021). The framework provides language proficiency scales across listening, reading, spoken interaction, spoken production, and writing progressions. The scales range from A1, A2 (Basic User) to B1, B2 (Independent User) through to C1 and C2 (Proficient User). At A1, for example, a language learner can:

> understand and use familiar everyday expressions and very basic phrases aimed at the satisfaction of needs of a concrete type. Can introduce him/herself and others and can ask and answer questions about personal details such as where he/she lives, people he/she knows and things he/she has. Can interact in a simple way provided the other person talks slowly and clearly and is prepared to help." (Council of Europe, 2021, pp. Global Scale - Table 1 (CEFR 3.3): Common Reference Levels)

At the higher end of the scale a C2 language learner can:

> understand with ease virtually everything heard or read. Can summarise information from different spoken and written sources, reconstructing arguments and accounts in a coherent presentation. Can express him/herself spontaneously, very fluently and precisely, differentiating finer shades of meaning even in more complex situations." (Council of Europe, 2021, pp. Global Scale - Table 1 (CEFR 3.3): Common Reference Levels)

These global scales are further broken down into qualitative self-assessment rubrics with 'I can' statements for students to track and assess their own learning and progress. To date, the scales have been adapted to support the learning of 32 different languages, and there is no reason that the framework could not be adapted for Māori-

medium use as well. Such an adaptation would be a logical next step in Māori-medium development and provides a much-needed focus for further research.

5.2.5 Summary

This section has highlighted issues with the development of students' oral language abilities prior to the study. The main factors that impacted that development were the lack of consideration given to second-language pedagogies when planning oral language programmes in all three classroom, as well as the non-existence of oral language assessment tools and progressions. The following section discusses the acceleration students made in their academic language ability as a result of the study intervention. The section highlights the impact that improved pedagogical practice can have on Māori-medium students' academic language acquisition in a relatively short time, and provides further evidence of the efficacy of well-known second-language pedagogies that have proven to be effective in other second-language contexts across the globe.

5.2.6 Students' Academic Language Post-intervention

By the end of the 14-week intervention in this study, there had been a significant shift in students' academic language abilities. Students understood and were able to use curriculum-specific language related to the writing curriculum, and they were able to use that language spontaneously in verbal communication to talk about what they were learning, the levels they were achieving at, and what they needed to do to improve. Student 1's pre- and post-intervention answers to the question of what he was learning to do in his writing programmes exemplify the shift in academic language ability which was noted across the student participants.

Table 32*: Academic Language Shift Interview Extract - Student 1*

Researcher	I roto i tōu hōtaka tuhituhi kei te ako koe ki te aha?*(What are you learning to do in your writing programme?)*
Student 1: Pre-intervention	*Kia pai ake, kia mahi wahangū.* (To get better and work quietly.)

Student 1: Post-intervention	*Pēhea te tuhi tika i ngā ira kati me ngā pūmatua me ngā tohu tō i ngā wā tika. … Te whakamahi i ngā kīwaha me ngā kupu whakarite i roto i tōoku tuhinga taki. … Te whakamahi kupu kīwaha me ngā kupu whakarite i ngā wā tika … (for example) … te ketuketu te wānanga.* (How to write full stops and capital letters and macrons in the correct places. … To write colloquialisms and metaphors in my recount writing. … To write colloquialisms and similes at the appropriate times … (for example) … te ketuketu te wananga.)

The extract above exemplifies two main improvements related to the students' academic oral language ability. Firstly, as a result of the intervention, they developed their ability to discuss their learning using a greater amount of relevant academic language specifically related to the writing curriculum. For example, many curriculum words were common in their post-intervention interview that were absent in pre-intervention interviews including: kīwaha (colloquialisms), kōwae (paragraphs), piko (commas), and kupu ōrite (similes).

Secondly, after 14 weeks the students were able to use academic language spontaneously in their peer conversations as well as the post-intervention interviews. The interview extracts below show how the post-intervention interviews became more like a conversation than the question-and-answer format that characterised the interviews pre-intervention (see chapter 2).

Table 33*: Academic Language Shift Pre- and Post-intervention Interview - Student 1 (English Translation)*

	Key	Interviewer	Student 1
Student 1: Pre-intervention Interview	Student 1: Post-intervention Interview		
Tell me what you are learning to do in your writing programme? To get better and work quietly.	Tell me what you are learning to do in your writing programme? How to write full stops and capitals correctly all the time.		

How do you know what your learning intention is to get better at writing? To work all the time to get better each time. What does good writing look like? No mistakes and full stops in the correct place. How do you know if you have completed your writing correctly, or if you have achieved the learning intention? If you understand it, it's finished. What are some of your strategies to make your writing better? To work all the time. What are some of the resources you use to make your writing better? (Shrugged shoulders.) What are you learning to do in reading? To read the sentences correctly. What are the resources you use to help you with reading? Pens and paper.	Any other learning intentions? To write colloquialisms and metaphors in my recount writing. How do you know what your learning intention is when you are writing? Because we do them all the time when we are writing. How do you know what your learning intentions are, where are the learning intentions? On the Anga Putanga Ako. What is the Anga Putanga Ako? A resource for the learning intentions so you know what level and strand the learning intention is. What are the strands of the Anga Putanga Ako? Purposes for writing, strategies for writing, and writing knowledge. What level are you? Level 3. How do you know what level you are? Because we do some activities, our learning buddy writes what level they think we are. What are some of the learning outcomes from Level 3? How to write full stops and capital letters and macrons in the correct places. Any others?

	To write colloquialisms and metaphors in my recount writing … To write colloquialisms and similes at the appropriate times. Do you know what colloquialisms and similes are? Yes. What are some? Te ketuketu te wānanga. What are some of the resources you use to help you make your writing better? Te Anga Putanga Ako and the Kāri Matapaki. What are the Kāri Matapaki? They help you understand the strand and the level of your learning intention. What are some of the questions on the Kāri Matapaki? What is your learning intention now, what is your next learning intention. Do you like writing? Yes. What are the things you like? To write about an exciting topic that has happened. Is your writing programme different this year? I think I've gone up a level and learnt new outcomes. Do you have anything else to say? No.

The improvement in students' academic language abilities resulted from their participation in self and peer assessment activities, where they regularly discussed their learning in pairs with the support of linguistic scaffolds such as the Anga Putanga Ako and Kāri Matapaki. The efficacy of the self and peer assessment activities for students' language development in this study supports the association made in second-language research between Task Based Language Teaching pedagogies and students' improved second-language achievement (Bourgoin & Le Bouthillier, 2021). Task Based Language Teaching and the links to the self and peer assessment activities as they unfolded in the study intervention are discussed below.

5.2.7 Task Based Language Teaching

In second-language classrooms, Task Based Language Learning involves students learning the target language through well-planned pedagogical tasks that include meaningful conversations to produce clearly defined outcomes (see 2.14) (Long, 2015; Long & Crookes, 1991; Nunan, 2004; Prabhu, 1987). Task based pedagogies are underpinned by the Interaction Theory associated with second-language acquisition (Ellis, 2008, 2009; Krashen, 1988; Long, 1996, 2015; Swain, 1997; Swain et al., 2002). The theory highlights the importance of conversational interactions for language learning, where students' opportunities to hear input and produce output are maximised.

Accordingly, TBLT involves pedagogical tasks that involve students communicating with each other to hear and produce more language. To optimally support language acquisition, the tasks need to meet four criteria (Ellis & Shintani, 2014). Those criteria include: the conversations having a primary focus on *meaning*; a problem or *gap* that students are required to work out; students being able to *rely largely on their own linguistic and non-linguistic resources*; and having *a clearly defined outcome*. The links between these criteria and the self and peer assessment tasks as they were performed by students in this study are discussed below.

In this study, the self and peer assessment tasks improved the discourse patterns in all three classrooms as student engaged in communicative interactions with each other

that involved more language input and output than previously elicited through the IRF (see 4.2.1) discourse patterns that were common in their classrooms prior to the study.

5.2.8 Focus on Meaning

Meaningful use of the second-language in context leads to incidental acquisition of the second language (Norris & Ortega, 2000). When students are focused on creating meaning, their motivation to use the language increases, and they see themselves as communicators of it rather than learners of it. Accordingly, the self and peer assessment activities in this study were particularly relevant and meaningful for the students because they were directly related to their own and each other's learning achievement and progress. As opposed to learning activities where student struggle to see the relevance to themselves and their world, the self and peer assessment activities developed students' knowledge of what they needed to learn, and they were motivated to discuss their learning and progress so that they could progress to higher levels of the Anga Putanga Ako.

5.2.9 Gap

Pedagogical tasks require some kind of 'gap' (a need to convey some form of information in order for successful completion of the task) (see 2.14.2). The self and peer assessment activities in this study met this criterion as students had to make assessment decisions about each other's work and convey and justify those decisions to each other. Crucially, this gap was demanding enough that it caused communication 'breakdowns' when students did not have the language to communicate their ideas. Swain (1988) argues that the need to make one's output more comprehensible during breakdowns produces 'pushed output' – language that goes beyond their current developmental stage. These adjustments promote second-language acquisition as well as confidence to communicate.

The importance of communication breakdowns for language acquisition relates to Schmidt's Noticing Hypothesis (Schmidt, 2001, 2012). The Hypothesis posits that language input only becomes intake for learning when it is consciously noticed. It is this conscious attention to the form of language during meaningful conversations that drives language learning forward (Gass & Selinker, 2008; Ōgeyik, 2018; Schmidt, 2012; Swain et al., 2002). Research supporting the Noticing Hypothesis, conducted by

Lyster (2019), reviewed the variable effects of instructional interventions from a range of studies in French immersion classrooms and found the most effective interventions for improving students' language development were those that included noticing and language awareness.

Communication breakdowns boost students' language noticing in the classroom (Ōgeyik, 2018; Schmidt, 2012; Swain et al., 2002) because, during these breakdowns, students must process their output more carefully, paying more attention to linguistic features to ensure their messages are expressed clearly. Communication breakdowns can also elicit clarification requests, which prompt a closer focus on the form to ensure answers are comprehensible (Gass & Selinker, 2008). In these instances, students are motivated to refer to any linguistic scaffolds to continue and extend their communications (Gibbons, 2002), such as those provided in this study, and these scaffolds can provide more opportunities for noticing.

In this study, communication breakdowns occurred when students did not have the language they needed to ask or answer questions, particularly early in the intervention. These breakdowns prompted them to refer to the language scaffolds and notice and apply the language in order to make their output comprehensible. This process repeated each time the students engaged in the self and peer assessment activities and, as such, accorded with the advice of researchers that effective tasks need to include oral repetition and quality input that provides extended opportunities for students to notice language features that they are able to use to complete the required tasks (Farley, 2005; Schmidt, 2012; Winke, 2013).

Evidence that students noticed the language of the scaffolds appeared during post-intervention interviews when they used language from the scaffolds to answer questions about their learning that they had not previously used. The transcripts of Students 23's interview below are examples. In his post-intervention response, he directly referenced the Anga Putanaga Ako as the resource that taught him what the outcomes were that he needed to learn and he used the exact language of the Anga Putanga Ako unaided to describe what he needed to learn to progress, including ira kati, pūmatua, tohu kōrero, kīwaha, kupu whakarite, hikohiko, pārongo, kōwae (full stops, capital letters, speech marks, colloquialisms, similes, exciting, information,

paragraphs). Student 23 had also learnt how to use these academic words in grammatically correct sentences.

Table 34:*Noticing Interview Extract - Student 23*

Researcher	*Pēhea koe e mōhio ai he aha tāu whāinga ako mō te whakapakari i tāu mahi tuhituhi?* (How do you know what you need to learn to do to improve your writing?)
Student 23: Pre-intervention	*Parakitihi.* (Practice.)
Student 23: Post-intervention	*Mai te Anga Putanga Ako … tuhi tika i ngā ira kati me ngā pūmatua i ngā wā katoa. Te tuhi tika i ngā tohu kōrero i ngā wā katoa. Te whakamahi kīwaha, kupuwhakarite hoki kia hikohiko taku tuhinga me te tāpiri atu i ētahi atu pārongo ki ngā kōwae kia hiko taku tuhinga.* (From the Anga Putanga Ako … to use full stops and capitals all of the time. To always use speech marks correctly. To use colloquialisms and similes to make my writing more exciting and to also add more information to my paragraphs to make my writing more interesting.)

The finding that students noticed language in the intervention tasks supports the conclusions Ogeyik (2018) made from his meta-analysis of studies on noticing:

> there seems to be a link between the act of noticing certain forms in the input and the emergence of the noticed forms in the output, which is a kind of circulation prompted through interventions in teaching and learning processes. Such circulation determines the growth of language knowledge in L2 settings. (p. 397)

5.2.10 Relying on Their Own Linguistic and Non-linguistic Resources

A further TBLT criterion posits that learners should be able to rely mainly on their own linguistic and non-linguistic resources to complete the task (Ellis & Shintani,

2014) (see 2.14.3), including knowledge of the contexts or linguistic scaffolds. This prevents the situation where students get stuck and fossilisation occurs (Prabhu, 1987; Seedhouse, 2004; Selinker, 1972), a situation where learning stops, as opposed to acquisition.

In this study, the students brought first-hand knowledge of the context to their self and peer assessment communications. They were discussing their own and each other's' writing artifacts. They also had linguistic scaffolds, in the form of the Anga Putanga Ako and Kāri Matapaki, which allowed them to complete their communicative tasks in the absence of the teacher, and, as opposed to language fossilisation, their language ability improved.

5.2.11 Clearly Defined Outcome

TBLT tasks also require a clearly defined outcome. This encourages students to focus more on achieving the goal than on the correctness of their language forms (Ellis & Shintani, 2014). In the self and peer assessment activities in this study, the students knew that they had to make assessment decisions about their own and each other's achievement against specific criteria. It was important that the process was demonstrated clearly at the start of the intervention so that students knew exactly what the expected outcome was from their conversations. Teachers also had to become more explicit about the learning intentions before and during writing lessons so that students had a clearly defined outcome to assess.

Students held each other accountable during the self and peer assessment activities as they expected and wanted feedback on their writing achievement each time they met. The required outcomes in the self and peer assessment tasks, as discussed above, were particularly meaningful and motivating because they linked to students' own writing achievement and progress, and they wanted to progress.

Overall, the improvement in students' academic oral language reflects the findings of a number of previous studies that have evidenced the effectiveness of similar task-based approaches for raising students' academic language proficiency in immersion classrooms (Bourgoin & Le Bouthillier, 2021; Swain et al., 2002). In Bourgoin and Le Bouthillier's (2021) study, the researchers supported teachers in French immersion classrooms to develop their second-language pedagogical practice to include task-

based literacy activities for their Grade 1 students. The teachers introduced literacy activities into students' learning programmes that included: role plays, adding extra written pages to extend or change stories they read, and describing pictures for others. The teachers also created linguistic scaffolds to support the students' communications during tasks. These included examples of scripts and dialogues for students to use during roleplay tasks, as well as vocabulary lists and sentence starters related to specific themes they were expected to discuss and write. Scaffolds also included adjective reference sheets and connector word sheets that were made available to students at their group learning centres to further support communicative tasks. The scaffolds helped "push students towards using increasingly more complex language forms and structures" while completing their given tasks (Bourgoin & Le Bouthillier, 2021, p. 84). Data was collected from 37 students across two classrooms. The study findings suggested that the scaffolded small group tasks supported students to add more detail to their speech and to produce more complex sentences. The researchers also noted that the scaffolded tasks were "particularly impactful in supporting young beginning language learners with extended language output, peer interaction, learner autonomy, emerging spontaneous language use, and student engagement" (Bourgoin & Le Bouthillier, 2021, p. 70). Like the students in the present study, the French immersion students were able to move away from using the scaffolds over time to produce the target language more spontaneously.

As well as improving students' academic oral language, the self and peer assessment activities in this study also improved their literacy achievement. The following section discusses improvements in students' writing and reading respectively.

5.3 Students' Literacy Achievement

Immediately prior to this study intervention, the student participants' tuhituhi and pānui achievement levels were well below what would be expected for their time at school, according to Ministry of Education progress expectations (Te Kete Ipurangi, 2022). As a result of the 14-week self and peer assessment intervention, students made accelerated progress in both tuhituhi and pānui at an average rate expected for students over two years of schooling, according to those same Ministry of Education progress expectations (Te Kete Ipurangi, 2022). The tuhituhi and the pānui results are discussed below.

5.3.1 Tuhituhi

The acceleration of students' writing achievement resulted from the confluence of two main factors related to the study intervention. These were: 1) the development of students' metacognitive knowledge in relation to their writing; and 2) their increased exposure to the Māori language. Each factor is discussed respectively below.

5.3.1.1 Metacognition

Metacognition in education refers to a students' ability to be aware of what they are thinking about and their ability to choose thought processes (see 2.13). In this study, there was evidence that students improved a particular aspect of metacognition, their metacognitive knowledge. Metacognitive knowledge refers to knowledge about one's cognitions, including about one's own learning. Examples are a learner's reflections of what they know and what they do not know, or what they still need to learn (Flavel, 1979; Haukas, 2018; Wenden, 1987). This type of knowledge is considered by researchers to be a central component of, and prerequisite to, further learning, including second-language learning (Hacker, 1998; Haukas, 2018; Lee & Mak, 2018; Paris & Winograd, 2013; Tobias & Everson, 2002). With metacognitive knowledge, second-language students know what they can do in relation to using the language and what they still need to learn, and they can consciously draw on this knowledge to strategically drive their own learning forward and monitor progress. For example, they might use curriculum outcomes frameworks to understand the knowledge and skills required at each curriculum level and then strive to learn those outcomes. In terms of Ako, Māori perspectives on teaching and learning, this ability to understand and drive one's own learning forward links to the principle of rangatiratanga (self-determination) over one's own learning. When students are supported to have rangatiratanga over their own learning, their mana is acknowledged and reinforced, and this supports their holistic wellbeing as well as their academic achievement (Ministry of Education, 2014).

In this study, evidence of improvement in students' metacognitive knowledge and rangatiratanga over their own learning came in the form of students' improved ability to discuss their current writing foci, current writing levels, and next learning steps in relation to the writing curriculum, as discussed in the previous section. Prior to the intervention, none of the students in the study knew their achievement levels in

relation to the writing curriculum. When asked what they were currently learning to do, they simply replied, ‘aua’ (I don’t know) or talked about general things like ‘ki te mahi wahangū’ (to work silently) or ‘ki te tuhi pai’ (to write well). They could not specify what they needed to learn to improve, and they could not identify what resources they could use to support their learning.

The extracts below from Student 6’s post-intervention interviews exemplify the students’ improved metacognitive knowledge over the course of the study. In particular, this student was able to discuss the range of specific writing outcomes related to the various levels of the writing curriculum, the curriculum level she was achieving at, and specific strategies she used to progress.

Table 35*: Transcript Extract - Student 6*

Key	Researcher	Student 6
Original Transcript	English Translation	
Tēnā, whakamārama mai, I roto i te mahi tuhituhi, kei te ako koe ki te aha i tēnei wā? Te tuhi tapanga e hAngai ana ki te kaupapa me te hopu i te kai pānui. Me te tuhi mahere reo me te tuhi i ngā kīwaha me ngā kupu whakarite kia hikohiko te tuhinga … te tuhi kōwaē He aha te kōwae? Ko te kōwae, inā kei a koe he kaupapa, kua mutu koe i tērā kaupapa, ka huri ki tētahi atu kaupapa. Pērā, inā i haere koe ki te whare o tō hoa, a, ka haere ki te papa tākaro. Nō whea ngā whāinga?	What can you tell me about what you are learning in writing at the moment? To write a title that is connected to what I am writing about and one that captures the reader. Writing a plan first, and writing Māori sayings to make the writing interesting … writing paragraphs. What is a paragraph? A paragraph is if you have a topic, you finish that topic and start another topic. Like if you go to your friend’s house, then you go to the park. Where are those learning outcomes from? From the Anga Putanga Ako. What is that?	

Mai i te Anga Putanga Ako. He aha tērā? He Anga me ngā whāinga, me te tamumata, me te whenu o tō whāinga. He aha tō taumata? Taumata toru. He whāinga kua tutuki pai i a koe mō te taumata whā i tēnei wa? Te tuhi i ngā pūmatua me ngā tuhi hāmama. Pēhea koe e mōhio ai kua oti pai tāu mahi tuhituhi, kua tae pai ki te whāinga ako rānei? Ka pānui au i ngā paearu angitū anō, a ka rapu au i aua mea i roto i taku tuhinga. Mēnā kei reirā kua mōhio au kua tutuki pai te whāinga. He aha ētahi o āu rautaki hei whakapakari i tāu mahi tuhituhi? Ka titiro au ki ngā paearu angitū, ka rapu au i aua mea i roto i ētahi pukapuka hei tauira mō taku mahi tuhi. Ka whakarongo ki te kaiako hoki.	A framework with learning outcomes, the level, and the curriculum strand your outcome comes from. What level are you? Level 3. Have you achieved any learning objectives from Level 4 at this time? To write capital letters and exclamation marks. How do you know if you have reached your learning goal or achieved the learning intention? I look at the success criteria again, I find those in my writing. If they are there, I know I have achieved the outcome. What strategies do you use to write well? I look at the success criteria and then I look for those in other books as examples for my writing. I also listen to my teacher.

At a more micro level, the students also improved their metacognitive knowledge in relation to specific achievement outcomes and success criteria. This metacognitive knowledge developed as teachers improved their teaching of writing. Teachers began to choose and teach specific written language features from the Anga Putanga Ako.

They explicitly shared learning outcomes with students before each lesson as well as the related success criteria. The teachers also shared examples of the text features they were teaching, and supported students to discuss them before practising them in their own writing. Students then assessed themselves and each other in relation to those success criteria.

The finding related to improved metacognitive knowledge is consistent with previous studies that have shown the practice of self and peer assessment raises students' metacognition and, in turn, achievement across the curriculum (Black & Wiliam, 1998a, 1998b, 2009; Boud, 2000; Deakin-Crick et al., 2005; Joyce et al., 2009; Lee, 2017; Liu & Hansen, 2013; Topping, 2009). In second-language classrooms, mathematics and reading have featured most in the research of self and peer assessment (I. Clark, 2012; Lee, 2017), with writing studies focusing mainly on tertiary contexts (Huynh & Nguyen, 2019). However, in Bourgoin and Le Bouthillier's study (2021), discussed earlier (5.2.11), elementary school students' metacognition was developed as they learnt to discuss 'I can …' statements in relation to explicit curriculum-related learning outcomes during their task-based activities. The result was an overall improvement in their literacy achievement.

The current finding also intersects with recent work on the topic by Lee and Maks (2018). The researchers developed guidance frameworks for primary and secondary school teachers wishing to implement self and peer assessment practices to improve second-language students' metacognition in their writing learning. They developed an Integrated Framework on Metacognition in L2 Writing (Lee & Mak, 2018). The framework provides guidance to develop students' metacognition throughout the writing process, including planning, monitoring, and evaluating their writing. The framework highlights the use of evaluation rubrics (similar to the idea of the Anga Putanga Ako in this study) as a major scaffolder of, and contributor to, students' metacognitive development during their self and peer assessment activities.

5.3.1.2 Increased Exposure to Written Language

As well as improved metacognitive knowledge, the second likely contributor to the students' accelerated writing achievement was their increased exposure to language through reading. The positive impact reading can have on students' writing has been well established in second-language research (Lee & Schallert, 2016). The increased

comprehensible input provided in reading materials has been shown to positively influence students' writing output as they retrieve information previously processed or noticed during reading (Krashen, 1984; Nation & Macalister, 2010; Rahimi & Farjadnia, 2019).

During this study intervention, students read more, including the language of the Kāri Matapaki and Anga Putanga Ako as well as the exemplar texts they read as part of their writing lessons. The increased reading provided extended opportunities for students to notice (Ōgeyik, 2018) aspects of written language in two ways. Firstly, their attention was drawn explicitly to written language features during the writing lessons, for example, when Peta taught paragraphing. He provided his students with a number of narrative texts to read. They read and discussed the lead and supporting ideas in paragraphs and practised writing their own ideas in logical order in paragraphs. Peta also wrote examples of kīwaha (colloquial sayings) on the board, and then discussed them and displayed them around the room for students to read and use in their own writing.

Beyond the explicit focus on language features during their writing lessons, students also had extended opportunities to notice language via the increased reading that was part of the intervention. For example, while they read and deconstructed a number of texts to learn about particular features of written language, they may have noticed additional new vocabulary or phrases.

The theory that there may have been a link between students' increased reading and their improved writing in this study is supported by previous findings on the topic (Elley & Mangubhai, 1983; Lee & Schallert, 2016). Elley and Mangubhai (1983), for example, studied the effects of silent and shared reading on students' writing development. Their study included fourth and fifth grade students in Fiji who were learning English as a second language. The students were split into three groups. Over seven months, one group participated in regular silent reading, one group in regular shared reading activities, and one group in traditional audio-lingual instruction. At the end of the study, both reading groups exhibited superior writing progress when compared with the audio-lingual language learning group. Similarly, Lee and Schallert (2016) studied the relationship between reading and writing with 300 middle school learners aged between 13 and 14 in South Korea who were learning English as

a foreign language. The study involved splitting the students into three groups. For two semesters, all three groups received regular English instruction for three days a week. This included a textbook-based programme that centred on conversational dialogues, reading texts, discussing vocabulary and grammatical rules, and interpreting short passages. The study intervention was applied one day a week. For the control group this involved an extension of the regular English language programme. For one of the experimental groups the intervention treatment involved reading one book a week of their choice. The second experimental group participated in extensive writing one day a week, which involved writing one essay a week. Results showed that both experimental groups made similarly significant gains in writing achievement but not the control group. Thus, for one experimental group, reading positively impacted the students writing even without increased writing instruction.

While it is difficult to quantify the respective impacts of the improved writing instruction and increased exposure to written texts in this study, the findings do indicate that the confluence of the two benefited the students' writing achievement. This is an important consideration in the Māori-medium context where teachers, such as those in this study, have previously believed that oral language must be acquired independently and as a pre-requisite to further literacy skills such as reading and writing.

5.3.2 Reading

As discussed earlier, the students in this study averaged statistically significant reading progress as a result of the study intervention. Students in Kura 1 and Kura 3 accelerated their reading achievement by an average of 27 weeks progress in 14 weeks, and Kura 2 students increased their levels by an average of 50 weeks progress in 14 weeks. This is an important finding because Māori-medium students need to be able to read to engage with the increasingly complex ideas of the curriculum, and to access the rich sources of language input and Māori knowledge that texts can provide.

The reason for students' accelerated reading achievement likely stems once again from the extended opportunities they had to notice language. Opportunities to notice language came from: the scaffolded, and more explicit writing instruction they

received, as discussed above; the increased amount of writing they did during the study; as well as the increase in reading they did.

5.3.2.1 Writing for Reading

I have already discussed the improved and increased writing instruction students experienced during the intervention. The likelihood that this positively impacted their reading achievement is predicated on findings from previous studies that have shown that writing can positively influence second-language students' reading development (Elley, 1991; Graham & Hebert, 2011; Lee & Schallert, 2016; Shanahan, 1984; Shanahan & Lomax, 1986). Graham and Herbert (2011) for example, conducted a meta-analysis of studies related to the impact of writing on ESL students' reading development. They limited their review to "true and quasi-experiments involving controlled tests, where the reading gains made by one group of students who received a writing treatment were contrasted with a comparable group of students who did not engage in writing or writing instruction" (Graham & Hebert, 2011, p. 732). One of the questions the researchers investigated was 'Does writing skill instruction improve reading?'. To answer this question, they reviewed 21 related studies involving students from Grade 4 to 12. The meta-analysis found that, across all 21 studies, there was a positive effect of writing instruction on students' reading. The analysis also broke down types of writing instruction and the respective effects of those on particular aspects of reading, such as fluency, word recognition, and comprehension. Similarly to the current study, in the studies that involved text structure, and paragraph/sentence instruction in particular, there was a statistically significant improvement in students' reading comprehension.

As well as improved writing instruction, a further aspect of writing that may have contributed to the students' reading progress in the current study was the increased writing they did in the intervention. For example, they wrote more sentences to practice punctuation and grammar, more recounts to practice paragraphing and re-telling, as well as more recount revisions to edit and include features they were learning such as kīwaha (local colloquialisms) for impact.

Increased writing, even without writing instruction, has been shown to improve second-language students' reading in previous studies. For example, in the same meta-analysis discussed above, Graham and Herbert (2011) also investigated the

question of ‘Does increasing how much students write improve reading?’. The researchers examined nine related studies involving students from Grades 1 to 6. Importantly, in all the studies all students received the same writing instruction. The treatments in the studies included students writing more while control groups did not. The increased writing treatments included: writing about self-selected topics; sustained writing for 15 minutes a day; using the internet to write to pen pals; writing short passages using inference words; and writing journal entries. Like the current study, the analysis found that increased writing improved reading comprehension in all nine studies.

5.3.2.2 Increased Reading

During this study intervention, students read more written texts than they had prior to the study. As discussed earlier, this included reading the texts on the Kāri Matapaki and Anga Putanga Ako as well as the exemplar texts associated with their writing lessons. The idea that increased reading improves reading skills links to Krashen’s (1982) idea that language is acquired through exposure and that the more language learners are exposed to words used in context the more they are likely to develop their understanding of them. This idea connects once again to the Noticing Hypothesis in that increased reading provided students with increased opportunities to notice and, therefore, learn language.

Although the current study did not directly test the relationship between all the texts students read as part of their writing lessons and their improved reading ability, study data did show that words students read repeatedly on the Kāri Matapaki and Anga Putanga Ako featured often in their post-intervention interviews (see Table 33). It is possible that those words and other words and phrases learnt through increased exposure to texts in their writing lessons supported their reading comprehension in the post-intervention assessments.

Overall, this study found that the practice of self and peer assessment, supported by linguistic and curriculum scaffolds, raised students’ academic oral language and their reading and writing achievement simultaneously. This is an important finding because, prior to the study, the participant teachers believed they needed to develop students’ oral language as a pre-requisite to their curriculum learning, and they admitted that they struggled to do so. The challenge of integrating language and

literacy learning is widespread in second-language classrooms. The following section discusses the alignment between the approach in this study and other approaches that have been developed to meet the challenge.

5.3.3 Integrating Language and Literacy Learning

The finding that literacy and language were developed simultaneously in this study supports approaches to integrating language and curriculum content in immersion programmes that have already been developed abroad, for example, content-based instruction (CBI) and content and literacy integrated learning (CLIL), which are often regarded as different names for the same high-level approach (Cammarata, 2016; Cammarata & Haley, 2018; Cammarata & Tedick, 2012; Cenoz, 2015; Lyster, 2019).

CBI and CLIL approaches evolved from the concern that, when teachers teach content on its own, second-language students can achieve some comprehension without having to engage in processing the language, which may stymy language development (Swain, 1988). For example, they may understand some key points from the input, but, without language scaffolds, they may not be able to discuss the ideas and further develop their language. As Lightbown (2014) argued, separating language and content "may deprive students of the opportunity to focus on specific features of language at the very moment when their motivation to learn may be at its highest" (p. 30). The separation of language and content has been invoked to explain why students in other bi-lingual education contexts have not always developed their language production abilities to the levels they are capable of (Lyster, 2019).

While there are different forms of CBI and CLIL, the overall approach is underpinned by particular requisites including the need for teachers' programme planning to be underpinned by second-language acquisition theory. Examples include, like the intervention in this study, the development and inclusion of communicative pedagogical tasks (Bourgoin & Le Bouthillier, 2021) that are primarily focused on meaning including learning curriculum content, while also promoting opportunities for noticing or a focus on form that can drive language forward. Consideration is also often given to the types of scaffolds that will stretch students' language and curriculum knowledge development within their zones of proximal development.

Another important aspect of CBI and CLIL approaches is that instruction should promote student agency through collaborative peer assessment practices (Lyster, 2019). As O'Dwyer and de Boer (2015) advise, this types of practice "generally works toward developing learners' ability to self-assess, and embodies principles such as: assessment tasks should be designed to stimulate productive learning practices amongst students; assessment should involve students in actively engaging with transparent criteria" (p. 399).

To help French immersion teachers bridge the teaching of content, language, and literacy, Cammarata (2016; Cammarata & Haley, 2018) developed a Content-Language-Literacy Curricular Framework. The Framework supports immersion teachers to consider and plan for content objectives, academic literacy skills objectives, content-related language objectives, and literacy related language simultaneously.

The intervention in this study provides a particular example of CBI and CLIL approaches. For example, the self and peer assessment practices developed the type of metacognitive knowledge that underpins students' agency over their own learning and that could be applied across the curriculum. The self and peer assessment tasks also supported students to communicate for the meaningful purpose of understanding their own curriculum learning and driving it forward. The confluence of the optimal second-language acquisition conditions applied in the context of literacy curriculum learning resulted in improved oral language, reading, and writing all at the same time. The study findings suggest that CBI and CLIL approaches are also effective, and needed, in Māori-medium educational contexts.

The fact that students were able to accelerate their language and literacy achievement simultaneously in this study provides a strong argument for more work to be done in developing CBI or CLIL type frameworks, such as that of Cammarata (Cammarata, 2016; Cammarata & Haley, 2018), that are easily taken up by Māori-medium teachers to support them integrate language and curriculum learning. The adoption of new pedagogies that support language and curriculum integration, however, requires the development of teachers' pedagogical knowledge and practice. This issue as it applies to Māori-medium teachers is explored below.

5.4 Teachers' Pedagogical Knowledge and Teaching Practice

As well as seeking to understand the effect of self and peer assessment practices on students' learning, this study also sought to learn what effect the approaches would have on teachers' pedagogical knowledge and practice. The study found that, by observing and delivering the self and peer assessment programme throughout the study intervention, teachers improved their knowledge of second-language pedagogies, including the need for scaffolded small group communicative tasks. They also learnt to share explicit learning intentions and to support students to assess their own and each other's progress and achievement. They also improved their knowledge of the Māori-medium writing curriculum through the development and use of the Anga Putanga Ako.

Prior to the study intervention, none of the three teachers were able to explain how their teaching programmes were underpinned by second-language acquisition theory. The teachers did not explicitly plan for oral language development, apart from the introduction of new words from time to time. There was no use of linguistic scaffolds to support students to discuss their curriculum learning, and planned integration of language and curriculum development across the three classrooms was also non-existent. Tamara exemplified all three teachers' beliefs that language needed to be acquired before curriculum content could be taught:

> **Tamara:** *"It feels like you're not teaching to develop and progress, but teaching to speak … that's different in mainstream where seemingly all can speak English and you're always moving forward … and not just learning new words …"*

The mutually-facilitative relationship between oral language, reading and writing was also poorly understood. Two of the three teachers did not plan for, or deliver, any formal reading programmes, and the explicit teaching of writing skills in their classrooms was limited at best. The one teacher who did deliver a reading programme was not able to explain how the programme reflected second-language pedagogical theories or how it linked to the writing and oral language learning.

All three teachers expressed frustration that their students' language was not developing sufficiently and that this was limiting their curriculum achievement. They

all theorised that their students' limited language proficiency was attributable mainly to the lack of exposure to the language in their homes. This deficit theorising potentially prevented them from searching for better ways to develop students' language in their classrooms.

The teachers' beliefs and practices described above are not uncommon in immersion contexts. For example, Fortune et al (2008) found that Spanish immersion teachers in Grades 3 to 6 believed they were always needing to teach language when they should be attending to the curriculum. However, video recordings of their practice showed, much like the teachers in this study, that they did not provide language instruction in systematic ways beyond vocabulary and verbs. With regard to the French immersion context, Lyster (2019) notes "The integration of language and content continues to be a challenging task for educators to accomplish both in instructional practices and program design" (p. 496), and this issue relates to the quality of pre- and in-service education immersion teachers receive.

Pre- and in-service teacher education was also the main factor that impacted the beliefs and practices of the teachers in this study. The following section discusses the limited education in second-language pedagogies they had received in both their Initial Teacher Education programmes and once they entered the profession.

5.4.1 Pre- and In-service Education

The three teachers in this study were experienced professionals who were committed to the Māori-medium kaupapa. However, they struggled to find ways to develop their students' language ability to the levels they needed to engage with the higher levels of the curriculum. All three teachers advised that they had received little or no pre- or in-service support to develop their practice in relation to particular theories of Instructed Second-language Acquisition (ISLA) or the associated pedagogical approaches that have been shown to improve students' second-language acquisition in bi-lingual classrooms across the globe, such as those discussed throughout this chapter. For example, none had heard of task-based teaching pedagogies, linguistic scaffolding, or integrated approaches to language and literacy development, and none fully understood the relationship between reading, writing, and oral language development. Komene pointed to this theme when he wrote in his journal:

> **Komene:** *"As a provisionally certified teacher I found this course supplementary to my learning at the faculty of education, teachers training programme where we were shown that having "whāinga ako" up on the whiteboard would aid student understanding, however, I don't recall being made aware of the advantages of specific discussion around whāinga, and taumata, as seen in the "Anga Putanga Ako and the accompanying "Kāri Matapaki"."*

Without specialised knowledge, the teachers had few strategies to understand or meet the complex range of language and learning needs of their students.

This finding reflects concerns about Māori-medium pre- and in-service education that have been raised by researchers since the early 1990s (Hohepa et al., 2014; Jacques, 1991; May & Hill, 2005; May et al., 2004; Murphy et al., 2008; Skerrett, 2011). Murphy et als' study (Murphy et al., 2008), for example, surveyed 11 of the 13 Māori-medium Initial Teacher Education (ITE) programmes on the question of second-language pedagogies. They found that two programmes specifically taught second-language pedagogies, four programmes included some aspects of second-language acquisition, and five programmes did not reference it at all. The findings in this study indicate that there is still work to be done in Māori-medium ITEs to ensure sufficient coverage of specialised approaches to immersion teaching and learning.

As well as pre-service education, the importance of mentorship and induction for retaining and developing novice teachers in Māori-medium settings has also been well-established (Hohepa et al., 2014). However, none of the teachers in this study recalled any professional development or support to develop their second-language pedagogical practice since entering teaching. Reasons for the lack of in-service support to the teachers included having no experienced teachers in their schools who could provide the support, and limited access to specialist support outside of the school. Two of the kura were small with no other staff who had been trained in second-language pedagogies to support the participating teachers. The other kura was larger but again none of the teachers had been trained in second-language pedagogies. Further, all three kura were located in isolated rural communities, and Māori-medium professional development specialists who had the capacity to travel from their home regions to support them were hard to access. This finding highlights the challenges

still being faced by Māori-medium kura to provide consistent, quality mentoring programmes that can support Māori-medium goals.

This study also reinforces the positive difference in-service education can make to teacher practice and, as a result, student achievement. Through the intervention, the teachers' second-language pedagogical knowledge and practice developed in a short time. To start with, they improved their knowledge of the curriculum tuhituhi (writing) progressions and how to use them to guide their teaching:

> **Peta:** *"Even though it made my head sore going through all the writing curriculum outcomes and choosing the ones for the Anga Putanga Ako, it was really beneficial to see what the students should be learning. It's good to have the whole school understand what the students should be learning so we all know what to teach at each level."*

Once they had an understanding of the curriculum progressions and what students needed to learn, the teachers were able to select appropriate outcomes to target their teaching. By their own admission, prior to the study, two of the teachers rarely shared curriculum-related learning foci with their students and, through the intervention, they learnt how beneficial that practice was:

> **Tamara:** *"Yes … I haven't really been doing this. I haven't been telling them what the learning intention is. It helps them to focus on the important parts of the lesson, especially when they go back and assess themselves and each other."*

> **Peta:** *"I noticed the researcher really breaking down and explaining the learning intention so the students could understand what they were learning, I need to do that more."*

While Komene did share learning intentions prior to lessons, he explained that he did not expect his students to actually discuss those learning intentions after he shared them**:**

> **Komene:** *"This is the bit I wasn't doing … before I was just used to giving them the learning intention and no discussion … yes I can see it now, they need to talk about it to understand it."*

An example of the improvement in teachers' writing teaching is when Peta taught paragraphing during the intervention. To begin he shared the learning intention and success criteria and wrote them on the whiteboard as follows:

> *Whainga: Kei te ako au ki te raupapa tika i aku whakāro ki te kōwai*
>
> (Objective: I am learning to order my ideas into paragraphs)
>
> *Paearu Angitu:*
>
> 1. *Tuatahi kua tuhia aku whakāro matua ki te māhere*
> 2. *Kua tāpiri atu ētahi pārongo ki ngā whakairo matua*
> 3. *I roto i te tuhinga tuatahi kua timata ia whakāro matua ki te rārangi hou*
> 4. *E rua ngā rārangi waenganui i ia kōwai*
>
> (Success Criteria:
>
> 1. First, I have written the main ideas into the planner
> 2. I have added extra information to each main idea
> 3. In the draft I have started each main idea on a new line
> 4. There are two lines between each paragraph)

Peta then gave his students short narratives to read as well as the planning to help shape those narratives. He supported the students to discuss how each paragraph aligned to the plan and how the first sentence in each paragraph told them what that paragraph was going to be about. He then asked the students to read on to extrapolate further supporting information from each paragraph to demonstrate how paragraphing worked. The students deconstructed a number of texts in this manner to reinforce the concepts before constructing paragraphs together, and, finally, practicing on their own. After lessons, students used the Kāri Matapaki to self and peer assess their writing in relation to the lesson outcomes and specific success criteria. This activity continued to focus their discussions on what they needed to learn and how they would know if they were successful.

Through the intervention the teachers also developed their understanding of how to scaffold language and content together. Early in the study, Komene recognised the positive difference the Kāri Matapaki made to students' ability to discuss their writing learning. He then began to think about transferring the use of the scaffolds to other curriculum areas:

> **Komene:** *"It was amazing to see, how the Kāri Matapaki were used, supporting the students to talk, to bring out their thoughts about the learning intentions and the success criteria…today I used the Kāri Matapaki to support the students' discussions. I used them in the reading lessons and to support students to understand scientific report writing. I noticed the learning was more accelerated because of the discussion cards. During this time I noticed the students relied less on the cards and found their own answers. I am also thinking about the advantages of using discussion cards in other curriculum areas such as the mathematics and science programmes."*

While the changes in teachers' knowledge were positive, the changes in their practice were not always sustained. On many of my visits to two of the schools during the intervention period, the teachers advised they had not continued the self and peer assessment activities as often as planned due to competing demands in the school or other priorities in their teaching programmes. This was likely because my study was not primarily focused on professional learning and development and, as such, the teachers did not receive the type of support considered necessary for effective professional development to be sustained. For example, as well as missing other optimal conditions for teacher PLD, the study duration was only 14 weeks, which is not considered not long enough to embed change in teacher practice, and it did not involve regular in-class modelling or teacher observations with feedback, which are considered essential for effective professional development (Timperly et al., 2007).

However, the positive impact the study did have on the teachers' knowledge and practice points to the need for well-planned in-service development opportunities for Māori-medium teachers. As previous studies have highlighted, well-designed and ongoing professional learning and development can make a positive difference to teachers' pedagogical knowledge and practice in second-language teaching (Cammarata & Haley, 2018; Lyster, 2019; Timperly et al., 2007). Cammarata and

Haley (2018), for example, studied the impact of a Professional Learning and Development project for teachers in French immersion classrooms in a particular province in Canada. The study was initiated to address the ongoing low language achievement of the immersion students in the province. It was based on the assumption that developing teachers' knowledge and language and curriculum integration skills would be an effective way to counteract students' low achievement. The teachers in the study were assisted over a year and half to use a content-language-literacy curricular framework (Cammarata, 2016) to plan for content objectives, academic literacy skills objectives, content-related language objectives, and literacy related language objectives in their learning programmes. The study findings:

> provide compelling evidence that, although teachers faced varied struggles to plan and implement well integrated lessons along the way, they showed great improvement and an ability to create well-balanced curriculum plans by the end of the year-and-a-half-long PD intervention when assisted. (Cammarata, 2016, p. 345)

5.5 Summary

This study found that, prior to the intervention, the 24 Māori-medium participant students from three different Māori-medium kura (schools) were achieving well below their capability in relation to their oral language ability, as well as pānui (reading) and tuhituhi (writing) curriculum expectations. Although previous research shows this situation is not unique to the three classrooms in this study, the extent to which this is a problem in Māori-medium programmes nationally is unknown because there are no tools to measure Māori-medium students' oral language achievement, and there is no national data collected on students' pānui and tuhituhi achievement across the country.

The intervention in this study turned this situation around in a short time. The students were taught to communicate with each other to assess their own and each other's writing. They were assisted in those communications with linguistic scaffolds including the Kāri Matapaki and Anga Putanga Ako. As a result, their literacy and language achievement was significantly accelerated.

The study findings reinforce task-based pedagogical approaches that have been shown to accelerate language acquisition in bi-lingual classrooms abroad, and at the same support the principles of Ako advocated by Māori-medium experts for effective Māori-medium teaching and learning. The particular self and peer assessment pedagogical tasks in this study developed students' language knowledge and skills at the same time as their metacognitive knowledge in relation to their writing programmes. The confluence of metacognitive knowledge development and increased language acquisition resulted in the simultaneous acceleration of pānui, tuhituhi, and academic oral language achievement. This finding reinforces what is already known about the mutually-facilitative relationship between reading, writing, and oral language. The finding challenges the traditional and prevalent belief in Māori-medium education that oral language must be developed before, and separately from, reading and writing skills development.

The current study provides an example of how curriculum content, literacy in this case, and language learning can be integrated in the Māori-medium context. The findings add to the work being done to develop Content Literacy Integrated Learning frameworks in bi-lingual programmes across the globe, and it is likely that the approaches and scaffolds used in this study could be effectively applied to improve students' language and content achievement across the Māori-medium curriculum.

For the students in this study, their under-developed language and literacy achievement stemmed from the insufficient pre- and in-service teacher education their teachers had received. As a result of the limited education they had received in relation to instructed second-language pedagogies, the teachers were challenged to find ways to develop their students' language as well as their curriculum knowledge and skills. This was particularly difficult given that, for most children, there was little or no reinforcement of the Māori language outside of the school.

The study found that the teachers also benefited from the intervention. They improved their awareness of the need to make learning explicit for students as well as the need for students to discuss their learning in small groups. They also developed their understanding of the importance of language scaffolds for extending students' language use and acquisition, as well as their knowledge of the curriculum outcomes they were expected to achieve. The study also reinforced the need for professional

learning and development programmes to be well planned and embedded over time if change in teacher practice is to be sustained. The conclusions that can be drawn from the findings in this study are discussed in the following chapter.

Chapter 6: Conclusion

6.1 Introduction

This study demonstrated that Māori-medium students were able to make statistically significant gains in their reading, writing, and academic oral language achievement by participating in well-designed self and peer assessment practices. The study also showed that, when exposed to self and peer assessment pedagogies, Māori-medium teachers were quickly able to see them as useful approaches to develop their students' Māori language ability at the same time as their curriculum progress. The study findings provide useful evidence to inform pre- and in-service education programmes for Māori-medium teachers, and further inform the development of aromatawai approaches in Māori-medium classrooms.

The following chapter discusses the conclusions that can be drawn from my study. It begins by briefly recapping the study background, and the thesis aims, questions and methodology. Next, the findings in relation to each study question are summarised followed by the implications of those findings for Māori-medium education. The chapter continues with a review of the limitations of the study and, finally, opportunities for further research are proposed.

6.1.1 Background

I conducted this study to address a need I observed while teaching in Māori-medium classrooms. As a Māori-medium teacher I had difficulty developing my students' ability to discuss even basic curriculum ideas through the Māori language and to drive their own learning. In terms of Ako I had difficulty supporting them to develop rangatiratanga over their own learning. While my students, who were in their eighth year of Māori immersion schooling, could understand basic everyday social language and classroom instructions, their ability to speak impromptually in the Māori language about everyday subjects was minimal, and their ability to discuss curriculum-related ideas was even more limited. They were totally reliant on me for direction, and I knew they were capable of more.

I had also observed that although my own children had been educated exclusively in Māori-medium schooling, their ability to converse in the Māori language was, in my view, not as developed as it should have been for their time in immersion schooling. The Māori language proficiency of my students and my own children was around what one might expect from a much younger child conversing in their first language. Although some language delay might be expected in a child's second-language development, this gap was concerning.

While visiting a number of Māori-medium primary schools for inspiration I learnt that the issue with students' limited ability to converse in Māori about their learning was not unusual. In many of the classrooms I visited the teachers spoke fluently in the Māori language throughout lessons, but their students were mostly silent, passively following instructions or sometime answering closed-recall question like 'Kua mārama koutou?' (Do you understand?).

I knew that without more complex and abstract language, students would be unable to develop the higher-order thinking they were capable of and that they needed to be able to discuss the increasingly more complex ideas of the currciulum. Also of concern was the risk that Māori-medium students were not actually developing the language proficiency they need to have to enable them to transmit it to future generations. Given Māori medium is a significant site of language regeneration, this risk needed to be addressed.

Having studied formative assessment practices I was familiar with the notion that improving students' metacogniton had been well proven to accelerate their curriculum achievement. I came to theorise that, if carefully planned for, the practice of self and peer assessment would likely develop Māori-medium students metacogntive knowledge, academic language proficiency, and curriculum achievement all at the same time. This approach had proved successful for raising the language and curriculum achievement of my Māori-medium students in my previous Master's study and I now wanted to test its efficacy across Māori-medium classrooms more widely.

6.1.2 Summary of the Study

This study investigated the application of self and peer assessment pedagogies in Māori-medium classrooms to raise students' academic oral language and literacy

achievement at the higher end of primary school. The study sought to answer the following questions:

1. What is the effect of self and peer assessment on students' academic oral language development in Māori-medium literacy programmes?
2. What is the effect of self and peer assessment on students' literacy achievement in Māori-medium literacy programmes?
3. How does implementing self and peer assessment practices in Māori-medium classrooms impact on teachers' pedagogical knowledge and teaching practice?

The study was conducted across three Māori-medium classrooms in three separate Māori-medium schools. It included 24 students and three teachers. A 14-week intervention was implemented in each classroom that involved teaching the students to self and peer assess their own and each other's writing learning and progress.

In order to support students understanding of what they needed to learn to progress through the writing curriculum, a rubric (Anga Putanga Ako) was developed that outlined writing outcomes students needed to master to progress through the writing curriculum levels. Over 14 weeks the students regularly participated in self and peer assessment discussions, where they referred to the Anga Putanga Ako to discuss their achievement levels and what they needed to learn next.

As well as the Anga Putanga Ako, newly-developed Kāri Matapaki (conversation scaffolds) were introduced to the students to support their self and peer assessment conversations. The Anga Putanga Ako provided the specific knowledge of the writing curriculum outcomes students needed to know to be able to discuss their learning progress. The Kāri Matapaki provided language models that supported students to ask and answer questions about their learning, prompting them to refer to the Anga Putanga Ako to fill in the specfic details they needed in relation to their progress and achievement.

The intervention also involved supporting teachers to choose specific writing outcomes from the Anga Putanga Ako to teach students so their teaching aligned to students' developing understanding of what they needed to learn to progress through the curriculum. They learnt to share those explicit outcomes with students before the

writing lessons, as well as more specifc success criteria, and to link learning activities directly to the outcomes they were targetting. The teachers also learnt to allow time for students to discuss their achievement of the success criteria using the Kāri Matapkai at the conclusion of lessons, and to use the Anga Putanga Ako to discuss their curriculum progress and next steps.

6.2 Students' Academic Language Proficiency

The study found that, prior to the intervention, the participant students had limited oral language profiency for their time in Māori-medium education. However, not only were they unable to discuss their learning with academic language related to the specific ideas of the writing curriculum, they also struggled to explain more simple everyday ideas. For example, when asked to describe some of the reading or writing activities they do in their classrooms, many students simply shrugged their shoulders in response or answered in a way that indicated they did not understand the question. This finding shows that, despite the issue of Māori-medium students' under-developed language having been raised a number of times over the past 20 years (Edmonds et al., 2013; Glynn, Berryman, & Weiss, 2005; Keegan, 2003; McNaughton et al., 2006), the situation has not improved.

The study found that students' under-developed oral language proficiency was linked to their teachers' approaches to language teaching in the classroom and the absence of oral language progressions and assessment tools developed for Māori-medium. None of the three teachers explicitly planned oral language programmes or for the integration of language and curriculum content. As has traditionally been the case in Māori-medium classrooms, there was an expectation that students would pick the Māori language up simply by being immersed in it on the school grounds, much the same as they do in their first language. For example, discussion patterns in the study classrooms did not maximise language input and output opportunities needed for second-language acquisiton but, instead, largely involved the teachers talking and giving instructions and asking closed-recall questions to the whole class, with students offering simple 'yes' or 'no' answers on occasion.

The naturalistic approach to language teaching and learning demonstrated in the participant classrooms has been identified as a limiting factor in the development of

students' language in Māori-medium classrooms in the past (Education Review Office, 2002; Glynn, Berryman, & Weiss, 2005; McNaughton et al., 2006), with students "rapidly reaching a stage where the amount of language they are hearing and using is insufficient to continue expanding their vocabulary and fluency" (Glynn, Berryman, & Weiss, 2005, p. 4). Researchers have also found the same issues in French immersion programmes where students language is likely to be more under-developed when their teachers believe language and literacy will be learnt by osmosis in naturalistic settings, and this belief is usually due to insufficient education in second-language pedagogies (Cammarata & Haley, 2018; Tedick & Fortune, 2013).

Insufficient education in second-language pedagogies was also the issue limiting teachers' approaches to language teaching in this study. One teacher had been educated in an English-medium initial teacher education programme and had little professional development to learn second-language pedagogies associated with developing students' language in Māori-medium classrooms since transitioning to Māori-medium teaching. The other two teachers had trained in Māori-medium initial teacher education programmes but did not remember learning about the types of second-language pedagogies that could accelerate students' language development and curriculum achievement simultaneously at the higher end of primary school. Further, like the first teacher, neither had had in-service support to develop their second-language pedagogical knowledge or practice since entering teaching.

This study sought to inform effective language and literacy teaching approaches in Māori-medium classrooms. It involved teaching students to converse in small groups to make assessment decisions about their learning levels related to curriculum progression outcomes. By the end of the intervention the students were more able to discuss their learning and next steps with vocabulary and ideas specifically linked to the writing curriculum. They were able to discuss aspects of their learning they had achieved and those that needed further attention. They were also better able to describe their learning activities and what resources they used to support their learning. As such, this study makes a significant contribution in providing evidence-based pedagogies for improving students' academic oral language at the higher end of Māori-medium primary school in particular.

As discussed at the beginning of this chapter, second-language teacher education was not the only factor influencing teachers' language teaching in this study. Oral language proficiency progressions and assessment tools have not yet been developed for Māori-medium classrooms. This meant the teachers had no benchmarks on which to base decisions about students' language abilities and where to target their language teaching. Although important steps have been made by Māori-medium experts to develop language proficiency progressions on behalf of the Ministry of Education (Edmonds et al., 2013), the Ministry has not progressed that work to produce the progressions or related assessment tools for Māori-medium use. The reasons for this inaction are unknown.

6.2.1 Implications

The findings related to students' language achievement in this study point to a number of implications for Māori-medium development. Firstly, the findings provide practical pedadogical solutions to the challenge of improving students' academic oral language, which, in turn, can positively impact their cognitive and curriculum development. The study also informs the types of supports teachers need to meet the challenges they face teaching second-language students in context where the target language recieves limited exposure outside of the school. Finally, the study higlights the urgent need for the development of oral language assessment tools and progressions to inform oral language programmes. Each of these themes is discussed respectively below.

6.2.1.1 Cognitive and Academic Achievement

This study has shown that well-planned second-language pedagogies, such as Task Based Language Teaching approaches, are needed and can be effective for the development of Māori-medium students' academic language proficiency. The findings provide important pedagogical guides that should be included with urgency into Māori-medium initial and in-service teacher education programmes.

Delaying such development in Māori-medium teacher education has implications for Māori-medium students in relations to Cummins Threshold Hypothesis. The hypothesis posits that second-language students need the academic language skills required to access the curriculum in at least one of their languages so that they do not

suffer negative cognitive or academic consequences. For example, at the higher end of primary school, students need academic language to analyse, evaluate and synthesise new information.

Without these higher-order thinking skills, however, not only is students' curriculum achievement compromised, they are also potentially prevented from contributing to new knowledge, and, crucially, from supporting or challenging the current social order. This is a particularly important issue for indigenous students whose country has been colonised. If they wish to emancipate themselves and their people from the oppression that comes from colonisation, they need the linguistic and thinking tools to understand abstract ideas, such as hegemonic control, and to be able to respond to those ideas.

Students also need increased language capabilties in order to take advantage of the growing employment opportunities that exist for Māori language speakers. For example, there is a growing industry based around the Māori-language media, Māori language translation and advisory services, and the production of Māori-language resources. A high level of Māori language proficiency is required for all of these fields.

As well as academic language development, however, this study has shown that it is also important to consider the development of Māori-medium students' social language proficiency. While it is thought that social language develops more easily in second-language contexts, this study has shown that this may not be the case for all Māori-medium students, many of whom have limited exposure to the Māori language outside of school. Therefore, if academic language is the sole focus of explicit language teaching in the classroom, we risk a unique situation where students may learn academic language registers associated with the curriculum but not be able to have discussions with native or more proficient speakers who may be less familiar with those academic registers. This situation would deny students the opportunity to learn from those who have vast amounts of cultural and historical knowledge to share.

Finally, given that Māori-medium education is a significant Māori language regeneration platform, we need to ensure that Māori-medium graduates acquire the levels of Māori language proficiency they need to enable them to develop future

generations' ability to understand and use it. We need to re-establish intergenerational transmission if we are to ensure our language survives and becomes normalised in society.

6.2.1.2 Teachers

The findings in this study demonstrated that teachers need better specialist education in the types of second-language pedagogies that can effectively develop students' language and literacy ability at the higher end of primary school. The study provides evidence of types of pedagogies that can effectively meet that need. It showed that Task Based Language Teaching approaches are as effective in Māori-medium classrooms as they are in second-language classrooms across the globe.

This finding has implications for the Ministry of Education, who need to ensure that pre- and in-service teacher education is provisioned for, to the extent that pedagogical approaches, such as those trialled in this study, are embedded across the system. Without this investment we will continue to deny teachers the support they require to meet the challenges they face, challenges that in the past have seen them leaving the profession after only an average of five years service (Radio New Zealand, 2013).

6.2.1.3 Assessment Tools

This study has shown that there remains an urgent need to develop oral language progressions and assessment tools to guide teaching and learning in Māori-medium education. Traditonally, the only assessments available to Māori-medium teachers and students have been those designed for pānui (reading) and tuhituhi (writing) and, given there is no established link between the curriculum pānui and tuhituhi progressions and Māori language proficiency progressions (Edmonds et al., 2013), these assessments cannot be regarded as valid ways of measuring students' language proficiency. Without oral language progressions and assessment tools, teachers have no way of knowing to what extent their students' academic or social language development is optimal, or whether they need extra support or extension. The naturalistic unplanned approach to language teaching is more likely to continue when there are no signposts to alert teachers to expected progressions.

This situation needs to be addressed with urgency, and this will require significant investment from the Ministry of Education. As stewards of the education system, the

Ministry currently has no way of collecting language achievement data across all Māori-medium primary schools. This means they have no robust evidence on which to base decisions about the provision of support for Māori-medium, or means of measuring the effectiveness of such supports for students' language progress and achievement. The Ministry of Education has a responsibility to ensure students are receiving the best possible education this country can offer. To better meet this responsibility, they need to initiate the development of language assessment tools, such as Kaiaka Reo or those like the Common European Reference for Language Framework, with urgency.

6.3 Students' Literacy Achievement

Pre-intervention data collected in this study revealed that, as well as limited oral language proficiencies, student participants were also achieving below expectation in relation to the pānui (reading) and tuhituhi (writing) curriculum.

This finding was once again related to teachers' limited education in second-language pedagogies. None of the teachers understood the mutually-facilitative relationship between reading, writing, and oral language development, and they had not learnt effective ways to develop literacy skills for Māori-medium students beyond early primary school years. All three teachers believed their students' limited language proficiency needed to be addressed separately and as a requisite to their literacy progress. For example, two teachers did not have planned reading programmes because they did not know how to develop students' reading comprehension in their second language, and small group work to focus and monitor teaching and learning was limited to non-existent.

Underlying this issue, the teachers themselves did not have a clear idea about what progress and achievement they should be expecting for their students in reading or writing because their schools were yet to develop whole school progressions that specified the reading or writing outcomes expected for students as they progressed through their schooling. The result was that the teachers in each level across the school made decisions on where they should be directing their teaching across reading or writing in isolation from each other. Like the oral language situation, they had no

agreed signposts to tell them what their students should know by when, or to alert them if students needed extra support.

6.3.1 Writing

Writing is an important skill for second-language students because it provides them with another avenue for language output in a society where such opportunities are rare. Through writing they can practice their productive language skills and also demonstrate their understanding of the curriculum

Over the course of the 14-week intervention, students in two of the kura made an average of 2 years writing progress according to Ministry of Education expectations and, in the third kura, they made 27 weeks progress. The students' accelerated progress was related to the development of their metacognitive knowledge related to the writing curriculum, that is, their knowledge of what levels they were achieving at and what they needed to learn to progress. Their metacognitive knowledge increased on two levels. At the highest level, they learned, through the Anga Putanga Ako, what curriculum levels they were achieving at and what outcomes they needed to achieve to progress. At a more micro level, they learnt to discuss the specific outcome from the Anga Putanga Ako being taught in each writing lesson they participated in, as well as the success criteria they needed to achieve that outcome.

This finding extends our knowledge of the positive effect of metacognitive development on students' achievement in a range of classroom contexts across the globe. In particular, it is the first study to demonstrate pedagogies that can develop *Māori-medium* students' metacognition and, therefore, their rangatiratanga (agency) over their own learning in the context of their writing learning, and the subsequent positive effect that development can have on their curriculum achievement.

6.3.1.1 Implications

The findings related to students' writing achievement in this study point to some important implications for Māori-medium education. In particular, as with the oral language approaches discussed above, the study provides specific examples of the types of pedagogical approaches that can be included into teacher education programmes so that teachers have specific strategies to improve students'

metacognition across the curriculum. In particular, they need support to learn formative assessment pedagogies such as sharing explicit learning intentions with students and ensuring their lessons link directly to those intentions. They also need to provide students with opportunities to assess themselves and each other against those criteria. Once again, this finding points to implications for the Ministry of Education who need to provision adequate pre- and in-service teacher education so the pedagogies in this study are socialised across the Māori-medium sector.

The study also provides specific examples of the synergies that can be developed between tuākana-tēina pedagogies and aromatawai to support the development of students rangatiratanga (agency) over their own learning, a valued principle of Ako. These themes are discussed below.

6.3.1.1.1 Aromatawai

Māori-medium educationalists have identified a need to develop assessment tools and practices that can support the principles of aromatawai (Māori perspectives on assessment) including the need for students to understand well defined criteria by which they are being assesssed and to have decision-making power in the assessment process. These criteria of aromatawai support the development of students' rangatiratanga (self-determination) over their own learning.

The self and peer assessment practices in this study met those criteria. By the end of the study, the students clearly understood, from the Anga Putanga Ako and by supporting each other as tuākana-tēina, the criteria by which they could progress through the writing curriculum and they made decisions about what they needed and wanted to learn next to progress. As such, Anga Putanga Ako type tools as well as the practice of self and peer assessment need to be included as aromatawai pedagogies in Māori-medium pre- and in-service teacher education programmes across the country.

The Anga Putanga Ako as an assessment tool is particulary suited to Māori-medium programmes because it is flexible enough to support the unique needs of individual kura and their commuities including hapū and iwi. Marau-ā-kura (individual school curricula) are developed by each kura to include the knowledge and skills prioritised by local hapū (sub-tribes) and whānau (families associated with the school). In this regard, the Anga Putanga Ako developed in this study provides exciting potential.

Although in this study it aligned with the Māori-medium tuhituhi (writing) curriculum, it could easily be constructed to include the mātauranga (knowledge) and skills outcomes valued by each school and its respective whānau and hapū. The self and peer assessment pratices can then still be evoked to develop students' metacognitive knowledge around that mātauranga and, thereby, empower students to be drivers of their own learning within their particular schooling contexts. Preserving the rangatiratanga (self-determination) of each kura and its community is a fundamental requisite in Māori-medium education, and any pedagogical approaches must be seen to support this aspiration if they are to be considered and adopted by Māori-medium practitioners.

6.3.2 Reading

Students' reading achievement also improved significantly as a result of the intervention in this study, despite the fact that they did not participate in any extra lessons focused on explicit reading strategies. After 14 weeks of the intervention, students across the three kura made an average of between 27 and 50 weeks progress according to Ministry of Education expectations.

While the students were not taught specific reading skills during the intervention, they were exposed to increased opportunities to read texts. They read from the Anga Putanga Ako and Kāri Matapaki and they read and discussed examples of texts features during their improved writing lessons. There is evidence in their post-intervention interviews that they noticed and automated the new language from the scaffolds. This, as well as any other language they noticed through the increased exposure to texts, likely impacted their reading ability and comprehension.

This is a useful finding for Māori-medium teachers who struggle to find ways to extend students' language. Reading texts provides extended opportunities for language input, which is important in a context where input is often limited to students' teachers. The rich array of Māori language texts now available to schools also provides students with access to a world of recorded Māori knowledge that can support learning across the curriculum.

6.3.2.1 Implications

This study highlights the need to ensure Māori-medium teachers understand the importance of exposing students to written texts as a rich source of language input in their literacy programmes. Once again, this poses implications for the Ministry of Education who need to ensure teachers are skilled in approaches that can support students to comprehend texts written in their second language and ways to integrate the reading of texts into their literacy programmes to support writing and oral language development.

6.3.3 Curriculum Integration

While a small number of earlier studies have provided evidence of effective practices for improving Māori-medium students' reading or writing achievement (Glynn et al., 1993; Hohepa, 2008), this study is the first to demonstrate pedagogies that can improve reading, writing, and oral language all at the same time and at the higher end of primary school. This finding reinforces what we already know about the mutually-facilitative relationships between reading, writing, and oral language in second-language classrooms. The findings also provide an example of how curriculum content, literacy in this case, and language learning can be integrated in the Māori-medium context so that one is not sacrificed for other. The findings add to the work being done to develop Content Literacy Integrated Learning frameworks in bi-lingual programmes across the globe, and shows such integration is possible and beneficial for Māori-medium teachers and learners as well.

6.3.3.1 Implications

Māori-medium teacher education programmes must ensure that teachers understand the importance of curriculum integration and how this can be achieved effectively. Once again, the Ministry of Education needs to take responsibility for ensuring that all Māori-medium pre- and in-service teacher education providers are up-to-date with the types of pedagogies tested in this study and are integrating them into their teacher education programmes.

6.4 Māori-medium Teachers' Pedagogical Knowledge and Teaching Practice

The findings in this study support previous findings about the inconsistency with which Māori-Medium teachers have been educated in instructed second-language pedagogies (Hohepa et al., 2014; Jacques, 1991; May & Hill, 2005; Murphy et al., 2008; Skerrett, 2011). For example, Māori-medium teachers may have trained in Māori-medium initial teacher education programmes where they may or may not have been educated in second-language pedagogies, or they may have trained in mainstream teacher education programmes where coverage of Māori-medium pedagogies is non-existent.

The limited education in second-language pedagogies that teachers in this study had received in their initial teacher education programmes, as well as during their time in-service, had left them reliant on naturalistic approaches to teaching students' oral language, hoping in the main that they would pick it up through osmosis in their immersion classroom settings. The teachers were frustrated that their students could not discuss the increasingly complex ideas of the curriculum, and believed that the main contributing factor to the students' limited language abilities was the lack of Māori language transmission in their homes, as opposed to under-developed second-language pedagogies in their teaching programmes. They had limited ideas about how to develop their students' language capabilities and felt frustrated that their linguistic abilities were not progressing.

Further, two of the teachers did not appreciate the need to explicitly share learning intentions before lessons or have students discuss them, and none of the teachers fully understood the interrelatedness of reading, writing, and oral language or how to integrate literacy teaching so one could support the development of the other. Two teachers did not run reading programmes at all.

The study found that when the Māori-medium teachers observed the self and peer assessment practices that formed the study intervention, they quickly identified them as effective practices for developing their students' language and curriculum knowledge at the same time. They identified the small group discussions as effective ways to promote more language input and output than whole class IRF discourse approaches that were their usual approach to teaching language and curriculum. The

teachers also saw the benefits of the Anga Putanga Ako and Kāri Matapaki scaffolds for supporting students' language development as well as their rangatiratanga over their own learning. They also learnt to share learning intentions more explicitly and to develop explicit success criteria so that students could assess their own and each other's work.

The inadequate approach to pre- and in-service Māori-medium teacher education has been highlighted by researchers since the early 1990s (Jacques, 1991; May & Hill, 2005; Murphy et al., 2008; Skerrett, 2011). Without education in effective pedagogies that can improve Māori-medium students' language and curriculum achievement, teachers will continue to struggle to find ways to meet the wide range of linguistic needs their students present with at the higher end of primary school. In particular, they will struggle to develop the types of language required for higher-order thinking and engagement with the complex ideas associated with the higher levels of the primary school curriculum. As discussed later (6.4.1.1) this situation has begun to be addressed with the introduction of relevant requirements for Initial Teacher Education by the Teaching Council of Aotearoa New Zealand in 2019 (Teaching Council of Aotearoa New Zealand, 2019).

However, while coverage of effective second language pedagogies in Initial Teacher Education is a necessary starting point there remains a dearth of research to inform such pedagogies that are relevant and tested in the Māori-medium context in particular. Although there are numerous studies that have informed second-language pedagogical approaches internationally, Māori-medium is a unique bi-lingual education context. Māori-medium education broke free from the oppressive colonial education system that was designed deliberately to assimilate us. There is, therefore, an understandable reluctance by Māori-medium educators to adopt pedagogies that have not been developed through a kaupapa Māori process. If Māori-medium teachers and leaders are to adopt new pedagogies, those pedagogies must be designed, developed, and tested specifically from within the Māori-medium context so that they are trusted and engaged with. They must be seen to be conducive to the Māori-medium kaupapa. In that regard, the pedagogies in this study were readily taken up by students and teachers because they built on familiar and valued Māori approaches to teaching and learning, such as the tuākana-tēina approach, by supporting students,

through the use of linguistic scaffolds, to discuss their learning with each other. Through this process, students simultaneously developed their language proficiency and their curriculum knowledge resulting in improved rangatiratanga over their own learning. This is an important aspect of Ako valued by Māori-medium teachers and students.

This study demonstrated, for the first time, teaching approaches that can have a significantly positive impact on Māori-medium students' language and literacy development simultaneously at the higher end of primary school, even when those students have limited access to the Māori language outside of school. The study found that, once equipped with such pedagogies, Māori-medium teachers were able to focus on what they *could* change, what difference they *could* make, rather than the things they cannot change such as students' limited exposure to the Māori language outside of the school. They trusted the pedagogies because they aligned with Māori values and approaches to education encompassed in the concept of Ako, such as the empowerment of students to make decisions about and drive their own learning.

6.4.1 Implications

By becoming educated in the pedagogical practices demonstrated in this study, teachers may become equipped to more easily support their students to become independent, agentic learners who can meet their full linguistic and academic potential. They will likely feel more fulfilled in their vocation and may even continue serving the Māori-medium kaupapa for longer, with less of the burn-out common amongst Māori-medium teachers who, as discussed earlier, have in the past, lasted on average less than five years in Māori-medium teaching due to the associated challenges (Radio New Zealand, 2013).

6.4.1.1 Initial Teacher Education and In-service Professional Development

Improvements to Māori-medium teacher education need to be made on two fronts, including both pre- and in-service teacher education programmes. To this end an important start was made to strengthening Initial Teacher Education (ITE) in 2019 with the introduction of new programme approval, monitoring, and review requirements (Teaching Council of Aotearoa New Zealand, 2019). The requirements include an expectation that Māori-medium student teachers will meet explicit levels

of Māori language competency on entry and prior to graduation from programmes and that, “programmes must demonstrate practices that are reflective of the principles of second language learning”(Teaching Council of Aotearoa New Zealand, 2019, p. 48). As discussed above this study has demonstrated clear evidence of exactly the types of key second-language pedagogies that can be included into Māori-medium programmes to ensure teachers have the skills to raise Māori-medium students’ language and curriculum achievement simultaneously.

The adoption of these pedagogies into Initial Teacher Education programmes and the monitoring of the new requirements needs to be supported with urgency to ensure new graduates are sufficiently prepared for the challenge that awaits them on entry to Māori-medium teaching. This is particulalrly acute given that the current government has announced an intention to target 30% of Māori students participating in Māori-medium education by 2040 (Ministry of Education, 2023).

Development of ITE programmes is however not enough, given that beginning teachers are not typically the people who have the power or experience to make change in schools, let alone nationally. In fact, in the Māori-medium cultural context, beginning teachers will often consider it disrespectful to challenge the ideas of older or more experienced teachers who may not be up-to-date with second-language pedagogical practice. To support beginning teachers, and to effect change in schools, experienced in-service teachers who hold positions of influence must also be given the opportunity to upskill. They are the leaders who can embed change across their schools and, as such, need the opportunity and resources to learn, test, and develop new pedagogies across their classrooms and schools over time.

In order to make a significant and lasting difference to Māori-medium students’ language and curriculum achievement outcomes, Māori-medium teacher education needs to be based on what we know about best practcice PLD delivery (Timperly et al., 2007). This includes delivering the PLD in the teachers’ classrooms, embedding the new learning over time, and ensuring teachers are released adequately to ensure competing priorities in the school do not undermine their learning, as was the case in this study. The PLD needs to target:

- Experienced teachers from a range of kura across the country, who need to be fully released to participate in the programmes;
- A focus on the pedagogies outlined, developed and trialled in this study;
- Education on second language pedagogies more broadly such as TBLT approaches;
- The collection of data from participating teachers' schools to contribute to a national picture of students' language and literacy outcomes across the Māori-medium landscape; and
- A focus on schoolwide development of language and literacy progressions, and the embedding of those progressions into the school's curriculum.

6.5 Limitations

This study showed that, once students were equipped with the appropriate skills and tools, they were able to drive their own language and literacy learning forward. The study showed that teachers had also begun to improve their knowledge of second-language pedagogies and had begun to adopt related practices. However, the study was short, with an intervention of only 14 weeks. Therefore, the extent that the pedagogies had become normal practice was hard to gauge and, in fact, there was evidence the intervention was not long enough to embed the changes.

6.6 Further Study

This study has highlighted a number of possibilities for Māori-medium education that warrant further study. For example, a longitudinal study would be useful to demonstrate just what students could achieve if they were educated through the self and peer assessment pedagogies over a longer period of time, and what timeframes are required to embed improvements in teacher practice.

Further, there is no reason that the self and peer assessment pedagogies in this study, with their literacy related scaffolds, could not be applied successfully to develop student agency and achievement across others areas of the curriculum, for example, science, mathematics or any other subject that Māori-medium whānau deem

important. Future studies to measure the impact of these pedagogies across the curriculum would provide useful insights for educators.

Further studies are also required into effective language assessment tools and progressions, as well as frameworks for curriculum integration in Māori-medium classrooms.

6.7 Summary

Years of systematic and institutional racism in New Zeland have marginalised Māori people and our culture in our own country. Efforts to eradicate our language and culture through the State education system included the mental, physical, and spiritual abuse of generations of Māori children. Our language was brought to near extinction, and our once proud culture was reduced to a shameful whipser.

We are indebted to all those tīpuna who fought back on a national scale to reclaim our rangatiratanga (self determination) including the regeneration of our language and culture. Their fight included the development of Māori-medium education, a safe and nurturing school system to protect and educate our children. Māori-medium educationalists forged this alternative, uniquely-indigenous education system for our people within a larger education system that was fighting to assimilate and oppress us. Against these odds, they fought tirelessly and gave their lives for the kaupapa. They built a movement on gut instinct and sheer determination to save our mokopuna from the trauma the mainstream system had caused them and continues to cause our children today. In Māori-medium classrooms, our children are nutured by teachers who understand, value, and love them *as Māori*. Our children learn the knowledge of their forefathers and hear the language that has echoed across these lands since the arrival of the first ancestors. They learn to understand and live in harmony with our earth mother and how to protect her for all our living brothers and sisters, from the bees to the trees, to the birds and fish, and to the people.

Since its inception, the demand for Māori-medium education has been immense and has outstripped the research available to inform it. Educators have relied largely on traditional methods of language transmission to support students to acquire the Māori language in the classroom, while learning the curriculum at the same time. This has proven difficult as many Māori-medium students are second-language learners of the

Māori language with little reinforcement of it outside of the school. Despite their passion and committment, teachers struggle to develop students' language and literacy proficiency to the levels they are capable of in this challenging and extraordinary situation.

This research provides some answers to inform the supports Māori-medium teachers are seeking and that students need. While a small number of earlier studies have provided evidence of effective practices for improving Māori-medium students' reading or writing achievement (Glynn et al., 1993; Hohepa, 2008), this study is the first to demonstrate pedagogies that can improve reading, writing, and oral language all at the same time and at the higher end of primary school. This finding reinforces what we already know about the mutually-facilitative relationships between reading, writing, and oral language in second-language classrooms. The finding also provides an example of how curriculum content, literacy in this case, and language learning can be integrated in the Māori-medium context so that one is not sacrificed for the other. The findings add to the work being done to develop Content Literacy Integrated Learning frameworks in bi-lingual programmes across the globe, and shows such integration is beneficial for Māori-medium teachers and learners as well.

While the Government intends to target 30% of Māori students particpating in Māori-medium education by 2040, they now need to ensure the sector is provisioned for success. The Ministry of Education needs to ensure the pedgogical supports demonstrated in this study are made available to all Māori-medium teachers and students. Without this support we deny our children the chance to develop their cognitive, linguistic, and academic skills to their full potential. While this may impact their education pathways, career choices and employment opportunities, it also renders them less able to challenge the dominant discourse of the coloniser, and to contribute new knowledge to our world.

If we are to create an equitable 'playing field' for Māori-medium students, Māori-medium teachers must be supported to develop the specialist teaching approaches that this study has demonstrated for effective language and literacy teaching. Through these improved language and literacy pedagogies, students will be led to new ways of thinking and new forms of consciousness that will support them to engage in the critical dialogue associated with supporting or resisting the current social order. They

will be able to contribute their unique ideas to the development of knowledge that will invariably make our world a better place, and they will be better equipped to continue the transfer of the Māori language to future generations.

"Piki kau ake te whakaaro pa, hauhake tonu iho"

(When a good thought springs up it must be harvested)

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Appendices

Appendix A: Ethics Approval

Dean's Office
Faculty of Education
Te Kura Toi Tangata
The University of Waikato
Private Bag 3105
Hamilton, New Zealand

Phone +64 7 838 4500
www.waikato.ac.nz

THE UNIVERSITY OF WAIKATO
Te Whare Wānanga o Waikato

MEMORANDUM

To: **Rosina Shandley**

cc: Associate Professor Margie Hohepa
Ms Vanessa Paki

From: **Professor John Williams**
Chairperson, Research Ethics Committee

Date: 14 September 2015

Subject: Supervised Postgraduate Research – Application for Ethical Approval (EDU077/15)

Thank you for submitting the revisions to your application for ethical approval for the research project:

Awhi Mai Awhi Atu: Raising Māori Medium Students' Academic Language Proficiency Through Self and Peer Assessment

I am pleased to advise that your application has received approval.

Please note that researchers are asked to consult with the Faculty's Research Ethics Committee in the first instance if any changes to the approved research design are proposed.

The Committee wishes you all the best with your research.

Professor John Williams
Chairperson
Research Ethics Committee

Appendix B: Teacher Semi-structured Interview

GUIDING QUESTIONS

1. Kōrero mai mo tāu mahi pouako mai i tāu timatanga tae noa ki tēnei wā. Ko tēhea ngā momo kura/ akomanga rānei i mahia e koe i roto?
   (Tell me about your teaching from the time you started until now. What types of schools and classrooms have you taught in?)

2. Ki āu whakaaro he rerekē te whakaako i ngā tauira rumaki reo ki te whakaako i ngā tauira i roto i te akomanga auraki? Kōrero mai mō aua rereketanga.
   (Do you think there are any differences teaching students in Māori immersion classrooms compared to mainstream classrooms? Tell me about those differences)

3. He aha ētahi o ngā rautaki/ngohe rānei e mahia ana e koe ki te whakapiki i te reo o ngā tauira i roto i tō akomanaga?
   (What are some of your teaching strategies or activities you employ for lifting the language proficiency of the students in your classroom?)

4. *Kōrero mai mo te hōtaka reo matatini i roto i tāu akomanga. He aha ngā wāhanga, pēhea te whakahaere?*
   (Tell me about the literacy programme in your classroom. What are the components, how does it operate?)

5. He aha ētahi o ngā aromatawai mō te reo matatini e mahia ana e koe i roto i te akomanga?
   (What types of assessments do you use in your literacy programme?)

6. He āwangawanga, whēuaua rānei e pā ana ki te whakaako i ngā tauira i roto i te reo Māori? Whakamārama mai.
   (Are there any concerns or difficulties teaching students in the Māori language? Describe these).

7. He kōrero ano tāhau e pā ana ki tāu mahi whakaako i roto i te akomanga rumaki reo?
   (Do you have anything else to say about teaching in a Māori immersion classroom?)

Appendix C: Student Semi-structured Interview

Awhi Mai Awhi Atu

GUIDING QUESTIONS

1. Kōrero mai mō te hōtaka reo matatini i roto i tāu akomanga. He aha ētahi o ngā ngohe? Pēhea te hōtaka tuhituhi/pānui/kōrero rānei?
   (*Tell me about the literacy programme in your classroom, what are some of the activities?)* Depending on students' answers I will prompt them to talk about other components of the literacy programme they talk about writing I will ask them about what reading and oral language activities they do.
2. Tēnā, whakamārama mai, i roto i te mahi tuhituhi, kei te ako koe ki te aha i tēnei wā?
   (What can you tell me about what you are learning in writing at the moment?)
3. Pēhea koe e mōhio ai he aha tāu whāinga ako mo te whakapakari i tāu mahi tuhituhi?
   (How do you know what you need to learn to do to improve your writing?)
4. Pēhea koe e mōhio ai kua oti pai tāu mahi tuhituhi, kua tae pai ki te whāinga ako rānei?
   (How do you know if you have reached your learning goal?)
5. He aha ētahi o āu rautaki hei whakapakari i tāu mahi tuhituhi?
   (What strategies do you use to write well?)
6. He aha ngā rauemi e mahia e koe hei whakapakari i tāu mahi tuhituhi?
   (What are the resources that you use to help you improve your writing?)
7. He kōrero ano tāu e pā ana ki tāu mahi ako tuhituhi i roto i tāu akomanga?
   (Do you have anything else to say about how you learn to write in your classroom?)
8. Tēnā, whakamārama mai, i roto i te mahi pānui, kei te ako koe ki te aha i tēnei wā?
   (What can you tell me about what you are learning in reading at the moment?)
9. Pēhea koe e mōhio ai he aha tāu whāinga ako mo te whakapakari i tāu mahi pānui?
   (How do you know what you need to learn to do to improve your reading?)
10. Pēhea koe e mōhio ai kua oti pai tāu mahi pānui, kua tae pai ki te whāinga ako rānei?
    (How do you know if you have reached your learning goal?)
11. He aha ētahi o āu rautaki hei whakapakari i tāu mahi pānui?
    (What strategies do you use to read well?)
12. He aha ngā rauemi e mahia e koe hei tautoko i tāu ako pānui?
    (What are the resources that you use to help you learn to reading?)
13. He kōrero ano tāu e pā ana ki tāu mahi ako pānui i roto i tāu akomanga?
    *(Do you have anything else to say about how you learn to read and write in your classroom_*

Appendix D: Principal Information Letter

Awhi Mai Awhi Atu

The Principal
xxxxxxxxxx
xxxxxxxxxx
xxxxxxxxxx
(Date)

Ko Hikurangi te maunga kitea tuatahi e te rā
Ko Waiapu te awa i kaukaungia e ōku tīpuna
Ko Ngāti Porou te iwi
Ko Te Aowera te hapū
Ko Rosina Shandley (Haua) awau

Tēnā koe xxxxxxx

I am seeking your support for my PhD research project that investigates self and peer assessment practices to raise students' written and oral Māori language ability.

In 2011 I introduced a progamme of self and peer assessment in my own Māori medium classroom as part of my Masters research. The study found that all students who participated in the programme significantly improved their written and oral language achievement over the 20 weeks of the study. Because of the positive result I would like to test out the programme in three other Māori medium classrooms including one in your school.

The research would be conducted in one senior school classroom (Years 5 to 8). The students would be taught to assess their own and each other's writing during their regular literacy times, over 20 weeks. They will use specific language scaffolds to help them discuss their writing and to make decisions about their learning. They would also use a writing journal that I would monitor.

This research will require up to five days of the teacher's time to construct resources and plan the implementation of the programme. If necessary, I can relieve in the school at later dates during the year to compensate the school for the use of relief teachers.

As part of the research I will collect and analyse student interview data, literacy diary entries, writing samples, e-asTTle pānui and tuhituhi data, and video recordings of students participating in the self and peer assessment activities. I will also interview the participating teacher about their ideas around teaching Māori medium students

and the impact of the new programme and collect their journal reflections related to the programme. All of this information will be analysed for inclusion in the thesis. Neither the school, teachers, nor students will be identified throughout the process of this research or in the thesis or any future publications of the research. However while every effort will be made to ensure confidentiality, bearing in mind that Māori Medium is a small community this cannot be guaranteed.

All information will be treated with the utmost respect and all data collected will be stored in a locked cupboard at my home.

I am also seeking your permission to use the research data for future educational purposes outside of the research.

If you need clarification on any matter concerning this project, then do not hesitate to contact me ph:0272164871 or rosinashandley@gmail.com . If you have any questions or concerns about the project, either now or in the future, please feel free to contact either me or my supervisor, Margie Hohepa at the Waikato University (Phone: 07 838 4455 x 7874; Email: mkhohepa@waikato.ac.nz).

Yours Sincerely

Rosina M Shandley

Appendix E: Principal Consent Form

Awhi Mai Awhi Atu

Principal Consent for the Conduct of Research Form

I have read and understood the information letter outlining Rosina Shandley's proposed research study and had any questions answered.

I am happy for my school to take part in this research

I understand that the school and students will not be identified in the final report.

I consent to the use of anonymous student data for conference proceedings, and published articles.

I understand that I can discuss any issues with the research with Rosina at any time or alternatively with the chief research supervisor.

I understand give my permission for Rosina to use some of the data, including video clips of students that may identify them and the school, for future educational purposes.

Research Supervisor's Contact Details:

Margie Hohepa, Waikato University, Phone: 07 838 4455 x 7874

Email: mkhohepa@waikato.ac.nz

Principal: _____

Signature: _____

Date: _____

Appendix F: Teacher Information Letter

Awhi mai Awhi Atu

(Teacher)
xxxxxxxxxx
xxxxxxxxxx
(Date)

Dear _____ ,

I am writing to gain your support for a research project I wish to conduct in your classroom around lifting students' academic language and literacy achievement.

In the NZ context where most Māori medium students are second-language speakers of te reo Māori, attaining high academic Māori language skills is a challenge. This project seeks to support language learning through the use of self and peer assessment practices.

The study will involve teaching the students how to assess their own and each other's writing during their regular literacy times, over 20 weeks. They will use language scaffolds to help discuss their writing and make decisions about their literacy skills and future learning steps. They will also write their ideas about the programme in a writing journal that will be shared with me.

The research will be conducted in 3 phases:

Phase 1

Teacher

You will participate in a 30-minute semi-structured interview about teaching and learning in Māori medium classrooms. You can choose not to answer any questions and also end the interview at any time. I will then work with you for one day to develop the resources for the self and peer assessment programme to be implemented in your classroom. You will pair your students and decide which four pairs will be interviewed, and video-taped during their learning. I will then model the teaching of the self and peer assessment programme in your classroom for two weeks while you observe. You will then be released to work with me for another day to construct a plan for you to continue teaching the programme for a further 18 weeks.

Students

You will assess the students' literacy skills using e-asTTle tuhituhi and pānui tools and guidelines. Participating students will also be asked to provide their writing books from which everyday writing samples will be copied and analysed by me. Students will participate in one semi-structured individual interview about their literacy learning. Each interview will be approximately 10 minutes in length.

Phase 2

Teachers

You will teach the self and assessment programme in your classroom for up to 18 weeks. You will be released for an equivalent of one hour per week to evaluate and plan the ongoing programme. You will meet with me at regular intervals during some of those release times to discuss the programme and any support required. You will keep a reflection journal for me to analyse.

Students

Students will participate in the self and peer assessment programme in their regular literacy time. At up to four points during the study students will be video-taped by me as they engage with the self and peer assessment activities. Videotapes will be transcribed and analysed for inclusion in the thesis. During up to three literacy sessions per week students will make entries in literacy journals about their learning in the programme, for analysis by me.

Phase 3

Teachers

After the 18-week intervention you will participate in a 20-30 minute individual semi-structured interview that will involve you discussing your ideas about the programme and how it relates to students language and literacy learning. Interviews will be transcribed for inclusion in the thesis.

Students

Students will complete another e-asTTle tuhituhi and pānui assessment of 40 minutes duration. Student who participated in original interviews will participate in another individual semi-structured interview. Each interview will be approximately 10 minutes duration.

Data

The teacher and student interview data, e-asTTle assessments, journal entries, student writing samples, and video recordings of students participating in the self and peer assessment activities will be analysed for inclusion in the thesis. You will have an opportunity to review and revise both of your interview transcripts, meeting notes, and journal information before data is included in the thesis. Neither the school, you, nor the students will be identified in the final thesis report. However while every effort will be made to ensure confidentiality, bearing in mind that Māori Medium is a small community this cannot be guaranteed.

I am also seeking your permission to use the research data for future education purposes outside of this research study.

If you take part in the study, you have the right to:

- Withdraw from an interview and refuse to answer any particular question
- Withdraw from the study before xxxx (include 10 week date).
- Ask any further questions about the study that occurs to you during your participation
- Be given access to a summary of findings from the study when it is concluded.

If you need clarification on any matter concerning this project, then do not hesitate to contact me ph:0272164871 or roisnshandley@gmail.com

If you have any questions or concerns about the project, either now or in the future, please feel free to contact either me or my supervisor, Margie Hohepa at the Waikato University (Phone: 07 838 4455 x 7874; Email: mkhohepa@waikato.ac.nz).

Yours Sincerely

Rosina M Shandley

Appendix G: Teacher Consent Form

Awhi Mai Awhi Atu

Teacher Consent for the Conduct of Research Form
Awhi Mai Awhi Atu

I have read and understood the information letter outlining Rosina Shandley's proposed research study and have had my questions answered. I understand that I will be interviewed twice during the study and those interviews will be voice recorded and transcribed for inclusion in the thesis. I can withdraw from the interviews at any time. I will also make regular written reflections in a journal that will be analysed for the thesis. Will meet regularly with Rosina and she will take meeting notes for use in the thesis. I will have an opportunity to review interview transcripts, meeting notes, and journal entries before they are included anonymously in the final thesis.

I agree to participate in the research project and to implement the self and peer assessment programme in my classroom literacy programme. I understand that the neither the school, my students, or I will be identified in the report.

I consent to the use of anonymous student data in the final thesis report and I understand that the thesis will be available electronically to University staff and students through the University library, and may be requested by non-members of the University.

I also consent to the use some of the study data including video clips of students conducting their learning activities in future education seminars, workshops, publications or conferences. I understand that through this data it may be evident to some that I was their teacher at the time of the research. If I do not consent my decision will prevail.

I understand that I can discuss any issues with the research with Rosina at any time or alternatively with the research supervisors.

I understand that I can withdraw from the study at any time up until xxxx(insert 10 week date).

Research Supervisor's Contact Details:

Margie Hohepa, Waikato University, Phone: 07 838 4455 x 7874

Email: mkhohepa@waikato.ac.nz

Teacher:_____

Signature:_____

Date:_____

Appendix H: Whānau/Caregiver Information Letter

Awhi Mai Awhi Atu

Department of Professional Studies in Education
Faculty of Education
Te Kura Toi Tangata
The University of Waikato
Private Bag 3105
Hamilton, New Zealand

Phone +64 7 8384455
www.waikato.ac.nz

Tēnā koutou te whānau,

Xxxxxx I am writing to seek your support for a research project I would like to conduct with your child and his/her peers in his/her classroom. The research will trial a self and peer assessment programme to raise students' written and oral Māori language ability. I am conducting the research as part of my PhD.

In this study all classroom students will be taught to assess their own and each other's writing during their regular literacy times, over 20 weeks. They will use language resources like the ones I have shown you to help them discuss their writing and make decisions about their levels and next learning steps. They will also write their ideas about the programme in a writing journal that will be shared with me.

If you agree as part of the study I will interview your child about his/her learning. The interview recordings will be transcribed for the thesis. I will also collect and analyse dairy entries, writing samples, **and video recordings of your child participating in the self and peer assessment activities.** Your child will not be identified in the written thesis, however because Māori medium is small community confidentiality cannot be guaranteed. I am also seeking your permission to use the study data for education purposes out side of this research in the future.

Only my supervisors and I will be privy to the notes, transcripts, documents, and video recordings collected during the study. All the data will be stored in a locked cupboard at my home. The data will be destroyed after five years unless you give permission for the information to be used for further education purposes after the study.

The students will be participating in the self and peer assessment programme as part of their regular classroom programme. However if you do not want your child to participate in the study they will not be interviewed or video recorded and none of

their data will be included in the thesis. Your relationship with your child's teacher will not be affected in any way whether you or your child chooses to participate or not to participate.

If your child takes part in the study they have the right to;

- Refuse to answer questions they prefer not to answer
- Withdraw from the study before xxxxx (10 week date to be inserted).
- Ask any further questions about the study that occurs to them during their participation
- Be given access to a summary of findings from the study when it is concluded.

If you need clarification on any matter concerning this project, then do not hesitate to contact me ph:0272164871 or rosinashandley@gmail.com

If you have any questions or concerns about the project, either now or in the future, please feel free to contact either me or my supervisor, Margie Hohepa at the Waikato University (Phone: 07 838 4455 x 7874; Email: mkhohepa@waikato.ac.nz).

Nāku Noa

Rosina Shandley
(Ngāti Porou)

Appendix I: Whānau/Caregiver Consent Form

Awhi Mai Awhi Atu

Caregiver Consent Form For Student Participation in Research Project

I have had Rosina Shandley's doctoral research project explained to me and read the Caregiver Information Letter. I understand the nature of the research and why my child has been selected to participate. I have had the opportunity to ask questions and have them answered to my satisfaction.

I understand that:

- My child's participation as an individual is voluntary.
- I have the right to withdraw my child and any data that he/she may have provided from the research at any time up to xxxxxx (insert 10 week date)
- He/she will be interviewed by Kōka Rosina two times for up to 10 minutes each time and that these interviews will be voice recorded. My child will also be video taped taking part in learning activities up to four times during the study.
- He/she can ask for the voice or video recorder to be turned off at any time and that he/she does not have to answer any question if he/she does not want to.
- Information from his/her reading and writing assessments, writing journals and book, and interviews will be collected and may be included in the research report without her/his name attached.
- Data collected from /him/her will be kept confidential and will be securely stored at the school for one year and then securely at Kōka Rosina's house until 2021 unless I give permission for the data to be used for educational purposes in the future.
- All data will be reported anonymously, and confidentiality of participants will be maintained although it cannot be guaranteed. An electronic copy of the thesis will become available, as the University of Waikato requires that a digital copy of Doctoral theses be lodged permanently in the University's digital repository: Research Commons.
- Kōka Rosina may use the data from this study for future educational purposes.
- I can contact Kōka Rosina through the school or on 0272164871 if I have any questions or if any issues come up relating to this project.
- For any unresolved issues I can contact the chief research supervisor Margie Hohepa at the Waikato University (Phone: 07 838 4455 x 7874; Email: mkhohepa@waikato.ac.nz).

I consent to my child participating in the research project.

Name:_____

Signed: _____

Date:_____

(Guardian)

Name:_____

Signed:_____

Date:_____

(Participant)

I would like a copy of my child's interview if it is used in the thesis

YES / NO

I would like to attend a hui to hear a summary of the findings

YES/NO

I would like to receive a link to the final thesis

YES / NO

(Email address/postal address_____)

I am happy for Kōka Rosina to come back to me to seek permission to use my child's data, including video clips for further education purposes

YES / NO

Appendix J: Student Information Letter

Awhi Mai Awhi Atu

He Pepa Whakamārama mō ngā Ākonga: To be read and explained to students face to face.

Ko te Rangahau: Awhi Mai Awhi Atu

Ko te Pēpa Whakamārama: Ākonga

Ko Te Kairangahau: Kōka Rosina Shandley

I tēnei tau kei te mahi rangahau a Kōka Rosina i roto i tōu akomanga. E pā ana tēnei rangahau ki te whakapiki i te reo matatini o koutou ngā akonga.

Ko taku hiahia kia uiui i a koe, aa, kia whakautu koe i ētahi pātai e pā ana ki tāu mahi pānui, tuhituhi, kōrero hoki. Ka hiahiha awau kia kohi i āu kōrero me ētahi o āu mahi kura mā te mihini-hopukōrero, mā te kāmera ataata hoki. Ki hiahia hoki awau ki te kohi ētahi o āu tuhinga me āu aromatawai mo te tuhinga rangahau.

Ki te uru mai koe ki te rangahau kāhore awau e hopu i tōu ingoa kia kore e mōhio ngā tAngata ko wai e kōrero ana, nā wai ngā mahi kura rānei. Maua ko taku hoa rangahau o te Whare Wānaga o Waikato anake ngā tAngata e mātakitaki ai i te ripene ataata e whakarongo hoki ki ngā ripene korero. Ka tuhia te ripoata rangahau e awau, ā, ka tono atu ki a koutou ko tōu whānau, kā ahei koutou ki te whakahoki whakaaro i mua i te whakaputa i te repoata mutunga. Mehemea ka hiahia koe kia tono atu i ōu ake whakaaro e pā ana ki te rīpoata tauira, ka pai tēnā. Ka tukua atu te ripoata whakamutunga ki Te Whare Wānanga o Waikato. Ka āhei hoki koe me tōu whānau hoki ki te pānui i taua rīpoata.

Ki te hiahia koe kia kōrero tonu māua mō tēnei rangahau, ka pai tēnā, me kōrero mai ki au.

Nāku noa, nā

Kōka Rosina

Appendix K: Student Consent Form

Awhi Mai Awhi Atu

He Pepa Whakaae mō te Rangahau-ā-Ākonga

Ko te Rangahau: **Awhi Mai Awhi Atu**

Ko te Pepa Whakamārama: **Ākonga**

Ko Kairangahau: **Kōka Rosina Shandley**

E mārama rawa atu ana awau ki tēnei kaupapa rangahau, ā, ka ahei ki te pātai ngā pātai kia mārama ai. Ka whakaae awau ki te kōrerorero ki te kairangahau, ā, ka whakaae au ki te kohia aku kōrero me aku mahi mā te mihini-hopukōrero, kāmera ataata, aku pukapuka, me aku aromatawai hoki. Māku anō e tono kia aukati te mihini, ahakoa te wā. Ka mōhio awau ki te kore awau e pirangi ki te whakahoki kōrero mo ngā pātai kei te pai. Ka mōhio hoki awau ka taea awau te puta atu i te rangahau tae noa ki te xxxxxx(insert 10 week date). Mohio hoki awau ka whakaatu pea a KōkaKōka Rosina i etahi mahi wāku ki ētahi atu tAngata mo te mahi mātauranga a ngā tau kei te heke mai.

(Ki te whakaae koe kia uru mai ki te rangahau, me tuhi ki raro).

Tōku ingoa: _____

Tōku kura: _____

Te rā: _____

Tōku mokotā: _____

Appendix L: RTM Information Form

Awhi Mai Awhi Atu

The Resource Teacher of Māori
Xxxxx
Xxxxx
Xxxxxx

(Date)

Kia ora xxxxxxx,

I am writing to seek your assistance for a PhD study I will be conducting in 2016.

The research will investigate the effect of self and peer assessment for raising Māori medium students' oral and written literacy achievement. I trialled a similar project in my own classroom for my Masters degree in 2011. The results of that study revealed that the self and peer assessment programme significantly raised students' oral and written language beyond usual expectations. Because the results of the study offer potential for raising Māori medium students' literacy achievement I now wish to test the programme across three other Māori medium classrooms. If successful the research may provide teachers in Māori medium settings with information about how they might increase their student's academic language proficiency to better ensure they achieve their school curriculum outcomes to the best of their potential.

Because of your expertise in the administration of Māori medium assessment tools, I would like your assistance in this project to moderate student participants' assessments. As a research assistant your activities would be as follows:

1. Moderate 6 e-asTTle tuhituhi assessments and 6 Kaiaka Reo oral language assessments.

I estimate the time required for these activities to be approximately one day in total.

Nō reirā xxxxxx, if you agree to assist in this research project please sign the confidentiality agreement below and return a copy to me at you earliest convenience.

Ngā mihi nui

Appendix M: RTM Confidentiality Form

Awhi Mai Awhi Atu

I agree to assist in Rosina Shanldey's PhD study under the conditions set out in the RTM Information Letter. Tasks I will be required to perform are;

- Moderation of 6 e-asTTle tuhituhi assessments and 6 Kaiaka Reo oral language assessments

Approximately 1 day of my time will be required for completion of these tasks.

I agree to keep all information I receive from this project confidential between Rosina, her supervisors, and myself.

Signed: _____

Name: _____

Date: _____

Researcher's Name and contact information:

Rosina M Shandley
57 Hauroa Road
Whataupoko
Gisborne
4010

Supervisor's Name and contact information:

Margie Hohepa, Waikato University, Phone: 07 838 4455 x 7874

Email: mkhohepa@waikato.ac.nz

Appendix N: Anga Putanga Ako

	Taumata 2 Ka taea e au te…	Taumata 3 Ka taea e au te…	Taumata 4 Ka taea e au te…
Āheinga Reo	tuhi taki	te tuhi taki, tuhinga tuhono, me te tuhi tautohetohe	te takenga pūtaiao, te taki pohewa
	tuhi he tapanga	tuhi tapanga hāngai ki te kaupapa	tuhi tapanga hāngai ki te kaupapa me te hopu i te kai pānui
Puna Reo	te tuhi tika i ngā ira kati me ngā pumatua i ētahi wā	te tuhi tika i ngā irakati me ngā pūmatua i ngā wā katoa	te tuhi tika i ngā irakati me ngā pūmatua i ngā wā katoa
	tuhi tika i te tohu pātai me te tohu hāmama i ētahi wā	tuhi i te tohu pātai me te tohu hāmama i ngā wā katoa	tuhi tika i te tohu pātai me te tohu hāmama i ngā wā katoa
	te whakamahi tika i te tohu tō i ētahi wā	whakamahi tika te tohu tō i te nuinga o te wā	whakamahi tika i te tohu tō i ngā wā katoa
	ka ngana ki te whakamahi i ngā piko me ngā tohu kōrero	whakamahi i ngā piko me ngā tohu kōrero i ngā wā e tika ana	whakamahi tika i ngā piko me ngā tohu kōrero i ngā wā e tika ana, me te whakamārama
			whakamahi i te irapiko, irarua, te tohuhono, te tohuwhai me te ira tohu
Rautaki Reo	whakamahi i ngā mahere tuhituhi mō te tuhi taki	whakamahi i ngā mahere tika mō te momo tuhinga	whakamahi i ngā mahere tuhituhi e pā ana ki ngā momo tuhinga nui ake i te toru
	waihanga i te tuhinga e hAngai ana ki te kaupapa i te nuinga o te wā	waihanga i te tuhinga tuatahi hei arotakenga mōna	waihanga i te tuhinga tuatahi hei arotakenga mōna me te whakawhānui i taua tuhinga tuatahi
	te matapaki i ana tuhinga me tētahi hoa, me tētahi rōpū hoki hei tumomo arotakenga mō ana tuhinga i raro i te tautoko o te kaiako	te matapaki i ana tuhinga me tētahi hoa, me tētahi rōpū hoki hei tumomo arotakenga mō ana tuhinga	te matapaki i ana tuhinga me tētahi hoa, me tētahi rōpu hoki me te whakaaro mō ngā pitopito kōrero
	whakamahi i te reo e pā ana ki te kaituhi me te tuhituhi i a ia e whakahitiwhiti kōrero ana mēnā e tautoko ana te kaiako	whakamahi i te reo e pā ana ki te kaituhi me te tuhituhi i a ia e whakahitiwhiti kōrero ana	whakamahi i te reo e pā ana ki te kaituhi me te tuhituhi i a ia e whakahitiwhiti kōrero ana mō ana tuhinga me ngā tuhinga a ētahi atu
	te ngana ki te raupapa tika i ngā whakaaro ki te kōwae	te raupapa tika i ngā whakaaro ki te kōwae	te tāpiri atu i ētahi atu pārongo ki ngā kōwae kia hikohiko taku tuhinga
	te ngana ki te tuhi kupu āhua kia whakaaroaro te kaipānui ki tau e tuhi nā	te tuhi kia nui ngā kupu āhua kia whakaaroaro te kaipānui ki tau e tuhi nā	te whakamahi kīwaha, kupu whakarite hoki kia hikohiko taku tuhinga

Appendix O: Ngā Kāri Matapaki

Ngā Pātai	Ngā Whakautu
1. Kia ora e hoa	1. Kia ora e hoa
2. He aha tou whāinga ako i tēnei rā?	2. Ko taku whainga mai i te Anga Putanga Ako ko te.....
3. Whakamārama mai te taumata me te whenu o tou whainga?	3. Ko te taumata ko te....Ko te whenu ko te...
4. Kua tutuki pai tou whāinga?	4. Ae kua tutuki pai te whāinga/Kaore ano taku whāngai kua tutuki pai nōtemea...
5. Pēhea koe e mōhio ai kua tutuki pai te whāinga? Whakaatuhia mai?	5. Kei te mōhio au kua tukutki pai te whāingai (kaore rānei) notemea kua titiro au ki te tuhinga a.....hei tauira. Ā pērā hoki taku tuhinga (kaore ano au kua tuhi tika o te...).
6. He aha ngā rauemi i tautoko ai i a koe kia whakatutuki pai te whāinga?	6. Ko te....me te...ngā rauemi i tautoko ai i awau
7. He aha tētahi atu whāngai māhau inaianei?	7. Ko taku whāinga inaianei ko te...
8. Pēhea koe e ako tou whāinga hau?	8. Ki te ako i taku whāinga hau ka....awau.
9. He aha ngā rauemi hei tautoko I a koe?	9. Ko ngā rauemi hei tautoko i ahau ko....
10. Ka pai tou mahi e hoa	10. Kia ora mo tou tautoko e hoa.